
MEMORANDUM

To: Mayor McConnell and Members of the Assembly
Jay Sweeney, Interim Municipal Administrator

From: Michael Harmon, P.E., Public Works Director *MH*
Stephen Weatherman, P.E., Municipal Engineer *S*
David Longtin, P.E., Senior Engineer *OLL*

Reviewed: Mellissa Cervera-Bean, Contract Coordinator

CC: Mike Middleton, Interim Finance Director *MM*

Date: October 1, 2013

Subject: Hollywood Way & New Archangel Street water and sewer improvements
Approval to Award Design Contract

Background:

On October 23, 2012, the City and Borough of Sitka Assembly participated in a work session based on the CBS Municipal Sanitary Sewer Master Plan. While the plan itself has not been officially approved by the Assembly, the sewer rate increase schedule proposed by the study (Ordinance 2012-37) was approved at the Assembly meeting that night.

The master plan, finalized in October 2012, compiled a prioritized list of short-term capital improvement projects. The two highest-ranked sewer pipe projects on the list are for New Archangel Street and Hollywood Way.

A Request for Qualifications for the design of sewer, water, storm drain and associated improvements for these streets was published in accordance with CBS procurement policy. Statements of Qualification (SOQs) were received from DOWL HKM and R&M Engineering. SOQ reviewers unanimously agreed that DOWL HKM is the more qualified firm to do this work.

DOWL HKM has submitted a fee proposal for a not-to-exceed time-and-materials cost of \$104,804 to provide design services for this project. A copy of that proposal is attached.

Analysis:

Poor subsurface conditions under the road sections of Hollywood and New Archangel are the cause of frequent operation and maintenance problems. The sewers have backed up at both of these locations due to “bellies” or misalignments in the pipes. Also, there are surface-drainage related problems at Hollywood Way, as well as a poorly defined road right-of-way. The water

main at Hollywood Way is performing adequately, but it is undersized relative to the local demands on the system.

The CBS Public Works Department has secured loan funding from the Alaska Department of Environmental Conservation (ADEC) to complete design and construction of improvements to the sewer system at New Archangel and the water and sewer systems at Hollywood Way.

Fiscal Note:

Design and construction costs for the ADEC-eligible sewer work are estimated at \$500,000. ADEC-eligible water improvements are estimated at \$250,000. State loan commitments totaling \$750,000 (\$500,000 from the Alaska Clean Water Fund and \$250,000 from the Alaska Drinking Water Fund) are currently available. The Public Works Department has applied for ADEC grant funding that would replace a portion of the loan.

Construction of certain elements of the project, such as sidewalks, curb and gutter in areas unaffected by the utility trenching, are not eligible for reimbursement from ADEC. CBS has \$80,000 in working capital set aside for this project in the FY2014 budget.

Recommendation:

Approve award of a design contract for the Hollywood Way & New Archangel Street water and sewer improvements project to DOWL HKM with a not-to-exceed amount of \$104,804.



September 25, 2013

David Longtin, P.E., Senior Engineer
City and Borough of Sitka
100 Lincoln Street
Sitka, AK 99835

RE: **DESIGN OF ROAD, WATER and SEWER SYSTEMS FOR HOLLYWOOD WAY AND NEW ARCHANGEL STREET**
REVISED Fee Proposal and Schedule

Dear David:

Thank you for selecting our firm to provide design services for the Hollywood Way and New Archangel Street projects. We understand that this work will be conducted on a time and materials basis, with a not-to-exceed contract limit. Following is our understanding of the Scope of Services based on our discussions with CBS Public Works staff and our recent work with several other city street improvement projects.

SCOPE OF SERVICES

Geotechnical Exploration

- Based on the regional geology and previous geotechnical explorations in the general vicinity of your site, we assume the site soils will consist of soft fill and peat to depths of 8 to 12 feet, followed by medium dense sands and gravels along Hollywood Way. We anticipate fill and peat to depths of at least 15 feet along New Archangel Street. A previous boring on New Archangel also revealed an ash layer at a depth of about 15 feet, followed by sands. If the soil conditions vary significantly from those anticipated, we will contact you to discuss further investigation options.
- Along each project corridor, we propose to drill two to three test borings to depths of about 20 feet to supplement the existing geotechnical data. The test borings will be drilled using a truck-mounted GeoProbe N8 drill rig fitted with 2" macro-core, direct push tooling. Samples are anticipated to be obtained continuously in four-foot lengths. The drilling services will be performed by Cuff Blakeley of Sitka, Alaska and the test borings will be logged by a DOWL HKM geologist/engineer.
- A slotted three-quarter inch PVC standpipe will be placed in most of the bore holes to monitor the groundwater level. That level will be checked once before leaving Sitka and the standpipes will remain in place after the investigation is complete.
- Selected samples recovered from the borings will be tested in our laboratory to classify the soils and to determine their basic engineering properties. The specific testing program will depend on the soil conditions and the samples recovered, but will typically include water content and particle-size analyses. A proposed lab testing program will be submitted to CBS for approval before beginning testing.
- The field work is expected to take one day, and we plan to perform the work in mid-October. The report will be available approximately three to four weeks after completion of the field exploration.
- The findings of the field and laboratory testing will be analyzed and interpreted. A single report will be issued that presents:
 - The data obtained from the field exploration and laboratory testing,
 - Our analysis and interpretation of the data,

907-780-3533 ■ 907-780-3535 (fax) ■ 5368 Commercial Boulevard ■ Juneau, Alaska 99801 ■ www.dowlhkm.com

Alaska - Anchorage, Juneau, Kodiak, Palmer ■ Arizona - Tucson, Tempe ■ Montana - Billings, Bozeman, Butte, Great Falls, Helena, Miles City
North Dakota - Dickinson ■ Washington - Redmond ■ Wyoming - Gillette, Lander, Laramie, Sheridan

- Recommended geotechnical design parameters for installation of the water and sewer lines, and
- Recommendations for associated construction earthwork and construction inspection and testing.
- **Assumptions** - The fee is based on the anticipated soil conditions, scope of work described above, and the following assumptions. If you have any additional information regarding the site conditions, if you would like the scope expanded, or if any of the assumptions are incorrect, please contact us so revisions can be made.
 - The client will assist with legal entry and access onto the site for DOWL HKM to perform the exploration.
 - The geotechnical investigations for Hollywood Way and New Archangel Street will be performed concurrently, under a single mobilization.
 - The site is accessible with a truck-mounted GeoProbe drill rig.
 - Traffic control consisting of signs and cones will be sufficient; no flagging will be required.
 - Test borings will be backfilled with cuttings and capped with cold patch pavement.
 - Cold patch will be provided by the City and Borough of Sitka, at no cost to DOWL HKM.

Survey and Mapping

- DOWL HKM will provide as-built survey and mapping with assistance from O'Neill Surveying and Engineering. Survey and mapping will be performed by the DOWL HKM survey crew during an approximate three day site visit. O'Neill will assist with establishing property lines and survey control.
- A thorough topographic survey of existing features will be performed on Hollywood Way in anticipation of a full road re-construction and the need for fine detail during design. The topographic survey for New Archangel will be more limited and will focus more narrowly on the sewer trench and key features required for the base map.
- In addition to a ground-based survey, we will as-built existing sewer and storm structures. This work will be done in tandem with a condition assessment of the structures by the engineer.

Preliminary Engineering (35%)

- **Mid-October 2013** – As lead designer, I will perform on-site research and reconnaissance in conjunction with the geotechnical exploration and topographic survey. This 2-3 day site visit will also include meeting with you and CBS Public Works staff to review existing conditions; maintenance issues; and desired improvements for the roadway, water, sewer, and storm drainage systems. I will also plan to meet with residents of each street to gather information about individual properties.
- **Mid-November 2013** - DOWL HKM will provide the following deliverables:
 1. Geotechnical Report
 2. Completed base mapping
 3. Preliminary design (35%)
 - New Archangel:**
 - Design a new sanitary sewer system between the manhole in Marine Street and the manhole adjacent to Halibut Point Road
 - Evaluate the condition of the aforementioned manholes to determine the need for rehabilitation or replacement
 - Address the potential for settlement of the new sanitary sewer line, and differential movement between the sewer trench and the remainder of the road section
 - Drawings:
 - Plan & Profile Drawing

- Typical Section
- Engineer's estimate

Hollywood Way:

- Design a new sanitary sewer system for both the north end (including a short section up De Groff), and the south end of the project. Replace existing cleanouts at the high end of each system with manholes. Replace associated service laterals to the property lines
- Design a new water system the length of the block between DeGroff and Sawmill Creek Road
- Make recommendations for a limited storm drainage system
- Provide alternatives for better delineation of pedestrian and vehicular traffic, private and public property, and investigate the potential for a sidewalk
- Drawings:
 - Three Plan & Profile alternatives
 - For example: With and Without Sidewalk, different curb lines, etc.
 - Water, sewer, and storm drain layouts
 - Associated Typical Sections
- Engineer's estimate for each alternative

Final Design (65% through Bid-ready Documents)

- **65%** design plans and updated engineer's estimate will be submitted electronically by **mid-December, 2013**. Most of the plan sheets will be included with some of the proposed Special Provisions and an updated engineer's estimate.
- **95%** design plans and Special Provisions will be submitted electronically by **mid-January, 2014**. This submittal will have all plan sheets, Special Provisions, and engineer's estimate. This plan set, with the DEC check list, will also be submitted to the Alaska Department of Environmental Conservation (DEC) for their "approval to construct" review. CBS will submit fees for this review directly to the DEC.
- **100%** bid-ready contract documents with final engineer's estimate will be submitted in CBS format by **mid-February, 2014**. This submittal will include a full set of bid documents to include the drawings, special provisions, and final engineer's construction cost estimate. The final civil plan set for both Hollywood Way and New Archangel will include the following sheets:
 - a. Cover sheet
 - b. General notes, abbreviations, and symbols
 - c. Survey control map
 - d. Sheet key map
 - e. Three to four sheets for typical sections and details
 - f. Three sheets for demolition plans
 - g. Three sheets for painted traffic markings (if appropriate) and signage
 - h. Two to three sheets for grading plans
 - i. Three sheets for sewer and water plans
 - j. One to two sheets for storm drain plans
 - k. Two sheets for profile views
 - l. Additional sheets as necessary

Following is our estimated fee proposal based on the preceding scope of work and a rough construction estimate of approximately \$700,000:

Geotechnical Exploration	-	18,306.00
Survey and Mapping	-	15,697.00
Civil Design	-	<u>70,801.00</u>

TOTAL ESTIMATED NOT-TO-EXCEED FEE: \$104,804.00

Please contact me if you have questions, or require additional information.

Sincerely,
DOWL HKM



Toby Lockhart, P.E.
Project Manager

**DOWL HKM - Final Design - Civil
ESTIMATE FOR PROFESSIONAL SERVICES**

PROJECT: HOLLYWOOD WAY + NEW ARCHANGEL STREET

PROPOSAL

CLIENT: CBS

9/26/2013
TAL

Final Design Fee Summary

35% Design Submittal - Hollywood	\$16,600.00
35% Design Submittal - New Archangel	\$7,440.00
65% Design Submittal	\$14,000.00
95% Design Submittal	\$21,520.00
100% Design Submittal	\$9,890.00
TOTAL ESTIMATED FEES FOR FINAL DESIGN PROFESSIONAL SERVICES	\$69,450.00

	Labor Category	Senior Engineer	Proj Manager	Proj Engineer	CAD Tech	Admin Asst.	TOTALS
	Hourly Rate	\$180.00	\$135.00	\$105.00	\$100.00	\$85.00	
35% Design Submittal - Hollywood	Hours						
Project Management			20			10	30
Conceptual Design Development		4	40				44
Drawing Preparation			20	8	24		52
Engineers Estimate		4	2				6
	Subtotal - Hours	8	82	8	24	10	132
	Subtotal - Costs	\$1,440.00	\$11,070.00	\$840.00	\$2,400.00	\$850.00	\$16,600.00
35% Design Submittal - New Archangel Street							
Project Management			4			22	26
Conceptual Design Development		4	16				20
Drawing Preparation			8		8		16
Engineers Estimate			2				2
	Subtotal - Hours	4	30	0	8	22	64
	Subtotal - Costs	\$720.00	\$4,050.00	\$0.00	\$800.00	\$1,870.00	\$7,440.00
65% Design Submittal							
Project Management			8				8
Grading Plan		2	20				22
Utilities Layout		2	12				14
Drawing Preparation			8		16		24
Engineer's Estimate		2	10				12
Special Provisions		2	16			4	22
Quality Control		2					2
65% CBS Review Meeting			2				2
	Subtotal - Hours	10	76	0	16	4	106
	Subtotal - Costs	\$1,800.00	\$10,260.00	\$0.00	\$1,600.00	\$340.00	\$14,000.00
95% Design Submittal							
Project Management			8				8
Grading Plan		2	16				18
Utilities Layout		2	8	8			18
Drawing Preparation			16	8	16		40
Engineer's Estimate		2	8		16	14	40
Special Provisions		4	16			12	32
Quality Control		4	8	8			20
95% CBS Review Meeting			2				2
	Subtotal - Hours	14	82	24	32	26	178
	Subtotal - Costs	\$2,520.00	\$11,070.00	\$2,520.00	\$3,200.00	\$2,210.00	\$21,520.00
100% Design Submittal							
Project Management			8				8
Drawing Revisions		4	4	2	8		18
Engineer's Estimate Revisions			4			4	8
Special Provisions Revisions		4	4			4	12
Quality Control		4	4				8
Assistance During Bidding		8	4	4	4		20
	Subtotal - Hours	20	28	6	12	8	74
	Subtotal - Costs	\$3,600.00	\$3,780.00	\$630.00	\$1,200.00	\$680.00	\$9,890.00
	Design Total - Costs	\$9,360.00	\$18,090.00	\$3,990.00	\$8,400.00	\$4,080.00	\$69,450.00
SUB-TASK NO.	ITEM(S)	Quantity	Unit Price	Total Price	EXPENSES		
Expense	Airfare	2	\$352.00	\$704.00	TOTAL =		
	Per Diem	4	\$68.00	\$272.00	\$70,152.00		
	Lodging	3	\$125.00	\$375.00			
				TOTAL EXPENSES:	\$1,351.00		