



**CHRISTOPHER B. BURKE ENGINEERING, LTD.**

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November 11, 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 II Engineering) for  
Creekside North Stormwater Improvements

Dear Mr. Ingram:

Christopher B. Burke Engineering, Ltd. (CBBEL) is pleased to submit this proposal to provide professional engineering services for the final design of stormwater improvements for the Creekside North Study Area. Phase I Engineering was previously completed under a separate contract. 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 Creekside Subdivision to determine the level of impact that several stormwater improvement alternatives could have in reducing the risk of flooding. The Creekside North Study Area floods as a result of a depressional area in the rear yards of several homes that does not have an overland flow route or adequate conveyance capacity from outlet pipe.

To provide the level of protection desired by the Village, CBBEL developed conceptual level alternatives to collect and convey stormwater runoff from behind the homes to the existing detention basin. It is our understanding that the Village would like to move forward with the design of the conveyance system. CBBEL will update the topographic information and prepare a detailed hydrologic and hydraulic model to accurately depict the flooding conditions. Once the model is completed and calibrated, it will be utilized to size the conveyance pipe to verify the capacity needed to collect and convey the stormwater runoff from the depressional area behind the homes and reduce the risk of future flooding for the residential structures.

CBBEL will provide the Village with a summary of the results including the reduction in flood elevation or ponding and the proposed level of protection. Upon Village review and concurrence, CBBEL will proceed with the design of the preferred alternative.

## **SCOPE OF SERVICES**

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

**Task 1 – Topographic Survey:** CBBEL will supplement the survey previously completed in Phase I. The survey will be used as a base map for design purposes. 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 – Preliminary Engineering:** CBBEL will prepare preliminary plans, specifications and cost estimates for the project areas. We assume all the project areas will all be included into one set of construction documents to be completed under a single contract.

We estimate the following plan sheets will be required with associated work hours:

SHEET HOURS	NO. OF SHEETS	AVG. HOURS PER SHEET	HOURS
Title Sheet	1	6	6
General Notes/ Summary of Quantities/ Typical Sections	3	16	48
Alignment Ties & Benchmarks	2	8	16
Sewer Plan & Profile 1"=20'	7	24	168
Grading Plans 1"=20'	1	24	24
Outlet Modification Plan	1	12	12
Erosion Control & Landscaping Plans & Details 1"=50'	4	12	48
Construction Details	1	8	8
Specifications	-	-	24
Cost Estimates/Quantity Calculations	-	-	40
QA/QC Reviews	-	-	8
<b>Total</b>	<b>20</b>		<b>402*</b>

\* Represents hours to complete Tasks 2 and 7.

Preliminary Plans, Specifications and a Cost Estimate will be submitted to the Village for review. This task includes one review meeting with Village Staff.

**Task 3 – Utility Coordination:** CBBEL will identify utilities that may have facilities within the project limits and send a Preliminary Utility Request to all known utility 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 4 – Hydrologic and Hydraulic Modeling:** Based on the data collected in Tasks 1 and 2, CBBEL will update the hydrologic and hydraulic modeling to reflect the actual field conditions. This will include the detailed characteristics of the Creekside Subdivision drainage system and the existing rear-yard depressional area. 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 the depressional area to the detention basin.

**Task 5 – Easement Coordination:** It is anticipated that 2 easements may be required for the stormwater improvements in the Creekside North Study Area. The following tasks will be required for the 2 easements:

- Initial coordination with Client
- Research at the Cook County Recorder's Office
- Field survey to locate limits of the improvements
- Office calculations and plotting of field and record data
- CAD Drafting of the Plat of Easement for the proposed easement area



- Write Legal description for the proposed easement area
- Final review and submittal by an Illinois Professional Land Surveyor
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**Task 6 – Permitting:** CBBEL will prepare a Stormwater Pollution Prevention Plan (SWPPP) consistent with the requirements of the Village's NPDES Phase II permit and submit it to the Illinois Environmental Protection Agency (IEPA).

**Task 7 – Final Engineering:** Upon meeting with the Village Staff to review their comments on the preliminary submittal, CBBEL will revise and finalize the contract documents and cost estimate. During this task the exact letting date will be determined and an estimated construction schedule will be provided.

**Task 8 – Bid Assistance:** CBBEL will assist the Village in advertising for bids, distribute plans and specifications to all bidders, and be present at the bid opening. CBBEL will review and tabulate all of the bids and make a recommendation of award.

#### **FEE**

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

TASK	DESCRIPTION	COST
1	Survey	\$ 8,200
2	Preliminary Engineering	\$ 32,500
3	Utility Coordination	\$ 4,800
4	Hydrologic and Hydraulic Modeling	\$ 12,500
5	Easement Coordination	\$ 8,400
6	Permitting	\$ 3,800
7	Final Engineering	\$ 21,700
8	Bid Assistance	\$ 2,200
	Direct Costs	\$ 500
	<b>Total</b>	<b>\$ 94,600</b>

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,



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: \_\_\_\_\_

**CHRISTOPHER B. BURKE ENGINEERING, LTD.**  
**STANDARD CHARGES FOR PROFESSIONAL SERVICES**  
**JANUARY, 2010**

<u>Personnel</u>	<u>Charges*</u> <u>(\$/Hr)</u>
Principal	240
Engineer VI	210
Engineer V	173
Engineer IV	138
Engineer III	125
Engineer I/II	102
Survey V	178
Survey IV	132
Survey III	127
Survey II	100
Survey I	78
Resource Planner V	112
Resource Planner IV	108
Resource Planner III	100
Resource Planner I/II	88
Engineering Technician V	150
Engineering Technician IV	132
Engineering Technician III	107
Engineering Technician I/II	97
CAD Manager	138
Assistant CAD Manager	126
CAD II	125
CAD I	98
GIS Specialist III	120
GIS Specialist I/II	67
Landscape Architect	138
Environmental Resource Specialist V	154
Environmental Resource Specialist IV	134
Environmental Resource Specialist III	114
Environmental Resource Specialist I/II	94
Environmental Resource Technician	90
Administrative	88
Engineering Intern	53
Survey Intern	53
Information Technician III	97
Information Technician I/II	62

Direct Costs

Outside Copies, Blueprints, Messenger, Delivery Services, Mileage      Cost + 12%

\*Charges include overhead and profit