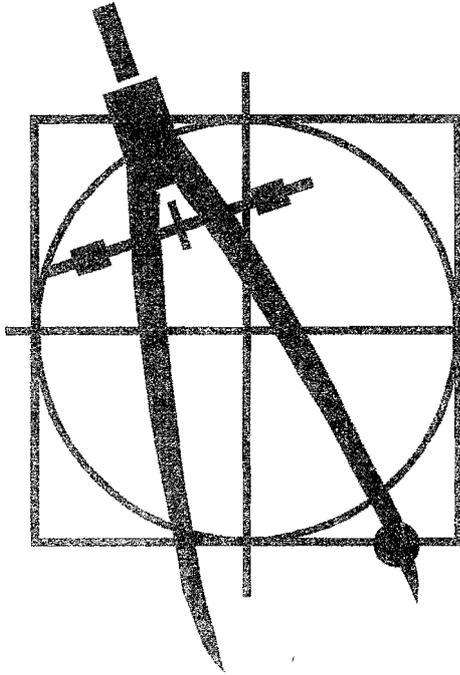
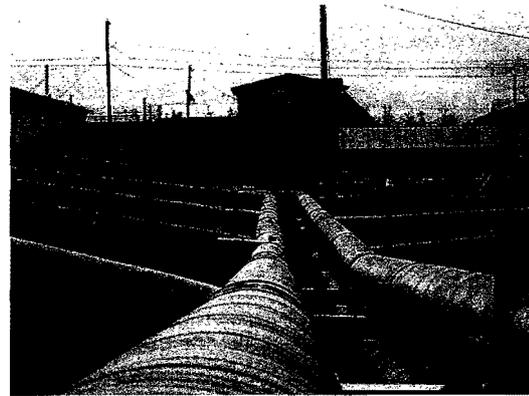




LARSEN CONSULTING GROUP



**Water & Sewer Master Plan Update
Professional Engineering Services**



Prepared For:



**City of Bethel
PO Box 1388
Bethel, AK 99559**

May 4, 2012

942.00



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A. PROPOSAL TRANSMITTAL LETTER



Mr. Chuck Willert
Public Works Director
City of Bethel
PO Box 1388
Bethel, Alaska 99559

May 3, 2012

Re: Proposal for Professional Engineering Services
Bethel Water & Sewer Master Plan Update – 2012-2017

Dear Mr. Willert:

Larsen Consulting Group (LCG) is pleased to submit our professional services proposal to the City of Bethel to amend its 2005 Water and Sewer Master Plan. We have a long-standing and firm commitment to the community and welcome this opportunity to further assist in shaping its future.

We understand the intent of Bethel's Request for Proposal is to select the firm best qualified to prepare an addendum to the 2005 Plan that: brings its findings up to date; refines the recommended capital improvement list; and establishes the top rated projects for public funding. Our proposed work plan is briefly summarized as follows:

1. Acquire, vet and organize pertinent planning information.
2. Review and summarize 2005 Plan findings. Revise, as necessary.
3. Assemble capital improvement list from 2005 and other plans. Pare list to potentially viable projects. Evaluate candidate projects--select the top three to four. Prepare an implementation plan for each.
4. Prepare draft document. Present to City. Gain feedback. Finalize addendum for Council acceptance.

We are confident we can deliver a short list of top tier Bethel projects and present them in the best light. During an era of public funding transition, we understand Bethel must precisely delineate and justify its infrastructure needs in order to qualify and successfully compete for funds. We know what it takes and are committed to deliver a work product based on well-vetted data, thorough engineering analysis and community input--essential for funding agency approval. *LCG's proposed work plan is specifically designed for that purpose.*

It should be noted, our proposal uses the term 'addendum' to describe the proposed work product. Our intent is to avoid confusing it with a "master plan update" often used by utility planners to describe a complete plan overhaul (for example, Bethel's 1996 and 2005 master plan updates). The addendum we propose has a narrower scope, intended to confirm key planning criteria and focus in on the highest priority capital improvements.

We believe our approach, methodology, experience and commitment uniquely qualify us for this work. Our team is ready and anxious to begin. At LCG, we look forward to continuing our relationship and appreciate the opportunity to work with you on this important planning project. Please contact me at (907) 245-8899 if you have any questions or require further information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Wallace Swanson', is written over a horizontal line.

Wallace Swanson, AIA
President



B. SCOPE OF WORK

1. PROJECT UNDERSTANDING

We at LCG understand that this proposed addendum to the 2005 Bethel Water and Sewer Facilities Master Plan (addendum) is intended to:

- Update system information and priorities to reflect current needs and funding eligibility;
- Review capital improvements proposed in the 2005 Plan and subsequent studies and plans;
- Conduct an engineering evaluation of potential capital improvement projects, based on City-approved criteria, to develop a prioritized schedule of capital improvements.
- Provide a detailed analysis of the top priority projects--for the next five years--to assist public funding and agency approvals.
- Summarize the findings and recommendations to the Bethel City Council to obtain stakeholder approval.

We understand this Addendum will be used to meet eligibility requirements for public funding by

2. DATA ACQUISITION, SITE/CLIENT VISIT

The LCG team's knowledge of Bethel, its utility history, and its unique challenges enables us to hit the ground running with baseline and project-specific information already established by our previous work. We can quickly begin the investigative process without spending excess time researching old files.

Our work plan begins with acquisition of pertinent system and operational information. Upon receiving Notice to Proceed, our Project Manager, Glenn Foust, PE, will schedule a visit to Bethel to:

- Meet with Public Works staff, provide a briefing on work objectives/deliverables and gain input;
- Establish a single point of contact for the City;
- Tour water and sewer systems with City staff;
- Photo-document existing conditions, systems, and prospective project sites;

U.S. Department of Agriculture - Rural Development, Alaska Department of Environmental Conservation, and possibly other agencies. Recent conversations with upper level representatives of ADEC and USDA-RD confirm our understanding and approach.

It is further understood that City of Bethel may be commissioning a cost of service and rate study to establish an equitable customer-based revenue stream and thereby provide the basis for a business plan. LCG proposes timing and structuring our Addendum-related work to work seamlessly with those performing the COS-Rate study.

Our intent is to constructively work with the City of Bethel to delineate a more current and focused utility planning document that will assist the City to identify, fund and cost-effectively upgrade the highest priority water and sewer systems to improve the quality of utility service to its customers.

- Collect accumulated data on facilities, operations, and service area constraints;
- Obtain copies of pertinent maps, studies, surveys, reports, plans, ordinances; and
- Confirm project objectives, milestones, lines of communication.

The objective of the site visit is to confirm and collect system information and to ensure that City staff and the LCG team are in clear agreement on procedures and expectations within the project scope, schedule and budget.

Within two weeks of the initial site/client visit, we will prepare and submit to the designated point of contact, an information request for outstanding data, as-builts, studies, or descriptions not obtained during the visit. Once the requested information is received, LCG will commence organizing it into useable Addendum material.

3. INFORMATION PROCESSING

Information collected during the data acquisition process will be vetted, assembled, and organized to facilitate analysis.

- Incoming data will be checked for accuracy, consistency and acceptability;
- Reports, studies, and plans will be reviewed and summarized;

- Information will be compiled by subject and organized according to intended use;
- Data to be featured in the Addendum will be organized into tables and graphs in an intuitive and logical arrangement to improve comprehension and readability.

4. ANALYSIS AND ALTERNATIVE DEVELOPMENT

Once the above described information is received and processed, the LCG team will confirm evaluation criteria, assemble a comprehensive listing of improvement ideas, trim the list to a manageable size, conduct a rigid engineering evaluation on the most promising projects, and develop an implementation plan for the top three to four projects.

Approved **evaluation criteria** will provide the basis for evaluating and recommending candidate improvements. Criteria typically include: capital costs, annual operation and maintenance costs, functionality, risk, ease of implementation, side impact, etc.

A **comprehensive list** of projects and project ideas will be assembled initially. These will be: pulled from previous plans; collected during our site visit and operator interviews; and accrued from our review of utility data taken since the 2005 Update. Such a comprehensive approach is advised to assure those affected (including utility customers and funding agencies) that alternative evaluation and selection is an objective process and no potentially viable options will get overlooked.

We propose to **trim the initial list** with a broad spectrum screening process to cull the weak, the outdated and the nonstarters.

Capital projects remaining on the list will be **evaluated** according to the accepted criteria. Each alternative will be described and numerically rated in a comparison matrix with the results presented graphically to facilitate prioritization and selection.

LCG will prepare an **implementation plan** for the each of the top three to four alternatives for the 2012–2017 timeframe. Each plan will include: conceptual level drawings; estimated costs for design, permitting, and construction; phasing and scheduling considerations; and an overview of funding opportunities.

The above-described process is designed to take a systematic approach in examining all identified potential improvement projects, efficiently closing on those holding the most promise, and developing a sound, defensible shortlist of capital projects with the greatest benefit-cost ratio for the community.

5. PRESENTATION OF RESULTS

Results of our proposed work plan will be incorporated into a technical memorandum and submitted to the Bethel Public Works Department for review and comment.

Once comments are received and appropriate corrections made, the technical memorandum will be converted into Addendum form and

presented at a regular session of the Bethel City Council.

Council feedback will be incorporated into the Addendum document to be re-submitted for final approval. With final approval, copies will be made and distributed.

	<ul style="list-style-type: none"> ▪ CH2MHill Engineering Term Services. Contract manager and Lead Architect. ▪ Contract Manager/Project Architect, K-12 School Campus Renovations – St. Mary's
<i>Education</i>	<ul style="list-style-type: none"> ▪ Bachelor of Architecture, University of Idaho, 1984
<i>References</i>	<ul style="list-style-type: none"> ▪ Greg Kinney, Project Manager, Alyeska - (907) 787-8700 ext 8961 ▪ Joe Killeen , Development Director, AVCPRHA, (907) 543-1366 ▪ Dave Herbert , Superintendent, St. Mary's School District, (907) 438-2411

The Project Manager plays the lead role for our team. An essential element of any design project is accurate and timely communication between the design team and owner. This requires good oral and written communications skills, people skills and the ability to listen and translate desires and information into the project development plan.

We propose Glenn Foust, PE as Project Manager. A proven leader, having managed challenging projects with multi-disciplined teams in several western states and Canada, Mr. Foust brings nearly 30 years of water supply planning and engineering experience to the City of Bethel's Water & Sewer Master Plan Update project. Mr. Foust has been managing water projects in the Western United States since 1982 and for LCG in Alaska since 2005.

Mr. Foust completed his bachelors and masters degrees in civil engineering at Brigham Young University in 1983 with an emphasis in water resource management. He has been licensed as a civil engineer since 1986 and is presently licensed in Alaska (Alaska Lic. No. 10859).

Mr. Foust has an established record of project management success. He and our LCG Team are committed to community-tailored solutions. Designs under his management specifically focus on flexibility, constructability, low construction cost, energy conservation, system performance, ease of operation, low maintenance, and longevity. They literally take a team approach to projects--involving the owner, other stakeholders, and technical analysts to view and solve the problem from multiple perspectives. Our design teams thereby close quickly on practical remedies that not only fit the community, but pass muster with those funding, approving, building and using the end product.

Mr. Foust has never failed to complete a project, nor have any of his designs been subject to litigation. None of the multiple state agencies where he has been licensed as a professional engineer the past 26 years has received a single complaint in connection with his work.

Glenn Foust, PE (AK CE-10859), Project Manager, Mr. Foust has 29 years of professional experience providing a wide range of planning, design, construction, and support services for municipal clients throughout the Alaska and Pacific Northwest regions. His planning work focuses on practical solutions, tailored to the specific needs of the community, that consider such issues as initial cost, long-term O&M costs, ease of maintenance, and reliability. Design experience includes: water source, treatment, conveyance, storage, and distribution facilities; wastewater collection, pumping, transmission, lagoon and wetland treatment, and disposal; storm water handling, cleanup, and disposal; roads and trails; wetland enhancement and mitigation; municipal and industrial solid waste landfills, and a full range of site development projects. Mr. Foust's designs emphasize high end-product value, functionality, low life cycle costs, and aesthetics.

<i>Project Role</i>	Project Manager
<i>Relevant Project Experience</i>	<ul style="list-style-type: none"> ▪ Alcantra Area Development Plan. Project Manager for Department of Military and Veterans Affairs plan requiring the coordination of multiple state defense forces and agencies to: ascertain planning priorities; establish access, building, utility, and training area requirements; and gain military acceptance for proposal to optimize utilization of an undeveloped 320-acre site.

- City of Ambler Water Treatment Plant. Project Manager for full scale plant in a remote, arctic location. Includes new building, site work, water process facilities, heat add systems, booster pumping, circulation pumping, hydronic heat, and backup power systems.
- Ambler Washeteria and Office Remodel: Project Manager for remodel of existing two-story City office building with a floor level addition to house a new washeteria. Remodel included roof and foundation replacement. Existing rotted timber foundations were replaced with low profile, adjustable foundation system for frost-susceptible soils. Entire building refurbished to a like-new condition with addition of a 400 square foot washeteria.
- Ambler Well. Project Manager for gaining regulatory approval, equipping and protecting a previously drilled well. Approval required testing and hydrogeologic evidence to establish no influence from surface water and other contamination sources. Equipment included pump, motor, switching gear, valves, piping and controls to connect to the system. Protection required casing and topographic modifications to prevent/control damage from river ice movement during breakup.
- Kotzebue Vortac Lake Water Source—Project Manager for project to establish Vortac Lake as the City's backup water source by stabilizing Vortac Dam and installing a gravity-fed water intake. Stabilization required geotechnical modifications to control erosion and localized slope failures. Intake required penetrating and protecting the dam's frozen core to install an innovative, level-adjustable inlet structure that can be
- Holy Cross Master Plan--Project Manager for a water and sewer master plan to qualify capital improvements for ADEC-VSW and ANTHC funding.
- Karluk Sanitation Facilities Master Plan--Project Manager for comprehensive community plan to identify, characterize, prioritize and recommend capital improvements for public funding.

Education

- M.E. Water Resource Management BYU, 1983
- B.S. Civil Engineering BYU, 1983

References

- Scott Karner, Project Manager, Dept. of Military and Veterans Affairs (907) 428-6728
- Derek Martin, City Manager, City of Kotzebue (907) 442-5202
- Chris Fehrman, Project Manager, ANTHC (907) 729-3561

3. PROPOSED KEY PERSONNEL

Project staffing is essential to delivering the quality of service necessary to execute a successful project. We have a team of professionals highly qualified and ready to do just that. Following are brief profiles of proposed key personnel available for this project.

Larsen Consulting Group

Dave Coolidge, PE (AK CE-8474), Project Engineer / LCG COB Projects Client Liaison, Mr. Coolidge, an Alaska-born engineer, has over 27 years of experience in the delivery of engineering projects throughout Alaska. His work has included both private and public projects involving planning, site development, roadways, airport, railroad, stormwater management, on-site water/wastewater systems, utilities, sanitation/solid waste and a variety of modal/facility projects throughout Alaska. He has managed and designed major projects for a variety of clients, including Municipality of Anchorage, State of Alaska, U.S. Army Corps of Engineers (USACE), Alaska Air National Guard (ANG), Ted Stevens Anchorage

International Airport (TSAIA), National Oceanic and Atmospheric Administration (NOAA) and the National Park Service (NPS). His project management experience includes scoping, contract management, schedule preparation and budget monitoring. As a design engineer, Mr. Coolidge performs site investigations, preliminary engineering studies, final design bid documents, agency permitting, contract administration and construction services. His federal experience includes numerous Design-Build (DB) projects under the USACE program, including both writing of technical requests for proposals (RFP) for USACE as well as being the civil lead on multiple A/E teams involving development projects at various DoD installations in Alaska. A LEED Accredited Professional, Dave is experienced in working effectively with Federal, State, Municipal and Local stakeholders to ensure successful project delivery with cost effective and sustainable solutions.

<i>Project Role</i>	Project Engineer / LCG COB Projects Client Liaison
<i>Relevant Project Experience</i>	<ul style="list-style-type: none"> ▪ Bethel Water and Sewer System Improvements. Served as Project Manager for Utility Manhole project and Project Engineer for the Bethel Heights Loop ABC water system improvements. These projects included water, sewer and plant utility improvements for the City of Bethel. Submitted 100% plans in 2011. Currently managing the Wastewater Treatment Facility Improvement project. Addressing USDA comments to the PER/ER final documents for the Lagoon and Water Loop projects and developing a design approach for the preferred Lagoon alternative. ▪ City of Ambler Water and Sewer Projects. Served in both Lead Project and Project Manager roles for over \$6 million in sanitation improvements since 2005. Work included new treatment plant, washeteria upgrades, water and sewer main loops, AVEC heat recovery and other community improvement projects. Dave is currently providing ongoing CA and technical support to ANTHC for water treatment plant, AVEC waste-heat recovery, a 2-cell facultative lagoon, a new sewer lift station and force main. Lagoon Cell 2, water treatment plant and heat recovery work will continue during summer/fall 2012 construction season. ▪ AVCPRHA Site Surveying & Civil Engineering Term Contract. Dave has served as Project Manager for this ongoing multi-year IDIQ term contract since 2005. LCG has completed projects in over 30 communities in the Y-K region since 2005. Services include site assessment, surveying, platting, site and utility design, grading, roadway and subdivision design in support of AVCPRHA housing development. The FY 2012 program included six villages currently wrapping up Final Design phase. The new FY 2013 program includes thirteen villages currently in schematic design phase. ▪ Kotzebue Raw Water Pipeline—Lead Project Engineer and Project Manager for over 9,000 feet of 8-inch raw water line from Vortac Lake to the City Water Plant to replace a failing 6-inch diameter line supported on steel piling that was severely frost jacking. LCG evaluated construction options for the replacement and selected a direct bury approach with a berm across the floodplain to both protect the pipeline and allow O&M access. Design included a 600 foot pipeline leg to Vortac Lake for a backup water source. ▪ Kotzebue Water Tank--Project Manager for the rehabilitation of a 1,500,000 gallon welded steel water storage tank. Design included: new supply, return and overflow piping; structural repairs, floor welding, new interior and exterior roof coating systems, a cathodic protection system and new appurtenances. ▪ Kotzebue Sewage Lagoon Cell 3 Improvements. Project Manager for this USDA RD funded project that included 1300 LF of sewer transfer piping and completion of the Cell 3 Lagoon. Provided construction documents, Agency permitting and CA services. Final Completion and ADEC Approval to Operate was obtained in September 2009.
<i>Education</i>	<ul style="list-style-type: none"> ▪ B.S., Civil Engineering, University of Colorado, Boulder, Colorado, 1985 ▪ 30+ graduate credit hours toward Master of Civil Engineering, University of Alaska, Anch.
<i>References</i>	<ul style="list-style-type: none"> ▪ Bill Arnold, Utilities Foreman, City of Bethel (907) 543-1957 ▪ Abe Palacios, Planning Manager, AVCP Regional Housing Authority (907) 543-1347 ▪ Eric Hanssen, Project Manager, ANTHC (907) 729-3620 ▪ Derek Martin, City Manager, City of Kotzebue (907) 442-5202

John D Hayden, PLS (KY 3101, NH 261, AK 12831), Chief of Surveys, Mr. Hayden has over 45 years of land surveying experience, including 38 years as a registered professional land surveyor. Mr. Hayden is a proficient surveyor and has completed subdivisions of lake and ocean front parcels, subdivision feasibility studies based on soils, topography and vegetation, project planning, scheduling and control. He has an extensive background in research. Since April 2005, Mr. Hayden has been employed by LCG as Chief of Parties, overseeing coordination of field activities and office procedures, performing plat checks and research. In addition, he has submitted numerous plats to DNR and local platting boards, the majority of which have been recorded.

<i>Project Role</i>	<ul style="list-style-type: none"> ▪ Chief of Surveys
<i>Relevant Project Experience</i>	<ul style="list-style-type: none"> ▪ City of Bethel Water & Sewer Improvements: 2009-2011, Completed detailed as-built surveys of portions of Water Loops A-B-C. Researched existing easements to identify areas where there are no easements and prepare documents for those sections of water line. ▪ City of Bethel Ridgecrest ROW Improvement: 2011, Performed a record survey of the north end of Ridgecrest Drive and established the new edge of ROW for future improvements. ▪ City of Bethel Small Boat Harbor, 2011-Ongoing, In the process of completing a record survey and site plan of the Bethel Small Boat Harbor, which involves combining USS Plats, US Corps of Engineer Plats and private surveys and mapping existing conditions within the Small Boat Harbor. ▪ Cordova, Alaska. 11/17/09, Completed a topographic hydrographic survey for the re-alignment of the Alaganik boat launch site for the US Department of Agriculture Forest Service R-10 Alaska Region. Bathymetry transects were taken every 150 feet for ¼ mile up-stream and down-stream of the current boat ramp. ▪ Adak Island, Alaska. Completed surveying, mapping and platting services to retrofit a 183-lot subdivision to an existing community. Required extensive research of military base records and government archives; close comparison of record information, utility maps, aerial photos and surveyed above-ground features; and close coordination with land owners and community leaders. ▪ 2005-2011 Completed more than 50 surveys in areas throughout Alaska mapping record information and topographic details such as rivers, slough, lakes, roads, and easements.
<i>Education</i>	<ul style="list-style-type: none"> ▪ Legal Procedures for Court Cases ▪ Somerset Community College, Somerset, KY, 1985 ▪ Photogrammetry & Geology, Henniker College, Henniker, NH, 1968 – 1970 ▪ Forestry & Surveying, Paul Smith College, Paul Smith, NY, 1960 – 1962
<i>References</i>	<ul style="list-style-type: none"> ▪ James Kaercher, President, KAE, Inc., Anchorage, AK 907-276-2176 ▪ Bubba Palacious, Planner, AVCP-RHA, Bethel, AK (907)-543-3121 ▪ Orin Herson, Owner, Oregon Woods, Seattle, WA (541) 517-8998

4. WORKLOAD & RESOURCES

With our depth of in-house resources and experience, LCG staff can efficiently accomplish the required work. Additional staff can be assigned to this project if needed to guarantee timely completion of project tasks. In fact, our team members work flexible schedules, including overtime, to ensure projected or fast track time frames are met. If this project is delayed for reasons beyond our control, resources are shifted

to other ongoing work and will be available and committed to the project when the work resumes. If selected, *LCG guarantees we have the resources and capacity to meet project expectations, including accelerated schedules and reassignment of personnel, as necessary.*

D. HISTORICAL PERFORMANCE

1. STATEWIDE RURAL EXPERIENCE

LCG has successfully completed over 875 remote and urban projects, working in more than 175 communities from one end of Alaska to the other. Projects typically include both design and construction services.

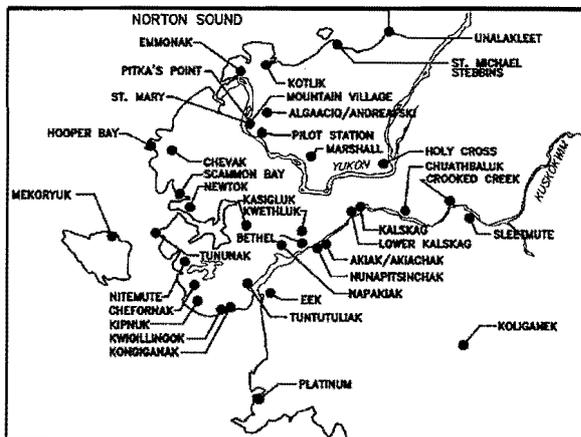
We have extensive experience working with Alaska infrastructure projects including commercial buildings, medical facilities, community centers, schools, housing, water treatment and distribution, roads and streets, storm drainage, sewage treatment and collection, solid waste collection and disposal, bulk fuel facilities and waterfront structures.

LCG designs for the cold region environments with emphasis on openness and lighting, energy efficiency, ease of construction in the short construction seasons and handicap accessibility.

We are experienced with specifying building materials that are low maintenance and will perform in the adverse weather conditions. LCG has extensive experience in the design and construction of commercial and community facilities in rural Alaska and have the capability to take projects from concept design through final construction and start up.

In addition, LCG has extensive experience with the design of foundations systems for all areas of Alaska including a patented piling system, adjustable post and pad system, insulated pads, refrigerated systems, thermo-siphons, thermopiles and conventional concrete footings. We have used all of them in the past, performed studies on them, know their strengths and weaknesses, and can utilize the appropriate system for the project.

2. REGIONAL EXPERIENCE



Although located in Anchorage, LCG specializes in rural Alaska infrastructure projects. Over 95% of our work is performed outside the municipality, including numerous projects within the YK Delta region. *LCG has:*

- Worked in more than 45 communities in the YK-Delta

- Has substantial Bethel Experience including work for the following clients:

- ◆ AVCPRHA
- ◆ City of Bethel
- ◆ YKHC
- ◆ LKSD

Following are descriptions of two current LCG projects in Bethel.

AVCPRHA REGIONAL OFFICE BUILDING

Client: AVCPRHA

Anticipated Project Cost: \$12,000,000

Period of Performance: 2008-ongoing

Reference: Joe Killeen, (907) 543-1366

Project Manager: Wallace Swanson, Architect

Description: LCG is in the construction administration phase for this 30,000 square foot two-story office building for the Association of Village Council Presidents (AVCP) Regional Housing Authority in Bethel, Alaska. This

building will serve as the regional headquarters for AVCP and will include staff offices, conference center with kitchen, and an employee wellness center.



The building is sited to take advantage of natural lighting and views. Interior partitioning uses a movable wall system, providing a long-term yet flexible office layout. Walls systems, including interior doors and windows, are pre-engineered and pre-manufactured to minimize construction waste. The design includes energy conserving state-of-the-art mechanical and electrical systems to generate, distribute and retain heat.

**ALASKA HOUSING FINANCE CORPORATION
ADMINISTRATION FACILITY DESIGN/BUILD**

Owner: Alaska Housing Finance Corporation
Contractor: Wolverine Supply, Inc.
Estimated Construction Cost: \$1 Million
Period of Performance: 2011-Ongoing
Reference: Ray Rouzan, Project Manager;
rouzan@ahfc.us, 907-478-2432
Project Manager: Wallace Swanson, AIA
Consultants: HZA



Description: LCG provided design and construction administration services for the AHFC Bethel Administration Facility. The 4,500 square foot facility provides office, meeting room and workshop. LCG was responsible for designing the site and ensuring the building would meet the needs of its owner and end users. This included surveying, permitting and planning coordination with the City of Bethel. LCG also assisted in community meetings for approval of the building in a residential neighborhood.

3. REPRESENTATIVE PROJECT EXPERIENCE

LCG has successfully completed hundreds of water and sewer projects for rural communities throughout the state. LCG specializes in public sector A/E services for Alaska communities with recent, relevant experience handling concurrent planning, design, materials procurement, and construction projects. Our team is committed to the development of cost-effective, well-constructed, public water and sewer systems.

Following are representative water and sewer projects recently completed by our firm.

CITY OF BETHEL WATER & SEWER PROJECTS

Estimated Construction Cost: \$30 Million
Engineering Fees: \$550,000
Period of Performance: 2009-present

Contact: John Sargent, Grant Development Manager (907) 543-1386

Description: LCG was contracted by the City of Bethel to complete a variety of public works projects for the City, primarily in the civil engineering and survey arenas, involving studies, designs and surveys. LCG prepared preliminary engineering and environmental reports for the City to upgrade and expand their water and sewer facilities to serve the City's needs over the next 25 years.

Projects include:

- Replacement of three mainline water loops for a total of approximately 34,000 linear feet of circulating water main.
- Water service modification and reconnections.

- Upgrades to the water treatment plant to accommodate new mainline pumps, valves, meters and appurtenances.
- Hydrant distribution and replacement.
- Replacement of force main, gravity sewer and manholes.
- Sewage lagoon and wetland treatment systems analysis and design.

Design challenges included extensive ROW, easement and property ownership issues for existing utility mainlines. Our survey team performed a thorough title and property ownership analysis of all affected lots. The new utility mainline locations were adjusted accordingly and easements were secured in required locations.

ALCANTRA AREA DEVELOPMENT PLAN

Owner: Dept. of Military & Veteran Affairs
Client: Alaska Department of Transportation & Public Facilities
Estimated Construction Cost: N/A
Study Cost: \$300,000
Period of Performance: 2011-Ongoing
Reference: Scott Karner, Project Manager, 907-428-6728, scott.karner@alaska.gov
Project Manager: Glenn Foust, PE
Consultants: Earthscape

Description: Alcantra Area Development Plan is a combined planning and design process addressing the needs of multiple state defense and emergency response agencies relocating to an undeveloped 320-acre parcel near Wasilla. Mr. Foust leads a multi-disciplined planning team responsible for working with the future tenants (Alaska Army National Guard, Office of Veterans Affairs, Alaska Military Youth Academy, State Defense Force, Division of Homeland Security, State Emergency Operations Center) and outside groups to develop a comprehensive plan that fits the property, meets the logistical and security needs of the tenants, and can be accomplished with minimal environmental and community impacts.

KOTZEBUE CITY ENGINEER TERM SERVICES

Owner: City of Kotzebue
Construction Cost: \$25 million
Period of Performance: 2002-2009
Contact: Derek Martin, Dir. of Capital Projects - (907) 442-5202

Project Manager/Engineers: Glenn Foust, PE, Dave Coolidge, PE, Andrea Stancliff, PE
Project Structural Engineer: Danny Graham, PE

Description: LCG was contracted to serve as the City Engineer for the City of Kotzebue, a community of just over 3,000 residents and the hub for the Northwest Arctic Borough. LCG has completed numerous projects for Kotzebue, primarily in the civil engineering and survey arenas. LCG prepared a Sanitation Utilities Development Plan for the City to upgrade and expand their water and sewer facilities to serve the City's needs over the next 25 years. Over 25 public works projects totaling more than \$50 Million have since been completed.

AMBLER WATER & SEWER IMPROVEMENTS

Owner: City of Ambler
Client: ANTHC
Estimated Cost: \$6 million
Period of Performance: 2005-2012
Project Manager: Glenn Foust, PE, Dave Coolidge, PE
Contact: Chris Fehrman, PE, ANTHC Project Manager - (907) 729-3561

Description: Ambler's sanitation-related work consists of over \$6 million in community infrastructure improvements. In August 2005, ANTHC asked LCG to take over the Ambler projects—which had languished for a number of years—and see them through completion. Complications, including inadequate programming and the discovery of naturally occurring asbestos in area soils, had mired the Ambler work to a standstill and prompted the previous A/E firm to quit the job.

LCG stepped in, coordinated with the Ambler community, established asbestos-handling procedures to meet safety and regulatory requirements, value-engineered changes to previous designs, designed new facilities, obtained regulatory approvals, and successfully implemented necessary improvements. Engineered improvements included: City office remodel; washeteria; sewage lagoon and lift station; water well; water treatment plant; water distribution loops; gravity and force main sewage collection systems. In addition to project planning and design, LCG has provided ongoing construction administration services for each project.

SANITATION MASTER PLAN – KARLUK

Owner: Native Village of Karluk
Client: Alaska Native Tribal Health Consortium
Estimated Cost: \$73,000
Period of Performance: 2005-2006
Project Manager: Glenn Foust, PE
Contact: Parke Ruesch, (907) 729-3600

Description: This project was a joint effort with ANTHC and VSW to develop a comprehensive plan addressing existing and future sanitation needs in the community. The Karluk Sanitation Master Plan was a village-wide assessment of existing facilities with emphasis on the water treatment plant, storage, and distribution components of the water system. The entire community was surveyed. The plan also evaluated the wastewater system, including the facultative lagoon, percolation cell, and lift station. This evaluation recommended alternatives for improving and funding sanitation systems to meet current and future demands on



the basis of community benefit, capital cost, operation and maintenance costs, regulatory compliance and permitting. It evaluated projected demands and resource constraints--then provided a detailed strategy, Capital Improvement Plan and Business Plan for implementing sanitation improvements.

SANITATION MASTER PLAN – HOLY CROSS

Owner: City of Holy Cross
Estimated Cost: \$100,000
Period of Performance: 2003-2005
Project Manager: Glenn Foust, PE
Contact: Pierre Costello, ANTHC Project Engineer – (907) 729-3534

Description: The Holy Cross Master Plan delivered a comprehensive engineering evaluation and business plan addressing long-term sanitation and financial concerns in the community. Detailed utility operations records enabled an accurate water supply and delivery analysis by the team that pinpointed problems and found solutions. Specific water, wastewater, and solid waste recommendations were incorporated into a phased, multi-year capital improvement program.

E. PROJECT MANAGEMENT

1. ROLE OF THE PROJECT MANAGER

A key element of any project is accurate and timely communication between the design team and the project stakeholders. This requires good oral and written communications skills, people skills, and the ability to turn ideas into reality through the technical detail provided in the design. It is essential that a single point of contact be assigned to streamline daily communications with contracting and project management staff, oversee the progression of the work, ensure the quality of deliverables and that budget and schedules are met.

The primary duty of the project manager is management. The project manager may also contribute significant technical effort to projects. *LCG has an ongoing training program dedicated to developing the skill sets required by top quality project managers who can successfully direct the technical effort required to produce high quality projects on schedule.*

Primary Project Manager Duties

- Maintain communication with client from initial effort through project completion.
- Communicate with LCG Executive Management regarding project status and performance.
- Manage the project team.

Key Responsibilities

- Develop and maintain project schedules and project budgets.
- Develop and maintain project coordination meeting schedule.
- Manage and supervise technical staff assigned to project.
- Assure quality control procedures are implemented and maintained for each of the technical areas required to complete the job.

- Assure completion of projects within budget | and on schedule.

2. PROJECT PLANNING & EXECUTION

LCG's planning and design philosophy is simple. We entertain diverse ideas and possibilities for win-win solutions, and then narrow the field to **focus on what works best**. We see it as our responsibility to:

- Attain and maintain technical competence,
- Keep project objectives in mind,
- Know the community,
- Pay attention to details,

- Listen to others—be open to fresh ideas and innovations,
- View the issue/problem from the perspective of key stakeholders,
- Select and develop alternatives from a sound base of knowledge,
- Support our clients in realizing their visions,
- Concentrate on simple operational requirements and cost effective operations.

3. PROPOSED SCHEDULE

LCG is committed to meeting the approved schedule and deliver work products within the portions of the overall timeframe we can control. However, it is suggested that the schedule be adapted to fit prevailing conditions *and* meet project completion objectives. For example, it may be advisable to schedule the site/client visit with Bethel's Public Works staff so as to time it with key operations (lagoon pumping, water tank cleaning, etc). It also seems advisable to coordinate activities and information requests with those doing related work, such as a cost of service and rate study, to streamline the process and reduce workload on City staff.

The above notwithstanding, we are prepared to meet the requirements of an aggressive project timeline as required. Our schedule commitments are as follows:

Task Item	LCG Commitment
Schedule Site/Client Visit	Upon receiving Notice To Proceed
Review Material, Prepare Information request	Two weeks from site/client visit
Process received information	Two weeks from receipt of complete set
Conduct Analysis, Develop Alternatives.....	Six weeks
Prepare & Submit Technical Memorandum	One week
Make City-suggested corrections	One week from receipt of comments
Schedule Council Presentation	

4. INTERACTION AND COORDINATION

Proactive project coordination with City of Bethel staff will be important during development of the water and sewer master plan addendum. LCG will work closely with Bethel's Public Works staff

to be certain that necessary project information is obtained early in the planning process and reflected in the prioritization of proposed capital improvement projects.

5. QUALITY CONTROL PLAN

Quality Assurance and Quality Control systems have been outlined and implemented at LCG. These systems include the following elements:

Management Responsibility

The Project Manager has overall responsibility for Quality Assurance & Controls. The PM meets regularly with the project team to review project progress and identify/resolve problems. The Manager ensures the prime contractor implements and enforces a construction site safety plan and hazardous substance response plan to ensure work crew and visitor safety at the construction site. The PM works with the Contractor to ensure all project team members and contractor employees have received the property training and possess the proper licensure/certifications for the duties they perform.

Design and Project Control Systems

LCG incorporate the "2-person rule" in oversight of design drawings and project schedule preparation. The computer design software systems used by LCG also have internal QA parameters that check for design or scheduling errors. Work products are reviewed and discussed by the project team to ensure all team members understand the project specifications and timelines. This adds a third layer of review and checks.

Document Control

LCG's quality plan outlines the designation (project number), use procedures (check out

policy) and filing requirements for design and project documents to ensure that information is kept in a most current format and is readily available for use and distribution.

Submittal Control

LCG's quality plan outlines submittal requirements with checklists to ensure that scope requirements are met, that all submittals are reviewed and that a submittal sheet accompanies each submittal outlining the content, purpose, follow-up requirements and specific notes to the receiver.

Corrective Action Review

Supplementing the project planning and in-progress reviews discussed above, LCG incorporates a corrective action review when problems are identified. Upon project completion a total project review is performed. This includes project closeout reviews for documentation of lessons learned, reviewing the scope and deliverables upon closeout and reviewing the financial outcome of each project. Past performance has indicated when systems have faltered, this element aims to use that experience to improve on existing quality procedures.

Quality Records

All LCG records are maintained electronically with an original hardcopy. Hardcopy files are kept for 7-years. Electronic files are kept indefinitely.

F. COMPENSATION STRUCTURE

Our Work Plan & Fee Proposal spreadsheet is attached to the end of this proposal. This document provides a breakdown by proposed task and proposed project personnel labor category. Also attached is a breakdown of LCG's rate schedule.

Thank you for the opportunity to submit this proposal to provide professional engineering and surveying services associated with the City of Bethel's Water & Sewer Master Plan Update. We appreciate your consideration of our qualifications.

WORK PLAN & FEE PROPOSAL



WORK PLAN AND FEE PROPOSAL

CITY OF BETHEL W&S Master Plan Addendum May 3, 2012 - Revision 0		Civil Engineer Mngr.	Senior Engineer I	Staff Engineer II	Surveyor I	Surveyor IV	Technician I	Technician II	Office Tech I	Office Tech II	Amount
HOURLY LABOR RATES		155.00	155.00	98.00	144.00	77.00	103.00	87.50	98.00	54.00	
I. Master Plan Addendum Tasks											
1	Data Acquisition, Site Visit	24	16	8	4				4	2	8,060.00
2	Information Processing	16	6	16	8		8	16	16	4	10,138.00
3	Analysis and Alternative Development	40	24	32	8		16	12	24	16	20,122.00
4	Presentation of Results, Feedback	24	8	16			16	16	8	24	11,656.00
	Labor:	104	54	72	20		40	44	52	46	49,976.00
	Expenses										6,534.30
TOTAL FEE											56,510.30
TOTAL LABOR HOURS		104	54	72	20		40	44	52	46	
ASSUMPTIONS:											
Three trips will be required. No weather delays.											
Only one information request will be necessary.											
One round of revisions from staff/department review, One round of revisions from Council review.											

**WORK PLAN AND FEE PROPOSAL
Larsen Consulting Group, Inc.**

CITY OF BETHEL				
W&S Master Plan Addendum				
May 3, 2012 - Revision 0				
EXPENSE ITEM	UNITS	QUANTITY	UNIT COST	AMOUNT
I. Master Plan Addendum Tasks				
Round trips between Anchorage and Bethel	Trip	3	614	1,842.00
Per diem meals	Day	6	65	390.00
Lodging	Night	3	150	450.00
Copying & Mailing & Expediting	Binder	15	200	3,000.00
Mark-up at Cost + 15%				852.30
TOTAL EXPENSES				6,534.30