

T A Y L O R E N G I N E E R I N G I N C

August 20, 2009

Ellen Posivach
City Manager
City of Port Richey
6333 Ridge Road
Port Richey, FL 34668

Re: Professional Engineering Services for the City of Port Richey, Florida, Work Order #4 –
Geotechnical Data Collections from Miller's Bayou and Cotee River Channels and Cotee River and
North Bay Boulevard Dredging Opinion of Probable Cost

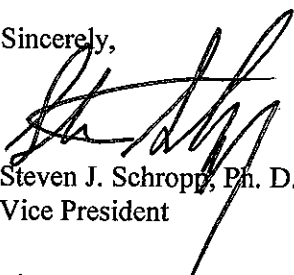
Dear Ms. Posivach,

The City of Port Richey has tasked Taylor Engineering to provide a Work Order for professional engineering services to dredge a series of new navigation channels. Work Order #4 contains a detailed scope of work that the City of Port Richey City Council intends to authorize on August 25, 2009. Taylor Engineering will perform all services detailed in Work Order #4 on a Time and Materials basis, for a total cost not to exceed \$68,036.

I have enclosed two copies of Work Order #4 for the above referenced project. Please sign where indicated and return one original to Taylor Engineering.

If you have any questions regarding this submittal, please contact me or Joe Wagner at (904) 731-7040 or via email at jwagner@taylorengeeing.com.

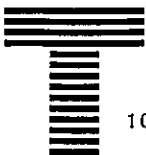
Sincerely,



Steven J. Schropp, Ph. D.
Vice President

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Enclosures



TAYLOR ENGINEERING, INC.

PROFESSIONAL ENGINEERING SERVICES FOR THE CITY OF PORT RICHEY, FLORIDA SCOPE OF SERVICES – GEOTECHNICAL DATA COLLECTION FROM MILLER’S BAYOU AND COTEE RIVER CHANNELS AND COTEE RIVER AND NORTH BAY BOULEVARD DREDGING OPINION OF PROBABLE COST

As noted in Work Order #3, the City of Port Richey has obtained permits from the Florida Department of Environmental Protection (FDEP) and U.S. Army Corps of Engineers (USACE) to dredge a series of new navigation channels. These include twelve channels within Miller’s Bayou (Channels 1, 7, 8, 9, 10, 14, 15, 16, 17, 18, 24, and 26) and six channels within the Cotee River (Channels 3, 4, 5, 6, 19, and 21) that do not impact seagrasses. In addition, five channels within the Cotee River (Channels 2, 20, 22, 25, and 29) do impact seagrasses and have not received a permit from the USACE. The remaining permitted channels are in the North Bay Boulevard area (11 and 13). The remaining non-permitted channels are channels 12, 27, 28, and 30. In fact, there is no current permitting effort for any of these channels (channels 12, 27, 28, and 30). Please see the attached figure for channel locations and proposed dredging permitting, design, and construction sequence.

Taylor Engineering will perform all services within this Scope of Services on a **Time and Materials (T&M) basis**. The City Manager, as designated by the City Council, will fill the role as the city’s Project Manager for all dredge projects and coordination efforts before issuance of the Notice to Proceed for this Scope of Services. The Project Manager will act as the Taylor Engineering’s point of contact, and Taylor Engineering will direct all requests for information through the Project Manager.

Our Work Order comprises the following tasks:

TASK 1 – GEOTECHNICAL DATA COLLECTION FROM MILLER’S BAYOU AND COTEE RIVER CHANNELS

Taylor Engineering will coordinate with Ardaman and Associates (Ardaman), a subconsultant to Taylor Engineering to provide the City of Port Richey with a geotechnical investigation of the Miller’s Bayou (Channels 1, 7, 8, 9, 10, 14, 15, 16, 17, 18, 24, and 26) and the Cotee River (Channels 2, 3, 4, 5, 6, 19, 20, 21, 22, 25, and 29). The focus of this investigation is to determine detailed geotechnical investigations needed to define the extent and quality (location, depths, thickness, hardness) of rock within the dredging template. We have designed this geotechnical investigation to define the project conditions on which we can then base a responsible Opinion of Probable Cost for the project’s construction (Work Order #3 for Miller’s Bayou and Task 2 for Cotee River).

To approximate the amount of existing (pre-dredging) rock versus the amount of existing (pre-dredging) unconsolidated material (sand, shell, silt, clay, and muck) within the permitted dredging template, Taylor Engineering proposes to conduct the following investigation and analysis. To evaluate the approximate volume of rock within the proposed dredging template, Taylor Engineering will analyze any existing reliable data and the results of the proposed geotechnical data collection (with protocols established in Ardaman’s scope of services). From this information, Taylor Engineering will develop a series of three-dimensional (3D) surfaces for each channel based on the top and bottom of rock elevations encountered during the proposed geotechnical field investigation. Ardaman will collect approximately 40 Standard Penetration Test (SPT) borings within the permitted channels (excluding Channels 11 & 13) to evaluate the strength of the rock within the proposed dredging template.

Taylor Engineering will base these 3D surfaces on the lateral location of top and bottom of rock elevation for each boring. For those borings that did not encounter rock, we will assume an elevation below the dredge template to ensure that the surface does not mistakenly calculate rock in these areas. These surfaces will assume a linear relationship between borings and a uniform cross section for each individual boring.

To determine the amount of existing rock within the dredging template, Taylor Engineering will use AutoCAD (Automatic Computer Aided Design) and proprietary programs to perform a series of “cut and fill” calculations. The calculations will provide a comparison of the various sediment stratum within each the created surfaces and the proposed dredging template. The result will yield an approximate calculated volume of rock within the dredging template of each channel.

Timeframe, Deliverable, and Cost:

- Thirty-five (35) working days after the issuance of a Notice to Proceed
- Two hard copies and one digital file of the final geotechnical investigation report
- \$50,278 (T&M, not to exceed)

TASK 2 – PRELIMINARY OPINION OF PROBABLE COST COTEE RIVER

Taylor Engineering will provide the City of Port Richey with a preliminary opinion of probable cost for dredging channels within Cotee River (Channels 2, 3, 4, 5, 6, 19, 20, 21, 22, 25, and 29). The cost opinion will include all expected engineering, modification of the existing FDEP permit, establishment of special assessment district (provided by GSG), construction, and final permit certification expenses. We will perform material take-offs to estimate the quantities of project construction materials. We will research material unit costs, adjusted for the project location and current market conditions. We will also attempt to obtain cost information from local contractors and material suppliers near the project. This opinion of probable cost will serve for planning purposes. Actual construction costs may vary depending on prevailing market conditions at the time of dredging.

Timeframe, Deliverable, and Cost:

- Twenty-eight (28) working days after the completion of Task 1
- Two hard copies and one digital file of the preliminary opinion of probable cost
- \$4,433 (T&M, not to exceed)

TASK 3 – PRELIMINARY OPINION OF PROBABLE COST FOR NORTH BAY BOULEVARD

Taylor Engineering will provide the City of Port Richey with a preliminary opinion of probable cost to dredge permitted channels (numbers 11 & 13, and new channels 12, 23, and 30) within the North Bay Boulevard area. Providing adequate access (height, width, and depth clearance) to these five channels will require the construction of at least one bridge near the intersection of Channel 24 and Bay Boulevard, and possibly a second bridge between Green Street and Betty Street. Taylor Engineering will analyze the collected data and provide an opinion of probable cost for two channel alignments and the request bridge and road infrastructure needed to connect these channels with Channel 24.

Taylor Engineering will provide the city with an order of magnitude cost for the two bridges mentioned above. We will base this cost on one site visit and one geotechnical boring. We will not obtain topographic survey data, right-of-way location, or develop preliminary roadway or bridge design as typically performed for an engineering cost estimate. For each bridge, Taylor Engineering will assume the following:

- A required clearance for boat passage beneath the bridge of about 10 ft at MHW
- A required width for single boat passage beneath the bridge of 12 ft
- A minimum water depth of 6 ft at MLW
- Unencumbered, 24-hour access along Bay Blvd.

Based on these assumptions, simple field measurements, and one soil boring, we will recommend a bridge type — culvert crossing, arch, or other type bridge — based on cost. With this determination, Taylor Engineering will contact pre-fabricated bridge suppliers for order of magnitude cost estimates. For the bridge approaches, we will estimate soil fill, retaining wall costs (if necessary), and roadway costs. To determine potential effects to utilities, Taylor Engineering will contact the “Sunshine Call before You Dig” agency to identify utilities within the right-of-way. Based on information supplied by this agency, we will provide an order of magnitude costs for utility work associated with bridge construction.

The cost opinion will include all expected permitting, engineering, establishment of special assessment district (provided by GSG), construction, and final permit certification expenses. We will perform material take-offs to estimate the quantities of project construction materials. We will research material unit costs, adjusted for the project location and current market conditions. We will also attempt to obtain cost information from local contractors and material suppliers near the project. This opinion of probable cost will serve for planning purposes. Actual construction costs may vary depending on prevailing market conditions at the time of dredging.

We believe the successful completion of this task this will provide the city with the requisite cost information to proceed with one design alternative. Please note that at this time, the city does not have an active FDEP Environmental Resource Permit Application for any configuration of Channels 12, 23, and 30.

Timeframe, Deliverable, and Cost:

- Forty-two (42) working days after the completion of Task 1
- Two hard copies and one digital file of the preliminary opinion of probable cost
- \$13,325 (T&M, not to exceed)

Table 1 (below) lists the costs by task for the above scope of services.

Task	Costs ² (Not to Exceed)	
	Labor	Other Direct Costs ³
Task 1. Geotechnical Data Collection within Miller’s Bayou and Cotee River Channels	\$10,384	\$39,894
Task 2. Preliminary Opinion of Probable Costs Cotee River	\$4,321	\$112
Task 3. Preliminary Opinion of Probable North Bay Boulevard	\$9,125	\$4,200
Subtotals:	\$23,830	\$44,206
Project Total	\$68,036	

¹All tasks performed on a time and materials basis

²Costs billed in accordance with the rates established in Taylor Engineering’s April 9, 2008 Professional Engineering Services Agreement with the City of Port Richey (see below)

³Includes subcontracted services and reimbursables

Payment schedule will follow procedures established in Taylor Engineering's April 9, 2008 Professional Engineering Services Agreement with the City of Port Richey. Rates (Table 2) established in the Professional Engineering Services Agreement are as follows:

Table 2 Hourly Labor Rates

Labor Category	Hourly Billing Rate ¹
CEO	\$285
President	213
Vice President	188
Senior Advisor	166
Director	140
Senior Professional	120
Project Professional	109
Staff Professional	81
Editor	93
Senior Technical Support	95
Technical Support	69
Administrative	51

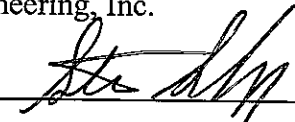
¹Rates will increase 5% on 03/01/2010 and each subsequent year.
Subcontractor costs (for each work order) billed at cost plus 12%
Other direct costs billed at cost plus a 12% markup

The parties have executed this Work Order effective this _____ day of _____, 2009.

City of Port Richey

By: _____
Name: _____
Title: _____

Taylor Engineering, Inc.

By: 
Name: Steven J. Schropp, Ph.D.
Title: Vice President