CHRISTOPHER B. BURKE ENGINEERING, LTD.
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July 28, 2014

Village of Orland Park
Public Works Department
15655 Ravinia Avenue
Orland Park, IL 60462

Attention: Mr. John Ingram – Infrastructure Maintenance Director

Subject: Proposal for Professional Engineering Services (Phase I Engineering) for Parkview Estates Stage II – Stormwater Improvements

Dear Mr. Ingram:

Christopher B. Burke Engineering, Ltd. (CBBEL) is pleased to submit this proposal to provide professional engineering services for the design of Stage II stormwater improvements for the Parkview Estates Subdivision. This proposal includes our Understanding of the Assignment, Scope of Services and Estimated Fee.

UNDERSTANDING OF ASSIGNMENT

CBBEL previously completed a conceptual level hydrologic and hydraulic model of the Parkview Estates Subdivision and surrounding areas to determine the level of impact that several stormwater improvement alternatives could have in reducing the risk of flooding. The Parkview Estates Subdivision is subject to flooding from a large upstream tributary area that flows through the development's online detention basin and a substantial amount of undetained runoff from unincorporated Palos Township. Based on the results of the analysis, the Village previously contracted with CBBEL for the design of several alternatives to reduce the risk of residential structures being inundated during future storm events.

Specifically, CBBEL is currently designing a collection and conveyance system to divert the undetained stormwater runoff from Palos Township to the detention basin and preparing modifications to the outlet control structure of the Parkview detention basin to more effectively and predictably control the water surface elevations, and the creation of additional stormwater detention storage.

To ultimately provide the type of protection desired by the Village, Stage II of the Parkview Subdivision Stormwater Improvements will consist of the design and construction of a

detention basin upstream to collect and store stormwater runoff from other areas tributary to Parkview. The detention basin is proposed to be located at Village-owned property at Evergreen View Park. The proposed stormwater conveyance system will consist primarily of a new piping network and will collect and convey stormwater runoff from the Caro Vista detention basin to the proposed detention basin.

Additionally, CBBEL will evaluate the Villa West detention basin to determine if the operation and/or function of the basin can be optimized to provide a higher level of protection for the residents of the Parkview Subdivision without adversely impacting other areas of the system.

SCOPE OF SERVICES

Based on our experience with similar projects, our anticipated scope of services is detailed below:

PHASE I ENGINEERING

Task 1 – Topographic Survey: The survey will be used as a base map for design purposes. The survey will include potential sites for additional stormwater detention, downstream areas of Mill Creek and other pertinent data related to the top of foundations and overland flow paths needed to complete the design. Included are the following survey tasks:

1. Horizontal Control: Utilizing state plane coordinates (NAD '83, Illinois East Zone, 1997 Adjustment); CBBEL will establish recoverable primary control.

2. Vertical Control: Establish site benchmarks for construction purposes, tied to the NAVD 88 Vertical Datum. A level circuit will be run throughout the project, establishing benchmarks and assigning a vertical datum on the horizontal control points.

3. Research at the Cook County Recorder's Office.

4. Field recon and survey to locate existing monumentation and Right-of-way evidence.

5. Analyze Record and Field Data necessary to compute approximate Right-of-Way throughout project limits.

6. All trees of 6 inch caliper or greater to be surveyed. Provide tree size, location and elevation on survey.

7. All above and below ground utilities including, but not limited to: water, sanitary sewer, storm sewer, telephone, electric, cable and gas, etc. Identify size, type, rim, and invert elevations.

8. Existing hardscape improvements located in the project limits including paving, curbs, light fixtures, walks, street signs, parking, fencing and gates, approximate R-O-W, and adjacent building façade & overhangs (if any).

9. Office calculations and plotting of field and record data.

10. Office contouring of field data and one foot contour intervals.

11. Drafting of existing conditions Plan at a scale of 1"=20'.

Task 2 – Utility Coordination: CBBEL will identify utilities that may have facilities within the project limits and send a Preliminary Utility Request to all knownutility companies to obtain pertinent information. Based on the information received from the utility companies, CBBEL will include locations of all facilities on the plans, identify potential conflicts with the proposed project and design the proposed improvements to minimize utility conflicts.

Task 3 – Hydrologic and Hydraulic Modeling: Based on the date collected in Task 1, CBBEL will update the hydrologic and hydraulic modeling to reflect the actual field conditions. This will include the detailed characteristics of the Caro Vista and Evergreen View areas. Once the model has been updated, CBBEL will calibrate the model for existing conditions based on historical data and/or surveyed water marks. CBBEL will size the proposed conveyance system from Caro Vista and design the detention basin.

Task 4 – Villa West Detention Basin Optimization: CBBEL will evaluate the Villa West detention basin for potential modifications to its operation to more effectively reduce the risk of flooding. The evaluation will determine if the basin's operations can be modified to allow it to store more stormwater runoff more often, store a larger quantity or otherwise be modified to provide an overall benefit to the entire system without increasing the risk at any other locations within the system. The results of this evaluation will be summarized for Village staff in a technical memorandum.

Task 5 – Preliminary Sewer Design Exhibit and Cost Estimate: Based on Tasks 1 through 4, CBBEL will prepare an overall Preliminary Sewer Design Exhibit illustrating the proposed pipe routing, pipe sizes and limits of pond modification work. This exhibit will serve as the basis of design for the future development of design plans and bidding documents (Phase II Engineering). CBBEL will also prepare a Preliminary Cost Estimate for the proposed project.

FEE

The estimated costs for the tasks provided above are as follows:

TASK	DESCRIPTION	COST
1	Topographic Survey	$ 25,000
2	Utility Coordination	$ 5,000
3	Hydrologic and Hydraulic Modeling	$ 19,750
4	Villa West Detention Basin Optimization	$ 7,800
5	Preliminary Sewer Design Exhibit and Cost Estimate	$ 10,000
	Total	**$ 67,550**

We will bill you at the hourly rates specified on the attached Schedule of Charges and establish our contract in accordance with the previously accepted General Terms and Conditions for Orland Park.

Please sign and return one copy of this agreement as an indication of acceptance and notice to proceed. Please feel free to contact us anytime.

Sincerely,

for

Christopher B. Burke, PhD, PE, D.WRE, Dist.M.ASCE
President

Attachment: Standard Charges

THIS PROPOSAL, SCHEDULE OF CHARGES AND GENERAL TERMS & CONDITIONS ACCEPTED FOR THE VILLAGE OF ORLAND PARK:

BY: _____

TITLE: _____

DATE: _____