

Should this item be pulled from the Consent Agenda the following motion is suggested:

POSSIBLE MOTION

I MOVE TO award a Professional Services Contract for the Nelson Logging Road Upgrade Project Phase One to LEI Engineering & Surveying and further authorize the Municipal Administrator to approve future contract amendments to complete the final design and permitting upon completion of Phase I not to exceed amount of \$117,360.00.

MEMORANDUM

To: Mayor McConnell and Members of the Assembly
Mark Gorman, Municipal Administrator

From: Dan Tadic, P.E., Municipal Engineer *DT*
Stephen Weatherman, P.E., Senior Engineer *S*

Reviewed: Michael Harmon, P.E., Public Works Director *MH*
Jay Sweeney, Chief Finance and Administration Officer *JS*
Tori Fleming, Contract Coordinator *TF*

Date: February 18, 2014

Subject: Nelson Logging Road Upgrade
Approval to Award Design Contract

Background:

A Request for Qualifications for design of the Nelson Logging Road Upgrade was published in accordance with City and Borough Procurement Policy.

The Nelson Logging Road Upgrade project includes, but may not be limited to, the following Improvements.

- Retrofit and/or replacement of the existing two bridges and their approaches;
- Replacement of the structural plate pipe arch what has failed at the end of the road;
- Replacement of, at a minimum, two compromised culverts;
- Realignment of the egress to Halibut Point Road;
- Widen the existing alignment where has sufficient distance; and
- Widen the road as funding allows within the current funding that has been allocated to the project.

The final scope of improvements is contingent on the availability of funds within the established \$2,343,000 budget.

Six (6) proposals were received and scored by a selection committee consisting of CBS Public Works Department staff. A project team led by LEI Engineering & Surveying was selected as the most qualified firm to complete the design.

LEI Engineering & Surveying has provided a fee proposal for a not-to-exceed time and expense cost of \$117,360.00 to complete phase one services consisting of preliminary engineering and alternative analysis. A copy of that proposal is attached.

Analysis:

Engineering services are planned to be provided in sequential phases allowing refinement of services as each phase is further developed with CBS.

- Phase I services include performing a preliminary assessment of the access road and structures on the Nelson Logging Road. The LEI team will perform all background research for cultural resources and permit investigation at this time. LEI will develop a decision matrix to enable the CBS to prioritize improvements along the access road given the current funding that is available.
- Phase II services will consist of those activities necessary to further the project in design and permit based on final design tasks selected by CBS on the decision matrix. These will include at a minimum: Bridge Design, Roadway Design, Hydraulic Engineering, Geotechnical Exploration, Wetland Delineation and the Cultural Resources Investigation.

Public Works has set a phase one design completion date of May, 2015. Upon completion of phase one, scope and fees will be established to complete final design and permitting. Construction is currently planned to begin spring/summer 2016. The total project cost is estimated to be \$2,343,000.

Fiscal Note:

The project is funded by a 2012 Alaska Department of Commerce, Community, and Economic Development Grant totaling \$2,343,000.

- Phase I design costs are 117,360.00
- Phase II design costs are estimated to be between \$150,000 to \$200,000 which is dependent on the Phase I scope chosen.

Recommendation:

- **Approve award of a Professional Services Contract for the Nelson Logging Road Upgrade Project Phase One to LEI Engineering & Surveying with a not-to-exceed amount of \$117,360.00.**
- **Authorize the Administrator to approve a future contract amendment(s) to complete the final design & permitting upon completion of phase one.**

STATE-OWNED NELSON LOGGING ROAD UPGRADE

SCOPE OF SERVICES

A) INTRODUCTION

Nelson Logging Road is owned by the State of Alaska Department of Natural Resources but currently maintained by the City and Borough of Sitka. The road is 1.2 miles long and runs from Halibut Point Road alongside the Starrigavan estuary and creek to the City and Borough's Tony Hrebar Shooting Range, State Public Safety Academy Shooting Range, USDA Forest Service Off-Road Vehicle Recreation Area and logging areas, and upper Starrigavan Valley in the Tongass National Forest.

This project is currently funded for a total of \$ 2,343,000 which includes safety improvements to the Halibut Point Road/Nelson Logging Road intersection, upgrading the roadway to 28 feet for two-way traffic, and upgrading both inadequate bridges and the engineering and permitting effort required to bring about construction of the route. The roadway is also to be moved toward the south to raise the roadway above the winter and spring flooding at the Starrigavan Creek estuary and eliminate sloughing off of the roadway into Starrigavan estuary. The project also includes three parking areas, at the Tony Hrebar shooting range, at the head of the USDA Forest Service Off-Road Vehicle Recreation Area, and at the State Park Forest and Muskeg Trailhead.

Upgrading Nelson Logging Road is a State priority due to the mandatory use of the road year-round by the Alaska State Public Safety Training Academy. With the increased use, it is imperative that the safety improvements be effected as soon as possible. The Alaska State Troopers must have access to their shooting range year round for their Public Safety Training classes. Thousands of other users also drive or walk Nelson Logging Road for selective logging, access to trails, and access to the public shooting range and the Tongass National Forest.

The deteriorated condition of the road is causing both safety (The Sitka Police Department has a record of a minimum of four traffic accidents in the last seven years) and maintenance issues in the form of potholing and in recent days flooding has eroded the road edges away and at the structural plate pipe at the end has encroached on the roadway at this time. There is inadequate sight distance at the intersection with Halibut Point Road due to vegetation and an outcrop of bedrock. The vertical approach to this intersection is quite steep and is especially dangerous in winter when ice makes it nearly impassable. It is so narrow in places that vehicles run into stumps along the edges of the road. Driving an ambulance to provide emergency services on Nelson Logging Road is risky under icy winter conditions. The bridges are functionally obsolete given their overall narrow width. A one lane road should have a minimum of 15' of surfacing between the rails for a 25 mph road. The current structure has only 12-feet. Rectifying the safety issues along this route is imperative for the well being of the traveling public and the various agencies that use this route.

LEI Engineering & Surveying has been tasked as the lead consultant to engineer and permit the least-cost best alternative that will satisfy the needs of the project. The project team consists of the following companies in Table 1:

Table 1: Nelson Logging Road Team

Team Member	Discipline	Location
LEI	Overall Lead -Civil	Sitka, Alaska
AMEC	Structural	Seattle, Washington
Sea Level Consulting	Archaeological	Sitka, Alaska
ELS	Environmental-Wetland	Seattle, Washington
AMEC	Environmental	Seattle, Washington
AMEC	Geotechnical	Seattle, Washington

The Nelson Logging Road Improvement Project includes, but may not be limited to, the following improvements:

- Retrofit and/or replacement of the existing two bridges and their approaches;
- Replacement of the structural plate pipe arch which has failed at the end of the road;
- Replacement of, at a minimum, two compromised fish culverts;
- Realignment of the egress to Halibut Point Road;
- Widen the existing alignment where it has insufficient sight distance; and
- Widen the road as funding allows within the current funding that has been allocated to the project.

The final scope of improvements is contingent on the availability of funds within the established \$2.343 million budget that was granted through the Department of Transportation and Public Facilities. Close interaction with the City and Borough of Sitka (CBS), the Assembly, and the public is essential to the formulation of final scope work and the ultimate success of this important transportation project. Based on preliminary discussions with the CBS, it is understood that a conventional full design/bid/build (DBB) set of contract documents is preferred over a two stage contracting method using design/build (DB) with Owner procurement of materials followed by contractor installation.

LEI was selected as lead consultant to provide engineering services for the Nelson Logging Road project. LEI will manage all consultants, prepare permit applications and provide all civil, structural and environmental services as is required to complete the project. LEI is tasked with performing a preliminary assessment of the access road and structures on the Nelson Logging Road. LEI will develop a decision matrix to enable the CBS to prioritize improvements along the access road given the current funding that is available.

B) SUMMARY OF SERVICES

Engineering services under this project will be provided in sequential phases allowing refinement of services as each phase is further developed with the CBS. Several distinct tasks will be performed under each phase.

- Phase I services include performing a preliminary assessment of the access road and structures on the Nelson Logging Road. The LEI team will perform all background research for cultural resources and permit investigations at this time. LEI will develop a decision matrix to enable the CBS to prioritize improvements along the access road given the current funding that is available.
- Phase II services will consist of those activities necessary to further the project in design and permitting based upon final design tasks selected by CBS under the decision matrix. These will include at a minimum: Bridge Design, Roadway Design, Hydraulic Engineering, Geotechnical Exploration, Wetland

Delineation, and the Cultural Resource Investigation.

- Phase III will consist of engineering services during construction including contract administration and inspection should CBS require assistance.

Fee proposals will be provided in sequential phases to reflect the current and future needs of the CBS. Phase I services will be included in the initial contract and Phases 2 and 3 will be added by contract amendment at a future date.

PHASE 1: PRELIMINARY ENGINEERING AND ALTERNATIVE ANALYSIS

LEI's unique approach to this task is based upon decades of experience performing low volume road engineering in Southeast Alaska. This approach will begin with office route planning and then comprehensive and on the ground road reconnaissance to determine the best possible road location and alternatives to meet CBS objectives. Proper road layout is very important for this project because poor road location often results in higher construction costs, typically more environmental disturbance, and higher long term maintenance costs. Following on-the-ground road location, LEI's approach will include proven and effective interdisciplinary team collaboration to complete preliminary route design and analysis.

Task 1-1: Office Route Planning

The LEI team will assemble the best available remote sensing data for the project area using a combination of ESRI ArcGIS and AutoDesk Civil 3D. We expect that remote sensing data will include a combination of GIS datasets, imagery, digital ortho-photography and stereo aerial photography. We will use photogrammetric tools and techniques, such as Intergraph Stereo Analyst, to develop preliminary route alternatives from the mouth of Starrigavan Bay to the end-of-project and to other points requiring access (e.g., rock source specified in the project purpose and need) while minimizing resource impacts and construction costs. The preliminary route provided by CBS in the solicitation will be used as one of these preliminary route alternatives. LEI will especially focus on the major crossings, estuaries, historic channels wetlands and geologic ally sensitive segments, and segments that could result in significant earthworks; because these road segments will likely be major construction cost centers and areas with unavoidable environmental impact. The environmental staff of the LEI team will also collect relevant agency and published information about the area and determine likely sensitive environmental features in the project area prior to field reconnaissance in Task 2.

Task 1-1: Deliverables

1. Collect relevant agency and published information about the area;
2. Develop preliminary route alternatives;
3. Determine permit needs based upon route alternatives.

Task 1-2: Engineering Field Reconnaissance

Senior layout engineers will begin reconnaissance by field locating, flagging and GPS recording all major control points along planned road alignments; including stream crossings, grade driven constraints (such as benches and saddles), topographic features and proximity to rock borrow sources. The team will strive to avoid resource constraints and sensitive terrain by working closely with the geotechnical engineers; soils scientists; hydrologists; and wildlife, fish, vegetation, and wetland biologists who will be ascertaining the presence of sensitive environmental features.

Senior engineers will field flag trial grade lines where alignments are grade controlling, or compass line tangents where alignments are not grade controlling. Approximate roadway centerline (p-line) will then be flagged using trial grade lines and compass lines as reference and account for cuts/fills at centerline, based upon vertical offset from trial grade lines. Senior engineers will provide field flags with notes on flags at points of specific interest to aide survey crews in capturing important features during the preliminary route survey effort. Examples include: grade breaks, begin/end planned horizontal curves, begin/end full bench inhaul construction, opportunities for mitigation, potential rock borrow sources, segments with observed poor soils, planned earth structures and stream crossings. These efforts will result in minimizing engineering layout costs while assuring a complete field survey, which has historically proven to be a cost-effective design approach.

Structural analysis of each bridge will be comprised of evaluating and preparing a report detailing the current condition of the pilings, abutments, bridge girders, bridge deck, bull rails and guardrails at each bridge structure site.

Utilizing electronic radar, an audio gauge thickness of bridge girder steel will be determined on Bridge #1 and calipers will be determined on Bridge #2.

A structural analysis will be conducted to determine the load capacity of each of the bridge girders, deck and associated bridge members. Bridge girder capacity will be based off of reduced section properties calculated from audio gauge readings and caliper readings.

The bridge assessment will ascertain whether or not the bridge is currently within code compliance and will be evaluated using the current AASHTO Standards.

LEI has been tasked with determining if each bridge can be widened, and if so provide preliminary recommendations concerning configuration and any complications that may arise as a result.

Task 1-2: Deliverables

1. Field locate and assess the centerline of the proposed alternative routes;
2. Determine pipe types and sizes for stream crossing;
3. Assess condition of bridge #1;
4. Structural analysis/AASHTO Code compliance check of bridge #1;
5. Assess condition of bridge #2;
6. Structural analysis/AASHTO Code compliance check of bridge #2;
7. Assess condition of pipe arch near end of the project;
8. Structural analysis/AASHTO Code compliance check of pipe arch.

Task 1-3: Cultural Resources Investigation and Reporting

For the office analysis Sea Level Consulting understands that the project area is in the immediate vicinity of the significant prehistoric cultural resource and paleontological sites. The project consists of upgrades to the Nelson Logging Road, from Halibut Point Road to the Shooting Range, an approximate 1.2 miles of road plus .5 miles of proposed realignment adjacent the Starrigavan Estuary and Creek. Proposed upgrades will adhere to the U.S. Army Corps of Engineers (USACE) and other appropriate regulatory agency requirements. Federal and State laws and regulations require undertakings associated with Federal agencies to comply with the National Environmental Policy Act (42 United States Code [U.S.C.] 4321 et seq.), and Section 106 of the National Historic Preservation Act (16 U.S.C. 470 et seq., 36 Code of Federal Regulations [C.F.R.] Part 800).

In an effort to assist in the fulfillment of Federal requirements Sea Level Consulting will provide services to complete Phase I archaeological investigations and recommendations of historic property eligibility to the National Register of Historic Places. Sea Level will assist in establishing consulting parties, provide a draft scoping/initiation letter to the State Historic Preservation Office, and provide a draft cultural resources report or memorandum complete with recommendations for advanced investigations needed, based upon the decision matrix put forth by LEI for alternative routes. This will be done through archival research, data review, oral history interviews, and review of alternative recommendations. All archaeological work proposed in this phase will be consistent with the first design phase of the project.

In order to establish historic significance for cultural sites to determine National Register eligibility, Sea Level Consulting proposes to utilize the standard anthropological triad of field investigation, oral history, and archival research for this investigation. The field work for this shall be conducted in Phase II, but the research and investigations will be performed in this Phase (Phase I).

Local archival research will be obtained from the historical societies and museums, newspaper, and magazine archives, the State of Alaska Library and Historical Collections, Sitka Tlingit tribal members, the Sealaska Heritage Institute, the Sitka Ranger District, and other relevant sources. Southeast residents will be consulted and personal interviews will be conducted about historical knowledge and the locations of undocumented sites, structures, and geographic features. This work shall also be performed during the research, Phase I, of this project.

Task 1-3: Deliverables

1. Collect relevant agency and published information about the area;
2. Compile research, field results, map and inventory;
3. Draft Nelson Logging Road Cultural Resources Investigation Memorandum and submit to CBS for comment.

Task 1-4: Wetland mapping and Permit Research

For the office analysis ELS will conduct site research using resources such as the NRCS soil survey information, National Wetland Inventory mapping, aerial photographs, and information provided by the client.

At the conclusion of field work, ELS will prepare a wetland delineation report and associated graphics including the vicinity map, site map, soil survey map, National Wetlands Inventory map and other appropriate mapping as needed.

During the project, ELS will coordinate and correspond with LEI and CBS to ensure that an accurate assessment of permitting needs is captured for the final design development phase. Potential permits for both wetlands, aquatics and cultural resources may be seen in Appendix B.

In phase II, ELS will delineate and discuss mitigation options should ELS and LEI deem it appropriate based upon the decision matrix developed during phase I.

Task 1-4: Deliverables

1. Project site research using available resources;
2. Permit research based upon planning efforts and conceptual design by LEI;
3. Prepare two memorandums, one for permit needs and one for wetland delineation needs based upon National wetland inventory maps. Receive comments and finalize each memorandum.

Task 1-5: Geotechnical Field Reconnaissance

For the office analysis that will be conducted prior to the field reconnaissance, a geotechnical exploration plan will be developed to describe the field procedures for identification of geotechnical hazards, conduct a preliminary assessment of structure sites, and determine initial cut/fill geometries. Geotechnical input to the alternatives analysis will include identification of geo-hazards such as areas of mass wasting (landslide features, including rockfall avalanche or debris flow chutes), talus slopes, seepage and springs, and low-lying muskeg areas. We will flag these features in the field so the constraints can be reviewed and evaluated by the engineering team for route options.

Task 1-5: Deliverables

1. Develop geotechnical exploration plan;
2. Identify mapped geotechnical hazards;
3. Make recommendations as to the level of field investigation and exploration needed for each alternative. Phase I recommendations will determine level of effort needed for Phase II.

Task 1-6: Preliminary Engineering Survey

LEI will perform a rapid route survey of each p-line (preliminary road alignment location) alternative using Laser Technology survey equipment with electronic data capture. Laser Technology survey equipment will capture p-line data to a precision of 1:1000 horizontally and 1:2000 vertically. Rapid route survey with this equipment type is ideal for preliminary low volume road analysis, as p-line productions of 2000 to 2500 feet of route survey per crew day are possible. LEI will perform site surveys at all fish bearing streams and stream crossing with an anticipated 48-inch diameter or larger structure. Surveys will also capture resource constraints and geotechnical features. Property lines, easements, and right of ways (R/Ws) will be researched and incorporated by the LEI team. Preliminary route surveying with this type of equipment allows for lower cost data collection for alternatives analysis. Higher order survey data doesn't result in better solutions for alternatives analysis, but can result in much higher costs when routes are shifting during alternatives analysis, resulting in the need for expensive resurveying.

Geometric design of the preliminary routes will consider construction recommendations and constraints identified during reconnaissance, which will include mitigation measures identified by resource specialists. The preliminary alignment and bridge structure selection often requires balancing competing priorities. Hydraulic, environmental, roadway and bridge engineers will work collaboratively to develop multiple alternative and options to determine which ones best meet project goals. A collaborative approach assures solutions that are both environmentally responsible and cost-effective.

LEI will complete preliminary stream crossing designs concurrently with geometric roadway design to a level sufficient to convey design approach and structure type for costing of alternatives analysis. Major bridge and earth structures, including retaining walls and engineered fills, will also be designed to a preliminary level sufficient for alternatives analysis and cost estimation.

LEI will develop preliminary plans and estimate output for each route alternative for analysis and presentation in the draft and final Preliminary Engineering Report. The plans and estimate format will follow CBS design standards and guidelines, and will meet the objectives and requirements needed for the environmental analysis task in the project.

Task 1-6: Deliverables

1. Perform preliminary route survey of existing road;
2. Perform preliminary route survey of proposed alternative alignments;

3. Perform site surveys at each of the bridges;
4. Perform site surveys at structural plate arch pipe;
5. Perform site survey at trailhead parking lots;
6. Create digital terrain model for preliminary engineering design;
7. Develop preliminary plans and estimate.

Task 1-7: Preliminary Engineering Design

Task 1-7: Deliverables

1. Geometric design that upgrades existing alignment;
2. Geometric design of alternative alignments;
3. Complete preliminary stream crossing designs;
4. Complete preliminary structure evaluation to reuse existing structures.

Task 1-8: Alternatives Analysis and Preliminary Engineering Report

LEI recognizes the importance of considering alternative alignments from a project objective level and environmental compliance. Alternatives will be based on field route reconnaissance, preliminary design, and environmental resource constraints. Potential mitigation associated with each alternative (including feasibility, costs, and likely agency acceptance) will be identified to ensure that overall project costs among alternatives are evaluated objectively. LEI will develop a Preliminary Engineering Report presenting these alternatives to the CBS for review and consideration. This report will include a history of the project, project objectives, preliminary PS&E (plans, specifications, and estimate), overview of resource constraints, and any public interest issues that are identified during preliminary engineering. Pending the preliminary engineering report review by the CBS, LEI's environmental and cultural resource specialists will negotiate scope of services necessary to further the preferred design alternatives into advanced and final design.

Task 1-8: Deliverables

1. Compile resource investigation needs for inclusion in alternative analysis;
2. Negotiate environmental and cultural resource mapping, delineation and investigation needs;
3. Prepare draft preliminary engineering report comparing alternatives.
4. Make recommendations to widen or replace existing structures.
5. Respond to City and Borough of Sitka comments and finalize report.

Task 1-9: Agency Collaboration (Could fall into Phase 1 or 2)

Following field studies and selection of the preferred route, the LEI team recommends meeting with each permitting agency to discuss our permitting plan in order to develop and confirm the optimum approach to obtaining each permit as efficiently as possible based on the selected route. Advanced and continued communications with permitting agencies following selection of the preferred route will often allow permitting to be expedited. Suggestions from each agency will be incorporated into the applicable permit applications. LEI will support CBS throughout the permitting processes including responding to all agency comments and making expedited changes, which will help save time in the project schedule.

Task 1-9: Deliverables

1. Present the alternatives and recommendations and confirm optimum approach to Phase 2.
2. LEI and CBS work to plan and schedule Phase 2 of the project.
3. Prepare a final scope of services for Phase 2 of the project. This would include the Cultural Resource field investigation, wetland delineation and mapping and any associated surveying necessary to tie resource constraints and significant cultural resources to avoid.

APPENDIX A
PHASE 1- COST PROPOSAL

APPENDIX A : COST PROPOSAL

PRELIMINARY ENGINEERING AND ALTERNATIVE ANALYSIS

Task-1.1 Office Route Planning

1. Collect relevant agency and published information about the area.(\$1000.00)
2. Develop preliminary route alternatives and design standards.(\$2500.00)

Task-1.1 Subtotal: \$ 3,500.00

Task-1.2 Engineering Field Reconnaissance

1. Field locate and assess the centerline of the proposed alternative routes.(\$4,200.00)
2. Determine pipe types and sizes for stream crossings.(\$800.00)
3. Assess condition of bridge #1. (\$12,200.00)
4. Structural analysis/AASHTO Code compliance check of bridge #1.(\$9,700.00)
5. Assess condition of bridge #2. (\$8,500.00)
6. Structural analysis/AASHTO Code compliance check of bridge #2.(\$6,900.00)
7. Assess condition of pipe arch near end of the project. (\$600.00)
8. Structural analysis/AASHTO Code compliance. (\$500.00)

Task-1.2 Subtotal: \$ 43,400.00

Task-1.3 Cultural Resources Investigation & Reporting

1. Archival research & field planning. (\$2420.00)
2. Compile research, maps & current inventory.(\$2030.00)
3. Draft report findings & submit Phase II investigation needs for comment. (\$3,060.00)
4. Receive comments and finalize report. (\$330.00)

Task-1.3 Subtotal: \$ 7,840.00

Task-1.4 Wetland delineation and permit research

1. Project site research using available resources. (\$800.00)
2. Prepare draft wetland delineation requirements. (\$1,060.00)
3. Receive comments and finalize report.(\$360.00)
4. Coordinate with local agencies to determine permits required.(\$3,600.00)

Task-1.4 Subtotal: \$ 5,820.00

Task-1.5 Geotechnical Field Research and investigation recommendations

1. Develop geotechnical exploration plan.(\$400.00)
2. Identify potential geotechnical hazards. (\$2500.00)
3. Make recommendations to be investigated during preliminary engineering. (\$1600.00)

Task-1.5 Subtotal: \$ 4,500.00

Task-1.6 Preliminary Engineering Survey

1. Perform preliminary route survey of the existing road.(\$9,600.00)
2. Perform preliminary route survey of proposed alternative alignments.(\$4,800.00)
3. Perform site surveys at each of the bridges. (\$6,000.00)

4. Perform site survey at structural plate arch.(\$2,000.00)
 5. Perform site survey at parking lots. (\$3,000.00)
 6. Create digital terrain model for preliminary engineering design. (\$1,100.00)
- Task-1.6 Subtotal: \$ 26,500.00**

Task-1.7 Preliminary Engineering Design

1. Geometric design upgrading existing alignment.(\$2,500.00)
 2. Geometric design of alternative alignment. (\$2,500.00)
 3. Complete preliminary stream crossing designs.(\$1,500.00)
 4. Complete preliminary structure evaluation to widen existing bridges.(\$1000.00)
- Task-1.7 Subtotal: \$ 7,500.00**

Task-1.8 Alternatives Analysis and Preliminary Engineering Report

1. Compile resource needs for inclusion in alternative analysis. (\$600.00)
 - 2.. Prepare draft preliminary engineering report comparing alternatives.(\$3,400.00)
 3. Make recommendations to widen or replace existing structures. (\$800.00)
 4. Respond to City and Borough of Sitka comments and finalize report.(\$500.00)
- Task-1.8 Subtotal: \$ 5,300.00**

Task-1.9 Agency Collaboration

1. Present the alternatives and recommendations and confirm optimum approach to Phase 2.(\$2,000.0)
2. LEI and CBS work to plan and schedule Phase 2 of the project.(\$1,500.00)
3. Prepare a final scope of services for Phase 2 of the project.(\$500.00)

Task-1.9 Subtotal: \$ 4,000.00

Task-1.10 Expenses

1. Vehicle use on project, Phase I. (\$3,500.00)
2. Equipment costs(Phase I). (\$5,500.00)

Task-A.10 Subtotal: \$ 9,000.00

Total for Phase 1: \$117,360.00

EXCLUSIONS

Any services not specifically covered in this proposal that are required for completion of the project, are not included in this proposal. All application and permit fees will be the responsibility of the client.

ADDITIONAL SERVICES

LEI will be pleased to provide any additional services on an hourly basis as per the following schedule of rates, "Exhibit A

EXHIBIT "A"

LEI ENGINEERING & SURVEYING 2015 Professional Services Rate Sheet

Labor Rates

Principal-in-Charge	\$174.94/hr
Senior Project Manager	\$144.78/hr
Senior Engineer	\$144.78/hr
Value Engineer	\$144.78/hr
Project Manager	\$120.65/hr
Construction Engineer	\$120.65/hr
Engineer	\$115.37/hr
Archaeologist	\$110.00/hr
Survey Manager	\$105.57/hr
Senior Designer	\$105.57/hr
Land Surveyor	\$105.57/hr
Biologist/Scientist	\$100.00/hr
Inspector	\$89.37/hr
Designer	\$85.21/hr
GIS Analyst	\$84.92/hr
Engineer Technician	\$79.93/hr
Senior Drafter	\$79.93/hr
Survey Crew Chief	\$79.93/hr
Drafter	\$69.37/hr
Senior Field Technician	\$64.85/hr
Clerical	\$58.82/hr
Field Technician	\$54.29/hr
Three-Man Survey Crew	\$194.54/hr

Expenses

Out-of-pocket expenses billed at cost plus 10%.
Vehicle mileage billed at \$0.56/mile.

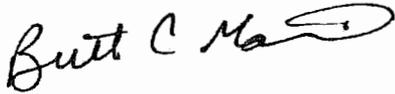
PAYMENT TERMS

Invoices for services rendered shall be issued at the end of each calendar month based on the engineer's estimate of project completion or by time spent, as appropriate. Payment in full is considered due upon receipt of the invoice. An accounting charge of one percent (2%) compounded monthly will be assessed against any unpaid

balance beginning 30-days following the date of the original invoice. Arrangements for payments other than as stated must be made prior to a commitment for services.

Thank you for the opportunity to submit this proposal. If you have any questions, please call my office at (503) 399.3828 or my cell phone at (907) 401.0777.

Sincerely,
LEI ENGINEERING & SURVEYING, LLC

A handwritten signature in black ink that reads "Brett C. Martin". The signature is written in a cursive style with a large, stylized "M" at the end.

Brett C. Martin, P.E.
Vice-President, Principal Engineer

I hereby certify that I have read and understand the terms of this proposal and by my signature am in agreement to these terms: hereby authorizing LEI Engineering & Surveying to begin work on proposed project.

Authorized Representative of City and Borough of Sitka.

Date

APPENDIX B
Potential Permits

Permits Required	
<input checked="" type="checkbox"/> Alaska DNR	<i>Comments:</i> A Title 16 Fish Habitat Permit will be needed for bridge crossings, which is obtained from Alaska Department of Natural Resources (DNR).
<input checked="" type="checkbox"/> COE	<i>Comments:</i> U.S. Army Corps of Engineers (COE) Section 404 permit will be needed for work in wetlands and Waters of the United States.
<input checked="" type="checkbox"/> OHA	<i>Comments:</i> An Alaska Cultural Resource Permit Application compliance from the Alaska Office of History and Archaeology will likely be needed to confirm that work would not disturb sites of historical significance wherever the road is moved or new area is disturbed.
<input type="checkbox"/> DNR	<i>Comments:</i> This land use permit may be required in the vicinity of Starrigavan Park since the park is leased from the State of Alaska. This may only be needed if the road may affect part of the park.
<input type="checkbox"/> ADEC	<i>Comments:</i> Alaska Department of Environmental Conservation (ADEC) Stormwater Pollution Prevention Plan will be needed for bridge construction. However, this permit will be required to be obtained by the construction contractor.
<input type="checkbox"/> CD/Bridge	<i>Comments:</i> Coast Guard Section 9 Bridge Permit will be needed for any new bridges that cross navigable waters.
<input checked="" type="checkbox"/> Other	<i>Comments:</i> Other permits that may be needed, particularly if federal funding is involved: ADEC Section 401 Certification if there is a discharge to navigable waters for bridge construction; consistency with Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat; and compliance with Protection of Wetlands Executive Order, Endangered Species Act, U.S. Fish and Wildlife Service (USFWS) Eagle Take Permit, Protection and Enhancement of the Cultural Environment Executive Order, Floodplain Protection Executive Order 11988, compliance with City and Borough of Sitka Floodplain Regulation, and Native Graves Protection and Repatriation Act.

Table 2: Expected and possible permits and approvals for the Nelson Logging Road Upgrade

APPENDIX C

SCHEDULE

LEI has created the following preliminary schedule that highlights the major tasks proposed in LEI's scope of work. This schedule focuses on the critical path to completion of early field reconnaissance, to preliminary engineering to alternatives select, and finally PS&E development.

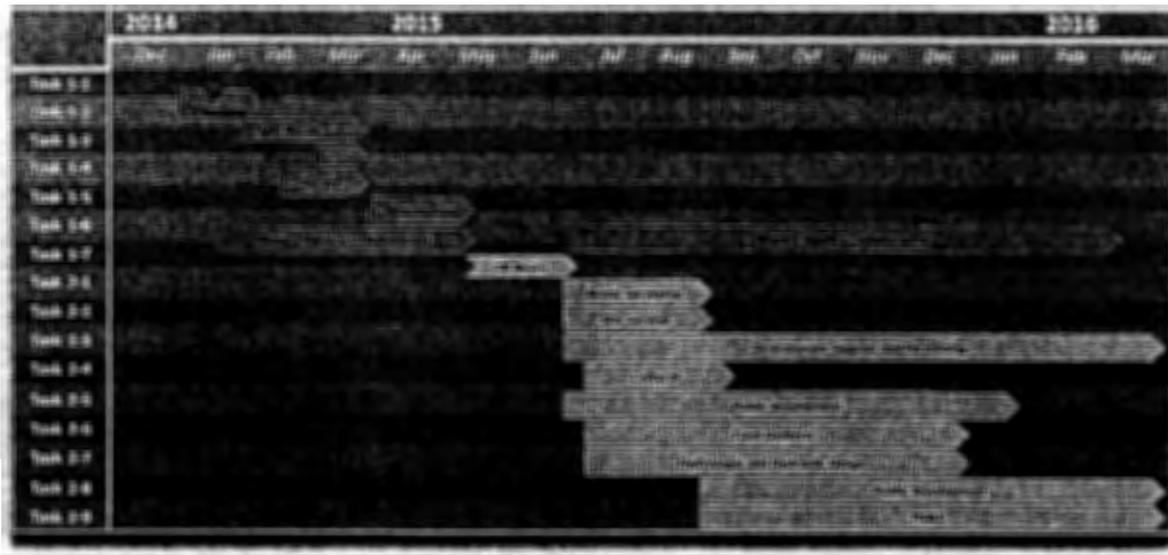


Figure 1: Schedule