CITY OF UNALASKA
UNALASKA, ALASKA

RESOLUTION 2018-48

A RESOLUTION OF THE UNALASKA CITY COUNCIL AUTHORIZING THE CITY MANAGER TO ENTER INTO AN AGREEMENT WITH HDL ENGINEERING CONSULTANTS, LLC TO AWARD PHASE 1A TASK 1 AND 20% OF PHASE 1A TASKS 2, 3 AND 5 DESIGN FOR THE CAPTAINS BAY ROAD AND UTILITIES IMPROVEMENTS PROJECT IN THE AMOUNT OF $195,868

WHEREAS, the Captains Bay Road and Utilities Improvements Project is an approved component of the City of Unalaska Capital & Major Maintenance Program; and

WHEREAS, Staff publicly advertised a Request for Qualifications to perform the Design of the Project and received three (3) proposals; and

WHEREAS, HDL ENGINEERING CONSULTANTS, LLC, an experienced design firm, was determined through an extensive scoring process to be the most qualified firm to perform the work; and

WHEREAS, funding is available in the Capital Project budget to award Phase 1A Task 1 and 20% of Phase 1A Tasks 2, 3 and 5 of the scope of services for the work.

NOW THEREFORE BE IT RESOLVED that the City Council of the City of Unalaska, Alaska, authorizes the City Manager to enter into an Agreement with HDL ENGINEERING CONSULTANTS, LLC, to perform Phase 1A Task 1 and 20% of Phase 1A Tasks 2, 3 and 5 Design for the Captain's Bay Road and Utilities Improvements Project for $195,868.

PASSED AND ADOPTED by a duly constituted quorum of the Unalaska City Council on July 10, 2018.

Frank Kelty
Mayor

ATTEST:

Marjie Veeder
City Clerk

CITY OF UNALASKA CORPORATE SEAL STATE OF ALASKA

MEMORANDUM TO COUNCIL

To: Mayor and City Council Members
From: Dan Winters, Acting Director, Department of Public Works
Through: Thomas Thomas, City Manager
Date: July 10, 2018
Re: Resolution 2018-48, a Resolution of the Unalaska City Council authorizing the City Manager to enter into an agreement with HDL Engineering Consultants, LLC to perform Phase 1A Task 1 and 20% of Phase 1A Tasks 2, 3 and 5 Design for the Captains Bay Road and Utilities Improvements Project in the amount of $195,868

SUMMARY: In May 2018 Staff let an open public Request for Qualifications for the Captains Bay Road Paving & Utility Extension Project, and three proposals for the work were received. Resolution 2018-48 will award the Phase 1A Task 1 and 20% of Phase 1A Tasks 2, 3 and 5 Design to HDL Engineering Consultants, LLC (HDL) for $195,868.

PREVIOUS COUNCIL ACTION: During the FY 2019 CMMP discussion with Council, a directive was given to the City Manager to move the Captains Bay Road and Utilities Improvement Project to the FY 2019 CMMP. Council also conveyed that they wanted the project "shovel ready" so the project would be ready for application for grants. Council funded this project via the FY2019-2023 CMMP and the FY19 Operating & Capital Budget Ordinance 2018-04, approved and adopted on May 22, 2018. That Ordinance provided $250,000 in initial funding for the work. The CMMP calls for $500,000 in additional funding in FY20 and $750,000 in FY21, however, Staff has been asked to step up the development time frame for this project. To that end, a Budget Amendment Ordinance will come before Council which will request the $1,000,000 in funding set for FY20 and FY21 be brought forward in order to award further phased Project design work to HDL.

BACKGROUND: The Captains Bay Road & Utility Improvements Project consists of approximately 7,000 feet of paving and other improvements from the intersection of Captains Bay Road with Airport Beach Road past the end of the Westward Seafoods facility. 6,696 feet of utility upgrades, utility extension and other improvements will be installed along Captains Bay Road from the Westward facility near the Pyramid Road intersection to the entrance of the Offshore Systems facility where the City Right-of-Way ends.

DISCUSSION: Approval of this resolution is the first step in preparing this project to be shovel ready, which will increase the probability of receiving grants. A Request for Qualifications for design services for the project was sent directly to the major civil engineering firms in Alaska, advertised on the Plans Room and Builders Exchange of Washington and advertised on the City website for 30 days. Three proposals were

received, and a team of City Staff scored them. Interviews were then held with the proposers and a second round of scoring was conducted.

HDL Engineering Consultants, LLC received the highest overall score in both rounds. The other proposers were Jacobs Engineering (CH2MHill) & PND Engineers, Inc. HDL is subcontract Electric Power Systems (EPS), Boreal Controls, Inc. (BCI) and Regan Engineering, and will perform the remainder of the work in-house.

The project design has been phased as follows:

Phase 1A – Scoping, Mapping and other Investigations
Phase 1B – Design
Phase 2 – Construction Services

Phase 1A is broken out as follows:

Task 1 Topo Surveying	$154,478
Task 2 Geotechnical Evaluation	$ 45,522
Task 3 Utility Mapping	$ 68,951
Task 4 Preliminary Permitting	$ 10,100
Task 5 Preliminary Design Survey Support	$ 92,475
Total	$371,526

Staff requested and negotiated pricing from HDL for Phase 1A of the requested scope of services, and the subject Resolution will partially award this Phase 1A work including all of Task 1 and 20% of Tasks 2, 3, and 5 to HDL Engineering Consultants, LLC (HDL) for $195,868 so that work can begin July 2018. Staff is requesting a Budget Amendment to pull forward funding that was set for future years in order to move the project forward to the next phases of design so that construction could begin in 2019. Staff will award the additional phases of the work once funding is secured.

Phase 1A for initial award is broken out as follows:

Task 1 Topo Surveying – 100%	$154,478
Task 2 Geotechnical Evaluation – 20%	$ 9,105
Task 3 20% Utility Mapping – 20%	$ 13,790
Task 4 Preliminary Permitting – 0%	$ 0
Task 5 Preliminary Design Survey Support – 20%	$ 18,495
Total	$195,868

Pricing is not currently available for Phase 1B – Design and Phase II Construction Services as the project is not fully scoped at this time. The expected total of all three phases is approximately $1,250,000.

ALTERNATIVES: The design has been phased in order to control spending and scope creep. Funding for Phase 1 is $250,000 total, with $208,500 budgeted for Engineering Services. Pricing was not requested from the other proposers; however, Staff feels HDL's costs are typical and fair. In addition; each of the proposers provided billing rate tables of which HDL was the lowest.

Council could elect to negotiate with another of the three respondents.

FINANCIAL IMPLICATIONS: The Agreement will pull $195,868 from the Project's budget, leaving a balance of $54,102. A pending Budget Amendment will provide more robust funding, slated for FY20 and FY21, in order to progress from Phase 1A and Phase 1B and move forward.

LEGAL: Not Applicable

STAFF RECOMMENDATION: Staff recommends Council adopt Resolution 2018-48 and award the Phase 1A - Tasks 1 and 20% of Tasks 2, 3, and 5 Design to HDL for $195,868.

PROPOSED MOTION: I move to approve Resolution 2018-48.

CITY MANAGER COMMENTS: I recommend Council approve Resolution 2018-48.

ATTACHMENTS: RFQ, SOQs, Scoring Sheet Summary, HDL Phase 1A Price Proposal, Form of Agreement

Request for Qualifications

Captains Bay Road Paving and Utility Extension

DPU Project No. 19201

Prepared by:

City of Unalaska
Department of Public Works

PO Box 610
Unalaska, Alaska 99685

April 25, 2018

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LIST OF ATTACHMENTS

Attachment A	Site Plan
Attachment B	DRAFT Consulting Services Agreement
Attachment C	Evaluation Score Sheet
Attachment D	Link to References

LIST OF ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ADEC	Alaska Department of Environmental Conservation
ADOT	Alaska Department of Transportation
AKZ10	Alaska State Plane Zone 10
ARV	Air Release Valve
ASCE	American Society of Civil Engineers
CAD	Computer Aided Drafting
GPR	Ground Penetrating Radar
HP	Horsepower
KV	Kilovolt
MASS	Municipality of Anchorage Standard Specifications
MLW	Mean Low Water
NAD83	North American Datum of 1983
NGVD29	National Geodetic Vertical Datum of 1929
NOAA	National Oceanic and Atmospheric Administration
PDF	Portable Document Format
RFQ	Request for Qualifications
ROW	Right of Way
SCADA	Supervisory Control and Data Acquisition

1.0 INTRODUCTION

This is a RFQ by the City of Unalaska Department of Public Works for design services for the Captains Bay Road realignments, asphalt paving, walkways, street lighting, primary electrical extension, communications extension, sanitary sewer extension, potable water extension, drainage and auxiliary work (the Project).

All questions about this RFQ are to be directed only to the Public Works Director and the City Engineer:

City of Unalaska - Department of Public Works
Tom Cohenour, Public Works Director
tcohenour@ci.unalaska.ak.us
907-581-1260

City of Unalaska - Department of Public Works
Robert Lund, P.E. City Engineer
rlund@ci.unalaska.ak.us
907-581-1260

Interpretations or clarifications considered necessary by the City of Unalaska in response to such questions will be issued by Addenda. Addenda will be emailed to all registered potential Respondents and also posted on the City of Unalaska website:

http://www.ci.unalaska.ak.us/rfps

To be added to the registration list published on the City of Unalaska website send an email to:

lgregory@ci.unalaska.ak.us

1.1 PROJECT BACKGROUND AND SCOPE

The following is not intended to be a comprehensive scope or to limit design including innovative and alternative considerations. Rather it is intended to communicate the City of Unalaska's understanding of the Project at this early phase.

The City of Unalaska has about 4,500 permanent residents and supports the largest seafood industry in the U.S. in terms of tonnage. During various seafood processing seasons, the total population may swell to more than 8,000 due to an influx of transient employees hired to work for the seafood processors.

Captains Bay Road is a narrow coastal road that was originally constructed by the U.S. military. It is relatively flat gravel surfaced road with shot rock sub-base from the adjoining cliffs and, in general, is adjoined by shot rock cliff on the inland side and armor stone clad coastline on the shore side. The shot rock sub-base is underlain with bedrock, very shallow in some locations, and there is a shallow bed rock shelf beneath the road at the former coastline or cliff line. Various locations may be underlain with other native soils common to Unalaska some of which can be unsuitable for backfill.

At intervals the terrain opens up at the outlets of various creeks and drainages into wider and flatter areas of which the largest are developed. Captains Bay Road serves as a primary transportation route for Westward Seafoods, North Pacific Fuel, Northland Services, Offshore Systems, and several smaller businesses as well as residential concerns. The section of ROW making up this project is a relatively heavy truck traffic area used by the fishing and support industries. Many of the employees of the industries do not own vehicles and regularly walk along the road shoulder. ADOT traffic counts measured average daily traffic of 1,057 and 2,100 daily vehicle miles traveled in 2013.

The extent of the Project is in Unalaska, Alaska from the intersection of Captains Bay Road with Airport Beach Road to the entrance to the Offshore Systems facility about 13,696 feet southwest of Airport Beach Road. See **Attachment A** Site Plan.

In general, the Project consists of 7,000 feet of paving and other improvements from the intersection of Captains Bay Road with Airport Beach Road past the end of the Westward Facility. 6,696 feet of utility upgrades, utility extensions and other improvements will be installed along Captains Bay Road from the Westward Facility near the Pyramid Road intersection to the entrance to the Offshore Systems facility where the ROW ends.

1.2 STANDARDS

Road geometry is per AASHTO and ADOT. The bid tabs and specifications should be an ADOT format, with Project specific modifications, enclosed within the City of Unalaska's standard bid documents which are based on the ASCE standard construction contracts.

Building codes are the same codes adopted by the State of Alaska. Alaska Administrative Code governs some utilities augmented by Unalaska Code of Ordinance Title 10.

The City of Unalaska has some published standard utility details and strong unpublished preferences from within the individual utilities who will participate in design review. Elsewhere, follow the ADOT standard details or the MASS standards if the City of Unalaska does not have a standard or a preference or cannot provide relevant details from a previous project they prefer incorporated.

Federal grant conditions will be incorporated into the construction contracts in anticipation of additional funding. The City of Unalaska has incorporated these conditions into a specification for inclusion in the supplementary conditions of the construction contract.

1.3 INTERSECTION OF CAPTAINS BAY ROAD AND AIRPORT BEACH ROAD

The intersection of Airport Beach Road and Captains Bay Road is a heavily traveled intersection commonly known as Agnes Beach. The intersection needs to be milled 2" and repaved, and the pedestrian access updated to accommodate an awkward transition from the shore side of Captains Bay Road walkway to the walkway on the opposite side of Airport Beach Road leading west to the South Channel Bridge and Amaknak Island. A right hand turn lane onto Captains Bay Road is desirable if space and topography allow.

1.4 AGNES BEACH TO PYRAMID VALLEY ROAD

Captains Bay Road from Agnes Beach to Westward Seafoods had 35 KV electrical power installed in 2017. There is a 15 KV service extension to the North Pacific Fuel facility, the present termination of electrical services. The 35 KV line installed in 2013 also branches to feed Pyramid Creek Road. Above ground electrical gear is predominantly installed on the coastal side of the ROW and all electrical conductors are below ground.

Communications spares were installed with both the 2013 and 2017 35 KV upgrades. They are City of Unalaska owned. Local telephone and cable TV provider TelAlaska, Inc installed fiber optics cable in their existing conduits in 2017 whose route closely follows the City of Unalaska's electrical conduits.

The work will include paving this section. Anticipate milling the top 12" to 18" of surface course material out and recycling what can't be used as shouldering material and fill elsewhere. The existing sub-base is largely shot rock fill and the remaining surface course material remaining below the milling depth. This material has performed satisfactorily elsewhere, and is analogous to the subsurface conditions on Ballyhoo Road paved in 2013, where no structural failures are evident to this date except noticeable surface wear. Overlay the sub-base with geogrid and 6" to 8" of base course overlain with 4"-6" of Type II Class A asphalt. All joints including the centerline joint are cut joints treated with a penetrating sealer. Return and seal the entire road with a polymer modified fog seal after one year of oxidation.

The asphalt section should be designed for 40 mph traffic; however, local speed limits are unlikely to exceed 30 mph. Provide minimum 12' wide lanes with a 3% cross-slope and 3' shoulders with rumble strips.

Walkways will be installed on the shore side. Walkways will either be curb and gutter with a 2" thick by 6' wide asphalt walkway, or a separated 2" thick by 6' wide asphalt path with the separation made by a 6' +/- wide vegetated drainage swale. 5' concrete walkways will be an additive alternate. Existing above ground or flush electrical and communication utilities will either be relocated or the walkways will meander behind them but these utilities will not be located in the travel or walkways.

30' streetlights will be installed at 200' intervals on 4 bolt pile bases on the shore side. Locate load centers near existing above ground utilities.

The existing drainage structures are a mixture of pipe type culverts which must be replaced. A catch basin is desired at most catches on the cliff side so those areas can also be used as vehicle pullouts or parking for subsistence activities. It is likely that most culverts were threaded through the sewer and water lines; therefore, many are shallow and will likely be replaced at the same diameter with SCH40 steel pipe.

Provide a general straightening and widening realignment of the ROW on the last third of the way to Westward Seafoods.

The sanitary sewer is a 6" diameter ductile iron force main installed in 1989 along the cliff side. There are numerous cleanouts that must be located and raised which is generally done with 24" grade rings and a standard frame and cover. The ARV requires a condition assessment as it may have been installed with galvanized steel pipe.

The water main is 24" Class 52 ductile iron installed in 1989. Numerous fire hydrants and valve boxes need to be raised to grade along the route. One hydrant needs to be checked for leaks and the leak repaired. The ARVs require re-plumbing as they were originally installed with galvanized steel pipe. A blow-off needs to be located then reconfigured with an extension and a Tideflex valve on the discharge. The water main was originally installed with cathodic test stations that have been disconnected and needs to be re-evaluated and abandoned or replaced.

1.5 PYRAMID CREEK ROAD INTERSECTION THROUGH WESTWARD FACILITY TO END OF PAVING

A 500' approach will be paved up Pyramid Creek Road without walkways.

There are numerous private utilities in the Westward Seafoods Facility following and crossing the ROW. It may be necessary to either cut paving short at the facility entrance or provide structure Westward Seafoods can cross in the future such as utilidors or pipe sleeves.

The 35 KV electrical power installed in 2017 ends at the Westward Seafoods Powerhouse at the entrance to the facility. From here, continue a 15 KV electrical

primary in 6" diameter conduit, sized to a future 35 KV system, with one spare. This will replace the current North Pacific Fuel 15 KV service. A retaining structure and guardrail is need above the Westward Seafoods electrical gear on the coastal side near the entrance to the facility.

Continue the communications spares installed with the 2017 35 KV upgrades. They remain City of Unalaska owned. Coordination will be required with TelAlaska and the City of Unalaska, and other providers, as to the preservation and continuation of their service.

The work may include paving this section. Anticipate milling the top 12" to 18" of surface course material out as frost susceptible and recycling what can't be used as shouldering or fill material elsewhere. The existing sub-base is either shot rock fill, alluvial talus or remaining road base remaining beneath the milling which has performed satisfactorily elsewhere as noted previously. Overlay the sub-base with geogrid and 6" to 8" of base course overlain with 4"-6" of Type II Class A asphalt. All joints including the centerline joint are cut joints treated with a penetrating sealer. Return and seal the entire road with a polymer modified fog seal after one year of oxidation.

The asphalt section should be designed for 40 mph traffic; however, local speed limits are unlikely to exceed 20 mph within the Westward Seafoods Facility. Provide minimum 12' wide lanes with a 3% cross-slope and 3' shoulders with rumble strips.

If paved, walkways will be installed on the shore side. Walkways will be roll curb and gutter with a 2" thick by 6' wide asphalt path. 5' walkways would be an additive alternate.

30' streetlights will be installed at 200' intervals on 4 bolt 18" diameter concrete pillar bases set in CEME tube on the ocean side but not in locations that would hinder Westward Seafoods plant activities. Locate load centers near existing above ground utilities. Street lighting terminates at the end of paving.

The City of Unalaska does not have drainage easements within the facility. Drainage pipes would be 18" minimum CPEP. The culvert that Westward Creek crosses through requires evaluation.

The sanitary sewer is the 6" diameter ductile iron force main installed in 1989 and terminating in a lift station located on an easement within the Westwards Seafoods facility. Continue the force main in 6" to 8" ductile iron pipe. Continue a gravity main to the end of pavement to accommodate future development and install service stubs. Service stubs will be typical in developed or developable areas identified by the City of Unalaska. While this Project may tie into the Westward Seafoods existing gravity system, condition assessments are needed, and it may be bypassed.

The lift station valve vault needs to be rehabbed. Valves and check valves are deteriorating. This valve vault is in a manhole but one can't stand up straight in it and maintenance is difficult. The City of Unalaska would prefer a new vault installed but there may not be room for it. During the processing season, this is a busy lift station and with increased flow from North Pacific Fuel and Offshore Systems as well so consider upgrading the pumps from 10 HP to 15 HP.

The water main installed in 1989 terminates in the Westward Seafoods facility near the entrance and becomes a private main. Continue 16" to 18" Class 52 ductile iron from the termination so that the private Westward Seafoods lines become services, and correct any deficiencies in the services identified by the City of Unalaska. Coordinate pipe diameter with the City of Unalaska regarding future development. Adjust all fire hydrants and valve boxes located in the ROW to grade and add new hydrants as necessary.

1.6 END OF PAVING THROUGH NORTH PACIFIC FUEL

There are numerous private utilities in the North Pacific Fuel Facility crossing the ROW.

Continue a 15 KV electrical primary in 6" diameter conduit, sized to a future 35 KV, with one spare. Continue to replace the current 15 KV primary.

Continue the communications spares installed with the 2017 35 KV upgrades. They remain City of Unalaska owned. Coordination will be required with TelAlaska and the City of Unalaska, and other providers, as to the preservation and continuation of their service.

Walkways will be the gravel shoulder. Midway, there is a tight convex corner against a particularly high cliff overhanging the ROW known as "Deadman's Curve". This curve will be improved with a combination of cliff scaling and coastal fill and guardrail.

Provide a general straightening and widening realignment of the ROW between Deadman's Curve and the North Pacific Fuel entrance.

The City of Unalaska has some drainage easements within the North Pacific Fuel facility. Below ground drainage pipes are minimum 18" CPEP. The bridge over Pyramid Creek bears consideration for utility crossings but is fairly new and should not need replacement but could be widened. Evaluate and replace existing culverts as necessary. They will be much more difficult to replace after utilities are installed.

Continue the sanitary sewer force main in 6" to 8" Class 52 ductile iron pipe. Install a new lift station and a parallel gravity system to accommodate the North Pacific Fuel facility and outlying buildings.

Continue 16" to 18" Class 52 ductile iron water pipe and install services. The existing North Pacific Fuel service from Lower Pyramid Creek Road (above) will be abandoned. Install new fire hydrants, valve boxes and ARVs in the ROW as necessary.

1.7 NORTH PACIFIC FUEL TO OFFSHORE SYSTEMS

Terminate all utilities at the entrance to the Offshore Systems facility where the City of Unalaska ROW ends. It is possible that the City of Unalaska elects to make this termination at the end of the North Pacific Fuel facility instead depending on cost and budget.

Continue a 15 KV electrical primary in 6" diameter conduit, sized to a future 35 KV, with one spare. There is an unmarked 4" electrical conduit from North Pacific Fuel to Offshore Systems that the utility may ask to be tied in as a spare.

Continue the communications spares installed with the 2017 35 KV upgrades. They remain City of Unalaska owned. Coordination will be required with TelAlaska and the City of Unalaska, and other providers, as to the preservation and continuation of their service which also ends at Offshore Systems.

Walkways will be the existing gravel shoulder.

Evaluate and replace existing culverts as necessary. They will be much more difficult to replace after utilities are installed.

Continue the force main in 6" to 8" Class 52 ductile iron pipe. Install a new lift station and an influent manhole at the entrance to Offshore Systems to accommodate the facility and nearby residential.

Continue 16" to 18" Class 52 ductile iron water pipe and install services. Install new fire hydrants, valve boxes and ARVs in the ROW as necessary. Provide a new end of the main chlorine residual test station in a heated insulated fiberglass hut. Provide a blow-off at the end of the main.

2.0 SCOPE OF SERVICES

The requested services are as outlined below. The Project is intended to be designed and bid ready before January 1, 2019. Construction will be phased over 2 years.

2.1 PHASE IA – SCOPING, MAPPING AND OTHER INVESTIGATIONS

Perform initial Project scoping and work planning with the City of Unalaska. Enumerate and identify the permits required to execute the Project. The City of Unalaska is not the authority having jurisdiction for any permitting and will apply for and close necessary permits only through the Consultant.

Work with the City of Unalaska to identify and engage the various facility owners and TelAlaska or other potential communication utilities throughout the Project. Property access for utility easements can be difficult, while the City Unalaska is prepared for some acquisitions, they should largely be avoided.

Work with the City of Unalaska to define the standards to be used in the Project for each design element. The purpose is to minimize rework.

Some evaluation of existing pavement in Unalaska is expected at its current state of wear versus the intended asphalt mix.

The existing mapping of the Project limits is cut up and there is not a single base map of the entire Project extent the City of Unalaska can provide. The provided ARC-GIS map is not survey grade, it is incomplete, contains numerous inaccuracies and is absolutely not to be used for any other purpose than preliminary scoping. The City of Unalaska expects to have a 2017 georeferenced high resolution drone aerial survey of the Project limits by July 2018.

Mapping is a function of resolving the existing as-builts into a single map with field surveys of utilities and other features.

1. Survey control is NAD83 AKZ10 Unalaska Survey Control 1994-1995 by Integrity Surveys and NOAA Tidal NGVD29 MLW.

2. Utility mapping will be difficult. There are known utilities we cannot locate in the field without potholing, and coordination will be required with both the public utilities and the private facilities. Condition assessments may need to be performed in the field by various utilities for existing equipment. Recommend sending a field engineer with the survey crew who is experienced in geophysical

surveys and involved in the design to coordinate and interact with the utilities and facility owners directly.

3. Unknowns cost the City of Unalaska in contractor change orders and late delivery of projects. Expect to employ back office research, potholing and GPR to provide an accurate and reliable map. A good example would be running a GPR transect along culvert replacements. If we do not know at bid, then tell the contractor in plain language there is an unknown.

4. Limited bathymetric survey of areas where fill is required for the purposes of fill quantity estimations and permitting.

The soils investigation has three primary concerns. The first is the suitability of the subgrade for paving, the second is the location of bedrock and the third is evaluation of cliffs for scaling.

1. Historically, geotechnical investigations have run from Agnes Beach to the entrance to the Westward Seafoods facility. Test pits were installed in 1982 and again in 2016.

2. The sub-grade in the paved area is expected to be analogous with Ballyhoo Road and the City of Unalaska does not expect to replace the sub-grade material. Some evaluation of the soft cliff side shoulder is warranted. Provide a good and fair way to handle intermittent reconstructions in the bid.

3. In locations where cliff scaling is expected, evaluate the slopes for scaling and stabilization. The rock is not high quality, is frost susceptible and is backed by private property.

4. Excavate test pits to the full depth of utilities on the closest planned pipe to the cliff side where we are most likely to encounter bedrock. From the end of paving to the termination of utilities; the focus of a soils investigation is identifying and communicating depth to bedrock, and identifying suitable backfill and the level of effort required trenching through the material. Avoid contract language that unfairly attempts to cover up deficiencies in the information provided or conversely overthinking the level of information needed.

   Preferable that the individual sent to log pits is an engineer involved in the design so that they can spend time on grade learning the site in more detail than they otherwise could on a site walk. Consider reducing the number of test pits only if GPR calibrated to test pits can reasonably determine the depth to bedrock through shot rock fill.

2.2 PHASE IB – DESIGN

Expect 2 to 3 weeks review periods during Design. The cost estimate should be an ADOT style bid form and be updated continuously.

- Pre-design scope and work plan
- 35% plans, specifications, cost estimate and City of Unalaska review
- 65% plans, specifications, cost estimate and City of Unalaska review
- 95% plans, specifications, cost estimate and City of Unalaska review
- Finalized permits
- Bid plans, specifications, project manual and bid services through award
- Conformed drawings

Limit the number of sheets for clarity, and prepare plans that could be constructed without access to the AutoCAD file.

2.3 PHASE III – CONSTRUCTION SERVICES (OUT OF SCOPE - NEGOTIATED WITH PHASE IA AND IB CONSULTANT OR REBID)

The nature of the consultant services through construction contracting has not been determined. The following roles may be utilized with some combinations of consultants the City of Unalaska deems most favorable to its own interests:

- Construction management
- Construction administration
- Construction back office support
- Construction inspection

2.4 PROJECT TEAM

The City of Unalaska anticipates the following technical support services throughout the Project:

- Single point of contact project management
- Civil engineering
- Surveying
- Pavement specialist
- Electrical engineering
- Powerhouse and process SCADA link controls
- Mechanical process (lift stations and chlorine residual test station)
- Geotechnical engineering
- Permitting
- Inspector

3.0 DELIVERABLES

Anticipate scoping, 35%, 65% and 95% level reviews by the City of Unalaska addressed in the previous section. Written review responses will be provided and review teleconferences held after each iteration as needed. Employ a methodology for checking of City of Unalaska comments and indicating they were addressed or cannot be addressed.

Communication will be primarily through the Public Works Director and the City Engineer who will also facilitate communication with the various utility divisions and private entities.

3.1 DOCUMENTS

Provide a PDF copy of draft documents, four bound hardcopies of the final documents, and one PDF copy provided on CD or flash drive. All drawing files must also be provided in AutoCAD or ARC-GIS and PDF format.

Provide cost estimates in spreadsheet format.

4.0 SELECTION PROCESS

Only one Statement of Qualifications from any individual, firm, partnership, or corporation, under the same or different names, will be considered. Should it appear to the City of Unalaska that any Respondent is interested in more than one Statement of Qualifications for the work contemplated, then all Statements of Qualifications in which such Respondent is interested will be rejected.

This does not preclude a subcontractor from appearing in more than one Statement of Qualifications.

4.1 EVALUATION AND AWARD PROCESS

The Evaluation Team will be appointed by the Public Works Director and City Engineer from among City of Unalaska staff. The entire scoring procedure, including Evaluation Team meetings and scoring materials, will be held strictly confidential until after negotiations are concluded.

All Evaluation Team members will be required to certify that they have no conflicts of interest and that they will strictly adhere to the procedures herein described.

- The City of Unalaska receives the Statements of Qualifications.
- Evaluation Team evaluates the Statements of Qualifications according to established criteria.
- The Evaluation Team will schedule and conduct a brief one hour phone interview with at least the two highest scored Respondents.
- The Evaluation Team re-evaluates the interviewed Respondents according to the established criteria.
- City Engineer reviews final scores and forwards evaluation results to the Director of Public Works.
- Negotiation with the Respondent with the highest scored Statement of Qualifications or, if necessary, the next lower scored responsive Respondent and so on. The Contract will be the Engineering and Related Services Agreement, **Attachment B**. The City of Unalaska will be inflexible with regards to the Contract language. The Scope of Services, Schedule and Fee for Services are negotiable.

- Director of Public Works forwards evaluation results and the Contract to the City Manager.

- City Manager makes their recommendation to the City Council for Contract award.

The City of Unalaska and the successful Respondent execute the Contract and a purchase order. The purchase order serves as Notice to Proceed.

4.2 CONDITIONS

The City of Unalaska reserves the right to reject any and all Statements of Qualifications and/or to waive any informality in procedures.

This RFQ does not commit the City of Unalaska to award a Contract, or procure or Contract for any services of any kind whatsoever.

The selection of a successful Respondent shall be at the sole discretion of the City of Unalaska. No agreement between the City of Unalaska and any Respondent is effective until the contract is approved by the City Council of the City of Unalaska, signed by the City Manager, and a purchase order completed.

The City of Unalaska is not liable for any costs incurred by Respondents in preparing or submitting Statements of Qualifications.

In submitting a Statement of Qualifications, each Respondent acknowledges that the City of Unalaska is not liable to any entity for any costs incurred therewith or in connection with costs incurred by any respondent in anticipation of City of Unalaska City Council action approving or disapproving any agreement without limitation.

Any perception of a conflict of interest is grounds for rejections of any Statement of Qualifications. In submitting a Statement of Qualifications, each Respondent certifies that they have not and will not create and/or be party to conflicts of interest with any City of Unalaska official or employee, including but not limited to any direct or indirect financial gain and/or gratuity or kickback or through unauthorized communication with City employees or officials not listed in this RFQ before the selection process is complete.

Nothing in this RFQ or in subsequent negotiations creates any vested rights in any person or entity.

4.3 SOQ DUE DATE AND TRANSMITTAL REQUIREMENTS

Statements of Qualifications must be delivered to the email addresses below by **2:00 p.m., local time, on May 30, 2018**.

mveeder@ci.unalaska.ak.us; rwinters@ci.unalaska.ak.us

Statements of Qualifications will be accepted before and on the published date, and until the time specified.

Statements of Qualifications must be submitted in a single email no larger than **5 megabytes**. The email header must clearly identify the Project and the Respondent e.g.

Name of Consulting Firm – Statement of Qualifications for City of Unalaska Captains Bay Road Paving and Utility Extension

4.4 DOCUMENT REQUIREMENTS

Our intent is that the preparation and review of an RFQ is not an onerous task. The recommended size of the Statement of Qualifications is about 5-10 pages not including resumes.

One (1) copy of the Statement of Qualifications must be submitted in an electronic PDF file organized with bookmarks and be printable to standard 8.5" x 11" or 11"x17" paper.

5.0 EVALUATION FACTORS

The purpose of the Statement of Qualifications is to evaluate each Respondent's capabilities for efficient execution of the Project. Evaluation criteria and weight are as follows.

Major Factor	Weight
1. Professional Qualifications	[40]
2. Experience and References	[30]
3. Narrative	[30]
Total	**[100]**

The Evaluation Team will rank each Respondent using a successive integer ranking system for each major factor. An Evaluator Score for each Respondent will be calculated.

$100 - ((Ranking_1 \times \%\ Weight_1 + Ranking_2 \times \%\ Weight_2 + Ranking_3 \times \%\ Weight_3)-1) \times 5$

The Total Score for each Respondent is an average of all of the Evaluator Scores.

The *Evaluation Score Sheet* will be used by the Evaluation Team to score each Statement of Qualifications; **Attachment C**.

5.1 PROFESSIONAL QUALIFICATIONS

The Professional Qualifications section should include:

- A brief description of the number, qualifications and types of key personnel who would serve on this Project including employees and potential subcontractors.
- Identify and furnish resumes of up to four key personnel and subcontractors who will serve in key positions for this project, including specific experience for each person on similar or related projects.
- Billing rates of key personnel in tabular format.

- The location of the home office and the scope of services offered there.
- Any additional information reflecting on the Respondents ability to perform on this Project.

5.2 EXPERIENCE AND REFERENCES

The satisfactory completion of similar projects of equal size and complexity will be an important element in the evaluation.

- Provide information for three (3) projects for which the Respondent has provided services most related to this Project.
- Provide a reference from the above projects that can comment on the firm's professional capabilities and experience. Names, email addresses, and phone numbers of individuals to contact must be included.
- Describe a situation where you provided the best design although it was not what you (or your client) initially wanted to design.
- Describe your best contractor and engineer relationship on a past project, the contracting mechanism and how that relationship benefited the owner.
- Provide a sealed sample Plan and Profile sheet and a sheet of details similar to this project that was prepared before 2018.

5.3 NARRATIVE WORK PLAN

Describe the methodology the Respondent will use to complete this Project for the City of Unalaska. The Narrative Work Plan will later become the basis of the Scope of Services referenced within the Agreement Exhibit "A", **Attachment B**. However; at this stage the City of Unalaska is most interested in each Respondent's methodology and a synopsis of the Plan to demonstrate understanding of local conditions, rather than a comprehensive work plan.

The Narrative Work Plan must not conflict with or supersede the Agreement; however, the Respondent should note any potential conflicts they would prefer to negotiate.

Provide information about the Respondent's availability and challenges associated with completing the work by end of 2018.

6.0 REFERENCES

The information and descriptions provided are for general informational purposes only and are not a substitute for industry knowledge, site inspection and completion of other necessary due diligence by interested Respondents. Respondents must make their own independent assessment of the conditions and may not rely entirely on any representation, description, or diagram provided by the City of Unalaska in preparing their Statement of Qualifications. Various references are provided for informational purposes only at the below hyperlink as **Attachment D**.

References

6.1 REFERENCES INCLUDED

- ADOT Traffic Counts – Traffic count summaries from 2000-2013
- ARC GIS – Current City of Unalaska map of the project extents
- Bid Tabs – Historical bid tab information from the City of Unalaska
- Geotechnical – 1982 geotechnical report and 2016 test pit reports from Agnes Beach to Westward Seafoods facility
- Photographs – Various photographs of Captains Bay Road including a recent drive through video
- 1988 North Pacific Fuel Utility Map – Facility plan including utilities
- 1989 Westward Utilities – Utilities in Westward Seafoods facility
- 1989 Wood Stave Water Line Replacement Drawings – Record drawings for installation of current 24" ductile iron water main
- 1992 Sewer Force Main Drawings – Record drawings for the 6" sanitary sewer force main installation
- 1995 Topography – Aeromap topography from 1995 in AutoCAD format
- 1999 Captains Bay Road Improvements – Fill and realignment project

- 1999 Deadman's Curve Profiles – AutoCAD file with various profiles. Unknown if work was performed.
- 2000 Westward Seafood Fuel Plans – Fuel lines within the Westward Seafoods facility and other utilities
- 2000s Westward Seafoods Utility Photos – Various photographs of open utilities near Westward Seafoods Powerhouse
- 2001 Pyramid Creek Bridge – Pyramid Creek Bridge plans
- 2006 South Channel Bridge Construction – Includes information about utilities in the vicinity of Agnes Beach
- 2011 Paving Planning – Reports with recommendations for paving in Unalaska
- 2013 Pyramid Valley 3-Phase Extension – 35 KV electrical upgrade up Pyramid Valley Road
- 2017 35 KV Upgrade – Plans and surveyed as-builts of the road originally by PND Engineers and modified by contractor from Agnes Beach to the Westward Seafoods facility
- 2017 Paving Estimates – Spreadsheet with some assumed costs
- 2017 TelAlaska Cable Replacement – Information of TelAlaska's communication utility
- 2017 Unalaska Paving Lifecycle Analysis – Paving report with some assumed costs
- 2017 Electric Master Plan – Electrical utility master plan including some information about this project
- 2018 Draft Water Master Plan – Water system master plan including some information on this project
- 2018 Wastewater Master Plan – Sanitary sewer master plan including some information on this project
- 2018 City Standards – Standard details, lift station standard, survey control and construction contract forms
- 2018 Electrical Single Line – Single line diagram of the electrical utility

Request for Qualifications

Captains Bay Road Paving and Utility Extension

DPU Project No. 19201

May 30, 2018

HDL ENGINEERING Consultants LLC

David W. Lundin, PE | Principal Civil & Environmental Engineer
301 West Elmwood Avenue | Palmer, Alaska 99645
907.746.5230 (P) | 907.746.5231 (F) | dlundin@hdlalaska.com

HDL Engineering Consultants, LLC (HDL) is pleased to provide this proposal to the City of Unalaska (the City) for design services to upgrade Captains Bay Road. The planned upgrades require a diverse, multidiscipline team that can help the City refine the scope, address the significant project challenges, and develop a quality set of construction documents. HDL is committed to providing the City with the highest quality work product and is best suited to assist the City for the following distinctive qualifications:

PROVEN TEAM: HDL is a diverse, multidisciplinary firm with the majority of the required key technical personnel in-house. In addition, we have a great relationship with our key specialty subcontractors. This will allow us to deliver a seamless, high quality design for the City.

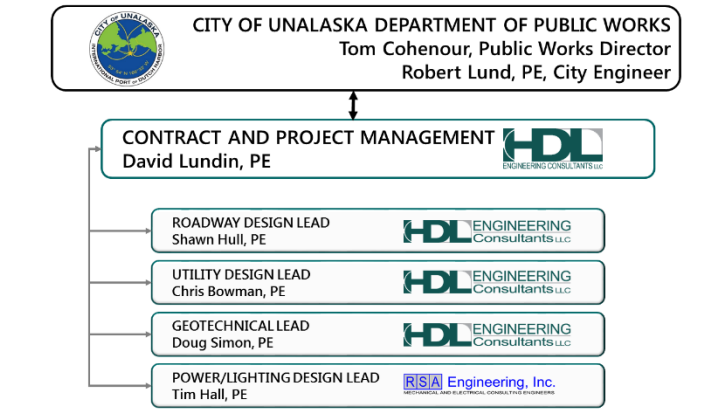
SITE KNOWLEDGE: HDL has conducted significant research on the proposed project. We understand the specific challenges that this project will present. Because of our research and site visit, we will be able to "hit the ground running" on the design, greatly improving the initial deliverables, and identifying key design issues upfront, saving the City time and money.

FLEXIBILITY: HDL works for a variety of government and private clients. We understand that one size does not fit all and collaborate with clients to deliver technically sound designs while considering local preferences, conditions, and resources. This flexibility allows us to incorporate the City's preferences while still offering new perspectives and options.

Professional Qualifications

The proposed project will require a diverse team of professionals to deliver a successful design. Each member of our team is committed to collaborating with the City on the project and acting as an extension of your staff. The HDL team has the right experience and expertise for this project.

The HDL team is prepared to collaborate and accomplish the roadway and utilities designs in tandem. To ensure that we can meet the proposed schedule, we have built our team around a strong contract and project manager and qualified technical leads. The organization chart to the right shows our key personnel and the key specialty team members that will support them. The chart also shows the anticipated lines of communication and authority. Brief overviews of the key specialty team members are included in the organizational chart. Bios for our contract/project manager and key technical personnel follow. Additional information regarding our four key team lead qualifications are included within the resume tab.



KEY SPECIALTY TEAM MEMBERS

ENVIRONMENTAL PERMITTING Heather Campfield	▪ More than 16 years of environmental experience, specializing in NEPA documentation ▪ Works with federal, state, local governments in satisfying environmental permitting, & ecological & biological assessments ▪ Experienced in coordinating public outreach/scoping, & making presentations to public entities
SURVEY & MAPPING Gene LeQuire, PLS	▪ More than 30 years of topographic mapping, ROW surveys, & platting ▪ Survey Project Manager for ROW mapping of Unalaska South Channel Bridge project ▪ Project Field Surveyor for Unalaska East Point/Ballyhoo Road Rehabilitation project
ROW ACQUISITION David Heier	▪ More than 30 years' experience in real estate, appraisal & ROW ▪ Licensed Real Estate Salesperson in Alaska (RECS18875); Bachelor degrees in Real Estate & Construction Management ▪ Served as ROW Agent for DOT&PF & Chief of Land & Resource Management for Matanuska-Susitna Borough
SLOPE STABILITY/ROCKFALL HAZARDS Benjamin George, PE, CEG	▪ 13 years designing slope stability & rockfall mitigations ▪ Manages rope access team of engineers & geologists evaluating conditions & hazards, & observing rockfall mitigation construction ▪ Providing slope stabilization in Ketchikan for DOT&PF Southcoast Region
WATER/WASTEWATER SCADA Greg Smith, PE	▪ More than 25 years' experience in control systems, system integration, & general electrical engineering ▪ Provided SCADA integration/implementation on +40 water/wastewater treatment plants, & ~300 sewer lift stations & water pump stations ▪ In-depth knowledge of all water/wastewater site in Unalaska
INSPECTOR Tom Regan, PE Regan Engineering, PC	▪ 37 years' experience including more than sixty projects in Unalaska/Dutch Harbor ▪ Provided inspection for Captains Bay Road electrical intertie

CONTRACT AND PROJECT MANAGEMENT
DAVID LUNDIN, PE

David brings 25 years of engineering experience to his role as Contract/Project Manager on this project. For the past 18 years, he has led and managed design and construction phase services throughout Alaska, primarily in the Matanuska-Susitna Borough (Borough). David is the President of HDL and Principal-in-Charge of Water/Wastewater, and Mat-Su Transportation, Civil and Site Development, Geotechnical, and Construction Testing services. David will have overall technical and financial responsibility for HDL's performance, and will be in responsible charge of civil engineering. He will be responsible for project oversight, schedule and budget management, and contract conformance. David will provide quality control reviews and serve as the principal point of contact between the City and the project team. With assistance from Shawn Hull, PE and Chris Bowman, PE, David will coordinate and supervise staff and subconsultant efforts, and manage day-to-day activities. David is a working principal, who enjoys project management and assuring delivery of high-quality engineering documents.

Relevant Experience: David has assisted clients with the delivery of over $80 million of capital projects as varied as water storage and distribution, sewer collection and treatment, roadway and airport

development and improvement, and public and private site development. Notable and relevant project management experience includes Phase II of the Southwest Utility System Extension in Palmer. This project included multiple bid packages and projects to construct the 1-million-gallon reservoir, booster pump station, and more than 11,000-feet of water system. David also managed design and construction administration of the City of Wasilla's 2.1-mile Mack Drive Extension/Clapp Street Improvements, which included realignment of an Alaska Department of Transportation and Public Facilities (DOT&PF) road, an anadromous stream crossing, and a new signalized intersection on Knik Goose Bay Road. David also has 12 years managing the design and construction of projects for the City of Palmer's Steel Water Main Replacement Program, totaling over 35,000-feet of water main replacement and more than 6 miles of street improvements at a cost of $26 million.

ROADWAY DESIGN LEAD: SHAWN HULL, PE

Shawn will lead the effort for the roadway design, and has 19 years' experience with the design and management of transportation projects. **Relevant Experience:** Shawn was the Project Manager and transportation design lead for the Seldon Road and Lucille Street upgrades project for the Borough that reconstructed an intersection and approximately 1.25 miles of roadway. He was responsible for the management of several disciplines: survey, civil design, geotechnical, hydrology, electrical, environmental, and Right-of-Way (ROW). Shawn was also the project engineer for DOT&PF's Fairview Loop Realignment and Signal at Knik Goose Bay Road project currently under construction.

UTILITY DESIGN LEAD: CHRIS BOWMAN, PE

Chris will lead the design of water and wastewater utility systems. He has 11 years' experience with development of all manner of water and wastewater utility infrastructure. **Relevant Experience:** Chris has led the design effort on a variety of utility extension projects including large diameter water pipelines, sanitary sewer force mains and lift stations. He has also performed construction inspections for water and wastewater systems, water reservoirs, sanitary sewer rehabilitation, and water and wastewater treatment plants. Chris is familiar with Unalaska's attention to detail and "hands on" project reviews when it comes to their utility systems from his work as project manager for the Chlorine Contact/Storage Tank #2 preliminary design.

GEOTECHNICAL LEAD: DOUG P. SIMON, PE

Doug will lead the geotechnical reconnaissance and evaluation to support the design effort. He has 17 years' experience providing geotechnical design on roadway projects. **Relevant Experience:** Doug has conducted geotechnical evaluations for a large variety of roadway and utility projects. Doug's experience includes ground penetration radar (GPR) evaluations, providing rock slope evaluation and design, and design of retaining structures. He was the lead geotechnical engineer for the Knik River Road, and Seldon and Lucille Road projects mentioned in this proposal.

POWER/LIGHTING DESIGN LEAD: TIM HALL, PE

Tim will lead the electrical design for the project. He has 31 years' experience in planning, design, and construction of electrical infrastructure. He is also a journeyman electrician having worked in the construction field while earning his degree. **Relevant Experience:** Tim has provided electrical design and support on projects throughout the state. He has lead the electrical design effort for several Unalaska projects including Ballyhoo Road Capital Improvements, Unalaska Airport Improvements, APL Dutch Harbor New Crane Power, and Carl E. Moses Boat Harbor Access Road and Utilities. This direct experience provides Tim insight into the challenges the City faces with electrical utilities and the preferred solutions.

ADDITIONAL RESOURCES: HDL has more than 70 professional and technical staff, including 24 licensed professional engineers, 10 engineers-in-training, 7 licensed land surveyors, and numerous engineering, survey, and drafting technicians, certified professional geologists, civil designers, environmental analysts, and administrative support personnel. We will leverage these resources and the depth of our subcontractors to deliver a successful project.

▶ BILLING RATES

The billing rates of the key team members and the staff that will support them is in the table below.

PROJECT TEAM MEMBERS	BILLING RATE
HDL Engineering Consultants, LLC	
David Lundin, PE	$175
Shawn Hull, PE	$155
Matt Coburn, PE	$120
Tim Creary	$110
Chris Bowman, PE	$135
Nicole Yount, PE	$120
Doug Simon, PE	$160
Jeremy Dvorak, EIT	$100
Heather Campfield	$160
Brooke Therrien	$95
Gene LeQuire, PLS	$165
Joseph Zych, LSIT	$95
Bryce Meyer, LSIT	$100
David Heier	$160
Amber Lindstrom	$75
RSA Engineering, Inc.	
Tim Hall, PE	$210
Davin Blubaugh, PE	$150
Frank Silberer	$110
Other Subcontractors	
Ben George, PE	$180
Greg Smith, PE	$175
Tom Regan, PE	$140

▶ LOCATION & SCOPE OF SERVICES OFFERED AT HOME OFFICE

HDL's Palmer office will manage the project. Most of HDL's key personnel/services for this project are in Palmer including the contract and project management, roadway and water/wastewater utility design, and environmental permitting. HDL's Anchorage office will provide geotechnical design and survey services.

▶ DISTINCTIVE PROFESSIONAL QUALIFICATIONS

HDL is a multidisciplinary firm with significant expertise in infrastructure projects similar to this project. Our in-house expertise and relationship with our specialty subcontractors will assure a seamless project.

Experience and References

HDL is proud to provide the following three project examples with similar scope and technical complexity. In addition, we are proud to include Robert Lund and Tom Cohenour as City of Unalaska references. Robert Lund worked with HDL on the Chlorine Contact/Storage Tank #2 preliminary design, and Tom Cohenour worked with HDL while employed by the City of Palmer. They can provide additional information regarding our ability to collaborate successfully with clients.

KNIK RIVER ROAD IMPROVEMENTS

Client:	Matanuska-Susitna Borough
Reference:	Brad Sworts, Capital Projects Division 907.861.7715 / brad.sworts@matsugov.us

Knik River Road (KRR) is 8 miles south of Palmer and pressed between the base of steep mountains and the Knik River. The road provides the only road access to the South Knik River community and lodges at the terminus of the road. The purpose of this project was to address safety and maintenance deficiencies along the roadway with limited funding. HDL worked closely with the Matanuska-Susitna Borough (Borough) staff and stakeholders to evaluate the 11.2-mile corridor prioritized improvement locations.

(1) Bingham Hill (MP 1.9) Reconstruct the horizontal curve to correct insufficient superelevation. Widening the shoulder and side slopes provided adequate clear zone width. The design required careful evaluation of the shallow bedrock below the road and along the side slopes.

(2) Tempra Street (MP 3.7) A rock face near Tempra Street extended to the road shoulder and created rockfall and site distance challenges. The slope was evaluated, cut back, and a rockfall catchment area constructed between the road and slope to alleviate hazards to vehicles.

(3) Scenic Overlook (MP 6.8 to MP 6.9) KRR is used by the tour bus industry to provide tourists a view of the Knik Glacier. They often stop between MP 6.8 and MP 6.9 to view the glacier and scenery. Construction of a scenic overlook area allows buses to stop safely outside the traveled way. This work included gabion walls up to 13.5-feet high to keep the improvements within the existing ROW.

(4) Fire Service Pull-Out (MP 8.0) The Butte Fire Department utilizes a surface water source at MP 8.0 to refill fire trucks. Trucks were traveling 2-miles out of their way to turn around safely. Constructing the pullout enabled the trucks to safely turnaround without significant additional travel and without creating a traffic hazard.

(5) Surfacing (MP 9.7 to MP 11.2) DOT&PF identified the need for the surfacing improvement along the last 1.5 miles or roadway in order to reduce maintenance time and costs. The majority of KRR is a paved roadway; however, the last 1.5 miles was gravel. A 40-mile roundtrip was required for DOT&PF's Palmer maintenance crews and equipment to maintain the gravel portion of this roadway. Surfacing the last 1.5 miles of road reduces maintenance costs and allows a plow truck to provide winter service.

HDL was responsible for management, survey, geotechnical, environmental, preparation of a Design Study Report (DSR), hydrologic and hydraulic design, utility coordination, plans, specifications and estimate (PS&E) documents, and support during construction. Specific services similar to the Captains Bay Road project are surveying a roadway with rock faces along one side, retaining wall design, geotechnical investigation and pavement design, sight distance improvements such as rock cuts and intersection realignments, culvert replacements, wetlands delineation, and roadway realignments.

SOUTHWEST UTILITY SYSTEM EXTENSION, PH I & II

Client:	City of Palmer
Reference:	Greg Wickham, Public Works Superintendent 907.745.3400 / gwickham@palmerak.org

In 2003, HDL helped the City of Palmer develop a wild idea. *With a new regional hospital proposed six miles from the nearest municipal utility, could Palmer extend their water and wastewater systems to serve this large customer?* Over the next 12 years, HDL provided planning and routing analysis, assisted with obtaining funding, surveyed the selected routes, led the ROW acquisition, and performed environmental studies and obtained permits. We designed more than 18-miles of water and sewer pipelines, three sewer lift stations, a water storage reservoir and booster station. The HDL team coordinated the designs with the Alaska Railroad Corporation, DOT&PF, and the University of Alaska. HDL obtained 18 permits and four Alaska Department of Environmental Conservation waivers that reduced the project construction cost to within the available funding. We also negotiated permanent utility easements from 17 landowners without using condemnation. Additional services included providing construction administration, inspection, and material testing without any claims to help bring this wild idea to reality.

During the early stages of the project, the scope of work increased from serving just the new hospital to serving an entire, largely undeveloped region near Palmer with water and wastewater utilities. HDL performed preliminary engineering on two alternate routing options, ultimately selecting a route that was not the City's anticipated route. Overall, Phase I consisted of 6.4 miles of 18-inch water main, 10 total miles of gravity and force main sewer, three sewer lift stations, and an inverted siphon system, which eliminated a lift station. The project timeline was severely constrained because the new hospital needed to be served immediately upon opening. Design of Phase I improvements was completed in just eight months. Construction began in July 2005 and completed in just 15 months including significant portions during the winter. HDL provided construction administration and full-time inspection services.

Shortly after completion of Phase I, HDL continued providing professional services for design of a new water storage reservoir to provide system redundancy to the hospital, and open up additional areas for water service. After reservoir site selection, HDL provided a fast-track design of a 2-mile water pipeline extension and assisted the City of Palmer during negotiations with DOT&PF to add construction of the pipeline into an adjacent roadway project already under construction.

Concurrently with construction of the new pipeline, HDL worked toward design of the new reservoir on land owned by the University of Alaska at their Mat-Su College campus. Because the selected site straddled a section line easement, which typically take up to 5 years to vacate, widening a natural hill was needed to accommodate the tank footprint. HDL performed the complex geotechnical analysis necessary to ensure that the slope would remain stable and support the 1-million gallon reservoir during a large earthquake. HDL's surveyors also assisted by performing a control and boundary survey, topographic mapping, and recording of easements necessary for land conveyance.

As part of the land purchase agreement, the City of Palmer was required to construct an access road and extend the water system to supply the college with water. To facilitate contracting, the final portion of Phase II was divided into two bid packages:

Bid Package 1—Site Preparation and Water Main Extension, which moved more than 225,000 cubic yards of material and constructed 2,200 linear feet of new roadway and 3,600 linear feet of 12- and 18-inch water mains.

Bid Package 2—Reservoir and Booster Station, which constructed the reservoir, booster station, and connecting the college to City water.

When HDL completed construction administration for the reservoir and booster station project, it was the culmination of 12 years of work with a final project cost of nearly $23 million.

SELDON ROAD & LUCILLE STREET IMPROVEMENTS

Client:	Matanuska-Susitna Borough
Reference:	Bob Walden, PE, Capital Projects Division
	907.861.7726 / robert.walden@matsugov.us

In 2014, the Borough completed upgrades and improvements to portions of Seldon Road and Lucille Street north of the City of Wasilla. HDL worked closely with Borough staff through the scoping process to determine the extent of improvements based on the available funding. Major objectives of this project were to upgrade the Seldon/Lucille intersection due to a high crash rate and upgrading Seldon Road to minor arterial standards to meet long-range objectives of becoming an alternative corridor between the cities of Wasilla and Palmer. Funding for the project was through a combination of state grants and Borough general obligation bonds. Total project cost was just under $10 million.

Major upgrades included converting the Seldon Road and Lucille Street intersection from a two-way stop controlled intersection into a modern roundabout, lowering the hill to the south of the intersection on Lucille Street for improved sight distance, and widening roadways to include 12-foot travel lanes and 8-foot paved shoulders along the approaches to the Seldon/Lucille intersection. Seldon Road, from Wards Road to Sweetdream Lane, was upgraded to 12-foot travel lanes and 4-foot paved shoulders and widened ditches. Other improvements included adding a separated, paved pathway along the south side of Seldon Road, new intersection lighting at side street intersections, drainage improvements, gabion retaining walls, and utility relocations. Lucille Street, from Spruce Avenue to Luther Avenue was milled, regraded, and repaved and widened ditches added.

HDL was responsible for management, survey, geotechnical investigation and pavement design, environmental evaluation and permitting, preparation of a Preliminary Engineering Report (PER) and DSR, hydrologic and hydraulic design, ROW acquisition and mapping, extensive utility coordination and preparation of utility agreements, and PS&E design.

▶ COLLABORATING WITH CLIENTS FOR A WIN-WIN DESIGN

The cities of Unalaska and Palmer are similar, in that they spend considerable time studying their problems and determining the best solution based on available information and in-house expertise. Oftentimes, consultants simply design the chosen solution. For the Southwest Utilities Extension project, the City of Palmer staff used their knowledge of engineering design and construction, considered the distance, terrain, and initial construction and operating cost estimates, and determined that a direct route, with nearly 5 miles of water and sewer piping and four lift stations was feasible, and the solution to their problem.

In our response to the City of Palmer's Request for Proposal, HDL identified the need to complete a Preliminary Engineering Report (PER) to satisfy US Department of Agriculture (USDA) Rural Utilities Service funding requirements. We proposed to evaluate briefly three alternative routes to satisfy USDA requirements, and then intended to move forward with the chosen route. However, once work commenced, a different picture unfolded.

The initial route had several technical, environmental, and economic obstacles, including land use restrictions on large parcels of University of Alaska land, Land and Water Conservation Fund, conversion-of-use issues from lift stations within an Alaska State Park, and shallow groundwater table and land use incompatibility associated with crossing commercial gravel mining operations.

The final PER dismissed the "chosen route"; but identified and fully evaluated two feasible routes. The final route was approximately 2.7 miles longer than the initial route, and had technical challenges as described previously. Although the final design was initially not what was anticipated by HDL or by Palmer, the $13.5 million project was designed, permitted, and completed in time for the opening of a new hospital and has been operating relatively problem-free for 12 years.

▶ BUILDING SUCCESSFUL CLIENT RELATIONSHIPS

HDL's business model includes placing young engineers in construction administration and inspection roles. Although they may experience only a few seasons, the education and training they receive and the relationships they build benefit the engineers and clients. One such engineer and contractor relationship is between David Lundin and Matt Ketchum.

David and Matt first worked together in 2003 on a City of Palmer project replacing the water system on Evergreen Avenue between the Glenn Highway and Alaska Street—the busiest segment in Palmer's road system. For construction of this traditional bid-build project, David—who had recently joined HDL—was our Project Engineer and Matt was Wilder Construction's Project Manager. This project was high-pressure, high profile, and fast-tracked. Construction closed Evergreen Avenue during the Alaska State Fair, during the wettest time of the year, and disrupted access to many businesses. Matt and David worked together on issues identified during construction and built a relationship of mutual respect. The $500,000 project was completed on time and for less than the original contract with no major disputes.

The next year, Matt and David had an opportunity to work together on another City of Palmer project, this time to construct two taxiway segments and expand an apron on the Palmer Municipal Airport. A month into construction, several buried drums were encountered during excavation for a taxiway. The drums appeared to be leaking a petroleum product. For many contractors, this would be seen as a "blank check." However, due to the relationship and trust between Matt and David, they were able to work together and minimize the disruption and cost to the project. David was onsite within 10 minutes and provided a time-and-expenses directive to construct a storage site and excavate the 50 drums of road asphalt and approximately 200 cubic yards of contaminated soil. Matt immediately directed all unnecessary personnel and equipment to work in other parts of the project and worked closely with David to limit costs. After receiving three bids for the haul-off and disposal, the total cost of the contamination cleanup was only $43,000.

David and Matt have continued their relationship. At one time, when David was notifying contractors of a project advertisement, Matt asked David who would be the project engineer. When David responded that he would, Matt said, "Ok, then I'll submit a bid." Over the years, David has called on Matt to lend his construction expertise during design development. This collaboration has ensured constructible designs and value-added benefits for the client.

▶ PLAN AND PROFILE EXAMPLE

Attached are examples of plan and profile and detail sheets.

Narrative

HDL has reviewed carefully the detailed list of potential project components, and understands the full scope will be defined after selection of the consultant. Potential challenges anticipated, potential project components, and our general approach to address the challenges are detailed within this narrative section.

▶ GENERAL PROJECT CHALLENGES/APPROACH

Each portion of the project has distinct challenges; however, some items are common to each portion. The following describes those common items and our general approach to addressing them.

SURVEYING & RIGHT-OF-WAY

SURVEY FOR DESIGN: We understand the City's preference to utilize the existing 2017 georeferenced high resolution drone aerial mapping as much as possible. At a minimum, we anticipate the aerial mapping being used in the 35 percent drawings and using some areas for final design. We understand this relativity new process and realize the importance of the ground survey needed to complement the drone and provide quality base mapping. HDL will establish primary horizontal and vertical control using static GPS and differential leveling techniques to tie to the georeferenced aerial mapping. We will establish this permanent control along the entire project corridor and develop a survey control diagram useful throughout the life of the project. We will verify the aerial mapping by performing a GPS survey of the centerline profile for the length of the corridor and cross-sections at half-mile intervals. A ground survey in areas of thick vegetation will be needed to locate buried utilities and densify the mapping in drainage areas.

HYDROGRAPHIC SURVEY: The Request for Qualifications (RFQ) identified two areas where the road will be realigned and the new embankment may extend into the water. These areas will require hydrographic survey for design. Using the existing control, we will use single beam sonar interfaced with RTK GPS to map the ocean bottom for the purposes of fill quantity estimations and to aid in permitting. The data will be checked intermittently using conventional survey techniques. The checked data will be complied with software that accounts for the yawl of the boat and incorporates an electronic tide gauge.

UTILITY MAPPING: Utility mapping is a challenge HDL's survey group has encountered on many design projects. It has been our experience that developing a good relationship with the utility owners and the individuals that provide locates will go a long way. We will meet with each utility at their office and gather any useful utility drawings. We will coordinate with our engineers, the utility locaters, and the potholing crew to locate and survey any unmapped utilities. We will supply a one-man survey crew for this work to save costs. Additionally, we will communicate with the City on a regular basis to report our utility mapping progress or any problems we are experiencing.

RIGHT-OF-WAY SURVEY & ACQUISITION: HDL surveyors will gather all available federal and state land status, tideland, and title information. Our preliminary research identified that Plats 94-34 and 91-22 and US Survey 3588 created most of the road ROW. Review of the documents and aerial imagery show varying ROW widths, adjacent tideland surveys, and possible encroachments into the ROW. Our ROW mapping will identify these factors for consideration in the final design. The final design of the road improvements and the realigned areas in the waterways may require ROW acquisition plats, tideland surveys, parcel plats, temporary construction easements, and legal descriptions.

To realign the road, the roadway will either need to encroach on the ocean or the cliffs. If the roadway is shifted to the cliff side, ROW acquisition will be required. HDL understands that one Native Corporation privately holds most of the property along the proposed realignment, which should simplify acquisition, if needed.

The roadway goes through active industrial facilities. Currently, the location of private utilities through the alignment is not known. Typically, state and federal funding requires all encroachments be permitted and the location documented. The lack of properly permitted and documented encroachments could cause challenges in receiving state and/or federal funding for this portion of the project.

ROW acquisition plats/drawings may be needed for appraisal and acquisition. However, no relocations are anticipated as only vacant land is anticipated to be acquired. HDL generally follows the State of Alaska Right of Way Manual, and recommends the City consider following the manual for potential ROW acquisition.

GEOTECHNICAL INVESTIGATIONS

Our team will use a combination of test pits and GPR to evaluate subsurface conditions along Captains Bay Road, Pyramid Creek Road, and the area of the proposed turn lane on Airport Beach Road. We expect shallow bedrock to have the greatest impact to construction. Test pits will be conducted along the cliff side of the roadway near the proposed vault locations and regular intervals in between. The design of the test pit and GPR program will maximize the information regarding the depth to bedrock.

Using a hand-held Dynamic Cone Penetrometer, we will evaluate the relative strength of the surface course and base course. Samples of the surface course will be collected and laboratory tests performed to confirm the frost susceptibility of the materials. The RFQ has a detailed description of the preferred typical section. Based on our observations, the section is performing well along Ballyhoo Road. HDL will conduct a more thorough inspection of the performance on existing roadways and offer potential cost effective modifications as appropriate.

HDL will evaluate the rock slopes that may be scaled/removed for road realignment. The nature of the fracture patterns will be mapped and recommendations for reducing the potential for falling rocks to affect safety or the roadway. Catchment basins, sloping, benching, or stabilization like rock bolting could be used. If needed, Landslide Technology is available to provide specialty consultation on stabilizing rock slopes.

A Geotechnical Data Report (GDR) will summarize the results of the geotechnical evaluation. The report will include the boring logs, rock fracture mapping, and geophysical results. The GDR will not include recommendations but will be made available as part of the design package so that the contractor is provided all of the available data and the potential for change orders is reduced.

HDL will evaluate the results of the geotechnical evaluation and develop recommendations for the roadway embankment fills, retaining structures, rock slopes, and pavement alternatives. The RFQ provided examples of typical pavement sections that have performed well in the past. If appropriate, HDL will provide alternatives that could improve pavement performance. The selected recommendations will be incorporated into the design but the recommendations memorandum will not be provided with the bid documents.

WATER/WASTEWATER

Locating existing public and private utilities will be a key challenge along the project corridor. Based on the RFQ information, as-built drawings are limited and may not be accurate. Diligence in locating the existing infrastructure will limit the potential for change orders during construction. During potholing operations, HDL will uncover the pipelines and perform a visual inspection. City Water/Sewer personnel indicated that polyethylene encasement is generally all that is required for pipeline corrosion protection. During potholing, we will expose the existing pipelines. If pipes were installed with polyethylene encasement, we will make a small slit in the existing encasement to inspect the pipe visually to ensure that significant corrosion has not occurred. We will repair the breach in the encasement and backfill the pothole. If significant corrosion is found or the pipeline was installed without polyethylene encasement, we will utilize resistance based corrosion indicators to assess the level of possible corrosion on the pipelines. HDL can also employ hydrosonic, leak correlation devices to check electronically for leaks in water pipes/hydrants, if necessary.

ELECTRICAL ENGINEERING

RSA Engineering (RSA) will provide electrical engineering design for roadway lighting, power, and communications utility extensions. RSA will utilize Davin Blubaugh, PE as the Lead Designer and Timothy Hall, PE as the Project Manager, and will assign an in-house peer reviewer as the project progresses.

Additional roadway lighting will be along the road from the intersection at Airport Beach Road to the end of paving. We anticipate that the lighting will consist of 30-foot poles supported by pile foundations similar to the Ballyhoo Road project. The poles will generally be located on the ocean side of the road to avoid problems with shallow bedrock. Poles will be spaced at approximately 200-foot centers and moved as necessary to avoid other utilities. We understand that the City prefers LED cobra-head style roadway lighting luminaires, similar to the Cooper Lighting Streetworks fixtures used on the Ballyhoo Road project, which RSA will utilize as the basis of design. Similar City projects have involved concerns with connections between poles and pole base pile caps, especially concerning substitute connection bolts manufactured in China. RSA will work with the project team to specify the light poles, pole bases and anchor bolts suitable for the project site. In addition, the anchor bolts will be tested and certified to ASTM standards.

The electrical upgrades will include replacing the existing 15kV underground feeder to the North Pacific Fuel facility with a new underground feeder in a 6-inch conduit sized to accommodate a future upgrade to 35kV. New conduits will be run in a common trench with City communications and TelAlaska conduits to facilitate telecommunication upgrades. We understand the City prefers to utilize molded multi-point junctions in below grade vaults for cable connections with a maximum spacing of 1,000-feet or less between vaults. We are also aware the City prefers schedule 40 PVC or HDPE rated for 90° Celsius cable with TRXLP Cable manufactured by Hendrix Wire and Cable for underground systems. These preferences along with other preferences will be the basis of design for the utility extension. The current scope calls for the upgrades to continue from the North Pacific Fuel facility to Offshore Systems facility entrance but is contingent upon cost and budget.

ENVIRONMENTAL

The required environmental permits are not clear since the project has not been defined fully; however, we anticipate the following challenges and approaches.

AGENCY SCOPING: Early coordination is key to avoiding delays due to permitting. Our team will draft an Agency Scoping Plan (Plan) outlining our outreach approach to involving the general public, businesses, and resource agencies throughout project design. The Plan will identify a list of project stakeholders for City review and approval; project description, and purpose and need statement. Informal scoping will be conducted with the agencies that have jurisdiction over natural resources within and adjacent to the project corridor. A scoping letter with a 30-day response timeline will be drafted and mailed to the resource agencies. HDL will collect all comments received and distribute among the team. Early coordination is instrumental in understanding the level of permitting requirements needed later in the project. This approach is strategic in avoiding unnecessary delays to permitting requirements and agency review timelines.

ENVIRONMENTAL PERMITTING: HDL's Environmental Services Group has reviewed the preliminary scope and determined that the following permits may be required: US Army Corps of Engineers Section 404/10 for impacts to wetlands and waters of the US, the Alaska Department of Fish and Game Title 16 Fish Habitat, and the Alaska Department of Natural Resources Temporary Water Use Permit. In addition to permitting, the following agency consultation may be required:

- National Marine Fisheries Service regarding work that has the potential to involve waters within Captains Bay
- The US Fish and Wildlife Service regarding endangered species
- The Alaska Department of Natural Resource regarding Section 106 of the National Historic Preservation Act and potential impacts to known historic resources
- The Alaska Department of Environmental Conservation regarding known contaminated sites in the area of proposed roadway improvements
- Multiagency consultation regarding involvement of potentially navigable waters.

Specialty studies that may be required during preliminary design include Phase I Environmental Site Assessment; desktop review of known cultural/archaeological resources, Essential Fish Habitat Assessment for review by the National Marine Fisheries Service, and wetlands delineation to determine impacts to wetlands and waters of the US.

NATIONAL ENVIRONMENTAL POLICY ACT DOCUMENTATION: Projects receiving federal funds will be required to assess, to the fullest extent possible, that the policies, regulations, and laws of the Federal Government be interpreted and administered in accordance with environmental protection goals. Should the project receive grant funding through Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grant Program, a full suite of environmental investigations, reviews, and consultations will be required to satisfy National Environmental Policy Act (NEPA) requirements per the Federal Highway Administration (the lead federal agency).

HDL's environmental team will work with the City to ensure the environmental documentation is in accordance with any potential federal funding agencies NEPA guidance. The strategy behind this approach is that the documentation could be used for future NEPA analysis, should federal funding be obtained for the project. We understand that it is up to the federal agency whether to adopt environmental analyses and documentation produced outside of a

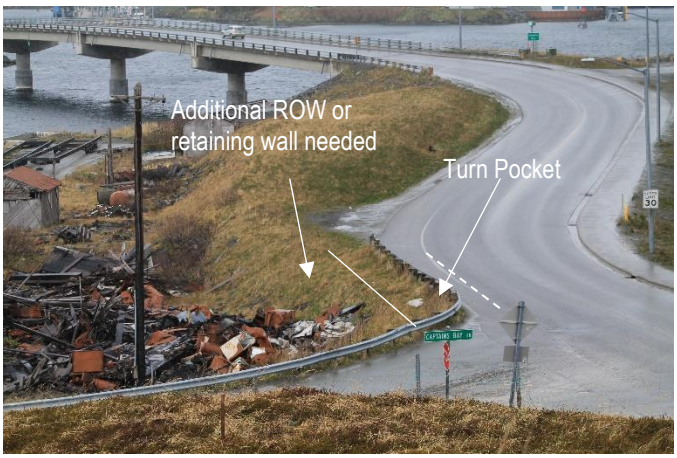
formal NEPA process. It will be to the City's advantage to coordinate early in the design process with any potential funding agencies to outline the project funding approach and define documentation requirements.

▶ LOCATION SPECIFIC CHALLENGES

The following sections describe those challenges that are specific to portions of the proposed project.

AGNES BEACH INTERSECTION

The City desires pedestrian walkway and turn pockets improvements at the intersection of Airport Beach Road and Captains Bay Road. The property where the right-hand turn pocket would be located has multiple owners, which could make ROW acquisition challenging. A retaining structure or steepened and armored slopes could minimize the required width. In addition, a slight realignment of Airport Beach Road through the intersection could develop more room for a turn pocket. There also appears to be a need for either adding a left-turn lane on the westbound approach of Airport Beach Road, or possibly raising the grade of the intersection to lessen the slope.



AGNES BEACH TO PYRAMID CREEK ROAD

This portion of the project could include walkways, realignment, paving, and water and wastewater upgrades. Realignment of the road will generally require either cutting back the rock slopes and/or filling along the ocean side of the road. Challenges with cutting the slopes back will include ROW acquisition, slope stabilization, and potentially bird nesting. If placement of fill is used to realign the road on the ocean side, an Environmental Impact Assessment could be required depending on the funding source. ROW acquisition and permitting have the potential to affect the project schedule. HDL will develop options, fully define the challenges, and design the best option based on collaboration with the City.

Many of the culverts through this section are damaged, blocked, or otherwise in need of replacement or repair. Survey of the ditch and culvert invert will be required to reestablish proper drainage during replacement, particularly in consideration of potential conflicts with existing utilities.

Water and wastewater related work along this section generally consists of assessing, repairing, and upgrading existing features. The key challenge will be locating the existing infrastructure, air relief valves (ARVs), and blowouts. HDL's methodology to address that challenge is on page 6.

The ARVs will be located and exposed along the alignment to determine the condition and functionality. We anticipate the design will include replacing galvanized pipes with stainless steel.

PYRAMID CREEK ROAD THROUGH WESTWARD FACILITY TO END OF PAVING

This portion includes a few key challenges, mostly associated with utility, traffic, and pedestrian congestion. Based on our project reconnaissance, the sight distance to the south is poor for traffic on Pyramid Creek Road trying to enter Captains Bay Road. We believe the Pyramid Road intersection can be upgraded by slight realignment so it intersects more perpendicular to the Captains Bay Road and raising the grade of the intersection. It also appears that the intersection could be adjusted west to assist with the site distance and Pyramid Road grade.

The existing road alignment encroaches on the electrical gear at the entrance to Westward Seafoods. The roadway embankment can be stabilized with a steepened slope that is reinforced and armored or a relatively short retaining wall. A gabion basket retaining wall—similar to those in other areas of Unalaska—could be used.

There is a significant volume of 'uncontrolled' cross traffic along the roadway through the Westward Seafoods facility including trucks backing across the road, forklifts, pedestrians, and carts. Furthermore, roadway improvements should not create shoulders or grade breaks that would limit cross traffic access. Despite not being able to add significant ditching, the roadway will still need to be designed to promote drainage by using features such as shallow drainage swales and flush stormwater intakes.

Water and wastewater extensions will consist of new construction; however, it will not be without its challenges. Locating existing private utilities within the Westward Seafoods area will likely prove difficult without institutional knowledge of the facility, as record drawings are not readily available. During our site visit, City staff indicated that they have a good relationship with Westward's utilities maintenance foreman. HDL's survey and utility locating crew will utilize this institutional knowledge, coupled with a GPR locating system to identify utilities in this area. HDL anticipates running three parallel GPR surveys (one at centerline and each edge) along this portion of the road alignment to assist in locating existing or abandoned utilities. The location and depth of each utility will be confirmed with at least one

test pit per crossing. HDL will work with the City and Westward Seafoods to determine which ones should be connected to the water main extension, or left in-place.

The RFQ anticipates that structural improvements to the roadway section will include digging out 12- to 18-inches of material. This could affect some of the numerous private utility lines that cross the road. Depending on the extent of conflicts, a modified, thinner structural section may be warranted through the facility.

High/fluctuating groundwater levels will also present a significant challenge to constructing the sewer lift stations. The City has expressed a desire to replace the existing valve vault in the first part of this project with something that will provide additional headroom. While we intend to utilize Boreal Controls' standardized lift station enclosure/layout, the location of these facilities in the intertidal groundwater zone vaults may require that they be installed above the finished grade, or utilize extreme waterproofing/anti-floatation measures. These factors will be taken into account during the design phase with ample consultation with the City prior to implementing a proposed design.

END OF PAVING THROUGH NORTH PACIFIC FUEL

The key challenges along this section include realignment and utility crossing of Pyramid Creek. It also includes Deadman's Curve and a general straightening of the road between the curve and North Pacific Fuel.

As discussed previously, the realignment may consist of cutting back the slopes or filling on the ocean side. The conceptual sketch above depicts two options at Deadman's Curve that meet the desired 40 mph rating.

Contaminated soils may be encountered near the North Pacific Fuel facility during the geotechnical evaluation or construction. The subsurface exploration plan and design will include instructions for that contingency.

Utilities will be required to cross Pyramid Creek. Because boring under the creek presents a significant cost, and significant unknowns, we will utilize either a site-built utilidor structure or arctic piping and hang water and sewer utilities on the underside of the existing Pyramid Creek Bridge.

NORTH PACIFIC FUEL TO OFFSHORE SYSTEMS

This portion consists mainly of utility extensions; however, if the estimated cost exceeds the budget, it may not be constructed. HDL can include this design portion as an additive alternative to provide the City with the option to construct as funds allow. We anticipate implementing Boreal Controls' standard chlorine residual test station at the end of the water pipeline, regardless of where it ends up.

▶ TEAM AVAILABILITY

The following table outlines the availability of the team members to work on this project.

PROJECT TEAM MEMBERS	PERCENT AVAILABLE
HDL Engineering Consultants, LLC	
David Lundin, PE	50%
Shawn Hull, PE	50%
Matt Coburn, PE	85%
Tim Creary	60%
Chris Bowman, PE	50%
Nicole Yount, PE	90%
Doug Simon, PE	60%
Jeremy Dvorak, EIT	75%
Heather Campfield	70%
Brooke Therrien	75%
Gene LeQuire, PLS	50%
Joseph Zych, LSIT	65%
Bryce Meyer, LSIT	50%
David Heier	80%
Amber Lindstrom	60%
RSA Engineering, Inc.	
Tim Hall, PE	25%
Davin Blubaugh, PE	40%
Frank Silberer	40%
Other Subcontractors	
Ben George, PE	50%
Greg Smith, PE	60%
Tom Regan, PE	75%

▶ SCHEDULE CHALLENGES

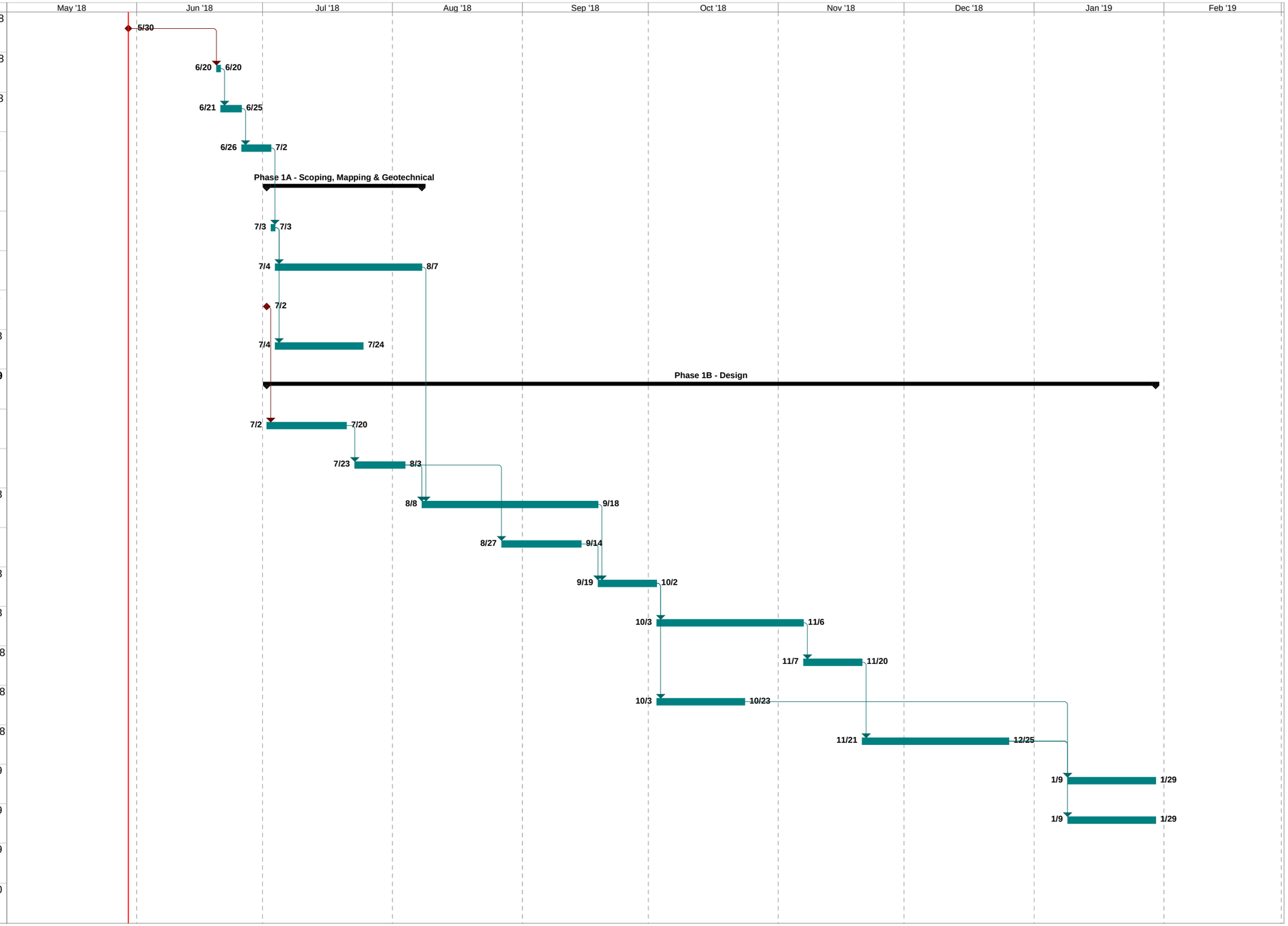
The schedule proposed by the City is aggressive given that the full scope of services is yet to be defined and there could be delays caused by permitting or ROW acquisition. However, HDL has a history of delivering projects on tight timelines. We have developed a schedule (on the following page) to show how we would achieve the desired delivery date. Important keys to design development in the requested timeline are:

- The drone survey is provided no later than July 15 and will be adequate for development of the 35 percent plans.
- The City's review will be limited to two weeks at each deliverable stage.
- Environmental scoping and permitting do not affect the schedule.
- Any ROW can be obtained successfully between the 35 percent and 95 percent design submittals.

Costs savings and efficiencies can be realized for the City if there is flexibility in the required project delivery schedule.

Captains Bay Road Paving and Utility Extension

ID	Task Name	Duration	Start	Finish
1	**Proposal Due**	0 days	Wed 5/30/18	Wed 5/30/18
2	**Notice-to-Proceed**	1 day	Wed 6/20/18	Wed 6/20/18
3	Project Scoping & Work Plan	3 days	Thu 6/21/18	Mon 6/25/18
4	City Review	5 days	Tue 6/26/18	Mon 7/2/18
5	**Phase 1A - Scoping, Mapping & Geotechnical**	**27 days**	**Mon 7/2/18**	**Tue 8/7/18**
6	Kick-Off Meeting	1 day	Tue 7/3/18	Tue 7/3/18
7	Topo Survey & Design Basemap Prep	25 days	Wed 7/4/18	Tue 8/7/18
8	Receive LiDAR From City	0 days	Mon 7/2/18	Mon 7/2/18
9	Geotechnical Fieldwork & Reporting	15 days	Wed 7/4/18	Tue 7/24/18
10	**Phase 1B - Design**	**152 days**	**Mon 7/2/18**	**Tue 1/29/19**
11	35% PS&E	15 days	Mon 7/2/18	Fri 7/20/18
12	City Review	10 days	Mon 7/23/18	Fri 8/3/18
13	65% PS&E/Draft Permits	30 days	Wed 8/8/18	Tue 9/18/18
14	Draft Permits	15 days	Mon 8/27/18	Fri 9/14/18
15	City Review	10 days	Wed 9/19/18	Tue 10/2/18
16	95% PS&E	25 days	Wed 10/3/18	Tue 11/6/18
17	City Review	10 days	Wed 11/7/18	Tue 11/20/18
18	Finalize Permits	15 days	Wed 10/3/18	Tue 10/23/18
19	Final PS&E	25 days	Wed 11/21/18	Tue 12/25/18
20	Advertisement	15 days	Wed 1/9/19	Tue 1/29/19
21	Assistance During Bidding	15 days	Wed 1/9/19	Tue 1/29/19
22	**Construction - Year One**	145 days	Mon 4/1/19	Fri 10/18/19
23	**Construction - Year Two**	130 days	Mon 4/20/20	Fri 10/16/20



Resumes

Shawn M. Hull, PE

Senior Civil Engineer

Shawn has more than 19 years of experience with transportation engineering projects ranging from rehabilitation to full reconstruction. Working closely with clients, Shawn ensures deliverables are submitted on time, and design and construction schedules are met.

Relevant Projects

Seldon Road and Lucille Street Upgrades, Wasilla. Project Manager/Lead Civil Engineer for the coordination and development of the plans, specification, and estimate (PS&E). Served as the point of contact for the Borough Project Manager and had overall responsibility of coordinating tasks between HDL staff and subconsultants. Worked closely with the Borough's construction management consultant assisting with questions and submittal reviews.

Knik River Road, Butte. Assisted the design engineer with design questions and completed Quality Control reviews at the 65, 95 and 100 percent levels. The project included roadway realignment and intersection design for sight distance issues, culvert design, design of a scenic overlook, and geotechnical design of rock cuts and retaining structures.

Fairview Loop Realignment and Signalization at Knik-Goose Bay Road, Wasilla. Assistant Project Manager responsible for coordinating the PS&E design efforts for the realignment of Fairview Loop and signalized intersection and approaches along Knik-Goose Bay Road to connect to the realigned Clapp Street. Prepared a design study report and special provisions for the project. Also assisted in the quality control of the plans, specifications, and estimate documents for the 65, 95, and 100 percent design submittals.

Engineering and Survey Term Contract, Matanuska-Susitna Borough. Project Manager/Project Engineer on assigned project. Currently managing six small roadway projects under this term contract. The status of these projects range from 35 percent design to 95 percent design. The scope of work includes road designs for upgrades to existing roads to improve alignment, drainage, the roadway structural section, and substandard width.

Forest Highway 43, Prince of Wales Island. Shawn helped prepare a Civil Alignment Study in cooperation with a separate geotechnical task order for a 12-mile stretch of Forest Highway 43 located on North Prince of Wales Island. The project objective was to upgrade the existing gravel-surfaced road—originally built in the 1970s for timber resource development—to meet current design standards for geometric alignment. The design upgraded Forest Highway 43 from a 24-foot wide, two-lane road to current highway standards for a 35 mile per hour, 24-foot wide paved roadway with 3-inches of asphalt surfacing. A Value Analysis of the design, and incorporating of approved results, was also included in the contract. Shawn was primarily responsible for the design of the roadway, which included preparation of all the earthwork quantities and estimate and assisting with the preparation of the project specifications.

Sandy Beach Road and Multipurpose Trail, Thorne Bay. Project Engineer for the design a 6-mile stretch of a one-lane gravel logging road into a two-lane, paved road that met design standards for 35 mile per hour. Shawn was responsible for the preliminary investigation research, site visits, roadway and trail design, and preparation of the final documents. He also provided support on the environmental permitting and hydrological analyses that included the preliminary design of 14 fish stream culverts.

Registration

Civil Engineer
Alaska (AELC10903)

Education

BS, Civil Engineering
University of Alaska Anchorage

HDL ENGINEERING CONSULTANTS LLC

Christopher J. Bowman, PE

Senior Civil Engineer—Water/Wastewater

Chris has nearly twelve years' experience with water and sewer design projects including water and sewer mains, treatment facilities, pump stations, and water/sewer system rehabilitation. He has also performed construction inspections for water and sewer mains, water storage reservoirs, facility rehabilitations, and water and wastewater treatment plants. Chris is experienced in the preparation of bid-ready plans and specifications, and coordinating project schedules with contractors and local municipal governments.

Relevant Projects

Southwest Utility System Extension, Phase IIA, Palmer. Lead designer for development and design of a multiple alternative 18-inch water main extension and 1-million gallon at-grade water storage reservoir. Preliminary work included writing a preliminary engineering report, selection of alignments for the transmission main, site selection for the at-grade water reservoir, and operation and maintenance cost estimates for the proposed improvements. Upon receipt of funding, the project was broken into three parts for the transmission main, site preparation of the reservoir/booster station site, and construction of the reservoir and booster station.

Chlorine Contact/Storage Tank, Unalaska. Project Engineer for the preliminary design package of a new 2.6 million gallon welded steel chlorine contact/storage tank and constant pressure booster station to provide Crowley Petroleum Distribution with water during periods of high demand and low storage tank levels. The scope of work included an evaluation of the City of Unalaska's operational data from previous years to establish average potable water demands during the year. A base map was compiled with existing improvements, property information and topographical information.

East Susitna Well Connection, Wasilla. Project manager/engineer of record for a project to connect a new 8-inch water well into the City of Wasilla's distribution system. Chris managed the exploration and well drilling program, which successfully found a high-quality water source. After the drilling program was complete, the City requested that HDL design a water main connection and access/maintenance road to the new water well. Chris managed the design and stayed on during construction to provide engineering services to the City.

Alaska State Fair Sewer Extension, Palmer. Project manager/engineer of record for design and construction of an approximately 5,000 linear-foot-long, 12- and 18-inch diameter gravity sewer main extension to bypass the existing sanitary sewer lift station. Preliminary work included an assessment of the existing lift station and local gravity, sewer pipe network to determine if the fairgrounds could be served by a new large-diameter, gravity sewer main. After preliminary evaluations, Chris oversaw the design of the project, which included a preliminary engineering technical memorandum; design progress submittals; and final bid-ready plans, specifications and an estimate. Construction phase tasks included periodic site inspections, coordination of construction activities between resident inspector, contractor and the Alaska State Fair, preparation of change orders, request for proposals, progress payment reviews and other administrative items.

Sherrod Area Water and Street Improvements, Phases 3 and 4, Palmer. Lead Engineer for the final two phases of Palmer's Steel Water Main Replacement Program. Both phases had very short design schedules and in total, they replaced over 5,000 linear feet of pipe, and upgraded a similar amount of roadway to improve drainage and prepare for future pavement (dependent on funding.) Chris was also the project engineer during construction of Phase 4 of the project.

Registration

Civil Engineer
Alaska (AELC13377)

Certification

Alaska Certified Erosion and Sediment Control Lead

Water Treatment Operator, Level 1

Education

BS, Civil and Environmental Science
Southern Illinois University—Carbondale

HDL ENGINEERING CONSULTANTS LLC

Doug P. Simon, PE

Geotechnical Services Manager

Doug Simon has a broad background in geotechnical engineering and hydrogeology. He has conducted many investigations for roadways, buildings, dams, airports, bridge structures, tunnels, landfills, deep excavations and other civil works projects. His experience includes subsurface characterization for geotechnical and environmental projects including roadways, drainage design, utility construction including water and wastewater, dam safety inspections, geotechnical design of shallow and deep foundations, mines, and geotechnical instrumentation. Doug has significant experience tackling difficult geotechnical problems with innovative and cost effective solutions.

Registration

Civil Engineer
- Alaska (AELC13943)
- Wisconsin (37343)
- Illinois (062-064060)

Education

MS, Geological Engineering
University of Wisconsin Madison

BS, Geological Engineering
University of Wisconsin Madison

BS, Geology
University of Wisconsin Madison

Relevant Projects

Knik River Road, Butte. Managed the geotechnical investigation and development of recommendations for reconstruction of portions of Knik River Road. The project included recommendations for two rock cuts, a gabion wall supported scenic overlook, structural section, pavement, and chip seal design.

Seldon Road and Lucille Street, Palmer. Managed the geotechnical investigation and development of recommendations for reconstruction of Seldon Avenue and Lucille Road. Designed a tiered slope that included gabion baskets and geosynthetic reinforcement to support the roadway embankment without needing to purchase additional right of way and relocate a septic field. The project consisted of approximately 2 miles of roadway and the associated interchange. Nineteen borings were conducted to supplement work that had been done previously.

Sullivan Avenue and Caudill Road Improvements, Butte. Provided geotechnical design of the roadway structural sections for reconstruction of Sullivan Avenue and Caudill Road, and recommendations for surfacing of the pathway along 2-miles of Old Glenn Highway. The project included 27 borings along approximately 2.5 miles of roadway and 9 borings along 2 miles of the Old Glenn Highway near Butte. A sheet pile retaining wall was designed to support the roadway embankment along Bodenburg Creek and resist potential erosion in the future.

Road Armoring Projects, Matanuska-Susitna Borough. Doug is project manager for designing armoring along three roadways in the Matanuska-Susitna Borough. The project teams included surveyors, geotechnical engineers, drafting staff, and environmental scientists. The projects, which are near completion, required coordination between the client, staff, subcontractors, permitting agencies, and stakeholders.

Vallenar Bay Road, Ketchikan. Lead geotechnical engineer for the evaluation of the Vallenar Bay Road project on Gravina Island for the Alaska Department of Natural Resources Division of Forestry. The road consisted of approximately 8.5 miles of forestry road constructed through rock, existing soil and boulder slopes steeper than 1H:1V, and landslides. Provided geotechnical recommendations for stabilizing the roadway through landslides, rock cut relationships, and riprap retaining structures to stabilize steep soil slopes.

Bering Straits Regional Housing Authority Term Services, Savoonga and Gambell. Geotechnical Task Manager and overall Contract Manager led the geotechnical evaluation in Savoonga and Gambell to support design services for fifteen homes and water and sewer utilities for the new housing subdivisions. The geotechnical evaluation included soil borings, laboratory testing of soils, and monitoring subsurface temperatures. Provided recommendations for pad development, and foundation, utility, and lift station design

HDL ENGINEERING CONSULTANTS LLC

Timothy E. Hall, PE

Principal Electrical Engineer

Tim has more than 31 years of hands-on experience in the electrical construction field. He is a journeyman electrician and worked extensively in the construction field while obtaining his electrical engineering degree. Tim is responsible for all project phases from predesign meetings with the owner through final construction phase services. He is experienced in planning, design, specification writing, construction administration, and troubleshooting for a wide variety of projects throughout urban and rural Alaska. Tim has provided exterior lighting designs for projects such as roads, airports, power plants, docks, and buildings of all sizes.

Relevant Projects

Ballyhoo Road Capital Improvements, Unalaska. Tim provided electrical engineering and construction administration services for the design of a new roadway lighting layout for Ballyhoo Road from Tundra Drive to the UMC Dock. The specified light fixtures match roadway light fixtures installed on the Carl E. Moses Boat Harbor Access Road project. In addition, a change to the contract was included at the 65 percent design to replace the existing 35kV underground electrical distribution lines from existing sectionalizing vault A1 so padmount switch S1 including new sectionalizing vault A2 and the replacement of switch S1.

Unalaska Airport Improvements, Unalaska. Tim provided electrical design services for rerouting the Ballyhoo Road and relocation of utilities off airport property to accommodate a runway extension. The electrical design included demolition and replacement of existing underground electrical and telecommunications facilities from padmount switch S1 to sectionalizing vault S2, including the addition of a new sectionalizing vault, a new telecom handhole and several telecom pedestals. Electrical distribution relocation was coordinated with the City's Electrical Department, and telecommunications relocations were coordinated with Telalaska.

APL Dutch Harbor New Crane Power, Unalaska. Tim provided electrical design assistance for the replacement of a diesel powered container crane with a new electrically powered crane. Electrical scope included the extension of a 35kV electrical feeder, a new unit substation, and connection for a 100-gauge crane. The project was designed for phased construction. Phase I included the design of a line extension from the existing 4-way switch that serves APL, the design of a new primary metering cabinet for APL's service, reconnection of the existing 3,500kVA transformer serving APL's power plant, a 35kV line extension to the new APL crane substation and extension of a 3.3kV line from the crane substation to the new crane cable splice box. Phase II design included metering equipment and a recloser to separate APL from the City grid during an event when the crane was providing reverse power to the grid.

Carl E. Moses Boat Harbor Access Road and Utilities, Unalaska. Tim provided electrical design services for lighting the new road to the boat harbor as well as extending power and telecommunications to the new harbor site. The project consisted of providing roadway lighting from the intersection of Henry Swanson Drive and Airport Beach Road to the new harbor site, as well as extending the 35kV underground distribution system and the existing telecommunications systems to the new harbor site. In addition, the electrical design was to size transformers and provide electrical service connections to three switchboards serving harbor float ramps A, B, and C and a new lift sewage lift station. Provisions were designed for future utility extensions to uplands facilities.

Additional roadway extension projects include the Unalaska Marine Facilities Lighting Replacement, King Cove Downtown Loop Design, Eagle River Loop Road Improvements, Anchorage West Dowling Road Phase I and II Upgrades, Glenn Highway Gambell to airport Heights Road Improvements, and Valdez Container Terminal Upgrades.

Registration

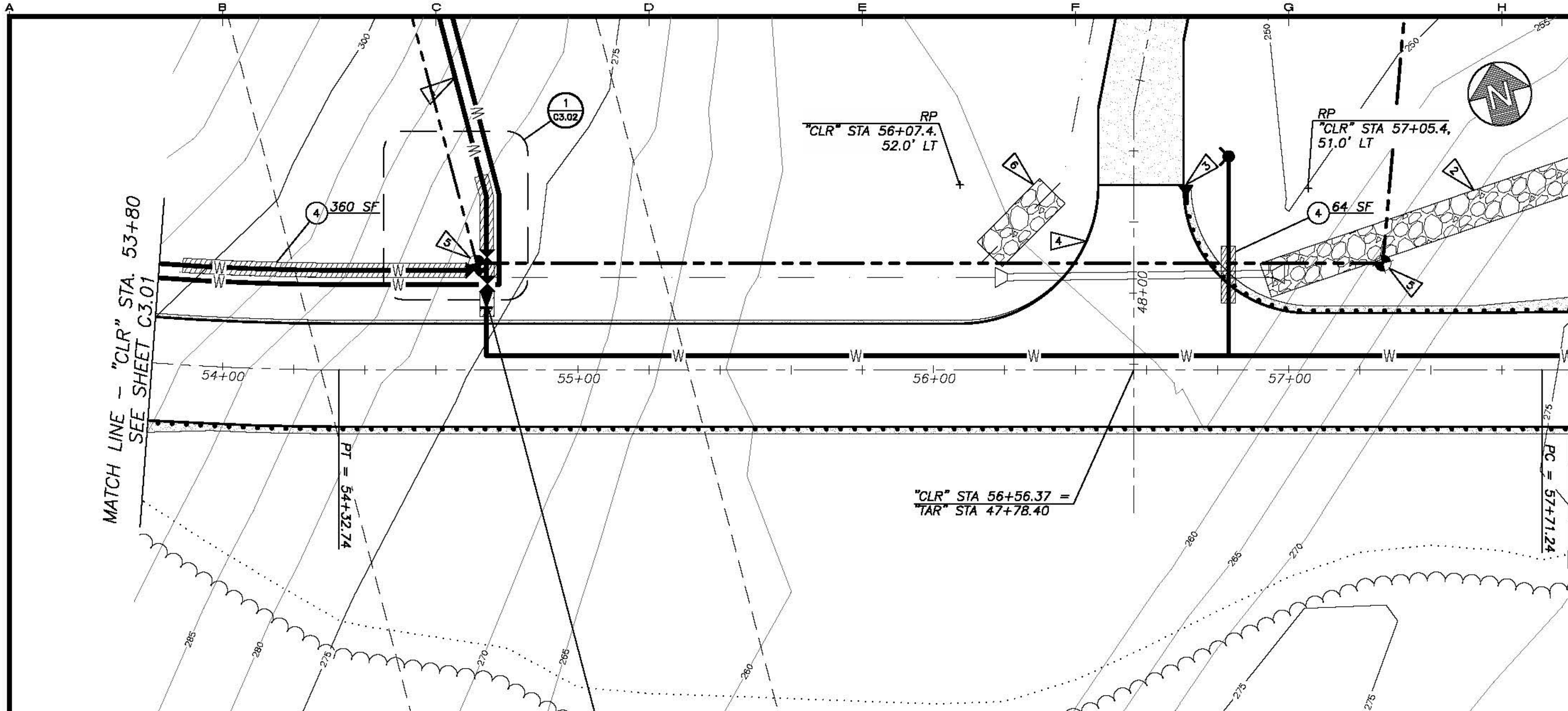
Electrical Engineer
Alaska (AELE9131)

Education

BS, Electrical Engineering
University of Alaska Fairbanks

RSA Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS

P&P Example



NOTES

A. SEE SHEET G1.02 FOR PROJECT NOTES, LEGEND, MISCELLANEOUS WORK ITEMS AND ABBREVIATIONS, SHEET G1.05 FOR WATER SYSTEM DETAILS, AND SHEET S1.01 FOR SURVEY CONTROL INFORMATION.

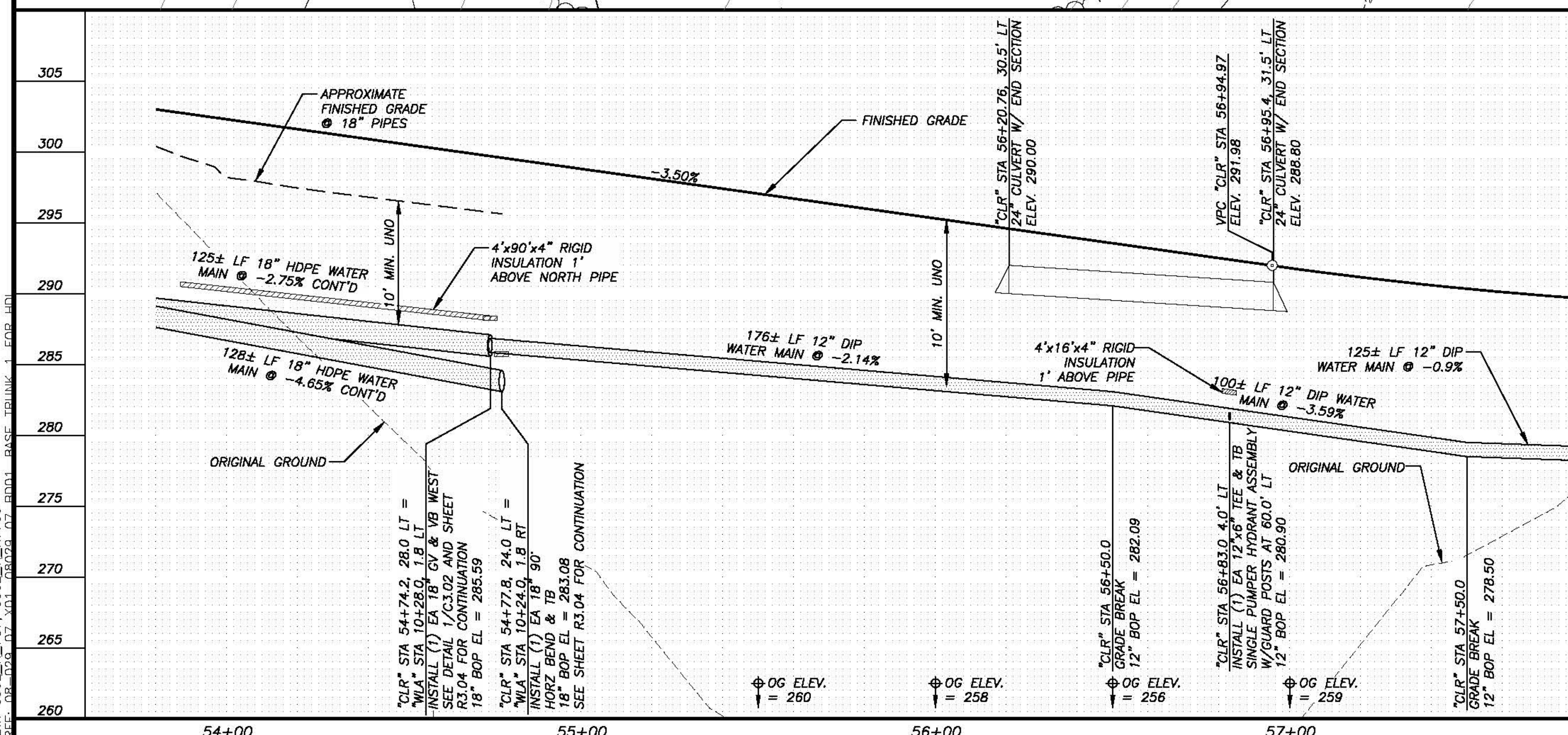
B. STATIONING IS ROAD CENTERLINE ALIGNMENT UNLESS NOTED OTHERWISE.

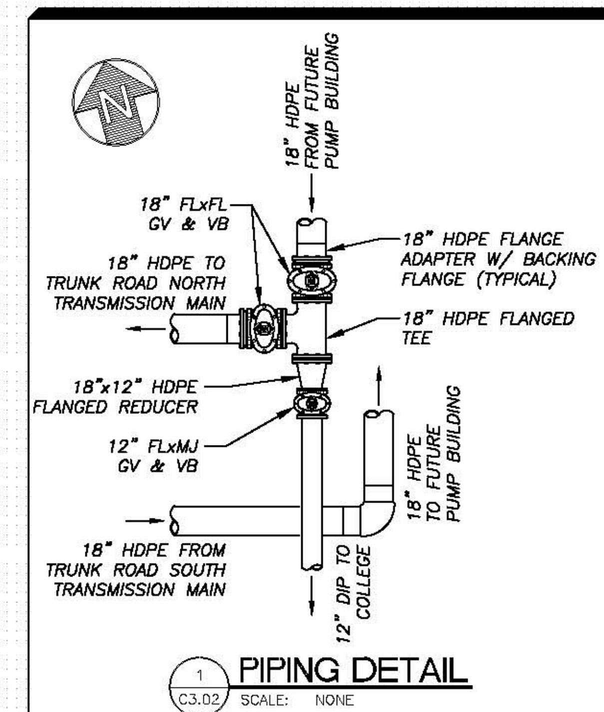
C. THE CONTRACTOR SHALL VERIFY AND FIELD LOCATE ALL BURIED AND OVERHEAD UTILITIES FROM THE APPROPRIATE UTILITY COMPANIES OR AUTHORITIES PRIOR TO COMMENCING WORK.

1. 18" HDPE TRANSMISSION MAINS, SEE SHEETS R3.04 & R3.05.
2. 112 LF DITCH LINING, 12" THICK.
3. BEGIN GUARD RAIL STA 56+70.4, 52.0' LT, W/ ET2000 END TERMINATION.
4. SEE SHEET R3.01 FOR DRIVEWAY PROFILE.
5. RESET MONUMENT.
6. DITCH LINING, SEE R3.01

0 20 40
SCALE IN FEET

COLLEGE LOOP ROAD





1 / C3.02 PIPING DETAIL
SCALE: NONE

REVISIONS: MARK | DATE | DESCRIPTION — 1, 2, 3, 4, 5

STATE OF ALASKA · 49th · DAVID W. LUNDIN · No. CE 10127 · REGISTERED PROFESSIONAL ENGINEER

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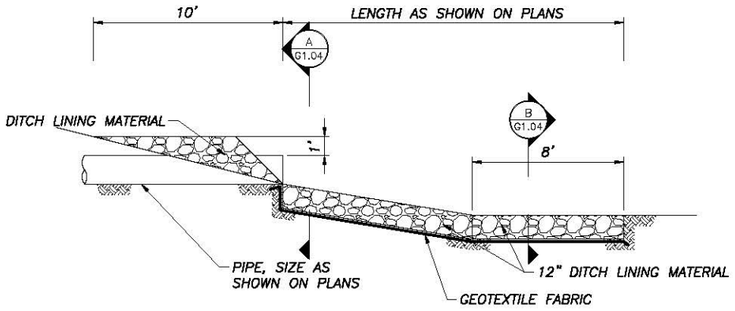
PALMER SOUTHWEST UTILITY EXTENSION PHASE IIa
SITE PREPARATION AND WATER SYSTEM EXTENSION
PALMER, ALASKA

SHEET TITLE: COLLEGE LOOP PLAN & PROFILE STA 53+80 TO STA 57+80

SHEET: C3.02

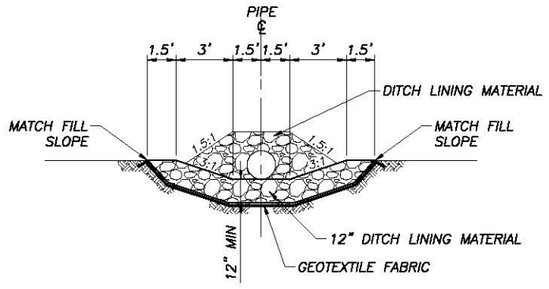
DRAWN BY: TLC/CAB | CHECKED BY: DWL
DATE: JAN. 2012 | SCALE: 1" = 20'
JOB NUMBER: 08-029

H:\Jobs\08-029 Palmer Southwest Utility Ext. Ph. II\08-029-07 Final Design\Site Prep\CAD\Drawings\08029_07_C301-306, 1=1, 01/30/12 at 17:20 by tlc
LAYOUT: C3.01 thru C3.08
VIEW: C302_H_PDF, C302_H_X7700
XREF: 08-029_07_X01, 08029_07_RD01, BASE, TRUNK 1, FOR HDL



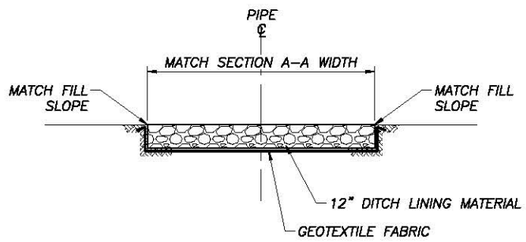
1 G1.04 DITCH LINING DETAIL

SCALE: NONE



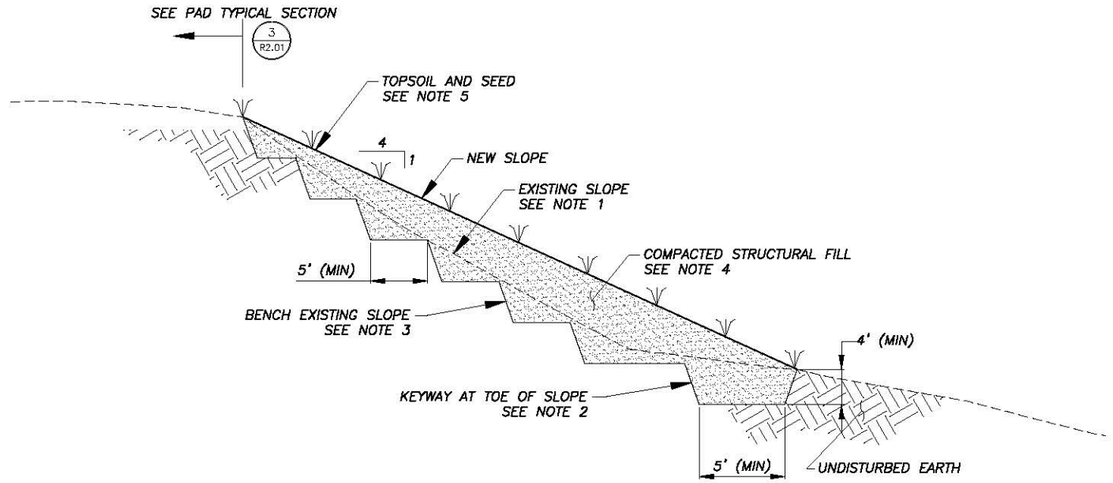
A G1.04 SECTION

SCALE: NONE



B G1.04 SECTION

SCALE: NONE



NOTES

1. REMOVE ALL VEGETATION AND ORGANICS FROM EXISTING SLOPE.
2. CONSTRUCT KEYWAY ALONG TOE PRIOR TO CONSTRUCTION OF NEW SLOPE (APPROXIMATELY 4–FEET DEEP BY 5–FEET WIDE).
3. EXISTING SLOPE SHALL BE BENCHED WITH 5–FEET (MIN) HORIZONTAL BENCHES ALONG THE ENTIRE SLOPE.
4. COMPACT IN ACCORDANCE WITH SPECIFICATION SECTION 02300, ARTICLE 3.7, BACKFILL FOR STRUCTURES.
5. INSTALL 4" TOPSOIL AND SEED ON ALL DISTURBED AREAS THAT ARE NOT SURFACED WITH GRAVEL OR PAVEMENT

2 G1.04 ENGINEERED SLOPE DETAIL

SCALE: NONE

REVISIONS			
MARK	DATE	DESCRIPTION	
1	2/22/12	ADDENDUM 1	
2			
3			
4			
5			

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STATE OF ALASKA — DAVID W. LINNELL — 12070 — REGISTERED PROFESSIONAL ENGINEER

PALMER SOUTHWEST UTILITY EXTENSION PHASE IIa

SITE PREPARATION AND WATER SYSTEM EXTENSION

PALMER, ALASKA

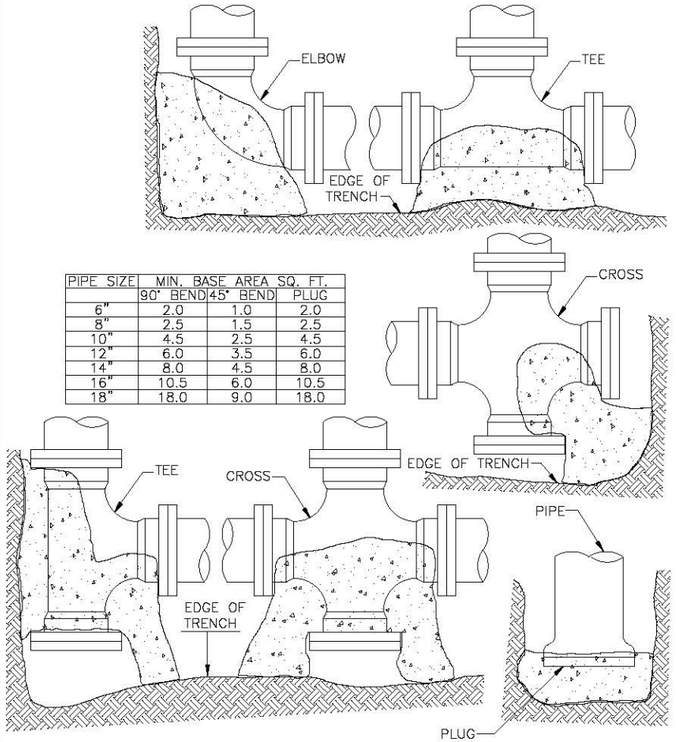
SHEET TITLE: DETAILS

SHEET: G1.04

DRAWN BY:	CHECKED BY:
TLC	DWL
DATE:	SCALE:
FEB. 2012	AS SHOWN

JOB NUMBER: 08-029

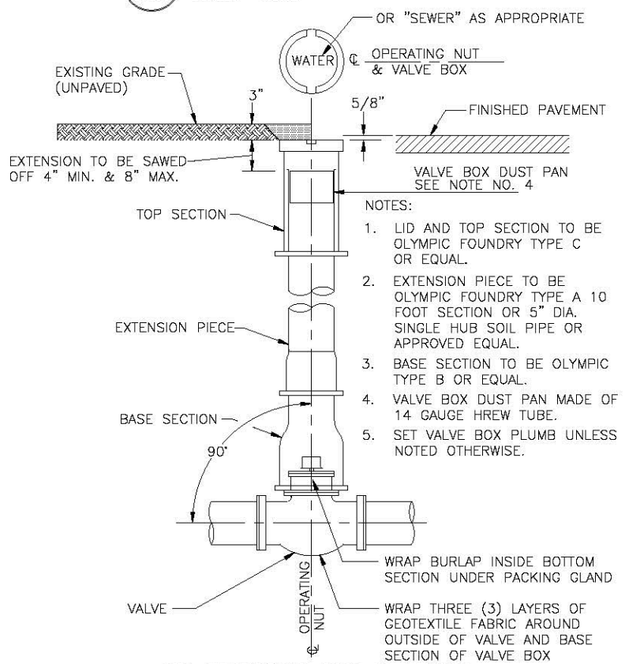
H:\jobs\08-029 Palmer Southwest Utility Ext. Ph. II\08-029-07 Final Design\Site Prep\CAD\Drawings\08029_07_G104, 1=1, 02/22/12 at 15:33 by tlc
LAYOUT: G1.05



PIPE SIZE	MIN. BASE AREA SQ. FT.		
	90° BEND	45° BEND	PLUG
6"	2.0	1.0	2.0
8"	2.5	1.5	2.5
10"	4.5	2.5	4.5
12"	6.0	3.5	6.0
14"	8.0	4.5	8.0
16"	10.5	6.0	10.5
18"	18.0	9.0	18.0

1 G1.05 THRUST BLOCK DETAILS

SCALE: NONE

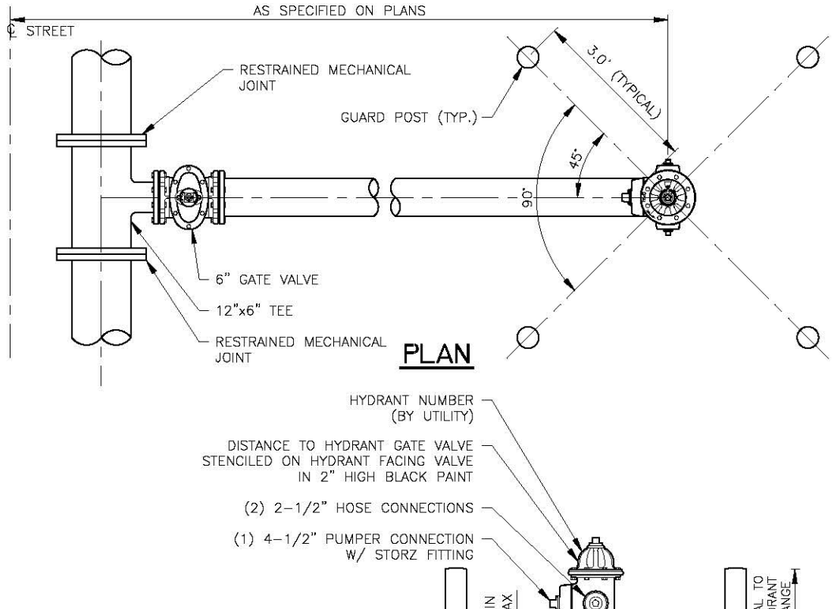


NOTES:

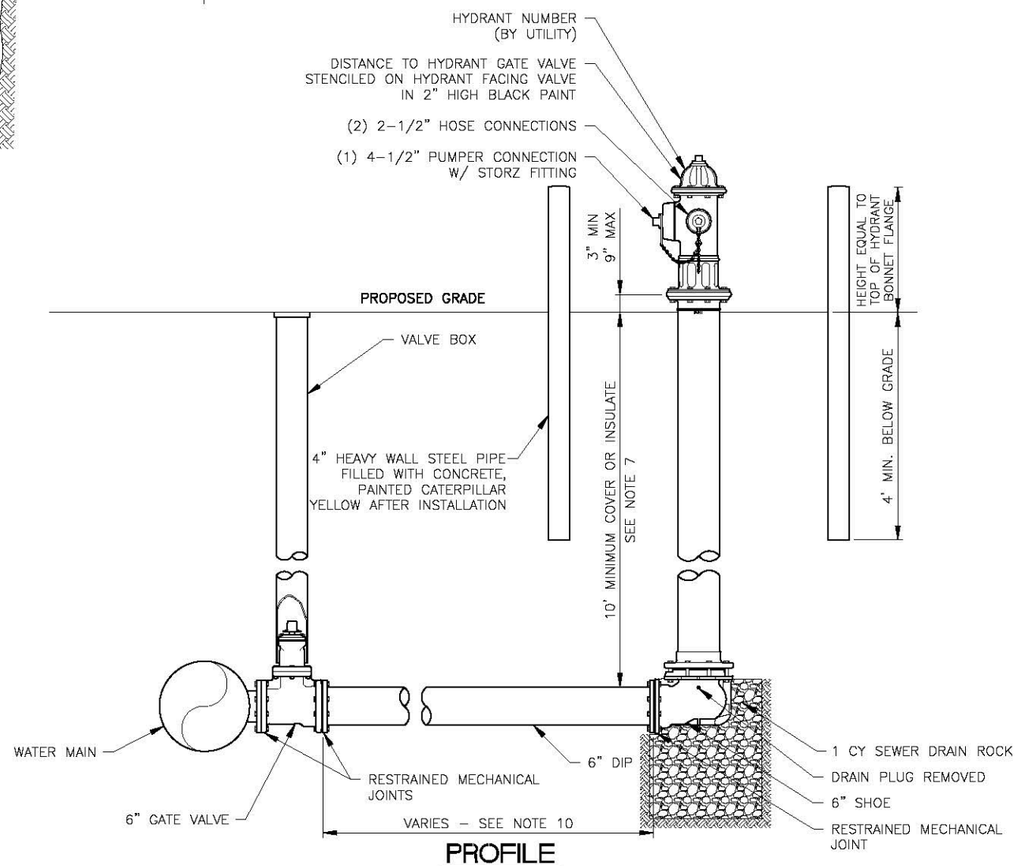
1. LID AND TOP SECTION TO BE OLYMPIC FOUNDRY TYPE C OR EQUAL.
2. EXTENSION PIECE TO BE OLYMPIC FOUNDRY TYPE A 10 FOOT SECTION OR 5" DIA. SINGLE HUB SOIL PIPE OR APPROVED EQUAL.
3. BASE SECTION TO BE OLYMPIC TYPE B OR EQUAL.
4. VALVE BOX DUST PAN MADE OF 14 GAUGE HREW TUBE.
5. SET VALVE BOX PLUMB UNLESS NOTED OTHERWISE.

3 G1.05 TYPICAL VALVE BOX

SCALE: NONE



PLAN



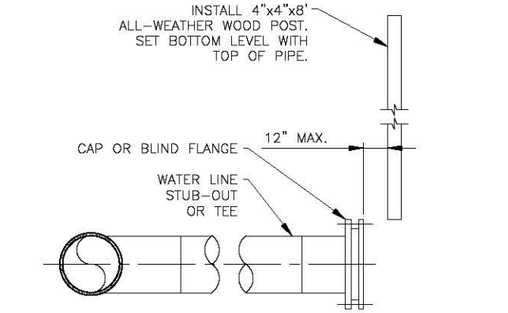
PROFILE

2 G1.05 SINGLE PUMPER HYDRANT ASSEMBLY DETAIL

SCALE: NONE

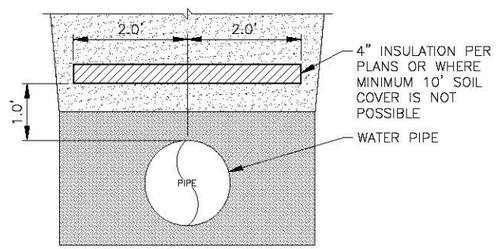
HYDRANT INSTALLATION NOTES

1. HYDRANT BARREL MUST BE INSTALLED PLUMB AND THE LEG MUST BE INSTALLED LEVEL.
2. DRAIN PLUG TO BE REMOVED BY CONTRACTOR.
3. LOCATION SHALL BE SHOWN ON PLANS.
4. ALL HYDRANTS SHALL BE PAINTED CATERPILLAR YELLOW.
5. AUXILIARY GATE VALVE BOX TO BE INSTALLED ACCORDING TO DETAIL FOR TYPICAL VALVE BOX.
6. ALL JOINTS SHALL BE RESTRAINED.
7. PROVIDE 4" x 4.0' WIDE RIGID INSULATION 1' ABOVE TOP OF PIPE WHERE LESS THAN 10' BUT MORE THAN 8' OF COVER IS ACHIEVED. CONTACT ENGINEER FOR DIRECTION IF LESS THAN 8' OF COVER.
8. HYDRANTS SHALL BE LEFT-HAND (COUNTERCLOCKWISE) OPENING.
9. ADJUSTMENT OF HYDRANT TO REQUIRED ELEVATION SHALL BE BY CONTRACTOR AT NO ADDITIONAL COST, INCLUDING BARREL EXTENSIONS AS NECESSARY.
10. COORDINATE AUXILIARY VALVE LOCATION TO ENSURE VALVE BOX IS NOT IN CURB, GUTTER OR CONCRETE SIDEWALK.
11. GUARD POSTS SHALL BE FURNISHED & INSTALLED BY THE CONTRACTOR.
12. GUARD POSTS SHALL BE LOCATED TO ALLOW UNRESTRICTED ACCESS TO PUMPER AND HOSE CONNECTIONS.



5 G1.05 END OF PIPE MARKER DETAIL

SCALE: NONE



4 G1.05 STANDARD PIPE INSULATION DETAIL

SCALE: NONE

REVISIONS		
MARK	DATE	DESCRIPTION
1		
2		
3		
4		
5		

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PALMER SOUTHWEST UTILITY EXTENSION PHASE IIa

SITE PREPARATION AND WATER SYSTEM EXTENSION

PALMER, ALASKA

SHEET TITLE: DETAILS

SHEET: G1.05

DRAWN BY:	CHECKED BY:
TLC	DWL
DATE: JAN. 2012	SCALE: AS NOTED

JOB NUMBER: 08-029


HDL
ENGINEERING CONSULTANTS LLC

Qualifications Evaluation
Capt. Bay Road Paving and Utility Extension

Technical Attributes	***Weight***	***%***	HDL	Jacobs	PND			
Professional Qualifications	*40*	*40.0%*	96.9	94.4	93.8			
Experiences and References	*30*	*30.0%*	96.9	94.4	95.6			
Narrative	*30*	*30.0%*	98.1	95.0	91.9			
Technical Proposal Raw Score	*100*	–	97.3	94.6	93.8			
Technical Proposal Adjusted Score	–	*100%*	97.3%	94.6%	93.8%			

Enter the Price Proposal (if any) in USD

Cost Attributes	***Weight***	***%***	HDL	Jacobs	PND			
Cost USD	*0*	–						
Price Proposal Score	–	*0%*	0.0%	0.0%	0.0%			
Total Score			**97.3%**	**94.6%**	**93.8%**			
Ranking			**1**	**2**	**3**			

6/15/18

6/15/2018

Qualifications Evaluation
Capt. Bay Road Paving and Utility Extension

For each Technical Attribute rank each Respondent starting with 1,2,3,4,5 and 6 and so forth. 1 is best, 2 is next best, 3 is third best, etc.. Do not skip or repeat numbers.

Attributes	***Weight***	***%***	**HDL**	**Jacobs**	**PND**			
Professional Qualifications	*40*	*40.0%*	1	3	2			
Experiences and References	*30*	*30.0%*	1	3	2			
Narrative	*30*	*30.0%*	1	3	2			

Do not edit. The below calculates the rankings you entered above as a percentage. Each successive rank is a difference of 5%.

Attributes	***Weight***	***%***	**HDL**	**Jacobs**	**PND**			
Professional Qualifications	*40*	*40.0%*						
Experiences and References	*30*	*30.0%*						
Narrative	*30*	*30.0%*						
Total Weight	*100*	*100.0%*						
Ranking								

I certify that I have no conflicts of interest and that I have strictly adhered to the procedures described in the Request for Qualifications.

Evaluator Signature:

Date:

Qualifications Evaluation
Capt. Bay Road Paving and Utility Extension

For each Technical Attribute rank each Respondent starting with 1,2,3,4,5 and 6 and so forth. 1 is best, 2 is next best, 3 is third best, etc.. Do not skip or repeat numbers.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	*40*	*40.0%*	1	2	3			
Experiences and References	*30*	*30.0%*	1	2	3			
Narrative	*30*	*30.0%*	1	2	3			

Do not edit. The below calculates the rankings you entered above as a percentage. Each successive rank is a difference of 5%.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	*40*	*40.0%*	100.0	95.0	90.0			
Experiences and References	*30*	*30.0%*	100.0	95.0	90.0			
Narrative	*30*	*30.0%*	100.0	95.0	90.0			
Total Weight	*100*	*100.0%*	100.0	95.0	90.0			
Ranking			1	2	3			

I certify that I have no conflicts of interest and that I have strictly adhered to the procedures described in the Request for Qualifications.

Evaluator Signature: Tom Cohenour

Date: 6-15-18

Qualifications Evaluation
Capt. Bay Road Paving and Utility Extension

For each Technical Attribute rank each Respondent starting with 1,2,3,4,5 and 6 and so forth. 1 is best, 2 is next best, 3 is third best, etc.. Do not skip or repeat numbers.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	*40*	*40.0%*	2	1	3			
Experiences and References	*30*	*30.0%*	3	2	1			
Narrative	*30*	*30.0%*	1	2	3			

Do not edit. The below calculates the rankings you entered above as a percentage. Each successive rank is a difference of 5%.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	*40*	*40.0%*						
Experiences and References	*30*	*30.0%*						
Narrative	*30*	*30.0%*						
Total Weight	*100*	*100.0%*						
Ranking								

I certify that I have no conflicts of interest and that I have strictly adhered to the procedures described in the Request for Qualifications.

Evaluator Signature: JRP

Date: 6/14/2018

Qualifications Evaluation
Capt. Bay Road Paving and Utility Extension

For each Technical Attribute rank each Respondent starting with 1,2,3,4,5 and 6 and so forth. 1 is best, 2 is next best, 3 is third best, etc.. Do not skip or repeat numbers.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	40	40.0%	2	3	1			
Experiences and References	30	30.0%	2	3	1			
Narrative	30	30.0%	1	2	3			

Do not edit. The below calculates the rankings you entered above as a percentage. Each successive rank is a difference of 5%.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	40	40.0%						
Experiences and References	30	30.0%						
Narrative	30	30.0%						
Total Weight	100	100.0%						
Ranking								

I certify that I have no conflicts of interest and that I have strictly adhered to the procedures described in the Request for Qualifications.

Evaluator Signature:

Date: 6/15/18

Scoring numbers were adjusted from original... (interpolated)

Qualifications Evaluation
Capt. Bay Road Paving and Utility Extension

For each Technical Attribute rank each Respondent starting with 1,2,3,4,5 and 6 and so forth. 1 is best, 2 is next best, 3 is third best, etc.. Do not skip or repeat numbers.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	*40*	*40.0%*	1	3	2			
Experiences and References	*30*	*30.0%*	1	1	1			
Narrative	*30*	*30.0%*	1	2	3			

Do not edit. The below calculates the rankings you entered above as a percentage. Each successive rank is a difference of 5%.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	*40*	*40.0%*	100.0	90.0	95.0			
Experiences and References	*30*	*30.0%*	100.0	100.0	100.0			
Narrative	*30*	*30.0%*	100.0	95.0	90.0			
Total Weight	*100*	*100.0%*	100.0	94.5	95.0			
Ranking			1	3	2			

I certify that I have no conflicts of interest and that I have strictly adhered to the procedures described in the Request for Qualifications.

Evaluator Signature: Thomas Thomas by Tom Cohenour

Date: 6-15-18

Qualifications Evaluation
Capt. Bay Road Paving and Utility Extension

For each Technical Attribute rank each Respondent starting with 1,2,3,4,5 and 6 and so forth. 1 is best, 2 is next best, 3 is third best, etc. Do not skip or repeat numbers.

Attributes	Weight	%	HDL	Jacobs	PND			
Professional Qualifications	40	40.0%	40	35	38			
Experiences and References	30	30.0%	25	25	25			
Narrative	30	30.0%	25	23	22			

Do not edit. The below calculates the rankings you entered above as a percentage. Each successive rank is a difference of 5%

Attributes	Weight	%	HDL	Jacobs	PND			
Professional Qualifications	40	40.0%						
Experiences and References	30	30.0%						
Narrative	30	30.0%						
Total Weight Ranking	100	100.0%						

I certify that I have no conflicts of interest and that I have strictly adhered to the procedures described in the Request for Qualifications

Evaluator Signature: Thomas Thomas

Date: 6-15-18

Qualifications Evaluation
Capt. Bay Road Paving and Utility Extension

For each Technical Attribute rank each Respondent starting with 1,2,3,4,5 and 6 and so forth. 1 is best, 2 is next best, 3 is third best, etc.. Do not skip or repeat numbers.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	40	40.0%	1	2	3			
Experiences and References	30	30.0%	1	2	3			
Narrative	30	30.0%	2	1	3			

Do not edit. The below calculates the rankings you entered above as a percentage. Each successive rank is a difference of 5%.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	40	40.0%						
Experiences and References	30	30.0%						
Narrative	30	30.0%						
Total Weight	100	100.0%						
Ranking								

I certify that I have no conflicts of interest and that I have strictly adhered to the procedures described in the Request for Qualifications.

Evaluator Signature:

Date: 6/15/18

Qualifications Evaluation
Capt. Bay Road Paving and Utility Extension

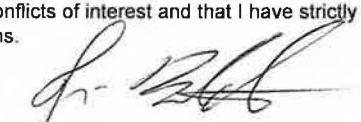
For each Technical Attribute rank each Respondent starting with 1,2,3,4,5 and 6 and so forth. 1 is best, 2 is next best, 3 is third best, etc.. Do not skip or repeat numbers.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	40	40.0%	2	1	3			
Experiences and References	30	30.0%	1	2	3			
Narrative	30	30.0%	1	2	3			

Do not edit. The below calculates the rankings you entered above as a percentage. Each successive rank is a difference of 5%.

Attributes	*Weight*	*%*	HDL	Jacobs	PND			
Professional Qualifications	40	40.0%						
Experiences and References	30	30.0%						
Narrative	30	30.0%						
Total Weight	100	100.0%						
Ranking								

I certify that I have no conflicts of interest and that I have strictly adhered to the procedures described in the Request for Qualifications.

Evaluator Signature: 

Date: 6/15/18

Qualifications Evaluation
Capt. Bay Road Paving and Utility Extension

Technical Attributes	***Weight***	***%***	HDL	Jacobs	PND			
Professional Qualifications	*40*	*40.0%*	#DIV/0! 3	#DIV/0! 2	#DIV/0! 1			
Experiences and References	*30*	*30.0%*	#DIV/0! 3	#DIV/0! 2	#DIV/0! 1			
Narrative	*30*	*30.0%*	#DIV/0! 3	#DIV/0! 2	#DIV/0! 1			
Technical Proposal Raw Score	*100*	–	#DIV/0!	#DIV/0!	#DIV/0!			
Technical Proposal Adjusted Score	–	*100%*	#DIV/0!	#DIV/0!	#DIV/0!			

Enter the Price Proposal (if any) in USD

Cost Attributes	***Weight***	***%***	HDL	Jacobs	PND			
Cost USD	*0*	–						
Price Proposal Score	–	*0%*	0.0%	0.0%	0.0%			

	HDL	Jacobs	PND			
Total Score	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**			
Ranking	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**			

6-15-12

HDL ENGINEERING Consultants LLC

July 3, 2018

Robert Lund, P.E., City Engineer
City of Unalaska
P.O. Box 610
Unalaska, AK 99685

RE: Proposed Scope and Cost
DPU Project No. 19201 - Captains Bay Road Paving & Utility Extension

Dear Mr. Lund:

HDL Engineering Consultants, LLC (HDL) is pleased to present this scope and cost proposal to the City of Unalaska for engineering services for paving and utility extensions on Captains Bay Road, in accordance with the Request for Qualifications dated April 25, 2018.

CIVIL ENGINEERING

GEOTECHNICAL ENGINEERING

TRANSPORTATION ENGINEERING

ENVIRONMENTAL SERVICES

PLANNING

SURVEYING & MAPPING

CONSTRUCTION ADMINISTRATION

MATERIAL TESTING

REAL ESTATE SERVICES

SCOPE OF WORK

TASK 1—TOPOGRAPHIC SURVEYING

HDL's survey group will create a topographic base map identifying the existing conditions within the project area. The drawing will include ground features, improvements, and right-of-way (ROW). Above and below-ground utilities will be added in Task 3.

Survey Control: HDL received the control network prepared by Integrity Surveys from the City Engineer. The existing network is comprehensive and will be the basis of our survey. We will tie the seven monuments located within the project area. The basis of horizontal coordinates will be NAD83 Alaska State Plane Zone 10 in survey feet. Note that HDL will create a local grid coordinate system that resembles Alaska State Plane for design with translation parameters to true Alaska State Plane. The vertical datum will be NOAA Tidal NGVD29 MLW from published Bench Mark Sheet 9462620.

Research: HDL will work closely with the Planning Department to obtain plats, easement documents, and other relevant information. This will reduce our research effort. HDL will check with the Department of Natural Resources (DNR) to ensure we have all property records that are available on the internet. A title report will not be obtained for any parcel during this phase of the survey.

Topographic Survey: The survey limits for this project are nominally from ROW to ROW plus one shot approximately 25 feet beyond to identify adjacent topography. Topographic data will be gathered sufficient to develop 1-foot contour mapping. The mapping will locate topographic features, the road prism, and improvements. We will also survey significant topographic features or improvements outside the limits that may impact design. We will again work closely with the City staff and our engineers to refine our survey limits in areas near the water and areas of steep terrain. We will use a reflectorless total station in steep unstable areas to ensure the safety of our crew. Cross sections will be surveyed at not less than 50-

foot spacing for both tangents and curves. ROW monuments will be recovered concurrent with the topographic survey.

The survey data will be reduced and a best-fit ROW solution will be determined. Additional ROW surveying will be necessary for platting, easements, or certification of the ROW.

Survey Quality Control/Quality Assurance. All survey work products will receive internal independent quality control reviews and quality assurance checks. Upon completion of the draft work product, a second licensed surveyor will review the survey calculations and data prior to a final quality assurance review. A survey field report and electronic check of all the data will be prepared.

Final Survey Deliverables. Final deliverables to our in-house designers will include a base drawing, survey check report, copies of the field notes, indexed photographs, and a survey report. If requested, copies will also be provided to City staff.

Assumptions. The following assumptions were used in developing the scope and cost for this task:

1. The field survey will be performed during the summer of 2018.
2. GPS survey methods will be used where possible and supplemented by conventional survey techniques where needed.
3. Lost days due to weather will be billed as an 8-hour day and are not included in this estimate.
4. ROW survey and mapping for platting, easement, or ROW-certification purposes is not included in this estimate.
5. Bathymetric surveys are not included in this estimate, but are anticipated in a future phase as the proposed roadway realignment is better defined. We will contact Scott Brown with the City of Unalaska Ports to gather existing bathymetric survey data that may be useful in this phase.

TASK 2—GEOTECHNICAL INVESTIGATION

A geotechnical evaluation will be conducted to explore the subsurface conditions along the proposed utility and roadway alignments. The goal of the geotechnical evaluation will be to reduce the potential unknowns during construction and develop parameters for design of the roadway surfacing, cuts and fills, utilities, and structures. The exploration will include test pits and bedrock mapping. Existing test pit logs and photos from previous construction efforts will be reviewed prior to selecting the test pit locations.

Geotechnical Exploration.

Agnes Beach to Pyramid Creek Road

Improvements along this portion of the project include upgrading/replacing the air relief valves (ARVs) and raising cleanouts, hydrants, and valve boxes to grade, adding street lighting, and paving. Approximately eleven (11) shallow test pits will be conducted along the roadway at approximately 500-foot intervals. The actual locations will be shifted to compliment the location of previous test pits and trenches. Test pits will be dug to a maximum of 2 feet below

existing ground surface (bgs) to evaluate the thickness and condition of the surface and base course materials.

Pyramid Creek Road and Intersection

Improvements for this portion of the project consist of paving a 500-foot approach and possible realignment/sight distance improvements at the intersection. Three shallow test pits will be conducted along the roadway to evaluate the thickness and condition of the surface and base course materials to a maximum depth of 3 feet bgs. A test pit will be conducted to a maximum depth of 5 feet where the roadway may be realigned.

Pyramid Creek Road Through Westward Seafoods to End of Paving

There are several underground utilities through this portion of the project and we anticipate potholing will be needed to confirm their locations. Therefore, we do not anticipate conducting shallow test pits for the sole purpose of evaluating the materials for use in the roadway structural section. Samples of the existing roadway section will be collected during utility potholing. Depending on the space available between utilities and surface obstructions, a test pit will be conducted near the retaining structure needed at the entrance of the Westward Facility.

End of Paving through North Pacific Fuel

Utility extensions are expected through this portion of the project. Test pits will be conducted along the roadway at approximately 500-foot intervals resulting in approximately eight (8) test pits for this portion of the project. The actual locations will be shifted to maximize sight distances and minimize the impacts to traffic. Test pits will be dug on the cliff side of the roadway to the depth of bedrock or a maximum depth of 8 feet.

North Pacific Fuel to Offshore Systems

Utility extensions are expected through this portion of the project. Test pits will be conducted along the roadway at approximately 500-foot intervals resulting in approximately five (5) test pits for this portion of the project. The actual locations will be shifted to maximize sight distances and minimize the impacts to traffic. Test pits will be dug on the cliff side of the roadway to the depth of bedrock or a maximum depth of 8 feet.

An experienced HDL engineering assistant will be present during test pitting to evaluate subsurface conditions, collect samples, and conduct field tests. Laboratory tests will be conducted on samples to evaluate the grain size distribution and moisture content of the materials.

Rock Cut Mapping. HDL will evaluate the location, density, and orientation of fractures on the exposed face of existing rock cuts that may be removed during roadway realignment. The rock cut evaluation will determine if patterns of adverse joints or fractures are present. The rock cut mapping will be used to evaluate the potential cut slopes and need for additional bedrock drilling as the potential roadway alignments are evaluated.

Geotechnical Data Report and Recommendations. We will prepare a geotechnical data report presenting the results of the field investigation and laboratory testing. The report will

detail the test pit results (including photos of each test pit and spoils pile), the location and depth of bedrock encountered, the results of laboratory testing, and the results of the bedrock mapping. The report will provide geotechnical data that can be included in the bid documents but will not include the geotechnical recommendations that will be incorporated into the design.

The geotechnical options and recommendations for utility construction, retaining structures, pavement design, and preliminary rock slopes/benching will be provided in a separate letter. If additional investigation is needed for bedrock slopes or road realignment into the ocean, the results of those evaluations will be provided in a separate memo.

Assumptions. The following assumptions were used in developing the scope and cost:

1. Soil borings or detailed subsurface evaluations in the ocean and potential rock cuts are not included in this scope of services. Additional geotechnical evaluation may be needed as the road alignment is refined.
2. The City of Unalaska will directly hire an experienced local contractor to conduct the test pits and provide traffic control.
3. Geotechnical test pits will be completed in three (3) days.
4. Mapping of the bedrock face will be limited to that which can be accomplished from the ground surface, a man-lift, and by photography. Climbing or scaling of the rock will not be conducted.

TASK 3—UTILITY MAPPING

Utility mapping will consist of a staged process of working from known to unknown conditions. First, HDL will request record drawings from the utilities and adjacent private facility-owners. We will review the drawings to identify data gaps and coordinate with the utilities and various facility-owners to attempt to fill in the gaps based on their extensive local knowledge. Using recent survey work to be provided by the City, our surveyors will stake and paint the location of the water and sewer utilities from Agnes Beach to Westward Seafoods. Utility locates will then be requested for below-ground utilities. Our surveyors will locate the paint marks on the ground, as field-marked by the utility companies, and will also locate the aboveground utilities. The data collected will then be added to the base map.

To locate utilities that could not be found using field locates and record drawings, and where depth of critical utilities is unknown, we will use a combination of ground-penetrating radar (GPR) and potholing. In these areas, GPR profiles will be conducted parallel and transverse to the roadway. GPR signatures that appear to indicate utilities will be confirmed with potholes. The location of found utilities will then be recorded and their condition will be documented.

Assumptions. The following assumptions were used in developing the scope and cost:

1. The City of Unalaska will directly hire an experienced local contractor to conduct the test pits and provide traffic control.
2. The GPR and potholing efforts onsite will be limited to eight (8) days.

TASK 4—PRELIMINARY PERMITTING

HDL will coordinate with the City to identify permits necessary to execute the project. A project stakeholder list will be developed, outlining contact information for facility owners along the corridor, and resource agencies that may require coordination throughout the project.

HDL will develop reference figures using ARC-GIS and the 2017 georeferenced high resolution drone aerial survey of the project limits recently provided by the City.

HDL's environmental staff will research readily available information regarding existing environmental resources located within and adjacent to the project corridor. A preliminary environmental overview will be drafted documenting which environmental resources are present. A preliminary scoping letter will then be drafted to each resource agency with jurisdiction over sensitive resources documented during the development of the environmental overview. The preliminary scoping letter, environmental overview, and reference figures will be used during preliminary scoping to determine permitting requirements for the proposed improvements.

Deliverables associated with this task will include:

- Project stakeholder list
- Preliminary environmental overview
- Agency outreach letter
- Record of agency feedback regarding level of permitting required

Assumptions. The following assumptions were used in developing the scope and cost:

1. Environmental field work will not be necessary during this phase of the project.
2. Draft permit applications will not be developed during this phase of the project.
3. No meeting with agencies – agency coordination will take place via email and phone conversations.

TASK 5—PRELIMINARY DESIGN

The purpose of the preliminary design submittal will be to establish the basis for design and present a concept-level plan set. During this phase, we will develop preliminary plans, a series of technical memoranda with supporting calculations and references to design standards, and a preliminary rough-order-of-magnitude construction cost estimate for the proposed project. We anticipate the following major items under this task:

Preliminary Project Plans. HDL will prepare a set of preliminary project drawings for the roadway portion of the proposed project from the Agnes Beach intersection through to Offshore Systems, Inc. facility. These drawings will present the proposed improvements in a conceptual format, showing only a plan view with horizontal curves appropriate for the design criteria. We do not anticipate providing profile views at this time. These plans will be useful for discussion and reference as the project moves into the next phase.

Roadway Design Technical Memo. HDL will use the scoping material in the RFQ and work with City staff to prepare a technical memo that includes preliminary design criteria for the roadway design features. Items will include horizontal and vertical alignment requirements,

slope requirements, functional classification, average annual daily traffic (present and design year), percentage of heavy truck traffic, design speed, intersection requirements, and pedestrian facility requirements.

Electrical Design Technical Memo. Our electrical engineering subconsultant, Electric Power Systems, Inc. (EPS), will use the scoping material in the RFQ and work with HDL and City staff to prepare a technical memo for the electrical upgrades and lighting, as described in the attached EPS proposal. Items included will be conduit sizes, estimated trench depth, light pole spacing and design criteria, and load center and panel information. HDL will provide coordination and quality assurance review prior to submitting the technical memo to the City for review and approval.

Water/Wastewater Technical Memos. Our water/wastewater design subconsultant, Regan Engineering, P.C. (Regan), will work with City staff to forecast flows and size the proposed lift station(s), force main, water main, and other required improvements, as described in the attached Regan proposal. He will engage with the various facility owners, review water/sewer master plan documents, and utilize his existing water/sewer flow models for these purposes. Regan will work directly with our SCADA subconsultant, Boreal Controls, Inc. (BCI), to coordinate controls integration with the new facilities. BCI's scope of work is described in their attached proposal. SCADA design parameters will be included in the Water/Wastewater memoranda or, if warranted, in a standalone memo. HDL will provide coordination, attend review meetings, and perform quality assurance reviews of the technical memos prior to submitting them to the City for review and approval.

Preliminary Cost Estimate. HDL and our subconsultants will prepare a preliminary rough-order-of-magnitude estimate of construction costs based on the plans and design criteria established during this preliminary design phase. Because we anticipate that this estimate may be used for project phasing, we will break the overall project into segments as established in the RFQ. This will allow City staff to prioritize the improvements that are most critical, and give a greater sense of the overall cost of each phase.

SCHEDULE

As identified in the schedule provided in the RFQ response, completion of this Phase IA will take a minimum of approximately six weeks. Assuming award of the contract on July 10, 2018, and allowing one week for processing of a contract, we should be able to complete this scope of work about September 1, 2018. However, this schedule allows no time for delays due to weather, coordinating with adjacent facilities, availability of excavators, availability of lodging, or any of the many additional potential causes for delay that are outside of our control.

COST

We propose to provide the aforementioned services on a time and expenses basis for a cost not to exceed **$371,526** as detailed on the attached worksheet. We anticipate that the award of this work will be in two steps as follows:

	WORK	TOTAL	APPROVAL DATE
Step 1	Task 1 and 20% each of Tasks 2, 3 and 5	$195,868	July 10, 2018
Step 2	Task 4 and remaining 80% of Tasks 2, 3, and 5	$175,658	July 24, 2018

We acknowledge that award of the contract and Step 1 is no guarantee of award of Step 2.

Thank you for your confidence and we look forward to working with you on another important project. Please contact me if you have any questions.

Sincerely,

HDL ENGINEERING CONSULTANTS, LLC

David Lundin, P.E.
Principal / Civil & Environmental Engineer

attach: Cost Worksheet, dated 7/3/18 (7 pages)
EPS proposal
Regan proposal
BCI proposal

FIRM: HDL Engineering Consultants, LLC	PROJECT TITLE: Captains Bay Road Paving & Utility Extension	DATE: 7/3/2018

TIME AND EXPENSES

TASK	TASK No.	LABOR (or FP)	INDIRECT COST	EXPENSES	TOTAL COST		FIRM'S TOTAL PRICE	*SUB-CONTRACTS	PRICE PLUS SUBS
Topo Surveying	1	$125,570	$0	$28,908	$154,478		$154,478	$0	$154,478
Geotech Evaluation	2	$31,670	$0	$10,552	$42,222		$42,222	$3,300	$45,522
Utility Mapping	3	$53,490	$0	$15,461	$68,951		$68,951	$0	$68,951
Prelim. Permitting	4	$10,100	$0	$0	$10,100		$10,100	$0	$10,100
Prelim. Design	5	$39,565	$0	$0	$39,565		$39,565	$52,910	$92,475

*Subcontractors for negotiated professional or technical services, products, etc. (Commodity items available to the general public at market prices, equipment use, and unit priced items are generally included in estimate as expenses.)

ESTIMATED TOTALS	LABOR (or FP)	INDIRECT COST	EXPENSES	TOTAL COST	FEE	FIRM'S TOTAL PRICE	*SUB-CONTRACTS	PRICE PLUS SUBS
FOR FIRM:	**$260,395**	**$0**	**$54,921**	**$315,316**	**$0**	**$315,316**	**$56,210**	**$371,526**

COST ESTIMATE PER TASK

FIRM: HDL Engineering Consultants, LLC		**PROJECT TITLE:** Captains Bay Road Paving & Utility Extension	
TASK NO: 1	**TASK DESCRIPTION:** Topographic Base Map		**DATE:** 7/3/2018
GROUP:	**METHOD OF PAYMENT:** **FP** ☐ **FPPE** ☐ **T&E** ☑ **CPFF** ☐	**PREPARED BY:** Brad Rinckey	

SUB-TASK NO.	SUB-TASK DESCRIPTION	LABOR HOURS PER JOB CLASSIFICATION										
		Project Manager	Survey Manager	Senior Surveyor	PLS Surveyor	PLS Surv. (OT)	Survey Tech.	Survey Tech. (OT)	2-Man Crew	2-Man Crew (OT)	Clerical	
	Management & Coordination	4	4	2							2	
	Mob/Demob				32	32					4	
	Research		1		24		4				1	
	Horizontal Control		1	1	24		4		32	16		
	Vertical Control		1	1	16		4		24	12		
	Topographic Survey		4	2		24		8	80	88		
	ROW Survey		2	6	40				24	12		
	Quality Control	2	4	24								
	Survey Base Map Drawing		2	2	160		16					
TOTAL LABOR HOURS		6	19	38	296	56	28	8	160	128	7	
*** LABOR RATES ($/HR)**		$175.00	$160.00	$160.00	$115.00	$155.00	$100.00	$135.00	$210.00	$275.00	$80.00	
LABOR COSTS ($)		$1,050	$3,040	$6,080	$34,040	$8,680	$2,800	$1,080	$33,600	$35,200	$560	

EXPENSES

SUB-TASK NO.	ITEM(S)	QUANTITY	UNIT PRICE	TOTAL PRICE
	Airfare	4	$1,220.00	$4,880.00
	Freight	1	$1,000.00	$1,000.00
	Lodging (2 ea, 2-person crews=2-rooms for 24 nights)	48	$185.00	$8,880.00
	Per diem (2 ea, 2-person crews for 24 days)	96	$60.00	$5,760.00
	Vehicle (per day for ea of 2 crew vehicles)	48	$120.00	$5,760.00
	Markup at 10%			$2,628.00
			TOTAL EXPENSES:	**$28,908**

SUB-CONTRACTORS: Firm Initials and Price Per Task

						Subtotal	10% Markup
FIRM:							
AMOUNT:						$0	$0

COMMENTS: Estimate is for scope and assumptions in the attached letter of the same date.

FIRM'S TOTAL COST OF LABOR (or Fixed Price):	**$125,570**
***IF CPFF*, TOTAL INDIRECT COST @ 0.00%**	**$0**
FIRM'S TOTAL EXPENSES	**$28,908**
FIRM'S TOTAL COST (no Subcontracts or Fee)	**$154,478**
TOTAL SUBCONTRACTOR PRICES:	**$0**

* Labor Rates shall be direct labor (base pay) only if Method of Payment is CPFF; otherwise, Labor Rates shall be total rates (i.e. base pay + benefits + overhead + profit.)

COST ESTIMATE PER TASK

FIRM: HDL Engineering Consultants, LLC		**PROJECT TITLE:** Captains Bay Road Paving & Utility Extension	
TASK NO: 2	**TASK DESCRIPTION:** Geotechnical Evaluation		**DATE:** 7/3/2018
GROUP:	**METHOD OF PAYMENT:** **FP** ☐ **FPPE** ☐ **T&E** ☑ **CPFF** ☐	**PREPARED BY:** Doug Simon	

SUB-TASK NO.	SUB-TASK DESCRIPTION	LABOR HOURS PER JOB CLASSIFICATION										
		Project Manager	Geotech. Engineer	Geotech. Eng. Asst.	Eng. Asst. OT	Drafter	Clerical					
	Management & Coordination	2	4				2					
	Geotechnical Exploration											
	Right-of Entry/Utility Locate			4								
	Review Existing Logs/Photos		2	4								
	Mobilization/Demobilization		16	16	4							
	Fieldwork		30	24	6							
	Geotechnical Data Report	2	24	60		4						
	Recommendations	4	16	24		4						
TOTAL LABOR HOURS		8	92	132	10	8	2	0	0	0	0	0
*** LABOR RATES ($/HR)**		$175.00	$160.00	$100.00	$135.00	$105.00	$80.00					
LABOR COSTS ($)		$1,400.00	$14,720.00	$13,200.00	$1,350.00	$840.00	$160.00	$0.00	$0.00	$0.00	$0.00	$0.00

EXPENSES

SUB-TASK NO.	ITEM(S)	QUANTITY	UNIT PRICE	TOTAL PRICE
	Miscellaneous Field Equipment	1	$500.00	$500.00
	Vehicle	5	$120.00	$600.00
	Airfare	2	$1,220.00	$2,440.00
	Lodging	8	$185.00	$1,480.00
	Per diem	10	$60.00	$600.00
	Freight (samples)	1	$1,000.00	$1,000.00
	Lift Rental	1	$1,000.00	$1,000.00
	Markup at 10%			$762.00
	Laboratory Testing	1	$2,170.00	$2,170.00
		TOTAL EXPENSES:		**$10,552**

COMMENTS: Estimate is for scope and assumptions in the attached letter of the same date. Includes total 28 test pits as detailed in the proposal. No borings in the ocean or in the rock faces to be cut. The City will hire the excavator under separate contract.

*HMA is an allowance for any consulting fees charged by local pavement experts

FIRM'S TOTAL COST OF LABOR (or Fixed Price):		**$31,670**
***IF CPFF*, TOTAL INDIRECT COST @**	**0.00%**	**$0**
FIRM'S TOTAL EXPENSES		**$10,552**
FIRM'S TOTAL COST (no Subcontracts or Fee)		**$42,222**
TOTAL SUBCONTRACTOR PRICES:		**$3,300**

SUB-CONTRACTORS: Firm Initials and Price Per Task

FIRM:	HMA*					Subtotal	10% Markup
AMOUNT:	$3,000					$3,000	$300

* Labor Rates shall be direct labor (base pay) only if Method of Payment is CPFF; otherwise, Labor Rates shall be total rates (i.e. base pay + benefits + overhead + profit.)

COST ESTIMATE PER TASK

FIRM: HDL Engineering Consultants, LLC		**PROJECT TITLE:** Captains Bay Road Paving & Utility Extension	
TASK NO: 2a	**TASK DESCRIPTION:** Laboratory Testing		**DATE:** 7/3/2018
GROUP:	**METHOD OF PAYMENT:**	**FP** ☐ **FPPE** ☐ **T&E** ☑ **CPFF** ☐	**PREPARED BY:** Doug Simon

	LAB TEST	# OF TESTS	COST PER TEST	SUBTOTAL
	P200	14	$40.00	$560.00
	Sieve	14	$75.00	$1,050.00
	Moisture Content	56	$10.00	$560.00
TOTAL NUMBER OF TESTS		84		
LABORATORY COSTS ($)				$2,170.00

EXPENSES

SUB-TASK NO.	ITEM(S)	QUANTITY	UNIT PRICE	TOTAL PRICE
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
	Markup at 10%			$0.00
		TOTAL EXPENSES:		**$0**

SUB-CONTRACTORS: Firm Initials and Price Per Task

						Subtotal	10% Markup
FIRM:							
AMOUNT:						$0	$0

COMMENTS:

FIRM'S TOTAL COST OF TESTING (or Fixed Price):	**$2,170**
***IF CPFF*, TOTAL INDIRECT COST @ 0.00%**	**$0**
FIRM'S TOTAL EXPENSES	**$0**
FIRM'S TOTAL COST (no Subcontracts or Fee)	**$2,170**
TOTAL SUBCONTRACTOR PRICES:	**$0**

COST ESTIMATE PER TASK

FIRM: HDL Engineering Consultants, LLC		**PROJECT TITLE:** Captains Bay Road Paving & Utility Extension	
TASK NO: 3	**TASK DESCRIPTION:** Utility Mapping		**DATE:** 7/3/2018
GROUP:	**METHOD OF PAYMENT:** FP ☐ FPPE ☐ T&E ☑ CPFF ☐	**PREPARED BY:** David Lundin	

SUB-TASK NO.	SUB-TASK DESCRIPTION	LABOR HOURS PER JOB CLASSIFICATION										
		Project Manager	Survey Manager	Sr Civil Eng	Civil Eng	PLS Surveyor	Survey Tech.	1-Man Crew	1-Man Crew (OT)	Geotech Engineer	Geotech. Eng. Asst.	Clerical
	Management & Coordination	8	4									4
	Coordination with Utilities & Facilities			2	8	8				2		
	Record drawing review & analysis			4	16	4						
	Mobilization/Demobilization				16		8			4	4	
	Surveying for Utilities							32	16			
	Staking Water & Sewer							16	8			
	GPR and potholing for utilities				80					88		
	Add utilities to base map			4	8	8	40					
TOTAL LABOR HOURS		8	4	10	128	20	48	48	24	94	4	4
*** LABOR RATES ($/HR)**		$175.00	$160.00	$135.00	$120.00	$115.00	$100.00	$150.00	$195.00	$160.00	$100.00	$80.00
LABOR COSTS ($)		$1,400.00	$640.00	$1,350.00	$15,360.00	$2,300.00	$4,800.00	$7,200.00	$4,680.00	$15,040.00	$400.00	$320.00

EXPENSES

SUB-TASK NO.	ITEM(S)	QUANTITY	UNIT PRICE	TOTAL PRICE
	Miscellaneous Field Equipment	1	$500.00	$500.00
	GPR Rental	1	$4,000.00	$4,000.00
	Airfare	2	$1,220.00	$2,440.00
	Lodging	19	$185.00	$3,515.00
	Per diem	22	$60.00	$1,320.00
	Vehicle	19	$120.00	$2,280.00
	Markup at 10%			$1,405.50
				$0.00
		TOTAL EXPENSES:		**$15,461**

SUB-CONTRACTORS: Firm Initials and Price Per Task

FIRM:						Subtotal	10% Markup
AMOUNT:						$0	$0

COMMENTS: Estimate is for scope and assumptions in the attached letter of the same date. The City will hire the excavator under separate contract.

FIRM'S TOTAL COST OF LABOR (or Fixed Price):	**$53,490**
***IF CPFF*, TOTAL INDIRECT COST @ 0.00%**	**$0**
FIRM'S TOTAL EXPENSES	**$15,461**
FIRM'S TOTAL COST (no Subcontracts or Fee)	**$68,951**
TOTAL SUBCONTRACTOR PRICES:	**$0**

* Labor Rates shall be direct labor (base pay) only if Method of Payment is CPFF; otherwise, Labor Rates shall be total rates (i.e. base pay + benefits + overhead + profit.)

COST ESTIMATE PER TASK

FIRM: HDL Engineering Consultants, LLC		**PROJECT TITLE:** Captains Bay Road Paving & Utility Extension	
TASK NO: 4	**TASK DESCRIPTION:** Preliminary Permitting		**DATE:** 7/3/2018
GROUP:	**METHOD OF PAYMENT:** **FP** ☐ **FPPE** ☐ **T&E** ☑ **CPFF** ☐	**PREPARED BY:** Heather Campfield	

SUB-TASK NO.	SUB-TASK DESCRIPTION	LABOR HOURS PER JOB CLASSIFICATION										
		Project Manager	Env Manager	Env Specialist	GIS Specialist							
	Management & Coordination	2	8									
	Preliminary Env Overview Memo	2	4	12								
	Project Stakeholder List		2	8								
	Agency Outreach Letter		2	8	4							
	Agency Coordination		4	16								
	Document Agency Feedback		2	8								
TOTAL LABOR HOURS		4	22	52	4	0	0	0	0	0	0	0
*** LABOR RATES ($/HR)**		$175.00	$160.00	$105.00	$105.00							
LABOR COSTS ($)		$700.00	$3,520.00	$5,460.00	$420.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

EXPENSES

SUB-TASK NO.	ITEM(S)	QUANTITY	UNIT PRICE	TOTAL PRICE
				$0.00
				$0.00
	Markup at 10%			$0.00
				$0.00
				$0.00
				$0.00
	TOTAL EXPENSES:			**$0**

SUB-CONTRACTORS: Firm Initials and Price Per Task

						Subtotal	10% Markup
FIRM:							
AMOUNT:						$0	$0

COMMENTS: Assumes no environmental field work will be required at this phase of the project. Assumes identification of permits necessary for project completion. Draft permits will not be developed during this phase of the project. No meeting with agencies - agency coordination will take place via email and phone conversations.

FIRM'S TOTAL COST OF LABOR (or Fixed Price):	**$10,100**
***IF CPFF*, TOTAL INDIRECT COST @ 0.00%**	**$0**
FIRM'S TOTAL EXPENSES	**$0**
FIRM'S TOTAL COST (no Subcontracts or Fee)	**$10,100**
TOTAL SUBCONTRACTOR PRICES:	**$0**

* Labor Rates shall be direct labor (base pay) only if Method of Payment is CPFF; otherwise, Labor Rates shall be total rates (i.e. base pay + benefits + overhead + profit.)

COST ESTIMATE PER TASK

FIRM: HDL Engineering Consultants, LLC		**PROJECT TITLE:** Captains Bay Road Paving & Utility Extension	
TASK NO: 5	**TASK DESCRIPTION:** Preliminary Design		**DATE:** 7/3/2018
GROUP:	**METHOD OF PAYMENT:** FP ☐ FPPE ☐ T&E ☑ CPFF ☐	**PREPARED BY:** David Lundin	

SUB-TASK NO.	SUB-TASK DESCRIPTION	LABOR HOURS PER JOB CLASSIFICATION										
		Project Manager	Sr Civil Eng (Road)	Civil Eng (Road)	Sr Civil Eng (W/WW)	Civil Eng (W/WW)	Drafter	Clerical				
	Management & Coordination	16	8		8			2				
	Roadway Design-											
	Plans (15%)	2	26	54			50					
	Tech Memo	4	8	16								
	Electrical Design -											
	Tech Memo	1	4		2							
	Water/Wastewater Design -	6										
	Tech Memo-Water Main				4	2						
	Tech Memo-Wastewater				4	2						
	Tech Memo-Condition Assessment				8							
	Tech Memo-Standards for Design				2	2						
	Tech Memo-Chlorine Monitoring				2							
	Tech Memo-SCADA				4							
	Preliminary Cost Estimate	2	4	16	4	16	24					
TOTAL LABOR HOURS		31	50	86	38	22	74	2	0	0	0	0
*** LABOR RATES ($/HR)**		$175.00	$155.00	$120.00	$135.00	$120.00	$110.00	$80.00				
LABOR COSTS ($)		$5,425.00	$7,750.00	$10,320.00	$5,130.00	$2,640.00	$8,140.00	$160.00	$0.00	$0.00	$0.00	$0.00

EXPENSES

SUB-TASK NO.	ITEM(S)	QUANTITY	UNIT PRICE	TOTAL PRICE
				$0.00
				$0.00
	Markup at 10%			$0.00
				$0.00
				$0.00
				$0.00
		TOTAL EXPENSES:		**$0**

COMMENTS: Estimate is for scope and assumptions in the attached letter of the same date.
Plans will be approximately 15% design level with Title Sheet, Typical Section, and Plan sheets of a roadway alignment over the base map. Electrical Tech Memo per EPS proposal; W/WW Tech Memos per Regan and BCI proposals.

FIRM'S TOTAL COST OF LABOR (or Fixed Price):	**$39,565**
***IF CPFF*, TOTAL INDIRECT COST @ 0.00%**	**$0**
FIRM'S TOTAL EXPENSES	**$0**
FIRM'S TOTAL COST (no Subcontracts or Fee)	**$39,565**

SUB-CONTRACTORS: Firm Initials and Price Per Task

FIRM:	EPS	Regan	BCI			Subtotal	10% Markup
AMOUNT:	$9,680	$28,240	$10,180			$48,100	$4,810

TOTAL SUBCONTRACTOR PRICES:	**$52,910**

* Labor Rates shall be direct labor (base pay) only if Method of Payment is CPFF; otherwise, Labor Rates shall be total rates (i.e. base pay + benefits + overhead + profit.)

Electric Power Systems inc.
Consulting Engineers

David Lundin, PE
Principal/Civil & Environmental Engineer
HDL Engineering Consultants

July 2, 2018

Subject: Price Proposal for Captains Bay Road Paving and Utilities Extension Electrical Design Memo

David,

You recently requested a price estimate to provide engineering services to provide the Captains Bay Road (CBR) Paving and Utilities Extension project Electrical Design Memorandum. This memo is the first phase of the overall project design. The remainder of the design will be performed under a subsequent proposal and estimate.

Below you'll find a Scope of Work and Deliverables, Assumptions, Key Personnel, and Price to provide all materials and labor to accomplish the work as we understand it. All necessary project management, engineering, drawings, and client correspondence are included and itemized below.

Scope of Work and Deliverables (SOW/D)

EPS will provide the electrical portion of the design memorandum and will include the following subjects:

1. Medium voltage design criteria for the 15 kV line extension starting at Pyramid Valley Rd. It is anticipated that this project will generally follow the same design criteria as the 2017 CBR 35 kV project. This task will also include transformers, conduit, conductor, services and other distribution equipment as required.

2. Communications infrastructure including City owned communications conduits and coordination with TelAlaska. The City existing communications conduits along CBR are spare. Design is assumed to be limited to continuation of spares for future use.

3. Street lighting design including preliminary lighting calculations

4. Preliminary cost estimate for electrical construction labor and materials.

5. Discussion of possible construction phasing options, including outage requirements, temporary power requirements and considerations.

6. Summary of any potential unique design issues that are identified during the work on the memorandum.

7. Listing of the electrical codes and standards which will be applicable to the project.

Assumptions

Below is a list of assumptions for this proposal. These assumptions are only intended to clarify our understanding of the scope and where the engineering effort boundaries exist.

1. EPS will provide the electrical design memo. This will be submitted by HDL along with the remainder of the design memos to the City.

2. EPS has only included the memorandum; preliminary design drawings can be added if requested

3. Travel to Unalaska has not been included, but can be added if requested.

4. The remainder of the project design scope and associated costs will be covered in a later proposal.

Key Personnel

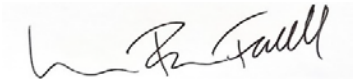
It is expected that electrical engineers David Harr, AK PE (Engineer X) and Bill Farrell, AK PE (Engineer VII) will provide these services. David and Bill will draw upon necessary support staff.

Price

The total estimate is $9,680 for this project and will be billed on regular monthly intervals on a Time and Expenses basis per our standard 2018 fee schedule. This price is valid through 12/31/18.

If you have questions or require additional information, feel free to contact me at 907-523-3104.

Thank you,



William Brown-Farrell, PE, PMP
Electrical Engineer
Electric Power Systems, Inc.

Electric Power Systems, Inc. Fee Schedule

Valid through 12/31/2018

Testimony, deposition/expert witness	$426.00
Engineer XII	$227.00
Engineer XI	$210.00
Engineer X	$195.00
Engineer IX	$178.00
Engineer VIII	$171.00
Engineer VII	$164.00
Engineer VI	$158.00
Engineer V	$152.00
Engineer IV	$142.00
Engineer III	$127.00
Engineer II	$114.00
Engineer I	$106.00
Project Manager VI	$210.00
Project Manager V	$195.00
Project Manager IV	$178.00
Project Manager III	$171.00
Project Manager II	$164.00
Project Manager I	$158.00
Engineer Tech VI	$171.00
Engineer Tech V	$158.00
Engineer Tech IV	$136.00
Engineer Tech III	$118.00
Engineer Tech II	$104.00
Engineer Tech I	$88.00
ROW Manager	$174.00
ROW Senior Agent	$151.00
ROW Agent	$109.00
ROW Assistant	$80.00
Professional Land Surveyor	$163.00
Expeditor	$88.00 ST / $116.00 OT
Clerical	$60.00
Office Manager	$75.00

1. The above listed rates are per hour.
2. The fee schedule is subject to review on January 1, 2019, and on January 1 of each year thereafter.
3. Expenses incurred, as necessary part of engineering services under this contract will be billed at cost plus 10%. Incidental expenses, such as computer usage, local phone service, and copying are included in the above rates. If Per Diem is utilized (vs. expenses and markup), it will be at the Federal Rates.
4. Services and materials purchased by Electric Power Systems, Inc. at the request of the owner will be billed at cost plus 10%.
5. Services and materials provided by other Engineered Solutions Group, Inc. companies will not be subject to intra-company markup, and are subject to the above fee schedule.
6. Interest at the rate of 1.5% per month (less, if restricted by law) may be charged for invoices greater than 60 days past due.

Electric Power Systems, Inc.
A division of Engineered Solutions Group, Inc.
3305 Arctic Blvd., Suite 201, Anchorage, AK 99503
Phone (907) 522-1953, Fax (907) 522-1182, www.esgrp.net

COST ESTIMATE PER TASK

FIRM: EPS			**PROJECT TITLE:** Captains Bay Road Paving & Utility Extension			
TASK NO: 5	**TASK DESCRIPTION:** Preliminary Design (Electrical)					**DATE:** 7/3/2018
GROUP:	**METHOD OF PAYMENT:**	**FP** ☐	**FPPE** ☐	**T&E** ☑	**CPFF** ☐	**PREPARED BY:** Bill Farrell

SUB-TASK NO.	SUB-TASK DESCRIPTION	LABOR HOURS PER JOB CLASSIFICATION										
		Eng. X	Eng. VII		Drafter	Clerical						
1	Medium Voltage	4	8									
2	Communications	1	2									
3	Street Lighting	2	8									
4	ROM Cost Estimate	1	4									
5	Phasing	2	4									
6	Summary of Issues	1	2									
7	Codes	1	2									
	Coordination & Management	2	4									
	Contigency	2	6									
TOTAL LABOR HOURS		16	40	0	0	0	0	0	0	0	0	0
*** LABOR RATES ($/HR)**		$195.00	$164.00									
LABOR COSTS ($)		$3,120.00	$6,560.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

EXPENSES

SUB-TASK NO.	ITEM(S)	QUANTITY	UNIT PRICE	TOTAL PRICE
				$0.00
				$0.00
	Markup at 10%			$0.00
				$0.00
				$0.00
				$0.00
		TOTAL EXPENSES:		**$0**

SUB-CONTRACTORS: Firm Initials and Price Per Task

						Subtotal	10% Markup
FIRM:							
AMOUNT:						$0	$0

COMMENTS:

FIRM'S TOTAL COST OF LABOR (or Fixed Price):	**$9,680**
***IF CPFF*, TOTAL INDIRECT COST @ 0.00%**	**$0**
FIRM'S TOTAL EXPENSES	**$0**
FIRM'S TOTAL COST (no Subcontracts or Fee)	**$9,680**
TOTAL SUBCONTRACTOR PRICES:	**$0**

* Labor Rates shall be direct labor (base pay) only if Method of Payment is CPFF; otherwise, Labor Rates shall be total rates (i.e. base pay + benefits + overhead + profit.)

Captains Bay Road Paving

Task 1A Scope and Engineering Fee Estimate

Regan Engineering

No.	Task	Projected Time (hrs)	Rate	Cost
1	Model Water System, Determine/Verify Capacities for Different Size Pipes w/appropriate Residual Pressure. Model for Pyramid or Well source supply. Consider current and future flow rates. Interview OSI, NPF, WSI and AML for current and Projected uses. Develop Tech Memo - Water Main Size(s).	24	$140	$3,360
2	Estimate Sewage Flows from Task 1, Determine Wet Well Sizes, Force Main Lengths and Sizes, Pump Station Locations, Estimated Pump Sizes, Identify Issues. Obtain and review Crowley/NPF infrastructure as-builts and plat(s)/ROW plans. Site and plan review, 2-days in field. Develop Tech Memo - Pump Station Locations, Sizes, Force Main Sizes (1)(2)	40	$140	$5,600
3	Condition Assessment for Pump Station #9, Westward Water and Wastewater Utilities, Exisitng Pipes and Appurtenances, Estimated 1-day research, 3+ days in Field. Meet with COU Water/Wastewater Divisions and review sites. Develop Tech Memo - Existing Utilities Condition Assessment	76	$140	$10,640
4	Expenses (Airfare, Per Diem, Ground Transportation, etc.); 1-Trip to Unalaska	-	-	$3,600
5	Produce Tech Memo with Standards to be used During Design.	8	$140	$1,120
6	Water EOD/Chlorine Monitoring Facility, Field Assessment of Existing Facility, Meet with Water Division, Research Structure Options, Research and determine Field Location of New Facility and Blow-off Pipe. Develop Tech Memo - Water EOD Cl2 Monitoring Facility (1)	16	$140	$2,240
7	15% Plan ROM Cost Estimate for Water and Sewer Pipe, Pump Stations, Cl2 Building, PS #9 Upgrades, Misc. Improvements.	12	$140	$1,680
	TOTAL			**$28,240**

(1) Excludes SCADA Assessment

(2) Need for Air/Vac relief valves TBD after road/pipe profiles available

Scope includes attendence of meetings with City to review and discuss memorandums.

July 2, 2018

HDL Engineering Consultants, LLC
3335 Arctic Boulevard, Suite 100
Anchorage, AK 99503

BOREAL CONTROLS INC.
JUNEAU, ALASKA

As requested by HDL, Boreal Controls Inc. is pleased to provide their fee schedule for Phase 1A of the Unalaska Captains Bay Road Paving and Utility Extension project. This a revised proposal, as the initial request was misinterpreted.

Scope of Work

Site Visits

No site visits are expected for Phase 1A of the project.

Meeting Participation

BCI staff will participate in the necessary design team meetings to coordinate efforts. Participation will be through teleconference. BCI expects the following meetings for Phase 1A:

1. General Project Coordination Teleconferences
2. Water Coordination Teleconference
   - A. End of Distribution Reporting Requirements
   - B. End of Distribution Programming Requirements
   - C. End of Distribution Communication (IT/IS)
3. Wastewater Coordination Teleconference
   - A. Existing Westward Lift Station Pump Size to be Increased
   - B. New Lift Stations Design Requirements
   - C. New Lift Stations Communications (IT/IS)

Scope, Investigation & Document Preparation

Formal bid documents are not necessary for Phase 1A of the project.

BCI provided the Electrical and Controls Systems Engineering for Unalaska's other Water and Wastewater stations. BCI will review their previous projects and deliver Unalaska's Water and Wastewater design standards to the engineering team.

BCI has programmed and standardized all of the Water and Wastewater PLCs and communication between them. Programming is not included as part of Phase 1A, but will part of Phase IB as the design requirements are made clear.

Cost Estimation

As part of the work for Phase 1A, BCI will provide a 15% level cost estimate for the water and wastewater stations.

Cost Proposal Phase 1A

We propose to undertake the foregoing scope of work on a time and expense basis with a not-to-exceed cost of **$10,200** per the attached cost spreadsheet. Below is BCI's general fee schedule for reference.

Position / Role	Rate
• Principal Engineer	$175/hr
• Project Manager	$160/hr
• Professional Engineer	$155/hr
• Staff Engineer	$140/hr
• Clerical	$75/hr
• Travel	$50/hr
• Travel Expenses	Billed at cost

Closure

Thank you for the opportunity to propose to work on this project. Please contact me if you have any questions or suggestions.

Sincerely,

Gregory S. Smith, P.E.
President
Boreal Controls Inc.

		ITEMS & DESCRIPTIONS	MATERIALS & EXPENSES QTY	UNITS	COST EACH	ITEM COST	LABOR QTY	UNITS	RATE	ITEM COST	COSTS MATERIAL MARKUP	MATERIAL SUBTOTAL	LABOR CONTINGENCY	LABOR SUBTOTAL	SUBTOTAL
1	**Phase IA : Scoping, Mapping, & Other Investigations**														**$10,180**
	A	Project Management				$0				$5,700	0.00%	$0	0.00%	$5,700	$5,700
		1 Project Management				$0	16	HOURS	$160	$2,560					
		2 W & WW Station Electrical Standards				$0	4	HOURS	$160	$640					
		3 W & WW Station Electrical Control Standards				$0	4	HOURS	$160	$640					
		4 Class 3 - 15% Cost Estimate				$0	12	HOURS	$155	$1,860					
		5				$0		HOURS		$0					
	B	Water				$0				$1,280	15.00%	$0	0.00%	$1,280	$1,280
		1 Coordination w/ Design Team & City				$0	8	HOURS	$160	$1,280					
		End Of Distribution Requirements				$0		HOURS		$0					
		Programming & Reporting				$0		HOURS		$0					
						$0		HOURS		$0					
						$0		HOURS		$0					
	C	Wastewater				$0				$2,560	0.00%	$0	0.00%	$2,560	$2,560
		1 Coordination w/ Design Team & City				$0	8	HOURS	$160	$1,280					
		Westward Lift Station Starter Size				$0		HOURS		$0					
		Programming Design				$0		HOURS		$0					
						$0		HOURS		$0					
	D	IT/IS Communications				$0				$640	0.00%	$0	0.00%	$640	$640
		1 Coordination w/ Design Team & City				$0	4	HOURS	$160	$640					
		Necessary Hardware				$0		HOURS		$0					
						$0		HOURS		$0					
						$0		HOURS		$0					
2	**Phase IB : Design**														**$0**
	A	Pre-design scope & work plan				$0				$0	0.00%	$0	0.00%	$0	$0
		1				$0		HOURS		$0					
		2				$0		HOURS		$0					
		3				$0		HOURS		$0					
	B	35% Plans & Specs				$0				$0	0.00%	$0	0.00%	$0	$0
		1				$0		HOURS		$0					
		2				$0		HOURS		$0					
		3				$0		HOURS		$0					
	C	65% Plans & Specs				$0				$0	0.00%	$0	0.00%	$0	$0
		1				$0		HOURS		$0					
		2				$0		HOURS		$0					
		3				$0		HOURS		$0					
	D	95% Plans & Specs				$0				$0	0.00%	$0	0.00%	$0	$0
		1				$0		HOURS		$0					
		2				$0		HOURS		$0					
		3				$0		HOURS		$0					
	E	Finalized Permits				$0				$0	0.00%	$0	0.00%	$0	$0
		1				$0		HOURS		$0					
		2				$0		HOURS		$0					
		3				$0		HOURS		$0					
	F	Bid Plans, Specs, & Services				$0				$0	0.00%	$0	0.00%	$0	$0
		1				$0		HOURS		$0					
		2				$0		HOURS		$0					

		ITEMS & DESCRIPTIONS	MATERIALS & EXPENSES QTY	UNITS	COST EACH	ITEM COST	LABOR QTY	UNITS	RATE	ITEM COST	COSTS MATERIAL MARKUP	MATERIAL SUBTOTAL	LABOR CONTINGENCY	LABOR SUBTOTAL	SUBTOTAL
	3					$0		HOURS		$0					
	4					$0		HOURS		$0					
	5					$0		HOURS		$0					
G		Conformed Drawings				$0				$0	0.00%	$0	0.00%	$0	$0
	1					$0		HOURS		$0					
	2					$0		HOURS		$0					
	3					$0		HOURS		$0					
3		**Phase II : Construction Services (Out of Scope)**													**$0**
A						$0				$0	0.00%	$0	0.00%	$0	$0
	1					$0		HOURS		$0					
	2					$0		HOURS		$0					
	3					$0		HOURS		$0					
B						$0				$0	0.00%	$0	0.00%	$0	$0
	1					$0		HOURS		$0					
	2					$0		HOURS		$0					
	3					$0		HOURS							

TOTAL **$10,180**

CITY OF UNALASKA

Consultant Agreement

Captains Bay Road and Utility Upgrades Project

FILE NO. 19201

Prepared By:

City of Unalaska
P.O. Box 610
Unalaska, Alaska 99685
907.581.1260

TABLE OF CONTENTS

AGREEMENT FOR CONSULTING
AND RELATED SERVICES

THIS AGREEMENT is entered into this _____ day of _____**, 2018** by and between **HDL ENGINEERING CONSULTANTS, LLC** (hereinafter called "Consultant"), and the **CITY OF UNALASKA** (hereinafter called "City").

WITNESSETH THAT:

WHEREAS City desires to engage Consultant to render consulting and related services for the performance of the **Captains Bay Road and Utility Upgrades Project**, and

WHEREAS Consultant represents that it has the experience and ability to perform such services; and

WHEREAS the parties hereto desire to enter into a basic agreement setting forth the terms under which Consultant will, as requested, perform such work;

NOW THEREFORE the parties hereto do mutually agree as follows:

1. Employment of Consultant

   Consultant agrees to provide professional services in accordance with the provisions of this Agreement. A written description of the work to be performed, schedule and compensation is set out in **Exhibits A-C** of this Agreement.

2. Performance

   Consultant agrees to perform the work described in **Exhibit A- Scope of Services**; however, the Consultant is not authorized to perform any work or incur any expense which would cause the amount for which he is entitled to be paid under this Agreement to exceed the amount set forth in **Exhibit C – Fee Proposal** without the prior written approval of the City. All services shall be rendered in accordance with the schedule set forth in **Exhibit B – Contract Schedule**.

   The work shall include but not be limited to the following: furnishing all equipment, transportation, per diem, travel, and supplies to perform all scopes of work that are authorized under the State of Alaska's Professional Engineering License, in connection with the **Captains Bay Road and Utility Upgrades Project**.

3. Fee

   After receipt of a periodic billing for said services, the City agrees to pay Consultant as compensation for the services under this Agreement such sums of money as set forth in **Exhibit C** of this Agreement. The amount payable to the Consultant shall not exceed the amount specified in **Exhibit C**.

4. Payments

   City agrees to make monthly payments to Consultant as services are performed and costs are incurred, provided Consultant submits a proper invoice for each payment, in such form accompanied by such evidence in support thereof as may be reasonably required by the City. City may, at its option, withhold ten percent (10%) from each

monthly payment pending satisfactory completion of the work by Consultant. All invoices are otherwise due and payable within thirty (30) days of receipt by City. City shall pay Consultant for the services identified in **Exhibit A** the **Not to Exceed Total Fee of One Hundred Ninety Five Thousand, Eight Hundred Sixty Eight Dollars ($195,868).** The Not to Exceed Total Fee is based on the distribution of the Not to Exceed Total Fee **for Tasks 1 and 5A** as set forth in **Exhibit A.** The portion of the Not to Exceed Total Fee billed and paid for Consultant's services shall be equal to the proportion of services actually completed for each task set forth in **Exhibit A** during the billing period to the fee total specified for that task.

5. Personnel

Consultant agrees to furnish all personnel necessary for expeditious and satisfactory performance of this Agreement, each to be competent, experienced, and well qualified for the work assigned. No person objected to by the City shall be employed by Consultant for work hereunder.

6. Independent Contractor Status

In performing under this Agreement, Consultant acts as an independent contractor and shall have responsibility for and control over the details and means for performing the consulting services required hereunder.

7. Indemnification

Consultant shall defend and save harmless City or any employee, officer, insurer, or elected official thereof from and against losses, damages, liabilities, expenses, claims, and demands but only to the extent arising out of any negligent act or negligent omission of Consultant while performing under the terms of this contract.

City shall defend and save harmless Consultant or any employee, officer, or insurer thereof from and against losses, damages, liabilities, expenses, claims, and demands but only to the extent arising out of any negligent act or negligent omission of City while performing under the terms of this contract.

8. Assignment

Consultant shall not assign this Agreement or any of the monies due or to become due hereunder without the prior written consent of City.

9. Subcontracting

Consultant may not subcontract its performance under this Agreement without prior written consent of City. Any subcontractor must agree to be bound by terms of this Agreement.

10. Designation of Representatives

The Parties agree, for the purposes of this Agreement, the City shall be represented by and may act only through the Deputy Director of Public Utilities or such other person as he may designate in writing. Consultant shall advise City in writing of the name of its representative in charge of the administration of this Agreement, who shall have authority to act for and bind Consultant in connection with this Agreement.

11. Termination

Either party shall have the right to terminate this Agreement in whole or in part at any time and for reasonable cause, by delivery of thirty (30) days written notice, specifying the extent and effective date thereof. After receipt of such notice, Consultant shall stop work hereunder to the extent and on the date specified in such notice, terminate all subcontracts and other commitments to the extent they relate to the work terminated, and deliver to City all designs, computations, drawings, specifications and other material and information prepared or developed hereunder in connection with the work terminated.

In the event of any termination pursuant to this clause, Consultant shall be entitled to be paid as provided herein for direct labor hours expended and reimbursable costs incurred prior to the termination pursuant to Section 3 hereof, and for such direct labor hours and reimbursable costs as may be expended or incurred thereafter with City's approval in concluding the work terminated, it being understood that Consultant shall not be entitled to any anticipated profit on services not performed. Except as provided in this clause, any such termination shall not alter or affect the rights or obligations of the parties under this Agreement.

12. Ownership and Use of Documents

Consultant agrees that all original design reproducible drawings, all pertinent calculations, specifications, reports, data and other documents prepared for the City hereunder are the property of the City and the City shall have the right, without payment of additional compensation, to disclose, reproduce and use such documents for this project

13. Insurance

A. During the term of the contract, the Contractor shall obtain and maintain in force the insurance coverage specified in these requirements. Such coverage shall be with an insurance company rated “Excellent” or “Superior” by A. M. Best Company, or a company specifically approved by the City.

B. The contractor shall carry and maintain throughout the life of this contract, at its own expense, insurance not less than the amounts and coverage herein specified, and the City of Unalaska, its employees and agents shall be named as additional insured under the insurance coverage so specified and where allowed, with respect to the performance of the work. There shall be no right of subrogation against the City or its agents performing work in connection with the work, and this waiver of subrogation shall be endorsed upon the policies. Insurance shall be placed with companies acceptable to the City of Unalaska; and these policies providing coverage thereunder shall contain provisions that no cancellation or material changes in the policy relative to this project shall become effective except upon *30* days prior *written* notice thereof to the City of Unalaska.

C. Prior to commencement of the work, the contractor shall furnish certificates to the City of Unalaska, in duplicate, evidencing that the Insurance policy provisions required hereunder are in force. Acceptance by the City of Unalaska of deficient evidence does not constitute a waiver of contract requirements.

D. The contractor shall furnish the City of Unalaska with certified copies of policies upon request. The minimum coverages and limits required are as follows:

1. Workers' Compensation insurance in accordance with the statutory coverages required by the State of Alaska and Employers Liability insurance with limits not less than $1,000,000 and, where applicable, insurance in compliance with any other statutory obligations, whether State or Federal, pertaining to the compensation of injured employees assigned to the work, including but not limited to Voluntary Compensation, Federal Longshoremen and Harbor Workers Act, Maritime and the Outer Continental Shelf's Land Act.

2. Commercial General Liability with limits not less than $1,000,000 per Occurrence and $2,000,000 Aggregate for Bodily Injury and Property Damage, including coverage for Premises and Operations Liability, Products and Completed Operations Liability, Contractual Liability, Broad Form Property Damage Liability and Personal Injury Liability.

3. Commercial Automobile Liability on all owned, non-owned, hired and rented vehicles with limits of liability of not less than $1,000,000 Combined Single Limit for Bodily Injury and Property Damage per each accident or loss.

4. Umbrella/Excess Liability insurance coverage of not less than $1,000,000 per occurrence and annual aggregate providing coverage in excess of General Liability, Auto Liability, and Employers Liability.

5. If work involves use of aircraft, Aircraft Liability insurance covering all owned and non-owned aircraft with a per occurrence limit of not less that $1,000,000.

6. If work involves use of watercraft, Protection and Indemnity insurance with limits not less than $1,000,000 per occurrence.

7. Professional Liability insurance with limits of not less than $1,000,000 per claim and $1,000,000 aggregate,

subject to a maximum deductible $10,000 per claim. The City of Unalaska has the right to negotiate increase of deductibles subject to acceptable financial information of the policyholder.

E. Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of the City, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officers, officials, employees and volunteers; or the contractor shall provide a financial guarantee satisfactory to the City guaranteeing payment of losses and related investigations, claim administration and defense expense.

F. All insurance policies as described above are required to be written on an "occurrence" basis. In the event occurrence coverage is not available, the contractor agrees to maintain "claims made" coverage for a minimum of two years after project completion.

G. If the contractor employs subcontractors to perform any work hereunder, the contractor agrees to require such subcontractors to obtain, carry, maintain, and keep in force during the time in which they are engaged in performing any work hereunder, policies of insurance which comply with the requirements as set forth in this section and to furnish copies thereof to the City of Unalaska. This requirement is applicable to subcontractors of any tier.

14. Claims Recovery

Claims by City resulting from Consultant's failure to comply with the terms of and specifications of this contract and/or default hereunder may be recovered by City by withholding the amount of such claims from compensation otherwise due Consultant for work performed or to be performed. City shall notify Consultant of any such failure, default or damage therefrom as soon as practicable and no later than 10 days after discovery of such event by written notice. Nothing provided herein shall be deemed as constituting an exclusive remedy on behalf of City, nor a waiver of any other rights hereunder at law or in equity. Design changes required as a result of failure to comply with the applicable standard of care shall be performed by the Consultant without additional compensation.

15. Performance Standard

Services performed under this Agreement will be performed with reasonable care or the ordinary skill of the profession practicing in the same or similar location and under similar circumstances and shall comply with all applicable codes and standards.

16. Compliance with Applicable Laws

Consultant shall in the performance of this Agreement comply with all applicable federal, state, and local laws, ordinances, orders, rules, and regulations applicable to its performance hereunder, including without limitation, all such legal provisions pertaining to social security, income tax withholding, medical aid, industrial insurance, workers' compensation, and other employee benefit laws. Consultant also agrees to comply with

all contract provisions pertaining to grant or other funding assistance which City may choose to utilize to perform work under this Agreement. The Consultant and all subcontractors must comply with state laws related to local hire and prevailing wages.

17. Records and Audit

Consultant agrees to maintain sufficient and accurate records and books of account, including detailed time records, showing all direct labor hours expended and all reimbursable costs incurred and the same shall be subject to inspection and audit by City at all reasonable times. All such records and books of account pertaining to any work performed hereunder shall be retained for a period of not less than six (6) years from the date of completion of the improvements to which the consulting services of this Agreement relate.

18. Reporting of Progress and Inspection

Consultant agrees to keep City informed as to progress of the work under this Agreement by providing monthly written progress reports, and shall permit City to have reasonable access to the work performed or being performed, for the purpose of any inspection City may desire to undertake.

19. Form of City Approval

Except as otherwise provided in this Agreement, City's requests and approvals, and Consultant's cost estimates and descriptions of work to be performed, may be made orally where necessary, provided that the oral communication is confirmed immediately thereafter in writing.

20. Duration of Agreement

This agreement is effective for a period of three (3) years from the date first shown above. The agreement may be extended by the mutual written agreement of City and Consultant.

21. Inspections by City

The City has the right, but not the duty, to inspect, in the manner and at reasonable times it considers appropriate during the period of this Agreement, all facilities and activities of the Consultant as may be engaged in the performance of this Agreement.

22. Endorsements on Documents

Endorsements and professional seals, if applicable, must be included on all final plans, specifications, estimates, and reports prepared by the Consultant. Preliminary copies of such documents submitted for review must have seals affixed without endorsement (signature).

23. Notices

Any official notice that either party hereto desires to give the other shall be delivered through the United States mail by certified mail, return receipt requested, with postage thereon fully prepaid and addressed as follows:

To City:	To Consultant:
Tom Cohenour, DPW Director City of Unalaska Box 610 Unalaska, Alaska 99685	David W. Lundin, P.E., President HDL Engineering Consultants, LLC 301 West Elmwood Avenue Palmer, Alaska 99645

The addresses hereinabove specified may be changed by either party by giving written notice thereof to the other party pursuant to this paragraph.

24. Venue/Applicable Law

The venue of any legal action between the parties arising as a result of this Agreement shall be laid in the Third Judicial District of the Superior Court of the State of Alaska and this contract shall be interpreted in accordance with the laws of the State of Alaska.

25. Attorney's Fees

In the event either party institutes any suit or action to enforce its right hereunder, the prevailing party shall be entitled to recover from the other party its reasonable attorney's fees and costs in such suit or action and on any appeal therefrom.

26. Waiver

No failure on the part of City to enforce any covenant or provisions herein contained, nor any waiver of any right hereunder by City, unless in writing and signed by the parties sought to be bound, shall discharge or invalidate such covenants or provisions or affect the right of City to enforce the same or any other provision in the event of any subsequent breach or default.

27. Binding Effect

The terms, conditions and covenants contained in this Agreement shall apply to, inure to the benefit of, and bind the parties and their respective successors.

28. Entire Agreement/Modification

This agreement, including **Exhibits A-C**, and the Consultant's proposal dated July 3, 2018, constitutes the entire Agreement between the parties with respect to the subject matter hereof, and all prior negotiations and understandings are superseded and replaced by this Agreement and shall be of no further force and effect. No modification of this Agreement shall be of any force or effect unless reduced to writing, signed by both parties and expressly made a part of this Agreement.

In witness whereof, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in duplicate on the respective date indicated below.

HDL ENGINEERING CONSULTANTS, LLC

By:_____
David W. Lundin, President

State of Alaska)
) ss.
Third Judicial District)

The foregoing instrument was acknowledged before me on the ____ day of July, 2018, by David W. Lundin, P.E., President of HDL Engineering Consultants, LLC, an Alaska Corporation, on behalf of the corporation.

_____
Notary Public, State of Alaska
My Commission Expires _____

CITY OF UNALASKA, ALASKA

By:_____
Thomas Thomas, City Manager

State of Alaska)
) ss.
Third Judicial District)

The foregoing instrument was acknowledged before me on the ____ day of July, 2018, by Thomas Thomas, City Manager for the City of Unalaska, a First Class Alaska Municipal Corporation, on behalf of the City of Unalaska.

_____
Notary Public, State of Alaska
My Commission Expires _____

CITY OF UNALASKA

EXHIBIT "A"
SCOPE OF SERVICES

The Consultant will work with the City to complete the **Captains Bay Road and Utility Upgrades Project** per the Consultant's Proposal dated July 3, 2018 attached. Tasks awarded under this Agreement are Tasks 1 and Task 5A.

CITY OF UNALASKA

EXHIBIT "B"

CONTRACT SCHEDULE

Schedule dated July 3, 2018 attached.

CITY OF UNALASKA

EXHIBIT "C"
FEE PROPOSAL

Fee Proposal dated July 3, 2018 attached.