

## SCOPE OF WORK NARRATIVE

### PROJECT UNDERSTANDING

Christopher B. Burke Engineering, Ltd. (CBBEL) understands that the following scope of work will be required as part of the Phase II engineering for the improvement of the intersection of 151st Street and West Avenue in the Village of Orland Park. The existing 4-way stop intersection will be reconstructed as a modern roundabout with one 16' approach lane and one 16' departure lane separated by a variable-width curbed splitter island, on each of the four intersection legs. The curb on the west splitter island will be mountable. The center island of the roundabout will consist of an 18' wide circulating lane, a raised truck apron, and a landscaped central space. All existing 5' wide sidewalks will be replaced within the project limits, and new sidewalk will be constructed along the west side of West Avenue south of the intersection. The existing enclosed Village-owned storm sewer system will be partially reconstructed, and new and extended storm sewer laterals will be built to drain the pavement. The Village-owned lighting system which exists along West Avenue will be relocated and extended as necessary to serve the roundabout. Existing public and private utilities that conflict with the proposed improvements will be relocated, and a new 8" watermain will be constructed throughout the project. All sidewalk ramps will be ADA-compliant.

This project will be combined with the 151st Street Reconstruction project which extends from West Avenue to east of Ravinia Avenue in Orland Park, Cook County, Illinois. The combined project will be advertised for letting by IDOT based on plans, specifications and estimates furnished by CBBEL on behalf of the Village. Bid advertisement is anticipated to be in Spring, 2018 or later as directed by the Village. Although the project involves only streets under Village jurisdiction, the bid documents must comply with IDOT requirements for State advertisement, including:

- All contract pay items must use an IDOT 8-character Coded Pay Item
- The contract will rely on the IDOT Standard Specifications as modified by General Notes, Special Provisions, and Village Details. The contract may use IDOT Highway Standards, Recurring and District One Special Provisions, and Local Roads Special Provisions.
- Plan sheets must conform to IDOT base sheets and drafting standards. The Cover Sheet mylar must be signed by the IDOT Region One and District 1 Local Roads Engineers.
- CADD development must be in MicroStation Select Series 4 and must conform to the IDOT CADD Manual and other requirements. All drawings and related files will be submitted to IDOT and must be formatted acceptably.

The contract documents will be prepared based on the approved Phase I Project Development Reports for 151<sup>st</sup> Street from West Avenue to east of Ravinia Avenue (Section 13-00071-00-WR) and for the 151st Street/West Avenue roundabout (Section 15-00074-00-CH). Any significant revisions during design to the combined project's limits, scope, or commitments will be negotiated with IDOT staff for approval of the changes. By conforming to the above requirements, we will maintain this project's eligibility for the programmed Federal (STP) construction funding.



# SCOPE OF WORK NARRATIVE

## SCOPE OF WORK

The scope of work anticipated to be performed during this project includes the following tasks:

### Task 1 – Phase II Kick-Off Meeting

CBBEL will attend a Phase II Kick-Off meeting with IDOT and the Village. The purpose of the meeting will be to review Phase I and the goals and objectives of the project. The scope and schedule will also be reviewed and refined. CBBEL will prepare and distribute meeting minutes.

### Task 2 – Topographic Surveys and Plat Revision

CBBEL last performed a full topographic survey of the project limits in 2007. We will perform supplemental surveys as needed to locate and record the changed topo features for use in Phase II design. We will update the existing condition plans, cross section and profile ground lines, and earthwork calculations as necessary to reflect current conditions.

Phase I determined that permanent right-of-way must be acquired and temporary easements will be needed to construct the roundabout in all four corners of the 151st Street/West Avenue intersection. The Plat of Highways that was prepared under Section 13-00071-00-WR will be revised for the new takings in the northeast, northwest, and southwest corners as well as for the changed taking and easements in the southeast corner, and processed through IDOT Bureau of Land Acquisition for review and approval.

### Task 3 – Land Acquisition Services

CBBEL engaged Santacruz and Associates to provide appraisal, review appraisal, and negotiation services under Section 13-00071-00-WR for five land parcels, at a fee budget of \$33,400.00. Of these five, appraisals and negotiations have been completed for 2 parcels, and approximately \$24,800.00 fee remains. Section 15-00074-00-CH adds three parcels at the 151st Street/West Avenue intersection; one parcel has been added and another removed along 151st Street; and no appraisal or negotiations will be necessary for the takings and easements at the Orland Park Police Department. Therefore, Santacruz will provide land acquisition services for a net total of two (2) additional parcels under this Agreement.

### Task 4 – Pavement Design

CBBEL had Testing Service Corporation perform a soils investigation and prepare a geotechnical report under Section 13-00071-00-WR in 2014. Per the project's two Phase I Reports, the reconstruction pavement material and thickness must be determined in Phase II. CBBEL will perform a mechanistic pavement design, coordinate with the Village regarding the findings, and submit our calculations to IDOT for approval.

### Task 5 – PSI

Under Section 13-00071-00-WR we engaged Huff & Huff to complete the project PSI, which will be used to estimate the quantity of special or non-special waste excavation to be included in the contract. To date, Huff & Huff has not been activated, and none of their fee budget of \$12,086.22 has been expended. Our 151<sup>st</sup> Street Phase II contract has sufficient remaining fee for Huff & Huff to complete this task.



## SCOPE OF WORK NARRATIVE

### Task 6 – Utility Coordination

CBBEL continues to coordinate with all known private utility companies within the project area and has previously obtained atlases, drafted their facilities into our existing condition plans, coordinated our drawings with the utility companies for verification, and met with the utilities at the Orland Park Village Hall to discuss project impacts, relocations, and schedule. Under this task, CBBEL will complete the identification of utility conflicts and will coordinate with the utility companies until the conflicts are settled by redesign for avoidance, or the utility companies have designed their relocation work.

### Task 7 – Traffic Signal Design

Under Section 13-00071-00-WR, CBBEL estimated 124 manhours and budgeted \$14,470.34 fee to prepare traffic signal plans for a modernized traffic signal at the 151<sup>st</sup> Street/Ravinia Avenue intersection. This task includes developing plans to maintain the existing temporary traffic signals erected by IDOT, plans and quantities for the new traffic signal installation, and plans for a permanent interconnection system to the 151<sup>st</sup> Street/LaGrange Road traffic signals. To date, none of the fee budgeted for this task has been expended, and we believe that our 151<sup>st</sup> Street Phase II contract has sufficient remaining fee for us to complete the above work.

### Task 8 – Lighting Design

Per the approved Phase I Report, the proposed roundabout will be lighted, and all existing roadway lighting impacted by the project will be relocated or adjusted as necessary. Two approach roadway lights will likely be required on 151<sup>st</sup> Street just west of the roundabout, and approximately four fill-in roadway lights will be required on 151<sup>st</sup> Street east of Ravinia Avenue. CBBEL also proposes to remove all existing Com Ed-maintained roadway lights along 151<sup>st</sup> Street between West Avenue and Ravinia Avenue and replace them with Village standard lighting. New street lights will use spun aluminum light poles, 12-15' truss arms, and 30' luminaire mounting height per Village Standard STR-06. All lighting conduit will be buried unit duct. Existing lighting controllers will be evaluated for continued use and new controllers designed as required. We will arrange new electric service(s) with Com Ed and will coordinate removal of Com Ed's lighting. We will also design an area light (luminaire with pole) which will be built on the McCollom property at West Avenue and maintained and powered by Mr. McCollom.

### Task 9 – Phase I Environmental Updates

CBBEL will coordinate with IDOT to renew/update the environmental clearances obtained in Phase I.

### Task 10 – IEPA Permitting

CBBEL will complete the permit application to IEPA for the proposed water main replacement. CBBEL estimated 6 manhours and budgeted \$1,516.41 fee under Section 13-00071-00-WR for this task, none of which has been expended. Our 151<sup>st</sup> Street Phase II contract has sufficient remaining fee for us to complete the above work.

### Task 11 – Stormwater Pollution Prevention Plan (SWPPP)

CBBEL will prepare a SWPPP for the project in accordance with Part IV of the General NPDES Permit No. ILR10. While preparing the 75% Plans, CBBEL design and environmental staff will coordinate to determine the minimum required and most suitable soil erosion and sediment control (SESC) Best Management Practices (BMPs) for this project. The SWPPP will identify all temporary and permanent



## SCOPE OF WORK NARRATIVE

BMPs and will include certification statements for signature by the contractor, subcontractors, and the Village. The SWPPP will be revised as needed based on review comments and electronically submitted to the IEPA as a Notice of Intent. Under Section 13-00071-00-WR, CBBEL estimated 17 manhours and budgeted \$2,166.57 fee for this task, none of which has been expended. Our 151<sup>st</sup> Street Phase II contract has sufficient remaining fee for us to complete the above work.

### Task 12 – Pre-Final Contract Documents and Cost Estimate (75% Submittal)

On the basis of the approved Project Report, CBBEL will prepare pre-final contract documents consisting of plans, specifications, estimate of time, status of utilities to be adjusted and an estimate of construction cost. The plans will be prepared in accordance with Village and IDOT design criteria. To the extent possible, we will salvage and revise plan sheets from the tentatively-scheduled local letting of this project, which was assembled in 2009. The plans will include the following sheets:

No. Sheet Title

- 1 Cover Sheet (the one from the tentative local letting in 2009 is not useable)
- 1 General Notes
  - Includes Village/IDOT standard notes and additional major notes to clarify project's intent and any restrictions. (Incidental work will be described in Special Provisions as per current IDOT practice.)
- 2 Alignment, Ties and Benchmarks sheets
- 8 Typical cross sections
- 3 Summary of Quantities
- 5 Schedule of Quantities (Earthwork, Drainage, Etc.)
- 15 Maintenance of Traffic Plans/Typical Sections/Staging Notes
- 4 Existing Conditions and Removal Plans
  - Existing topography, drainage structures, water main, sewers and other utilities
  - Items to be removed or adjusted
- 9 Proposed Roadway Plan and Profiles showing:
  - Proposed
  - Proposed reconstruction limits of pavements, curb and gutter, and sidewalks
- 9 Utility Plan and Profile sheets
  - Any protection required of existing utilities to remain in place
  - Proposed water main and storm sewer structures and pipe in plan and profile
- 3 Intersection Detail Plans
  - Proposed medians, islands, and entrances
- 14 Traffic Signal Plans and Details
- 8 Roadway Lighting Plans and Details
- 4 Erosion Control Plans and Details
- 5 Landscaping Plans and Details including roundabout center space and McCollom Property work
- 4 Soil Boring Plan and Soil Profiles
- 4 Pavement Markings and Signage Plans
- 5 Plat of Highways
  - Existing and proposed right-of-way
- 11 Construction Details and IDOT District 1 Details
- 30 Cross Sections
  - Sufficient in number to approximate cuts and fills (50' minimum interval)
  - Through driveways to show proposed slopes and confirm temporary construction easements

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145 TOTAL SHEET COUNT



## SCOPE OF WORK NARRATIVE

CBBEL will use IDOT standard pay items where applicable. Otherwise, project-specific special provisions will be written as needed. Plans, special provisions based on Village standard special provisions, and the estimate of cost will be submitted to the Village and IDOT for review.

### **Task 13 – Final Contract Documents and Cost Estimate (90% Submittal)**

Upon meeting with the Village staff to review Village and IDOT comments on the pre-final submittal, CBBEL will revise and finalize the contract documents and cost estimate. During this task the exact letting date (depending on funding availability and other issues) will be determined and an estimated construction schedule will be provided. The plans will be submitted to the Village and IDOT for review and final comment.

### **Task 14 – Bidding Documents and Final Cost Estimate (100% Submittal)**

CBBEL will make the final revisions to the final submittal based on Village and IDOT final review comments. The requested number of copies of plans and specifications will be submitted to IDOT and the Village. A final estimate of cost and estimate of required working days will also be submitted. In addition to printed copies, we will provide electronic versions of the plans, specifications and estimates to IDOT for bid advertisement.

### **Task 15 – Village and IDOT Coordination**

CBBEL will attend coordination meetings with Village staff throughout the design. We have budgeted three (3) meetings with the Village and two (2) meetings with IDOT.

### **Task 16 – Administration and QA/QC**

CBBEL will prepare monthly status reports with our invoices to the Village. CBBEL will perform internal QA/QC reviews of the plans, specifications and cost estimates prior to each milestone submittal.

## **SCHEDULE**

Based on the above general scope of work, it is estimated that the contract documents can be ready for advertisement by IDOT by early 2018. Village staff have stated that the Village Board may vote authorization to expend the local share of the costs of construction and construction engineering as early as January, 2018. Per IDOT's Letting Schedule, if the draft agreement for Phase III Engineering services is submitted for approval in March 2018, the project can be placed on the June 2018 letting.





## AVERAGE HOURLY PROJECT RATES

FIRM Christopher B. Burke Engineering, Ltd.  
 Local Agency Orlando Park  
 Section 13-00071-00-WR  
 Project 151st Street  
 Job No. 0

DATE 04/13/17

SHEET 1 OF 1

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES				Phase II Kick-Off Meeting				Topographic Surveys and Land Acquisition Services				Pavement Design				PSI
		Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg		
Engineer VI	70.00	48	6.99%	4.89	2	33.33%	23.33				2	50.00%	35.00	2	11.11%	7.78		
Engineer V	62.60	113	16.45%	10.30	3	50.00%	31.30				2	50.00%	31.30	6	33.33%	20.87		
Engineer IV	51.87	121	17.61%	9.14										4	22.22%	11.53		
Engineer III	44.80	68	9.90%	4.43										6	33.33%	14.93		
Engineer I/II	31.64	94	13.68%	4.33														
Env Res Specialist V	60.00	0																
Env Res Specialist IV	54.29	0																
Env Res Specialist III	41.06	0																
Env Res Technician	37.00	0																
Landscape Architect	52.50	0																
Survey V	60.00	10	1.46%	0.87							10	13.16%	7.89					
Survey IV	60.00	16	2.35%	1.40							16	21.05%	12.63					
Survey III	56.00	16	2.33%	1.30							16	21.05%	11.79					
Survey II	40.40	16	2.33%	0.94							16	21.05%	8.51					
Survey I	31.83	0																
CAD Manager	58.33	2	0.29%	0.17														
Asst. CAD Manager	49.83	24	3.49%	1.74							18	23.68%	11.80					
CAD II	43.67	40	5.82%	2.54														
CAD I	33.25	108	15.72%	5.23														
Engineering Technician	59.50	0																
Engineering Technician	45.00	0																
Engineering Technician	45.14	0																
Engineering Technician	38.67	0																
GSI Specialist III	46.00	0																
GSI Specialist I/II	28.25	0																
Administrative	33.47	11	1.60%	0.54	1	16.67%	5.58											
		0																
		0																
<b>TOTALS</b>		687	100%	\$47.82	6	100.00%	\$60.21	76	100%	\$52.62	4	100%	\$66.30	18	100%	\$55.10	0	0%

# AVERAGE HOURLY PROJECT RATES

**FIRM** Christopher B. Burke Engineering, Ltd.  
**Local Agency** Orland Park  
**Section** 13-00071-00-WR  
**Project** 151st Street  
**Job No:** 0

**DATE** 04/13/17

**SHEET**

2 OF 5

<b>PAYROLL</b>	<b>Avg</b>	Utility Coordination			Traffic Signal Design			Lighting Design			Phase I Environmental Update			IEPA Permitting			Stormwater Pollution Prevention		
		<b>Hourly Rates</b>	<b>Hours</b>	<b>% Part.</b>	<b>Wgt'd Avg</b>	<b>Hours</b>	<b>% Part.</b>	<b>Wgt'd Avg</b>	<b>Hours</b>	<b>% Part.</b>	<b>Wgt'd Avg</b>	<b>Hours</b>	<b>% Part.</b>	<b>Wgt'd Avg</b>	<b>Hours</b>	<b>% Part.</b>	<b>Wgt'd Avg</b>		
Engineer VI	70.00											4	2.00%	1.40					
Engineer V	62.60	2	5.56%	3.48								32	16.00%	10.02	2	22.22%	13.91		
Engineer IV	51.87	4	11.11%	5.76								44	22.00%	11.41	5	55.56%	28.82		
Engineer III	44.80	12	33.33%	14.93								48	24.00%	10.75	2	22.22%	9.96		
Engineer II/II	31.64	16	44.44%	14.06															
Env Res Specialist V	60.00																		
Env Res Specialist IV	54.29																		
Env Res Specialist III	41.06																		
Env Res Technician	37.00																		
Landscape Architect	52.50																		
Survey V	60.00																		
Survey IV	60.00																		
Survey III	56.00																		
Survey II	40.40																		
Survey I	31.83																		
CAD Manager	58.33																		
Asst. CAD Manager	49.83											6	3.00%	1.49					
CAD II	43.67											40	20.00%	8.73					
CAD I	33.25											24	12.00%	3.99					
Engineering Technic	59.50																		
Engineering Technic	45.00																		
Engineering Technic	45.14																		
Engineering Technic	38.67																		
GSI Specialist III	46.00																		
GSI Specialist II/II	28.25											2	1.00%	0.33					
Administrative	33.47	2	5.56%	1.86															
<b>TOTALS</b>	36	100%	\$40.10	0	0%	\$0.00	200	100%	\$48.13	9	100%	\$52.68	0	0%	\$0.00	0	0%	\$0.00	

# AVERAGE HOURLY PROJECT RATES

**FIRM** Christopher B. Burke Engineering, Ltd.  
**Local Agency** Orland Park  
**Section** 13-00071-00-WR  
**Project** 151st Street  
**Job No:** 0

DATE 04/13/17

SHEET 3

OF 5

PAYROLL	AVG	Pre-Final Contract Documents			Final Contract Documents (90%)			Bidding Documents (100%)			Village and IDOT Coordination			Administration and QA/QC			
		HOURLY RATES	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg
Engineer VI	70.00	4	3.08%	2.15	2	2.50%	1.75					16	40.00%	28.00	16	50.00%	35.00
Engineer V	62.60	20	15.38%	9.63	10	12.50%	7.83	8	14.29%	8.94	20	50.00%	31.30	8	25.00%	15.65	
Engineer IV	51.87	32	24.62%	12.77	16	20.00%	10.37	8	14.29%	7.41				8	25.00%	12.97	
Engineer III	44.80																
Engineer II/I	31.64	36	27.69%	8.76	24	30.00%	9.49	16	28.57%	9.04	2	5.00%	1.58				
Env Res Specialist V	60.00																
Env Res Specialist IV	54.29																
Env Res Specialist III	41.06																
Env Res Technician	37.00																
Landscape Architect	52.50																
Survey V	60.00																
Survey IV	60.00																
Survey III	56.00																
Survey II	40.40																
Survey I	31.83																
CAD Manager	58.33	2	1.54%	0.90													
Asst. CAD Manager	49.83																
CAD II	43.67																
CAD I	33.25	36	27.69%	9.21	24	30.00%	9.98	24	42.86%	14.25							
Engineering Technic	59.50																
Engineering Technic	45.00																
Engineering Technic	45.14																
Engineering Technic	38.67																
GSI Specialist III	46.00																
GSI Specialist II/I	28.25																
Administrative	33.47																
<b>TOTALS</b>	130	100%	\$43.42	80	100%	\$41.09	56	100%	\$39.64	40	100%	\$62.56	32	100%	\$63.62	0	0%
																	\$0.00

## PAYROLL RATES

FIRM NAME  
PRIME/SUPPLEMENT

Christopher B. Burke Engineering, L

DATE

04/13/17

ESCALATION FACTOR

0.00%

CLASSIFICATION	CURRENT RATE	CALCULATED RATE
Engineer VI	\$69.77	\$70.00
Engineer V	\$62.60	\$62.60
Engineer IV	\$51.87	\$51.87
Engineer III	\$44.80	\$44.80
Engineer I/II	\$31.64	\$31.64
Env Res Specialist V	\$60.00	\$60.00
Env Res Specialist IV	\$54.29	\$54.29
Env Res Specialist III	\$41.06	\$41.06
Env Res Technician	\$37.00	\$37.00
Landscape Architect	\$52.50	\$52.50
Survey V	\$60.00	\$60.00
Survey IV	\$60.00	\$60.00
Survey III	\$56.00	\$56.00
Survey II	\$40.40	\$40.40
Survey I	\$31.83	\$31.83
CAD Manager	\$58.33	\$58.33
Asst. CAD Manager	\$49.83	\$49.83
CAD II	\$43.67	\$43.67
CAD I	\$33.25	\$33.25
Engineering Technician V	\$59.50	\$59.50
Engineering Technician IV	\$45.00	\$45.00
Engineering Technician III	\$45.14	\$45.14
Engineering Technician I/II	\$38.67	\$38.67
GSI Specialist III	\$46.00	\$46.00
GSI Specialist I/II	\$28.25	\$28.25
Administrative	\$33.47	\$33.47
		\$0.00
		\$0.00

## **PAYROLL ESCALATION TABLE FIXED RAISES**

The total escalation for this project would be:

0.00%

## Subconsultants

FIRM NAME Christopher B. Burke Engineering, Ltd. DATE 04/13/17  
PRIME/SUPPLEMENT \_\_\_\_\_

NAME	Direct Labor Total	Contribution to Prime Consultant
Santacruz Assoc.		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
<b>Total</b>	0.00	0.00



**COMPANY NAME:** Christopher B. Burke Engineering, Ltd.

PTB NUMBER

TODAY'S DATE: 4/13/2017

*\*If other allowable costs are needed and not listed, please add in the above spaces provided.*

## LEGEND

W.O. = Work Order

Local Agency
Village of Orland Park
County
Cook
Section
15-00074-00-CH
Project No.
M-4003 (475)
Job No.
91-196-15
Contact Name/Phone/E-mail Address
Kurt Corrigan
708-403-6123
kccorrigan@orlandpark.org



Consultant
Christopher B. Burke Engineering.
Address
9575 W. Higgins Rd. Ste. 600
City
Rosemont
State
IL
Zip Code
60056
Contact Name/Phone/E-mail Address
Jason Souden, PE
847-823-0500
jsouden@cbbel.com

THIS AGREEMENT is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the PROJECT. Federal-aid funds allotted to the LA by the state of Illinois under the general supervision of the Illinois Department of Transportation (STATE) will be used entirely or in part to finance engineering services as described under AGREEMENT PROVISIONS.

#### Project Description

Name 151<sup>st</sup> Street and West Avenue Route \_\_\_\_\_ Length \_\_\_\_\_ Structure No. \_\_\_\_\_

Termini Intersection Improvement

Description Phase II Engineering for a roundabout at 151<sup>st</sup> Street and West Avenue.

#### Agreement Provisions

##### I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance, in accordance with STATE approved design standards and policies, of engineering services for the LA for the proposed improvement herein described.
2. To attend any and all meetings and visit the site of the proposed improvement at any reasonable time when requested by representatives of the LA or STATE.
3. To complete the services herein described within 300 calendar days from the date of the Notice to Proceed from the LA, excluding from consideration periods of delay caused by circumstances beyond the control of the ENGINEER.
4. The classifications of the employees used in the work should be consistent with the employee classifications and estimated man-hours shown in EXHIBIT A. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are indicated in Exhibit A to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
5. That the ENGINEER is qualified technically and is entirely conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated herein.
6. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections resulting from the ENGINEER's errors, omissions or negligent acts without additional compensation. Acceptance of work by the STATE will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or for clarification of any ambiguities.
7. That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by the ENGINEER and will affix the ENGINEER's professional seal when such seal is required by law. Plans for structures to be built as a part of the improvement will be prepared under the supervision of a registered structural engineer and will affix structural engineer seal when such seal is required by law. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the STATE.
8. That the ENGINEER will comply with applicable federal statutes, state of Illinois statutes, and local laws or ordinances of the LA.

9. The undersigned certifies neither the ENGINEER nor I have:

- a. employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for me or the above ENGINEER) to solicit or secure this AGREEMENT,
- b. agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
- c. paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for me or the above ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
- d. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
- e. have not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,
- f. are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (e) and
- g. have not within a three-year period preceding this AGREEMENT had one or more public transactions (Federal, State or local) terminated for cause or default.

10. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LA.

11. To submit all invoices to the LA within one year of the completion of the work called for in this AGREEMENT or any subsequent Amendment or Supplement.

12. To submit BLR 05613, Engineering Payment Report, to the STATE upon completion of the project (Exhibit B).

13. Scope of Services to be provided by the ENGINEER:

- Make such detailed surveys as are necessary for the planning and design of the PROJECT.
- Make stream and flood plain hydraulic surveys and gather both existing bridge upstream and downstream high water data and flood flow histories.
- Prepare applications for U.S. Army Corps of Engineers Permit, Illinois Department of Natural Resources Office of Water Resources Permit and Illinois Environmental Protection Agency Section 404 Water Quality Certification.
- Design and/or approve cofferdams and superstructure shop drawings.
- Prepare Bridge Condition Report and Preliminary Bridge Design and Hydraulic Report, (including economic analysis of bridge or culvert types and high water effects on roadway overflows and bridge approaches).
- Prepare the necessary environmental and planning documents including the Project Development Report, Environmental Class of Action Determination or Environmental Assessment, State Clearinghouse, Substate Clearinghouse and all necessary environmental clearances.
- Make such soil surveys or subsurface investigations including borings and soil profiles as may be required to furnish sufficient data for the design of the proposed improvement. Such investigations to be made in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE.
- Analyze and evaluate the soil surveys and structure borings to determine the roadway structural design and bridge foundation.
- Prepare preliminary roadway and drainage structure plans and meet with representatives of the LA and STATE at the site of the improvement for review of plans prior to the establishment of final vertical and horizontal alignment, location and size of drainage structures, and compliance with applicable design requirements and policies.
- Make or cause to be made such traffic studies and counts and special intersection studies as may be required to furnish sufficient data for the design of the proposed improvement.
- Complete the general and detailed plans, special provisions and estimate of cost. Contract plans shall be prepared in accordance with the guidelines contained in the Bureau of Local Roads and Streets manual. The special provisions and detailed estimate of cost shall be furnished in quadruplicate.
- Furnish the LA with survey and drafts in quadruplicate all necessary right-of-way dedications, construction easements and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.

## II. THE LA AGREES,

1. To furnish the ENGINEER all presently available survey data and information
2. To pay the ENGINEER as compensation for all services rendered in accordance with this AGREEMENT, on the basis of the following compensation formulas:

Cost Plus Fixed Fee       CPFF = 14.5%[DL + R(DL) + OH(DL) + IHDC], or  
                                   CPFF = 14.5%[DL + R(DL) + 1.4(DL) + IHDC], or  
                                   CPFF = 14.5%[(2.3 + R)DL + IHDC]

Where:      DL = Direct Labor  
                  IHDC = In House Direct Costs  
                  OH = Consultant Firm's Actual Overhead Factor  
                  R = Complexity Factor

Specific Rate       (Pay per element)

Lump Sum       \_\_\_\_\_

3. To pay the ENGINEER using one of the following methods as required by 49 CFR part 26 and 605 ILCS 5/5-409:

With Retainage

- a) For the first 50% of completed work, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to 90% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) After 50% of the work is completed, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments covering work performed shall be due and payable to the ENGINEER, such payments to be equal to 95% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- c) Final Payment – Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and the STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

Without Retainage

- a) For progressive payments – Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) Final Payment – Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

4. The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).

## III. IT IS MUTALLY AGREED,

1. That no work shall be commenced by the ENGINEER prior to issuance by the LA of a written Notice to Proceed.
2. That tracings, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LA and that basic survey notes, sketches, charts and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request, to the LA or to the STATE, without restriction or limitation as to their use.

3. That all reports, plans, estimates and special provisions furnished by the ENGINEER shall be in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE, it being understood that all such furnished documents shall be approved by the LA and the STATE before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.
4. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall not be construed to relieve the ENGINEER of any responsibility for the fulfillment of this agreement.
5. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amounts, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General and the STATE; and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the STATE for the recovery of any funds paid by the STATE under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
6. The payment by the LA in accordance with numbered paragraph 3 of Section II will be considered payment in full for all services rendered in accordance with this AGREEMENT whether or not they be actually enumerated in this AGREEMENT.
7. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LA, the STATE, and their officers, agents and employees from all suits, claims, actions or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.
8. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such material becomes the property of the LA. The LA will be responsible for reimbursement of all eligible expenses to date of the written notice of termination.
9. This certification is required by the Drug Free Workplace Act (30ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the State unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to, suspension of contract or grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the State for at least one (1) year but no more than five (5) years.

For the purpose of this certification, "grantee" or "contractor" means a corporation, partnership or other entity with twenty-five (25) or more employees at the time of issuing the grant, or a department, division or other unit thereof, directly responsible for the specific performance under a contract or grant of \$5,000 or more from the State, as defined in the Act.

The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

- a. Publishing a statement:
  - (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
  - (2) Specifying the actions that will be taken against employees for violations of such prohibition.
  - (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
    - (a) abide by the terms of the statement; and
    - (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.
- b. Establishing a drug free awareness program to inform employees about:
  - (1) The dangers of drug abuse in the workplace;
  - (2) The grantee's or contractor's policy of maintaining a drug free workplace;
  - (3) Any available drug counseling, rehabilitation and employee assistance program; and
  - (4) The penalties that may be imposed upon an employee for drug violations.
- c. Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.
- d. Notifying the contracting or granting agency within ten (10) days after receiving notice under part (B) of paragraph (3) of subsection (a) above from an employee or otherwise receiving actual notice of such conviction.
- e. Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by,
- f. Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.
- g. Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

10. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of DOT assisted contracts. Failure by the ENGINEER to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LA deems appropriate.

## Agreement Summary

Executed by the LA:

(Municipality/Township/County)

**ATTEST:**

By: \_\_\_\_\_

By: \_\_\_\_\_

(SEAL)

Executed by the ENGINEER:

**ATTEST:**

By: \_\_\_\_\_

By: \_\_\_\_\_