

	Agreement For	Agreement Type	
Using Federal Funds? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	MFT PE	Original	

LOCAL PUBLIC AGENCY			
Local Public Agency	County	Section Number	Job Number
Lake County Division of Transportation	Lake	22-00106-09-RS	
Project Number	Contact Name	Phone Number	Email
	Julian Rozwadowski	(847) 377-7506	JRozwadowski@lakecountyil.gov

SECTION PROVISIONS			
Local Street/Road Name	Key Route	Length	Structure Number
Riverwoods Road/Duffy Lane	2698/1254	4.2 miles	
Location Termini			<input type="button" value="Add Location"/> <input type="button" value="Remove Location"/>
Riverwoods - North of Deerfield Road to South of IL Route 22; Duffy - Riverwoods Road to West of I-94 bridge			
Project Description			
Widening and resurfacing of Riverwoods Road and Duffy Lane to provide standard roadway cross section. Potential bicycle and pedestrian accommodations along both roadway. ADA ramps and drainage improvements.			

Engineering Funding	<input type="checkbox"/> MFT/TBP	<input type="checkbox"/> State	<input checked="" type="checkbox"/> Other	County Option MFT
Anticipated Construction Funding	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> MFT/TBP	<input type="checkbox"/> State	<input type="checkbox"/> Other

AGREEMENT FOR
<input checked="" type="checkbox"/> Phase I - Preliminary Engineering <input type="checkbox"/> Phase II - Design Engineering

CONSULTANT				
Prime Consultant (Firm) Name	Contact Name	Phone Number	Email	
Peralte-Clark, LLC	John Clark	(847) 466-6258	john.clark@peralte-clark.com	
Address	City	State	Zip Code	
44 South Vail Avenue, Suite 201	Arlington Heights	IL	60005	

THIS AGREEMENT IS MADE between the above Local Public Agency (LPA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Project funding allotted to the LPA by the State of Illinois under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT," will be used entirely or in part to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

Since the services contemplated under the AGREEMENT are professional in nature, it is understood that the ENGINEER, acting as an individual, partnership, firm or legal entity, qualifies for professional status and will be governed by professional ethics in its relationship to the LPA and the DEPARTMENT. The LPA acknowledges the professional and ethical status of the ENGINEER by entering into an AGREEMENT on the basis of its qualifications and experience and determining its compensation by mutually satisfactory negotiations.

WHEREVER IN THIS AGREEMENT or attached exhibits the following terms are used, they shall be interpreted to mean:

- | | |
|----------------------------------|--|
| Regional Engineer | Deputy Director, Office of Highways Project Implementation, Regional Engineer, Department of Transportation |
| Resident Construction Supervisor | Authorized representative of the LPA in immediate charge of the engineering details of the construction PROJECT |
| In Responsible Charge Contractor | A full time LPA employee authorized to administer inherently governmental PROJECT activities Company or Companies to which the construction contract was awarded |

AGREEMENT EXHIBITS

The following EXHIBITS are attached hereto and made a part of hereof this AGREEMENT:

- EXHIBIT A: Scope of Services
- EXHIBIT B: Project Schedule
- EXHIBIT C: Qualification Based Selection (QBS) Checklist
- EXHIBIT D: Cost Estimate of Consultant Services (BLR 05513 or BLR 05514)
- EXHIBIT D : Direct Costs Check Sheet (attach BDE 436 when using Lump Sum on Specific Rate Compensation)
- _____
- _____
- _____

I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance of the Scope of Services presented in EXHIBIT A for the LPA in connection with the proposed improvements herein before described.
2. The Classifications of the employees used in the work shall be consistent with the employee classifications and estimated staff hours. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are 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.
3. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections required as a result of the ENGINEER'S error, omissions or negligent acts without additional compensation. Acceptance of work by the LPA or DEPARTMENT will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or the responsibility for clarifying ambiguities.
4. That the ENGINEER will comply with applicable Federal laws and regulations, State of Illinois Statutes, and the local laws or ordinances of the LPA.
5. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LPA.
6. To invoice the LPA, The ENGINEER shall submit all invoices to the LPA within three months of the completion of the work called for in the AGREEMENT or any subsequent Amendment or Supplement.
7. 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 US Department of Transportation (US DOT) assisted contract. 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 LPA deems appropriate.
8. 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 LPA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall be construed to relieve the ENGINEER of any responsibility for the fulfillment of this AGREEMENT.
9. For Preliminary Engineering Contracts:
 - (a) To attend meetings and visit the site of the proposed improvement when requested to do so by representatives of the LPA or the DEPARTMENT, as defined in Exhibit A (Scope of Services).
 - (b) That all plans and other documents furnished by the ENGINEER pursuant to the AGREEMENT will be endorsed by the ENGINEER and affixed the ENGINEER's professional seal when such seal is required by law. Such endorsements must be made by a person, duly licensed or registered in the appropriate category by the Department of Professional Regulation of the State of Illinois. 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 DEPARTMENT.
 - (c) That the ENGINEER is qualified technically and is thoroughly 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 in Exhibit A (Scope of Services).
10. That the engineering services shall include all equipment, instruments, supplies, transportation and personnel required to perform the duties of the ENGINEER in connection with this AGREEMENT (See DIRECT COST tab in BLR 05513 or BLR 05514).

II. THE LPA AGREES,

1. To certify by execution of this AGREEMENT that the selection of the ENGINEER was performed in accordance with the Professional Services Selection Act (50 ILCS 510) (Exhibit C).
2. To furnish the ENGINEER all presently available survey data, plans, specifications, and project information.
3. To pay the ENGINEER:
 - (a) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, 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 LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and DEPARTMENT a sum of money equal to the basic fee as

determined in this AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

(c) For Non-Federal County Projects - (605 ILCS 5/5-409)

- (1) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, 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 in all previous partial payments made to the ENGINEER.
- (2) Final payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and STATE, a sum of money equal to the basic fee as determined in the AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

4. To pay the ENGINEER as compensation for all services rendered in accordance with the AGREEMENT on the basis of the following compensation method as discussed in 5-5.10 of the BLR Manual.

Method of Compensation:

- Percent
- Lump Sum
- Specific Rate
- Cost plus Fixed Fee: Fixed

Total Compensation = DL + DC + OH + FF

Where:

DL is the total Direct Labor,

DC is the total Direct Cost,

OH is the firm's overhead rate applied to their DL and

FF is the Fixed Fee.

Where $FF = (0.33 + R) DL + \%SubDL$, where R is the advertised Complexity Factor and %SubDL is 10% profit allowed on the direct labor of the subconsultants.

The Fixed Fee cannot exceed 15% of the DL + OH.

5. The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any US 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 US DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by US 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 MUTUALLY AGREED,

1. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amount, 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 DEPARTMENT; the Federal Highways Administration (FHWA) or any authorized representative of the federal government, 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 DEPARTMENT for the recovery of any funds paid by the DEPARTMENT under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
2. That the ENGINEER shall be responsible for any all damages to property or persons out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LPA, the DEPARTMENT, and their officers, agents and employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.

The LPA will notify the ENGINEER of any error or omission believed by the LPA to be caused by the negligence of the ENGINEER as soon as practicable after the discovery. The LPA reserves the right to take immediate action to remedy any error or omission if notification is not successful; if the ENGINEER fails to reply to a notification; or if the conditions created by the error or omission are in need of urgent correction to avoid accumulation of additional construction costs or damages to property and reasonable notice is not practicable.
3. This AGREEMENT may be terminated by the LPA 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 LPA 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 materials becomes the property of the

LPA. The LPA will be responsible for reimbursement of all eligible expenses incurred under the terms of this AGREEMENT up to the date of the written notice of termination.

4. In the event that the DEPARTMENT stops payment to the LPA, the LPA may suspend work on the project. If this agreement is suspended by the LPA for more than thirty (30) calendar days, consecutive or in aggregate, over the term of this AGREEMENT, the ENGINEER shall be compensated for all services performed and reimbursable expenses incurred prior to receipt of notice of suspension. In addition, upon the resumption of services the LPA shall compensate the ENGINEER, for expenses incurred as a result of the suspension and resumption of its services, and the ENGINEER's schedule and fees for the remainder of the project shall be equitably adjusted.
5. This AGREEMENT shall continue as an open contract and the obligations created herein shall remain in full force and effect until the completion of construction of any phase of professional services performed by others based upon the service provided herein. All obligations of the ENGINEER accepted under this AGREEMENT shall cease if construction or subsequent professional services are not commenced within 5 years after final payment by the LPA.
6. 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 have harmless the LPA, the DEPARTMENT, and their officers, employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.
7. The ENGINEER and LPA certify that their respective firm or agency:
 - (a) has not 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 the LPA or the ENGINEER) to solicit or secure this AGREEMENT,
 - (b) has not 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) has not paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for the LPA or the ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
 - (d) that neither the ENGINEER nor the LPA is/are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
 - (e) has 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 indicated 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 and
 - (g) has not within a three-year period preceding this AGREEMENT had one or more public transaction (Federal, State, local) terminated for cause or default.

Where the ENGINEER or LPA is unable to certify to any of the above statements in this clarification, an explanation shall be attached to this AGREEMENT.

8. In the event of delays due to unforeseeable causes beyond the control of and without fault or negligence of the ENGINEER no claim for damages shall be made by either party. Termination of the AGREEMENT or adjustment of the fee for the remaining services may be requested by either party if the overall delay from the unforeseen causes prevents completion of the work within six months after the specified completion date. Examples of unforeseen causes included but are not limited to: acts of God or a public enemy; acts of the LPA, DEPARTMENT, or other approving party not resulting from the ENGINEER's unacceptable services; fire; strikes; and floods.

If delays occur due to any cause preventing compliance with the PROJECT SCHEDULE, the ENGINEER shall apply in writing to the LPA for an extension of time. If approved, the PROJECT SCHEDULE shall be revised accordingly.

9. This certification is required by the Drug Free Workplace Act (30 ILCS 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 DEPARTMENT 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 on grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the DEPARTMENT for at least one (1) year but not more than (5) years.

For the purpose of this certification, "grantee" or "Contractor" means a corporation, partnership or an 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 contract or grant of \$5,000 or more from the DEPARTMENT, as defined 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 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 (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 to maintain 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.
- (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.

Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act, the ENGINEER, LPA and the Department agree to meet the PROJECT SCHEDULE outlined in EXHIBIT B. Time is of the essence on this project and the ENGINEER's ability to meet the PROJECT SCHEDULE will be a factor in the LPA selecting the ENGINEER for future projects. The ENGINEER will submit progress reports with each invoice showing work that was completed during the last reporting period and work they expect to accomplish during the following period.

- 10. Due to the physical location of the project, certain work classifications may be subject to the Prevailing Wage Act (820 ILCS 130/0.01 et seq.).
- 11. For Preliminary Engineering Contracts:
 - (a) That tracing, 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 LPA and that basic survey notes, sketches, charts, CADD files, related electronic files, and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request to the LPA or to the DEPARTMENT, without restriction or limitation as to their use. Any re-use of these documents without the ENGINEER involvement shall be at the LPA's sole risk and will not impose liability upon the ENGINEER.
 - (b) That all reports, plans, estimates and special provisions furnished by the ENGINEER shall conform to the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Manual or any other applicable requirements of the DEPARTMENT, it being understood that all such furnished documents shall be approved by the LPA and the DEPARTMENT 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.

AGREEMENT SUMMARY

Prime Consultant (Firm) Name	TIN/FEIN/SS Number	Agreement Amount
Peralte-Clark, LLC	81-4901924	\$711,076.00
Subconsultants	TIN/FEIN/SS Number	Agreement Amount
Robinson Engineering, Ltd	32-2407339	\$230,958.00
Huff & Huff/GZA, Inc.	36-3044842	\$99,584.00
Mathewson Land Services, Inc.	85-4092178	\$21,200.00
Geocon Professional Services, LLC	45-0644817	\$53,615.00
TranSystems Corporation	43-0839725	\$57,319.00
Subconsultant Total		\$462,676.00
Prime Consultant Total		\$711,076.00
Total for all work		\$1,173,752.00

AGREEMENT SIGNATURES

Executed by the LPA:

Attest: The Local Public Agency Type of Local Public Agency

By (Signature & Date)

By (Signature & Date)

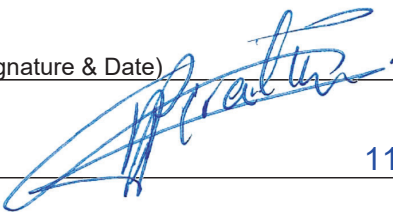
Local Public Agency Local Public Agency Type Clerk

Title

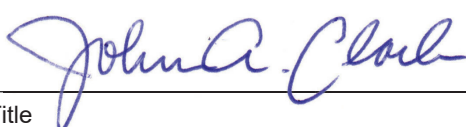
(SEAL)

Executed by the ENGINEER:

Attest: Prime Consultant (Firm) Name

By (Signature & Date)


Title

By (Signature & Date)


Title

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake County Division of Transport	Peralte-Clark, LLC	Lake	22-00106-09-RS

**EXHIBIT A
SCOPE OF SERVICES**

To perform or be responsible for the performance of the engineering services for the LPA, in connection with the PROJECT herein before described and enumerated below

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake County Division of Transport	Peralte-Clark, LLC	Lake	22-00106-09-RS

**EXHIBIT B
PROJECT SCHEDULE**

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Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake County Division of Transport	Peralte-Clark, LLC	Lake	22-00106-09-RS

**Exhibit C
Qualification Based Selection (QBS) Checklist**

The LPA must complete Exhibit D. If the value meets or will exceed the threshold in 50 ILCS 510, QBS requirements must be followed. Under the threshold, QBS requirements do not apply. The threshold is adjusted annually. If the value is under the threshold with federal funds being used, federal small purchase guidelines must be followed.

Form Not Applicable (engineering services less than the threshold)

Items 1-13 are required when using federal funds and QBS process is applicable. Items 14-16 are required when using State funds and the QBS process is applicable.

		No	Yes
1	Do the written QBS policies and procedures discuss the initial administration (procurement, management and administration) concerning engineering and design related consultant services?	<input type="checkbox"/>	<input type="checkbox"/>
2	Do the written QBS policies and procedures follow the requirements as outlined in Section 5-5 and specifically Section 5-5.06 (e) of the BLRS Manual?	<input type="checkbox"/>	<input type="checkbox"/>
3	Was the scope of services for this project clearly defined?	<input type="checkbox"/>	<input type="checkbox"/>
4	Was public notice given for this project?	<input type="checkbox"/>	<input type="checkbox"/>
5	Do the written QBS policies and procedures cover conflicts of interest?	<input type="checkbox"/>	<input type="checkbox"/>
6	Do the written QBS policies and procedures use covered methods of verification for suspension and debarment?	<input type="checkbox"/>	<input type="checkbox"/>
7	Do the written QBS policies and procedures discuss the methods of evaluation?	<input type="checkbox"/>	<input type="checkbox"/>
Project Criteria		Weighting	
8	Do the written QBS policies and procedures discuss the method of selection?	<input type="checkbox"/>	<input type="checkbox"/>
Selection committee (titles) for this project			
Top three consultants ranked for this project in order			
1			
2			
3			
9	Was an estimated cost of engineering for this project developed in-house prior to contract negotiation?	<input type="checkbox"/>	<input type="checkbox"/>
10	Were negotiations for this project performed in accordance with federal requirements.	<input type="checkbox"/>	<input type="checkbox"/>
11	Were acceptable costs for this project verified?	<input type="checkbox"/>	<input type="checkbox"/>
12	Do the written QBS policies and procedures cover review and approving for payment, before forwarding the request for reimbursement to IDOT for further review and approval?	<input type="checkbox"/>	<input type="checkbox"/>
13	Do the written QBS policies and procedures cover ongoing and finalizing administration of the project (monitoring, evaluation, closing-out a contract, records retention, responsibility, remedies to violations or breaches to a contract, and resolution of disputes)?	<input type="checkbox"/>	<input type="checkbox"/>
14	QBS according to State requirements used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Existing relationship used in lieu of QBS process?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16	LPA is a home rule community (Exempt from QBS).	<input checked="" type="checkbox"/>	<input type="checkbox"/>



**Riverwoods Road (W24)
from Deerfield Road (A47) to Illinois Route 22 (Half Day Road)**

**and
Duffy Lane (A43)
from Riverwoods Road (W24) to I-94 Bridge**

Section 22-00106-09-RS

Lake County, Illinois

**Phase I Engineering Scope of Work
November 2023**



44 South Vail Avenue, Suite 201
Arlington Heights, Illinois 60005

Phone: 847-485-8069

www.peralte-clark.com



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Project Understanding

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Exhibit B - Schedule

Exhibit C – QBS Checklist

Exhibit D – CECS Worksheet

Project Understanding

This project includes a Phase I Study to investigate alternatives to determine the improvement that provides the level of safety and operation that meets Lake County requirements of Riverwoods Road (W24) from Deerfield Road (A47) to the south right-of-way line of Illinois Route 22 (Half Day Road), as well as Duffy Lane (A43) from Riverwoods Road (W24) to the Interstate-94 (Tri-State Tollway) bridge overpass approach pavement on the west side of I-94. Intersection improvements at IL Route 22 and Deerfield Road are not included in this project. This project is located within the municipal boundaries of the Village of Riverwoods, Village of Lincolnshire, and Unincorporated Lake County. This project will be designed following 3R (Resurfacing, Restoration and Rehabilitation) guidelines. Roadway improvements are anticipated to include milling and grinding to correct profile, superelevation, and crown. Work will also include new curb and gutter, ADA ramps, and drainage improvements. The team will evaluate several design alternatives including bike friendly shoulders; off-road multi-use trail improvements; new pedestrian crossings; and the intersections of Riverwoods Road and the Edward Ryerson Forest Preserve entrance, Riverwoods Road and Westwood Lane, as well as Riverwoods Road and Duffy Lane will be evaluated to improve safety and mobility.

The project team will coordinate with key project stakeholders including the Village of Riverwoods, Village of Lincolnshire and Lake County Forest Preserve District to gain their input throughout the study. However, the formation of a formal Stakeholder Involvement Group (SIG) and Stakeholder Involvement Plan (SIP) is not anticipated. However, two in-person public meetings are anticipated as part of the project. The development of a public information campaign including the development of a project website is not anticipated for this project.

At this time, both Riverwoods Road and Duffy Lane have both matching tax and Motor Fuel Tax (MFT) funding. The Lake County Division of Transportation (LCDOT) will be the lead agency for this project. Details of the proposed scope are outlined below. Because LCDOT has an Agreement of Understanding with IDOT, it is anticipated that IDOT reviews will only be necessary for work within IL-22 or other IDOT right of way. Also per the AOU, the project shall go through the IDOT environmental review process as outlined in the BLRS Manual; and if any structures on the project meet the policy in the BLRS Manual, they will require IDOT review and approval. Roadway improvements to Illinois Route 22 (Half Day Road), Deerfield Road (A47) and Interstate 94 (Tri-State Tollway) are not anticipated as part of this project. It has been assumed that the Riverwoods Road corridor and the Duffy Lane corridor will be prepared as separate contract bid packages in Phase II, but the Phase I engineering will consist of evaluation of both corridors.

Phase I Engineering portions of this project will be coordinated and reviewed by IDOT-BLRS in accordance with BLRS Chapter 10 requirements and the AOU between IDOT and LCDOT. Because federal dollars are not anticipated to be involved in this project, the schedule of these two phases can overlap. Although both LCDOT and the design team believe impacts to public park lands will be avoided, scope is being included to address Federal Section 4(f) consultation requirements should a federal action (such as a permit or approval from a federal agency) arise in Phase I.

The Riverwoods portion of the project is currently programmed and targeted for construction in 2026, with the Duffy portion targeted in 2028. The following scope of work is based on scoping discussions with LCDOT staff on May 3, 2023, meetings with Staff from the Villages of Lincolnshire and Riverwoods on May

25, 2023, and coordination with LCDOT in November of 2023.

Exhibit A

Scope of Services

The following is our proposed scope of services for Phase I Engineering on this project:

1. Data Collection, Compilation, Review and Evaluation

This task includes obtaining all pertinent data required to complete Phase I work. Coordination will occur with LCDOT, IDOT, Illinois State Toll Highway Authority (ISTHA), the Lake County Stormwater Management Commission (LCSMC), the Village of Lincolnshire, Village of Riverwoods, Vernon Township, West Deerfield Township, Lake County Forest Preserve District (LCFPD), and all other agencies necessary to obtain base data for the project area, including but not necessarily limited to the following information:

- Record roadway and drainage plans, including previous studies/reports, and engineering and as-built plans for past Riverwoods Road and Duffy Lane.
- Recorded centerline and right-of-way plans for Riverwoods Road (W24), Duffy Lane (A43), Deerfield Road (A47), and Illinois Route 22 (Half Day Road).
- Available traffic data.
- Available crash data.
- Available survey data and control data for tying to the Lake County LiDAR mapping.
- Existing and proposed land use and zoning maps, including School Districts, Park Districts, Forest Preserve Districts, Sanitary/Drainage Districts, and Bike/Pedestrian plans as pertinent/available.
- Soils and geological information.
- Public and private utility plans (Peralte-Clark will work with the LCDOT utility coordinator to obtain this information).
- USGS maps and Flood Insurance Rate Maps.
- Public Service routes including Bus, Mail, and Emergency Services.

Peralte-Clark will coordinate with the Lake County GIS Department to obtain available GIS data for the study area, including aerial photography, LiDAR contour mapping, environmental resources, property lines, roadway names, etc.

Peralte-Clark will determine facility deficiencies based on information gathered and prepare exhibits of the data collected as appropriate for use as part of other project tasks. This task will include a plan-in-hand field review of the project area, and contact with key stakeholders within the project area, including the Village of Lincolnshire, Village of Riverwoods, Vernon Township, West Deerfield Township, LCFPD, and LCSMC to retrieve appropriate base project data.

Specific work items under this task will include:

- Initial project field review(s)
- Complete a detailed photo log of the site including a detailed inventory of topographic features which may impact or be impacted by the proposed design.
- Project data collection including contact and coordination with key project stakeholders.
- Coordination to obtain base project mapping data (LiDAR) and Lake County GIS data.
- Review, analyze, and catalog project data.

- Determine facility deficiencies.

2. Field Survey Work

The survey work for this project will be prepared by **Robinson Engineering. (Robinson)**, as a subconsultant. Surveying will be performed according to the Lake County Division of Transportation (LCDOT), Design Survey Procedures (Revised 10/22/21).

Peralte-Clark, LLC will coordinate with LCDOT to prepare a survey right-of-entry letter for survey work on private property. Robinson will contact property owners by delivering the survey right-of-entry letters, to the extent possible, in advance of surveying on private property.

On this basis, Robinson will perform the following survey tasks in accordance with applicable Lake County Survey Procedures:

Horizontal Control: Utilizing state plane coordinates, Robinson will set recoverable primary control utilizing GPS/GNSS and robotic total station equipment. It is assumed that the control for the one-foot contour Lake County LiDAR mapping is Illinois State Plane East, NAD83 (2011).

Vertical Control: It is assumed that either LCDOT has benchmarks available in the vicinity of the project or that Robinson will be allowed to establish vertical control (NAVD88) utilizing GPS/GNSS and the nearest NGS vertical monuments. Absent a NGS vertical monument within one mile of the project, vertical control will be established utilizing GPS/GNSS measurements in conjunction with geoid modeling (GEOID18) to establish points having estimated NAVD88 orthometric heights which very closely approximate NAVD88 elevations. A level circuit within the above identified survey limits will be run to establish benchmarks and assign elevations to the horizontal control points. Vertical Control Points and benchmarks shall be developed at a maximum spacing of 1,000 feet.

Topographic Survey: Topographic Survey will include approximately 16,200 feet or 3.07 miles along Riverwoods Road from the North line of Deerfield Road (A47) to the South line of Pembroke Drive, extending 600 feet east and 600 feet west along Illinois Route 22 (Half Day Road), and 600 feet south along Saunders Road from the intersection of Saunders Road and Deerfield Road (A47); as well as 6,900 feet or 1.31 miles along Duffy Lane from the East Line of Riverwoods Road to the West edge of the bridge over Interstate-94 (Tri-State Tollway). All other minor side streets adjacent to Riverwoods Road and Duffy Lane will extend 150 feet on each leg. The survey will extend 25 feet beyond the existing right-of-way line, beyond which the Lake County LiDAR mapping (1-foot contours) will be used. Survey will include existing visible features and improvements. Existing utilities will be surveyed from visible markings or flags by others. Storm, sanitary sewer and watermain structures will be surveyed, including rim elevation, invert pipe size, direction and elevation as observed at unlocked manholes. Robinson will field-locate all pavements, driveways, curb and gutters, pavement markings, signs, drainage structures, driveway culverts, crossroad culverts, and other planimetric features within the above noted survey limits.

Base Mapping: Robinson will compile all the above information into one base map MicroStation drawing suitable for plotting at 1'=20' scale that is representative of existing conditions for use in all engineering work in developing the detailed plan, profile and cross sections for the preferred alternative. Survey base map drawing will be generated in MicroStation OpenRoads Designer (ORD 2022 R3).

Cross Sections: Robinson will survey cross sections at 50' intervals within the survey limits, at driveways,

roadway culverts, and at all other grade controlling features. The cross sections will extend 25 feet beyond the existing right-of-way line.

Existing Right of Way Survey: The existing dedicated or conveyed ROW will be surveyed per provided plats and documents from LCDOT, IDOT, and ISTHA along with research performed at the Lake County Recorder for adjoining subdivision plats. The survey will be based on documents and field survey/recovery of existing monuments. There will not be research conducted beyond those provided documents or those documents available from the Lake County Recorder. Title reports for parcels along the route are not contemplated. Work includes establishing and measuring 9 sections plus 32,000 feet of mainline and side street right of way. Direct costs included for 50 subdivision plats plus 50 deeds for unsubdivided parcels.

Stream Survey: Survey will include four (4) cross sections extending 50 feet beyond the top of bank along both sides at 25-foot intervals of West Fork of the North Branch of the Chicago River. There will be four cross sections located north Duffy Lane and four cross sections located south of Duffy Lane, for a total of eight cross sections. The thalweg data shall be included in the cross section.

Alignment and Survey Control: Prepare drawings showing the station, offset, and coordinates of the alignment points (PCs, PTs, PIs, and POTs) and survey control points, along with listing and describing the primary and site benchmarks. These drawings will be included in the construction plans. The alignment points will be staked prior to construction.

Specific work items under this task will include:

- Completion of topographic survey.
- Supplemental survey.
- Coordination with LCDOT Utilities Coordinator (by Peralte-Clark).
- Obtaining existing utility information from utility agencies (by Peralte-Clark) and incorporation of data obtained into the topographic survey base map.

Supplemental Survey: In order to develop accurate and complete Phase I Study documents, **Robinson** will perform up to 5 days of supplement field surveys over the duration of the project to help resolve utility conflicts, obtain additional survey information for proposed water quality features, complete LiDAR mapping voids due to trees/brush, to pick-up any new developments/features along the corridor, and to pick-up additional survey areas if required based on the preferred alternative. Additional supplemental survey will be included in the Phase II agreement, if warranted.

Scope Omissions:

- Coordination with LCDOT for survey right-of-entry letter will be handled by Peralte-Clark.
- Hydraulic survey of West Fork of the North Branch of the Chicago River beyond the eight cross sections described in Stream Survey, above. Hydraulic modeling of the waterway is not anticipated since the roadway bridge culvert is a project omission.
- Plat of Highways (to be completed in Phase II engineering)

3. Traffic Counts

This task includes the following work related to collection of existing traffic data and associated data compilation including movement balancing.

Traffic Volume Counts: Video traffic 24-hour turning movements and vehicle classifications will be collected by **Quality Counts** for this project. The vehicle classifications will be Passenger Vehicles (FHWA 1-3, Single Unit Trucks (FHA 4-7), and Multi Unit Trucks (FHWA 8-13). Turning movement and vehicle classifications as well as pedestrian and bicycle counts will be obtained for the following intersections:

- Riverwoods Road (W24) at Edward Ryerson Forest Preserve entrance
- Riverwoods Road (W24) at Westwood Lane
- Riverwoods Road (W24) at Duffy Lane (A43)
- And a possible fourth intersection to be identified during the Phase I process

Counts will be conducted on Tuesday, Wednesday, or Thursday. Additional 24-hour counts will be conducted on Saturday at the Edward Ryerson Forest Preserve Entrance.

Bi-directional, twenty-four (24) hour roadway traffic counts (via traffic counting tube) will not be obtained. Traffic ADTs will be determined using the 24-hour turning movement counts at each intersection noted above.

4. Traffic Projections and 2050 Analysis

Peralte-Clark will review and determine roadway ADTs from the traffic count data and coordinate with the Chicago Metropolitan Agency for Planning (CMAP) to obtain projected 2050 traffic volumes for the project. The existing and 2050 projected traffic volumes will be utilized to determine operational deficiencies at the selected intersections in Task 3 noted above within the project study limits based on existing geometry. It is not the County's intent to address capacity improvements that may be warranted by 2050 CMAP projections as part of this project.

HCS 7 Analysis: An HCS 7 analysis will be prepared for the existing and no build condition using existing 2023 and projected 2050 traffic data. A total of 22 HCS analyses shall be performed (Existing and projected weekday am and pm peak hour at the 3 intersections, plus the Saturday peak hour at the Forest Preserve). Intersections to be analyzed as part of this study include:

- Riverwoods Road (W24) at Edward Ryerson Forest Preserve entrance
- Riverwoods Road (W24) at Westwood Lane
- Riverwoods Road (W24) at Duffy Lane (A43)
- And a possible fourth intersection to be identified during the Phase I process.

It is unknown if traffic signals will be warranted at Riverwoods Road at Duffy Lane. The other three intersections are not expected to meet traffic signal warrants. Hence, a traffic signal warrant for Riverwoods Road at Duffy Lane will be prepared as a part of this scope of services.

Peralte-Clark will provide a white paper Technical Memorandum summarizing the results of the traffic counts, calculated ADTs, projections and analysis, and noted deficiencies.

Specific work items under this task will include:

- Determine roadway ADTs from 24-hour counts
- Prepare traffic signal warrant analyses and technical memorandum.
- Compile traffic data to obtain 2050 traffic projections from CMAP
- Develop 2050 No-Build and 2050 Build Design Hourly Volumes (DHV)
- HCS 7 analysis for the Existing, 2050 No-Build, and 2050 Build condition using existing 2023 and

- projected 2050 traffic data for three intersections
- Technical Memorandum summarizing traffic analyses (signal warrant memo is separate)

5. *Crash Analysis*

This task includes obtaining the last five (5) years of crash data (2018-2022) from LCDOT and IDOT including segment and intersection crash data, to prepare a project Crash Analysis Report (CAR). It is anticipated that the crash data will be available through the LCDOT TCAS system which provides access to State, County and Municipal crash data and collision diagrams. Peralte-Clark will prepare supplemental intersection collision diagrams, if necessary, within the project study area, and other exhibits as necessary to summarize the crash data.

Specific work tasks will include:

- Develop CAR Format.
- Develop CAR Maps, Tables, and Exhibits.
- Prepare Preliminary CAR for review.
- Prepare Final CAR with disposition of comments.

6. *Roadway Drainage Analyses*

The drainage design and permitting work for this project will be prepared by **Peralte-Clark, LLC**.

Preliminary Drainage Investigation: Peralte-Clark will identify drainage problems by researching LCDOT flooding and maintenance records, coordinating with local agencies and conducting site investigations. The project scoping report indicated LCDOT Maintenance has had multiple drainage issues on this section of the roadway in the past. Side street and driveway culverts will need to be replaced or vertically adjusted, as well as ditches needing regrading to facilitate drainage. Per the Riverwoods Resurfacing final scoping report, any storm sewer to remain will be televised by LCDOT personnel prior to design. All driveway and side street culverts will be inspected by P-C to determine if they require replacement. Per the Riverwoods Resurfacing final scoping report, culvert 722 should be pumped out by LCDOT personnel and visually inspected by P-C prior to design.

Existing Drainage Plan: The existing drainage system will be analyzed to determine its suitability for continued use. This will involve the preparation of an Existing Drainage Plan (EDP). The EDP includes an evaluation of existing drainage conditions through a review of record drawings of the roadway plans, maps, reports, and field review. Data collection as part of this task includes obtaining pertinent record drawings, storm sewer atlases, USGS maps, soils maps, topographic maps, existing FEMA data/studies and other pertinent data. Determine whether to maintain or replace existing storm sewer systems, based on visual evaluation of sewer inspection videos to be provided by LCDOT and hydraulic need. Off-site and on-site drainage areas and existing drainage systems will be delineated on the base project mapping.

Agency Coordination: Peralte-Clark will coordinate with the Villages of Lincolnshire and Riverwoods, LCDOT, LCSMC, and LCFPD regarding drainage patterns and concerns, and sensitive drainage areas and/or outfalls. Based on initial meetings with the Villages of Lincolnshire and Riverwoods, there are no known drainage outfalls that should be considered as sensitive storm sewer outlets within the project limits.

Base Floodplains: There is a mapped FEMA floodway zone at the West Branch of the North Fork of Chicago

River located along Duffy Lane just west of the I-94 Bridge. It is assumed that the existing waterway crossing structure will be a project omission. Likewise, work within the regulatory floodway and/or floodplain is not anticipated. Hence, the preparation of compensatory storage calculations and a separate hydraulic report for this waterway crossing is not anticipated to be required for this project.

Specific work tasks associated with development of the EDP includes the following:

- Identify the tributary drainage area to inlets and outfalls.
- Identify existing drainage outfalls.
- Evaluate outfall sensitivity and suitability for continued use.
- Preparation of the EDP.
- Show floodplain and floodway boundaries to define omission area.
- Coordination meetings for the EDP with LCDOT, LCSMC, LCFPD, the Villages of Lincolnshire and Riverwoods, and Huff and Huff relating to the USACE.

Proposed Drainage Plan: A Proposed Drainage Plan (PDP) will be developed for the Location Drainage Technical Memorandum (LDTM). The PDP will include an evaluation of proposed drainage conditions for the identified preferred alternative. A closed drainage system is anticipated to remain between Half Day Road and Fairfax Lane as well as between Saunders Road and Deerfield Road within the limits of the proposed improvement. The purpose of completing an EDP and PDP will be to determine changes in drainage areas to the outfalls within the project limits, identify potential right-of-way needs and impacts and define the change in impervious area to the various outfalls. The six side street culverts and one crossroad culvert specifically mentioned in the Riverwoods Road Resurfacing Final Scoping Report document will be replaced.

Design criteria for the project will be developed and coordinated with LCDOT to verify how the project will be designed. The proposed drainage system will be designed using the latest Bulletin 75 rainfall data (published in March 2020). Riverwoods Road will consist of either curb and gutter sections with storm sewer for drainage or shoulder sections with ditches for drainage. Duffy Lane is an existing shoulder section that will either be improved to curb and gutter or remain with shoulders within the project limits. The storm sewer sizing, inlet spacing, sizing of the related lateral storm sewers and any minor culvert analysis (culverts less than or equal to 36 inches in diameter and driveway culverts) will be performed as part of the engineering design.

Subsequent to the approval of final geometry, the PDP will be prepared to reflect pertinent stakeholder comments and any review comments from LCDOT and LCSMC.

Specific work tasks associated with development of the PDP for the project will include the following:

- Delineate off-site and on-site drainage areas and perform hydraulic and hydrologic analyses using a combination of Bentley StormCAD, HY-8, Win TR-20 and Excel spreadsheets.
- Ensure reinstatement of existing drainage patterns.
- Identify and account for any diversions.
- Evaluate the needs for additional rights-of-way and drainage easements for drainage purposes.
- Evaluate the stormwater detention requirements in accordance with the Lake County Watershed Development Ordinance (WDO). Runoff volume reduction (RVR) techniques will be reviewed and incorporated in the proposed drainage plan as determined appropriate.
- Evaluate the need for stormwater quality BMP enhancements in accordance with LCSMC and/or Army Corps of Engineers guidelines.

- Coordination meetings for the PDP with LCDOT, LCSMC, LCFPD, IDOT, the Villages of Lincolnshire and Riverwoods, as well as Huff and Huff relating to USACE.

Proposed Drainage Design - Drainage Plan and Profile Sheet

- Outlet Evaluation – Evaluate existing outlets to determine their suitability for continued use and sensitivity to an increase in rate and volume of stormwater runoff. Six (6) outlets are anticipated within the project limits that will need to be analyzed. Stream survey data will be used to determine the tailwater elevations to use for outlets to the West Fork of the North Branch of the Chicago River.
- Peralte-Clark will use StormCAD to create a storm sewer model for the proposed drainage system that will include the mainline storm sewer, laterals, and inlets. A 10-year frequency storm will be used for design and the system will be checked for the 100-year storm event.
- Ditch sizing along Riverwoods Road and Duffy Lane will be performed if the existing ditches require modification due to geometric impacts.
- There are no culverts in the project limits that exceed 7.5 square feet in cross sectional area. If the existing drainage analyses results in some of the existing culverts being undersized, we will size those using rational method of stream stats and HY-8. For this scope of services, we are assuming two (2) culvert analyses. A one-page narrative and WIT will be developed for each culvert.
- Stormwater Detention Evaluation - The need for stormwater detention will be investigated. Stormwater detention is necessary if the new roadway development's impervious area exceeds one and a half acres per mile. The anticipated roadway geometry appears to have less than the threshold required for detention. Providing detention oversized storm sewer will be investigated, if required. Detention will be provided in accordance with the WDO for the improvement. It is assumed that there will be three (3) restrictor calculations for inline detention necessary. The detention calculations and criteria will be coordinated with LCSMC and LCDOT.
- Water quality basins will be provided in accordance with the ordinance. The water quality areas are anticipated to be included at sensitive outlets and as coordinated with reviewing agencies. The opportunity to use Bioswales and Rain Gardens for water quality improvements will be documented. The design of two (2) rain gardens is included as part of this contract.
- Local & Other Agency Coordination - Coordinate drainage related issues with IDOT, LCDOT, LCFPD, LCSMC, and the Villages of Lincolnshire and Riverwoods and other agencies as appropriate.
- Proposed Drainage Plan – The Proposed Drainage Plan will be the Drainage Plan sheet from the contract plans used as part of the LDTM. It will include the drainage system size, type, and location.
- Floodplain Evaluation – The floodplain will be an omission. There will be no need for compensatory storage to be determined for filling in the floodplain.
- Prepare LDTM and Exhibits – Complete all drainage tasks, sort out all data and exhibits and prepare a LDTM in compliance with requirements listed in ACEC-Illinois / IDOT 2014 Drainage Seminar handouts.
- A site visit is intended to clarify field conditions related to the design of the drainage facilities. Allocated two personnel for one (1) site visit for this project.

Location Drainage Technical Memorandum: This task includes development of a Location Drainage Technical Memorandum (LDTM) within the limits of improvement for the preferred alternative. It is anticipated that the LDTM will follow the 2014 ACEC Drainage Seminar format for improvements associated with this project.

Deliverables:

- a) Location Drainage Technical Memorandum (LDTM) that includes the following:
 - i. Existing Drainage Plan (EDP)
 - ii. Proposed Drainage Plan (PDP)
 - iii. Detention Analysis including calculations
 - iv. Culvert Analyses
 - v. Storm Sewer Analyses

7. Alternate Geometric Studies

The Alternate Geometric Studies task includes developing preliminary geometry of proposed mainline and intersection geometric alternatives for coordination with project stakeholders and evaluation by LCDOT.

Concept Alternatives

Intersections Alternatives Development: Intersection alternatives will be evaluated for several intersections within the project area. Alternatives will be modeled in HCS7, using the 2050 traffic projections obtained in scope developed in scope item 4, for the following intersections:

- Riverwoods Road (W24) at Edward Ryerson Forest Preserve entrance
- Riverwoods Road (W24) at Westwood Lane
- Riverwoods Road (W24) at Duffy Lane (A43)

It is assumed that one (1) no-build and three (3) build concept alternatives will be evaluated for each intersection. For the three intersections listed above, the build alternatives will include:

1. One-Way Stop Condition Alternative
2. Signalized Intersection Alternative
3. Roundabout Alternative**

For the Riverwoods Road and the Edward Ryerson Forest Preserve entrance as well as the Riverwoods Road and Westwood Lane intersections, Peralte-Clark will investigate if left turn lanes can be added without negatively affecting the right turn lanes. For the Riverwoods Road and Duffy Lane intersection, Peralte-Clark will investigate if a left turn lane is needed.

**Analysis of any single- or multi-lane roundabout alternatives and other intersection configurations at these three intersections will be investigated, but due to ROW concerns, this alternative is expected to be ruled out early in the analysis. The extent of the investigation includes the preparation of a 2D plan view layout to estimate anticipated ROW needs. Hence, capacity analysis using Synchro or Sidra is not anticipated as part of this work.

The development of detailed proposed roadway geometry will not be prepared as a part of this Intersection Feasibility Analysis. The primary purpose of this exercise is to identify minor geometric improvements that can be made to the intersections that result in the best operational and safety performance.

Mainline Alternatives Development: Preliminary mainline geometry will be developed for four (4) proposed mainline alternatives. Preliminary geometry will include basic plan geometry, preliminary profile, and will be 3D modeled in Bentley OpenRoads Designer (ORD) to establish preliminary limits of

construction and evaluate ROW requirements for each alternative. Preliminary roadway geometry will be developed and evaluated based on the available environmental resource data, the traffic and crash analysis performed, and initial stakeholder input.

The alternatives to be analyzed will include:

1. Minor Geometric Improvements Alternative – In curb and gutter areas, install / maintain 3-foot (4-foot if using edge rumble strips) HMA bike-friendly shoulders. It is anticipated that B-6.12 will be investigated along Duffy Lane to minimize impacts of the shared-use path.
2. Pavement Widening Improvements Alternative – In non-curb areas on the road adjacent to the bike path, install 8-foot shoulders (4-foot HMA, 4-foot aggregate)
3. Sidewalk improvements – there is an HMA sidewalk along the west side of the road between Woodland Lane and Hiawatha Drive that is in poor condition. It should be investigated if that sidewalk should be removed.
4. Bike path improvements – the off-street bike path along Riverwoods Road north of Saunders Road is owned and maintained by the Villages of Lincolnshire and Riverwoods. Per their scoping meeting, the Villages requested that LCDOT evaluate the following improvements:
 - a. The bike path on the east side of Riverwoods Road between Vernon Trail and Saunders Road will be resurfaced as part of this project and paid for as a cost sharing agreement between LCDOT and the Village of Riverwoods.
 - b. A new off-road bike path on the north side of Duffy Lane between Riverwoods Road and Saunders Road will be constructed as part of this project with future maintenance being transferred to the Village of Riverwoods. However, to fully evaluate the impacts of the proposed shared-use path along Duffy Lane, a path along the north and south side will be investigated.
 - c. As part of the scoping process with LCDOT, the following additional bike path alternatives will be investigated:
 - i. Bike path improvements along the east side of Riverwoods Road from Vernon Trail to south of IL Route 22 due to the shoulder widening and resulting impacts.
 - ii. Replace the sidewalk along the east side of Riverwoods Road from Saunders Road to Vernon Trail with an 8-foot shared-use path.

The following assumptions are also made with respect to development of preliminary mainline roadway geometry:

- New curb and gutter shall be B-6.24, unless otherwise specified.
- Existing curb and gutter should be replaced with B-6.24.
- The evaluation of an “add lanes” or mainline capacity improvement alternatives is not anticipated.
- Pedestrian and bicycle accommodations will be incorporated with all alternatives compliant with the Lake County NMTI policy.
- Typical cross sections will be developed using Beyond Typical.
- A closed drainage system (i.e.; curb and gutter) will be provided as needed within the limits of the project improvement area to minimize overall right-of-way impacts along the corridor.
- Stormwater detention and water quality improvements and locations (if required) will be estimated for the preliminary alternatives for comparative purposes and will be finalized as part of the preferred alternative.
- For each preliminary alternative, plan geometry, preliminary profiles, and a rough 3D roadway model will be developed to determine preliminary right-of-way requirements and assessment of

impacts.

- MicroStation OpenRoads Designer (ORD 2022 R3) workspace and standards will be followed for all design work to be performed.

The Intersection Alternatives Development and Mainline Alternatives Development work findings will be summarized in a combined white paper report. Projected 2050 traffic performance of each alternative considered with recommended preferred options for each intersection and the mainline pavement section will be submitted for LCDOT review. Two meetings are anticipated with LCDOT staff associated with development and review of the intersection feasibility analysis study.

Specific work tasks will include:

- Evaluate traffic performance of two (2) intersection alternatives at three (3) locations.
- Evaluate impacts of four (4) mainline alternatives
- Comparative analysis of the preliminary alternatives
- Development of typical cross sections using Beyond Typical
- Development of white paper report documenting study findings and recommendations

Preferred Alternative

After a preferred alternative plan has been selected, the preliminary geometric design will be refined based on wetlands, results of the Environmental Survey Request, geotechnical studies, and structural studies. Specific work tasks will include:

- Refine horizontal geometrics
- Refine vertical roadway geometrics including detailed analysis of proposed roadway cross sections.
- Determine right-of-way acquisition and grading easement limits.
- Refine environmental impacts.
- Prepare plan and profile exhibits.
- Submit detailed geometrics to LCDOT. It is assumed that the geometrics will be revised up to two times prior to presentation at the Public Meeting.

8. Traffic Maintenance Analysis

Peralte-Clark will prepare a Traffic Maintenance Memo for construction of the preferred alternative. This will include a determination of the most effective method for construction staging and traffic maintenance, including an evaluation of the need for and implications of maintaining traffic during construction, providing for construction detours, and any associated temporary pavement needs and associated temporary construction easements.

Peralte-Clark will prepare a traffic maintenance concept plan to identify an appropriate staging plan. As part of the concept plan, Peralte-Clark will develop a maintenance of traffic concept using sketches on base map drawings to accommodate possible proposed daytime roadway closures. It has been assumed that there will be three main stages of construction on Riverwoods Road and Duffy Lane to construct the project.

Specific work tasks will include:

- Determine stage construction methodology.
- Determine traffic maintenance requirements.
- Determine temporary construction easement needs.
- Prepare Traffic Maintenance Memo.
- Prepare Memo Exhibits to include:
 - Develop staging typical sections showing lane widths;
 - Work zones; and
 - Easements and traffic control devices.

9. Utility Coordination

Initial Coordination/Data Collection:

The proposed improvements will require coordination with public and private utilities that have facilities within the project corridor. Peralte-Clark will coordinate with any utility companies found to have facilities located within the vicinity of the project limits through a JULIE Design Stage/Planning Information Request. A request will be made for these utilities to provide any available maps of existing facilities. It has been estimated that there will be up to eight public and private utilities to coordinate with.

Utility Locating

Peralte-Clark will perform SUE Level D locating of any utility facilities located within the project limits. Level D information will be obtained from utility atlases, JULIE requests, and other reliable sources. Peralte-Clark staff will coordinate with Robinson’s survey crew so that utility markings can be incorporated into their work (picked up by their survey crew) in a timely manner.

SUE Level D locating shall include underground traffic control facilities at signalized intersections to the extent allowed by MOT limitations, worker safety, and the ability of the facilities to transmit a locating tone.

Level A locating (potholing or otherwise exposing buried utilities) is not included in this scope of work. If needed, it is anticipated potholing should be done by the affected utility.

Utility Data Base Mapping

Peralte-Clark will coordinate with Robinson so that utilities can be depicted accurately in the survey data and utility base maps. This shall include time allotted for utility base map QA/QC.

Preliminary Design Coordination Meetings

Peralte-Clark will coordinate with utility companies once the preferred alternative has been selected and refined. Peralte-Clark will send preliminary plans to utility companies to verify the locations of their facilities and review preliminary design to determine if there are any significant conflicts that need to be reviewed. Peralte-Clark will also coordinate with the roadway design team to develop understanding of the presence of utilities, their type, and possible issues with protecting and/or relocating those utilities.

Peralte-Clark will continue to coordinate with utility companies during subsequent Engineering phases.

10. Intersection Design Studies

At the direction of LCDOT, Peralte-Clark will prepare Intersection Design Studies (IDS) in IDOT format at a scale of 1" = 50' for the preferred alternatives at each of the following locations:

- Riverwoods Road (W24) at Edward Ryerson Forest Preserve entrance
- Riverwoods Road (W24) at Westwood Lane
- Riverwoods Road (W24) at Duffy Lane (A57)

Each IDS will utilize the capacity analysis for the preferred alternative prepared in Task 4. Peralte-Clark will design the proposed intersection geometry, prepare AutoTurn turning movement analysis diagrams, design a preliminary traffic signal layout (only for Riverwoods Road and Duffy Lane intersection), and include the required design criteria/design exceptions/general notes. The preliminary IDS is anticipated to be submitted to LCDOT and revised based on any review comments received.

The following assumptions are also made with respect to development of the preferred intersection geometry:

- The evaluation of an "add lanes" or mainline capacity improvement alternatives is not anticipated.

Specific work tasks will include:

- Prepare IDS for three stop-controlled intersections
- Investigation of adding a RRFB at the Edward Ryerson Forest Preserve.

Exclusions:

- It is anticipated that IDOT Bureau of Local Roads will not review the IDS.

11. Environmental Surveys, Analysis, and Coordination

The environmental work for this project will be prepared by **Huff and Huff, Inc. (H&H)**, as a subconsultant.

The project is located entirely within an area of local roads including approximately 2.9 miles of improvements along Riverwoods Road from Deerfield Road (A47) to Illinois Route 22 (Half Day Road) in Lincolnshire and Riverwoods, Illinois, as well as 1.3 miles of improvements along Duffy Lane from Riverwoods Road to the I-94 bridge in Riverwoods, Illinois.

The following scope of environmental services will be completed for the Riverwoods Road project by H&H. These include:

- Preliminary Environmental Site Assessment (PESA)
- Wetland/Surface Waters Delineation
- Wetland Report
- Tree Survey and Tree Survey Report
- ESR Submittal (including Biological Clearances and Archeological Review)
- Preliminary Jurisdictional Determination
- Bridge Bat Assessment

Preliminary Environmental Site Assessment (PESA): H&H will prepare a separate Preliminary Environmental Site Assessment for the Project Corridor. Based on aerial photography, there is one gas station and one automotive repair business located on the south side of the Riverwoods and Deerfield Roads intersection. Therefore, there is the potential to encounter special waste on the project. The

process will follow general protocols associated with ASTM E1527-13, which is a standard environmental site assessment methodology and IDOT procedures. These protocols are consistent with the "Preliminary Environmental Site Assessment (PESA)" procedures outlined by the Illinois Department of Transportation (IDOT) in BDE #66-10A and the "Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Projects". No soil sampling is included in this task. The PESA will be limited to local road ROW and will not include IDOT ROW at Illinois Route 22.

A. Historical Research

The project corridors historical land use/ownership records will be developed from standard historical sources. Historical aerial photographs or historical maps, such as Sanborn Fire Insurance Maps, will be reviewed, as available. The review will identify land use over time and potential areas of environmental concern, such as areas of surface disturbance and outside storage.

B. Site Evaluation

Current environmental features and conditions of sites adjacent to the right-of-way/project areas will be evaluated. A site walkover of potential right-of-way/project areas designated for excavation and/or acquisition will be conducted for first-hand evaluation of current environmental conditions within the project limits. All the features and conditions listed above will be investigated and, as appropriate, documented in photographs. The land-use and housekeeping practices of adjacent properties also will be evaluated in accordance with ASTM protocols.

C. Records Review

A records review will be conducted to determine potential environmental concerns within the study areas. The reviews will include a search of standard state and federal environmental record databases in accordance with the specifications of ASTM standards. The searches are based on the outline of the study areas.

Specifically, H&H will search each database to identify any potential sources requiring further investigation. As appropriate, Freedom of Information Act (FOIA) requests will be filed with the Illinois Environmental Protection Agency (IEPA) to obtain additional data pertaining to identified sites.

D. Report Preparation

A PESA report summarizing the results of the evaluation will be prepared for the project corridor. The following information will be included in these reports:

- a) The project location and description
- b) Historical uses of corridor.
- c) The area geology and hydrology.
- d) The environmental status of sites adjacent to the corridor regarding chemical use and storage, underground and aboveground storage tanks, solid waste, special waste, and hazardous waste, wastewater, and PCBs.
- e) An analysis of the site inspection.
- f) A summary of the findings regarding environmental concerns. This will include IDOT's BDE Manual Chapter 27-3, Special Waste Procedures, and identification of Potentially Impacted Properties (PIPs) per Subpart F, Section 1100, 35 IAC, related to Clean Construction or Demolition Debris management.

Wetland/Surface Waters Delineation: H&H will conduct a wetland and surface water delineation using current methods and guidance from the U.S. Army Corps of Engineers (USACE), which is outlined in the 2010 “USACE Midwest Region Manual”. Based on a cursory review of available mapping and current aerial photography, it is anticipated that five wetlands and one waterway are present within the project limits. The assessment will include a document review (soils, topography, wetlands, surface waters, hydric soils, and aerial photography mapping), an on-site field investigation, and a report summarizing findings, including mapping.

A. Off-site Record/Document Review

The following records/documents will be reviewed prior to conducting the field investigation. Soils information will be reviewed to determine the soil types encountered during the delineation procedures. The maps reviewed and to be used include:

- U.S. Geological Survey Topographic Map
- National Wetlands Inventory (NWI) Map
- Lake County Wetland Inventory (LCWI) Maps
- Lake County Advanced Identification (ADID) Maps
- Lake County Soil Survey
- FEMA Floodplain Maps
- Hydric Soils of the United States
- Hydrologic Atlas
- Aerial Photographs

B. On-Site Investigation (Field Inventory)

The on-site investigation will be conducted by H&H staff experienced in Federal methods for conducting wetland delineations. H&H will classify and define hydric soils, hydrophytic vegetation, and evidence of hydrology to determine if wetlands are present. The wetland perimeters will be surveyed in the field by H&H.

Wetland and surface water delineations will be conducted that will meet the requirements of Executive Order 11990, “Protection of Wetlands” Section 404 of the Federal Water Pollution Control Act as amended by the Clean Water Act (Corps of Engineers, Section 404 Permit) and the Illinois Environmental Protection Agency (IEPA Section 401 Guidelines) regulations. These regulations pertain to the placement of fill or alterations of drainage within wetlands of any type and apply to private as well as publicly owned wetlands. The investigation will meet the requirements of these regulations by identifying the type, functions, and approximate boundaries of all wetlands and surface waters.

Wetlands and surface waters found will be classified according to type using the “Classification of Wetlands and Deep Water Habitats of the U.S.” by Cowardin. Wetland boundaries will be defined using the *Midwest Region Manual* (USACE, 2010). Each potential wetland area will be evaluated for the presence of wetland indicators comprised of hydrophytic vegetation, hydric soils, and wetland hydrology. Functions of wetlands will be evaluated from field observations.

The entire area within the project limits will be investigated if unmapped wetlands or waterways are present. The Lake County Wetland Inventory (LCWI) Map depicts five wetlands in the project

limits. As the LCWI Maps were developed to be used as general planning tools, detailed field investigations are required to ascertain the presence of wetlands onsite. All areas exhibiting wetland characteristics within the project limits will be investigated.

H&H will survey the wetland and surface water perimeters using GPS. H&H will download the data and provide a shape file to Peralte-Clark, LLC. with all pertinent delineation survey data.

This task includes time for a boundary verification and preparation and submittal of preliminary jurisdictional determination to the Lake County Stormwater Management Commission (SMC). Fees for the boundary verification and jurisdictional determination will be paid by LCDOT directly to SMC and are not included in this cost estimate as the fees are based on the number of wetlands/surface waters present, which is not known at this time.

The wetland delineation will be scheduled according to the designated Lake County SMC and USACE growing season for Lake County, which begins on May 15th and ends October 1st. If the delineation is completed outside of the growing season, additional field visits may be required and are not included in this scope of services.

Wetland Report: A wetland and surface waters delineation report will be prepared summarizing the findings of the fieldwork.

Specific items to be included are as follows:

- a) Map showing the wetland/WOUS boundaries and project boundaries
- b) Aerial Photo with the appropriate limits of delineated wetlands and/or waterway
- c) USACE data sheets with color photos of the wetlands and the data points
- d) Floristic Quality Assessment
- e) Written description of wetland functional classification
- f) Permitting summary
- g) Jurisdictional Summary Table
- h) Identification of 303(d) impaired waterways
- i) Mitigation requirements

All wetland boundaries will be located using GPS. The wetland boundary map will be derived from the GPS survey of these features. The wetland layers will be separated for use by the Client for their construction drawings. Copies of the wetland report will be provided as a PDF.

Time under this task includes QA/QC of the report.

The preliminary jurisdictional determination and boundary verification will be conducted during this phase of the project.

Tree Survey and Tree Survey Report: H&H will conduct a tree survey and prepare a report for the portion of the project located in the Lake County Forest Preserve Edward Ryerson Conservation Area. H&H will identify the trees to species level and determine health, structure, and origin. H&H will also note whether any trees are of exceptional size and condition. The tree survey will follow Lake County Forest Preserve guidance for conducting tree surveys. All trees located on FPD property with a DBH of three inches and shrubs greater than three feet in height will be identified.

H&H will provide the location of all individual trees surveyed by station and offset from the field survey to the Client.

After all trees are evaluated within the forest preserve, a tabulation of trees will be compiled which summarizes trees present within the project limits and potential impacts. A summary tree memorandum will be prepared to document the tree assessment and summarize potential impacts.

It should be noted that the Edward Ryerson Nature Preserve has the highest level of protection of open lands in the state. The use or taking of land from a designated Nature Preserve requires an act of the State Legislature. Therefore, avoidance of impacts to the Nature Preserve is critical.

ESR Submittal: The environmental evaluation will be initiated through the submittal of the Environmental Survey Request Form (ESRF). The ESR will be completed in the event IDOT or federal funding is utilized in future phases. In addition, most MFT funded projects utilize the ESR process for obtaining biological and cultural information.

The ESR limits will be wide enough to incorporate reasonable alternatives and areas potentially affected, such as the drainage areas, detention areas, and compensatory storage sites. Environmental resource areas covered by the ESRF include wetlands, special waste, cultural (historical and archaeological) and state listed threatened and endangered (T&E) species.

Huff & Huff will prepare the ESRF package and send it to the Environmental Studies Unit at IDOT District 1 for review. If it is determined that the ESR process is not required due to funding, H&H will conduct the USFWS IPaC databases review to assess whether federal threatened and endangered species may be present in the project. In addition, H&H will also conduct the IDNR EcoCAT database review to assess whether state listed species are present. The database reviews can be completed quickly, but should only be completed if no ESR is required. There is a fee for conducting EcoCAT reviews.

Section 4(f) Scope: In coordination with the Section 6(f) coordination, H&H will complete coordination of potential park district and forest preserve impacts through the Section 4(f) process if a federal action (such as a permit or approval from a federal agency) occurs. As the level of impacts to recreational lands and facilities is unknown at this time, H&H assumes that the Section 4(f) coordination would be Programmatic and not de minimis. H&H assumes that the FHWA will require the Section 4(f) approval through the use of MFT funding.

This scope of work includes coordination with the Lake County Forest Preserve District. This will include meetings, conference calls and email correspondence. H&H will document the potential impacts to the recreational facilities and present this to the Federal Highway Administration (through LCDOT) for a determination on the level of processing of Section 4(f) impacts. A final Section 4(f) document will be prepared. There is the potential that the FHWA may determine that Section 4(f) is not applicable on this project through the use of MFT funds. If no federal action (such as a permit or approval from a federal agency) occurs, then Section 4(f) is not required. Again, it should be noted that avoidance of using land from the Edward Ryerson Nature Preserve is critical and if no other forest preserve or park district sites are involved, Section 4(f) and Section 6(f) may not be required.

Biological Clearances: Will be obtained through the ESR process as discussed previously.

Archeological Review: Will be obtained through the ESR process. If the project does not utilize the ESR

process, H&H will conduct HARGIS review and will work with Peralte-Clark to conduct a historic photolog of all structures. If the SHPO requires a more detailed review or Phase 1 Archeological survey, a qualified historic/archeological firm will need to be included in the study.

Bridge Bat Assessment: This proposal includes an assessment of NLEB habitat within the construction limits, specifically related to one (1) existing culvert structures present within the project corridor. The NLEB assessment entails only the assessment of bridge, culverts, and any other structure over four (4) feet in height that have the potential to provide roosting habitat for NLEB; and expressly does not constitute surveys, mist netting, echolocation, or other, for presence of NLEB within the project or adjacent areas, or specific tree surveys to identify trees that may provide suitable habitat for the NLEB or other listed bat species.

The USFWS and FHWA with the FRA and FTA standardized their approach to assessing impacts to federally listed bat species from highway construction and expansion projects, and for developing avoidance, minimization, and mitigation strategies. For projects with bridges, culverts, or any other structure over four (4) feet tall that have the potential to provide suitable roosting habitat, a preliminary assessment of the structure is required to confirm the presence or absence of evidence of bats. The methodology for the assessment follows guidelines from *“Appendix D: Bridge Inspection Guidance of the User’s Guide for the Range-wide Programmatic Informal Consultation for Indiana Bat and Northern Long-eared Bat.”* As this project will be processed through IDOT, an inspection of the bridge, culverts, and any other structure over four (4) feet tall that has the potential to provide suitable roosting habitat for NLEB, present within survey limits will be conducted to confirm evidence for the potential presence of bats.

Bridges and structures located along large bodies of water associated with wide floodplains generally provide suitable habitat for the NLEB and other bat species by providing areas to roost, sources of food, and opportunities to mate. Suitable roosting habitat for the NLEB includes cracks in concrete and expansion joints and congregate in areas where a cave-like environment is present. These specific areas are mostly associated with the substructure or lower portion of a bridge.

The bridge/structure assessment guidelines focus on four indicators of bats, which include the following;

- Visual – bats flying or roosting;
- Audible – chirping or high-pitched squeaking;
- Physical – droppings, referred to as guano, consisting of black or brown pellets, which accumulate underneath roosting location. Older guano appears grey in color. Guano can adhere to support beams, columns, and walls; and
- Staining – “wet” and dark looking stains may be visible on the walls, support beams, columns, beneath joints, and on the ceiling of bridge. Stains are typically in dark places. Stains are approximately four to six inches wide.

The identification of any of the above listed indicators is sufficient documentation to confirm recent bat usage. All indicators and observations of live or dead bats and their approximate location on the bridge or structure will be recorded on the bridge/structure inspection form. Time under this task includes the field assessment and the completion of the formal IDOT BBA Form and an associated photographic log of each structure assessed. Time under this task does not include formal coordination with any agency for impacts to listed species.

The following limitations apply to this task:

- Bridge and structure inspections can typically only be completed during non-flood conditions, and/or conditions when water levels safely allow for human passage within culverts and beneath bridge structures.
- Bridge and structure inspections typically cannot be completed within traditional navigable waterways without use of a boat or other mechanical means and are not included within this scope of services.
- Bridge and structure inspections cannot typically be conducted within gated or fenced structures.
- In some cases, debris build-up within culverts and other structures may not allow for physical inspection.
- The USFWS and IDNR have the authority to require additional assessments.

12. Land Acquisition Services

Mathewson Lane Services, Inc. (Mathewson) will be providing assistance with potential right-of-way issues as part of the Phase I Study.

For the purposes of establishing a project budget for this work, we have estimated potentially forty-four (44) parcels with potential right-of-way acquisition, permanent easement, and/or a temporary easement needs within the project limits. Mathewson, at the direction of P-C, will provide research and advice on the ownership of properties potentially impacted by the proposed improvements. The research may include identifying acquisition complications.

Mathewson shall perform the following services in conjunction with the above references Project:
 Ownership research and Analysis: Mathewson shall provide research and advice on the ownership of properties potentially impacted by the proposed improvements. The research may also include identifying any potential acquisition complications apparent in the public record.

Valuation: Mathewson shall provide opinions on probably costs associated with various design alternatives (Cost Estimate). The opinions may be based in whole or part on cost analysis prepared by licensed appraisers. Mathewson shall identify valuation challenges and potential cost savings arising from design options.

Other Services: Mathewson agrees to provide additional services as the parties may agree are appropriate in the furtherance of the project.

Mathewson will provide opinions of probably costs associated with the acquisition of land for various design alternatives and challenges and potential cost savings from the various design alternatives.

Not in scope:

- Appraisals and negotiations will be included in Phase II engineering.

13. Geotechnical Investigation

This task includes obtaining roadway corings and structural soil borings along Riverwoods Road between Deerfield Road and Illinois Route 22 (Half Day Road) as well as along Duffy Road between Riverwoods Road and the I-94 Bridge for design purposes as part of subsequent engineering design. Peralte-Clark,

LLC will utilize **Geocon Professional Services (Geocon)** for this work.

Lake County Division of Transportation

The scope of work includes locating and drilling seventeen (17) roadway cores along Riverwoods Road and eight (8) roadway cores along Duffy Lane. The roadway cores will be used to determine the existing pavement section. The roadway cores will be spaced approximately 1000 feet apart and staggered, in general accordance with the IDOT Geotechnical Manual guidelines. The cores will be drilled within the existing roadway and in the shoulder areas of Riverwoods Road and Duffy Lane. It is recommended that one split spoon sample be collected from the subgrade below the pavement section, and performance of a DCP test of the subgrade.

Additional subgrade borings should be performed for the proposed bike path along Duffy Road (8 borings), where turn lanes may be added (2 borings), where new traffic signals may be added (2 borings), and where potential retaining walls will be placed (10 borings) for a total of twenty-two (22) borings. The roadway borings will be drilled to a depth of 5.0 feet each from the existing ground/pavement surface, based on the existing ground elevation and proposed design grades. The structure borings will be drilled to a depth of 20 feet.

The location of the borings will be finalized upon consultation with the client. The location of the borings will be adjusted based on field conditions, accessibility, and utility conflicts. We anticipate closing of lanes during drilling two roadway borings. Additionally, we anticipate the need for flaggers for a limited number of borings. Traffic control signage and flaggers will be utilized as needed during drilling to ensure safety of drilling crew and traffic.

The cores and borings will be drilled with a truck-mounted drill rig. Soil sampling in the borings will be performed in general accordance with American Society for Testing and Materials (ASTM) standards, D 1586 "Penetration Test and Split Barrel Sampling of Soils". Observation for groundwater will be made during and immediately after the completion of the drilling. After the completion of the drilling, the boreholes will be backfilled with the soil auger cuttings from the same borehole. Where required, the surface will be patched with cement or asphalt to match surrounding elevations.

All field sampling and laboratory testing will be performed in general accordance with IDOT specifications. Laboratory testing includes moisture content tests, unconfined compressive strength tests using a RIMAC tester on all recovered soil samples. Standard Proctor tests, Illinois Bearing Ratio tests will be performed on bulk samples recovered from the proposed roadway areas. The final geotechnical report will be in general accordance with the IDOT Geotechnical Manual guidelines.

P-C will perform the following tasks:

- Prepare existing plan and profile exhibits for Geocon to use in referencing and plotting the location of the proposed borings/cores.
- Review and submittal of preliminary boring/core locations to LCDOT for review and approval.

14. Retaining Wall Design

The retaining wall design for this project will be prepared by **TranSystems Corporation (TranSystems)**, as a subconsultant.

General Understanding: With the roadway and multi-use path improvements, there is a possibility that retaining walls may be needed due to ROW constraints. The locations of the walls are to be determined. The proposed improvements to Riverwoods Road and Duffy Lane may require the addition of retaining walls in five locations with exposed wall heights not expected to exceed five (5) feet and length of wall not expected to exceed one hundred (100) feet. The use of retaining walls may alleviate additional right-of-way purchases in the five proposed areas, though the final recommendation on the use of retaining walls vs. other options such as right-of-way purchase or permanent easements will be determined during the design phase project. Retaining wall type including foundation type, and aesthetic features, will also be determined during the design phase of the project. The project is using local funds and will not include submittals to IDOT and will not involve work that extends into IDOT right-of-way.

Design Criteria/Assumptions

- A. Retained height not expected to exceed 5 feet and wall length not expected to exceed 100 feet.
- B. Anticipated site constraints for available room within the existing right-of-way may necessitate the use of a pile supported retaining wall to limit excavation. This may consist of a sheet pile retaining wall with a cast-in-place or precast concrete façade or a soldier pile supported cast-in-place or precast panel retaining wall.
 - a. A construction feasibility study for the retaining wall options listed above as well as a gravity wall will be reviewed as part of engineering. The construction feasibility study will take into consideration costs and site constraints such as available right-of-way, construction staging, and existing utility conflicts.
- C. Design will be according to the AASHTO LRFD Bridge Design Specifications and IDOT Bridge Manual.

Preliminary Structural Design Engineering Services: TranSystems will review the need for retaining walls along the proposed improvement and provide a cost and construction feasibility study of different retaining wall types.

Specific work tasks will include:

- TranSystems will submit a technical memorandum (a .pdf document via email) with results of construction feasibility review and recommendations on retaining wall type and location for Final Design.
- The feasibility study will include a list of aesthetic enhancements to the proposed wall as directed by LCDOT.
- Coordination with Geotechnical consultant to determine feasible retaining wall alternatives.

Items not included in Structural Engineering:

The scope of services listed here is limited to the retaining walls as described herein for the construction feasibility review. No meetings (other than those specified), survey, or permit acquisitions are included as part of the structural scope of services.

The following are assumptions for this task:

1. Base sheets at 20 scale will be completed by Peralte-Clark and provided to TranSystems.

15. Project Coordination Meetings

This task includes the organization and attendance at Monthly Project Status / Coordination Meetings throughout the duration of the project. Team members and LCDOT staff will be requested to attend these meetings to ensure the design work is moving ahead efficiently and on schedule. The preparation of

meeting minutes for these coordination meetings is not anticipated. However, an action item list and log will be kept ensuring all team members are responsive and accountable for their involvement in the project.

Coordination: Coordination with key stakeholder agencies will be required. We recommend that an initial kick-off meeting be scheduled with the Illinois Department of Transportation Bureau of Local Roads and Streets shortly after authorization to proceed, to introduce the project, review the general project scope of work and overall project development process (including public involvement activities), discuss field survey work anticipated to occur, establish mutual contacts, and to provide an opportunity for early project input.

Additional meetings with the following stakeholders are planned during the project development process:

- a. Illinois Department of Transportation – Bureau of Local Roads
- b. Lake County Forest Preserve District
- c. Lake County Stormwater Management Commission (SMC)
- d. Municipalities
 - i. Village of Riverwoods
 - ii. Village of Lincolnshire

It is anticipated that municipal emergency services representatives (police, fire, etc.) will attend the municipal coordination meetings and will not require separate consultation. The assumptions for establishing an estimated level of effort for stakeholder coordination and meetings are as described below:

- One (1) project kick-off meeting with LCDOT (in-person)*
- Thirty-six (36) monthly coordination conference calls with LCDOT
- Three (3) meetings with IDOT BLRS (in-person)*
- Three (3) meetings with Municipalities (in-person)*
- One (1) meeting with the Village of Riverwoods to discuss the potential jurisdictional transfer
- Two (2) meeting with Lake County SMC*
- Two (2) meetings with Lake County Forest Preserve District (in-person)*
- Four (4) meetings with residents (in-person)*

* Preparation and distribution of meeting minutes will be provided

16. Public Meetings

The purpose of the public involvement is to promote a proactive and responsive approach that seeks the input of all concerned stakeholders and that provides for appropriate input at key points in the project decision making process. The process will include two in-person open-house public meetings for this project. The first Public Meeting will present existing conditions, the needs for improvement, and preliminary improvement concepts. The second Public Meeting will present the proposed improvement plan. The following items are anticipated as part of the public involvement tasks for each meeting:

- Selection of and coordination with meeting venue.
- Preparation and distribution of invitation postcards to area residents, businesses, and stakeholders. Certified letters will be sent to property owners with anticipated right-of-way acquisition prior to the second public meeting.

- Preparation of public meeting newspaper display advertisement.
- Preparation of public meeting brochure
- Preparation of public meeting exhibits
 - 2-D Exhibits
 - Typical Sections using Beyond Typical (typical sections prepared using Beyond Typical in Item 7.
- Preparation for and attendance at public meeting dry-run with County Staff (assume two (2) meetings per public meeting). (In-person)
- Attendance at public meeting
- Preparation of meeting summary, disposition of comments, and Q&A document for County website
- Provide text and exhibits for County website

17. Project Report

The project will be summarized in a Project Report which will include maps, exhibits, and tables to help describe the various design elements for the alternatives and design alternate studied. The environmental and engineering aspects will be addressed in the report. The report is not anticipated to follow the IDOT CE report format but will be a compilation of the project white paper reports, public involvement feedback and other justification used to select a preferred alternative for this project.

Specific work tasks will include:

- Prepare report exhibits and tables
- Write, proofread, and edit Draft Project Report
- Compile materials and submit to LCDOT for review
- Revise Draft Project Report based on LCDOT review and submit Pre-final Project Report
- Revise Pre-final Project Report and submit Final Project Report

18. Project Administration and Management

This task includes overall project administration and management.

Project administration includes managing the day-to-day work effort on the project to ensure an efficient project development process including work force allocations, budget oversight, monthly progress reviews to ensure project milestones are being met to the extent possible.

Specific work tasks will include:

- General project management/administration including staff resource allocation, and task/schedule oversight.
- Prepare monthly progress reports including a copy of the overall project schedule.

19. Quality Assurance / Quality Control

This task includes Quality Assurance/Quality Control (QA/QC) reviews associated with major project deliverables.

QA/QC reviews will occur as part of major project deliverables in accordance with Peralte-Clark's established QA/QC procedures.

Specific work tasks will include:

- Quality reviews, etc.

20. Scope Assumptions and Omissions

The following assumptions are per a meeting with LCDOT, P-C, and Village of Lincolnshire staff:

- Existing Yorkshire Lane pedestrian crossing will be replaced with a flashing RRFB.
- A second pedestrian crossing with RRFB at either Duffy Lane or Londonderry Lane is anticipated. Location to be determined after Village of Lincolnshire completes their pedestrian plan.

The following assumptions are per a meeting with LCDOT, P-C, and Village of Riverwoods staff:

- The Riverwoods bike path will be resurfaced as part of this project, with a cost sharing agreement between LCDOT and the Village of Riverwoods.
- Two pedestrian midblock crossings will be provided with RRFB. The two locations will be:
 - Riverwoods Road and Portwine Road
 - Duffy Lane and Saunders Road

The following items are project omissions:

- Lighting Design
- Pavement Life Cycle Cost Analysis
- Section 106 permitting.

Exhibit B

Exhibit C

Exhibit D

Overall Fee Proposal



Local Public Agency Lake County Division of Transportation	County Lake	Section Number 22-00106-09-RS
Prime Consultant (Firm) Name Peralte-Clark, LLC	Prepared By J. Christell	Date 11/14/2023
Consultant / Subconsultant Name Peralte-Clark, LLC	Job Number 23-0005	

Note: This is name of the consultant the CECS is being completed for. This name appears at the top of each tab.

Remarks

PAYROLL ESCALATION TABLE

CONTRACT TERM	36	MONTHS		OVERHEAD RATE	154.83%
START DATE	12/1/2023			COMPLEXITY FACTOR	0
RAISE DATE	1/1/2024			% OF RAISE	2.00%
END DATE	11/30/2026				

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	12/1/2023	1/1/2024	1	2.78%
1	1/2/2024	1/1/2025	12	34.00%
2	1/2/2025	1/1/2026	12	34.68%
3	1/2/2026	12/1/2026	11	32.43%

The total escalation = 3.88%

Local Public Agency	County	Section Number
Lake County Division of Transportation	Lake	22-00106-09-RS

Consultant / Subconsultant Name	Job Number
Peralte-Clark, LLC	23-0005

PAYROLL RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET FIXED RAISE

MAXIMUM PAYROLL RATE	86.00
ESCALATION FACTOR	3.88%

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Engineering Chief - 4	\$86.00	\$86.00
Project Manager -3	\$70.67	\$73.41
Senior Project Engineer - 6	\$81.65	\$84.82
Senior Design Engineer - 4	\$50.58	\$52.54
Design Engineer - 3	\$45.21	\$46.97
Design Engineer - 2	\$37.47	\$38.93
Administrator	\$53.56	\$55.64

Local Public Agency	County	Section Number
Lake County Division of Transportation	Lake	22-00106-09-RS
Consultant / Subconsultant Name		Job Number
Peralte-Clark, LLC		23-0005

SUBCONSULTANTS

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

NAME	Direct Labor Total	Contribution to Prime Consultant
Mathewson Right of Way Company	0.00	
Huff & Huff (GZA)	30,398.00	3,039.80
Geocon Professional Services	0.00	
Robinson Engineering	74,876.00	7,487.60
TranSystems Corporation	21,405.00	2,140.50
Total	126,679.00	12,667.90

NOTE: Only subconsultants who fill out a cost estimate that splits out direct labor may be listed on this sheet.

Local Public Agency

Lake County Division of Transportation

County

Lake

Section Number

22-00106-09-RS

Consultant / Subconsultant Name

Peralte-Clark, LLC

Job Number

23-0005

DIRECT COSTS WORKSHEET

List ALL direct costs required for this project. Those not listed on the form will not be eligible for reimbursement by the LPA on this project.
EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

ITEM	ALLOWABLE	QUANTITY	CONTRACT RATE	TOTAL
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost (Up to state rate maximum)			\$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost			\$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			\$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum	992	\$0.66	\$649.76
Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day			\$0.00
Vehicle Rental	Actual Cost (Up to \$55/day)			\$0.00
Tolls	Actual Cost			\$0.00
Parking	Actual Cost			\$0.00
Overtime	Premium portion (Submit supporting documentation)			\$0.00
Shift Differential	Actual Cost (Based on firm's policy)			\$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost (Submit supporting documentation)	6	\$45.00	\$270.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)			\$0.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)	350	\$0.35	\$122.50
Project Specific Insurance	Actual Cost			\$0.00
Monuments (Permanent)	Actual Cost			\$0.00
Photo Processing	Actual Cost			\$0.00
2-Way Radio (Survey or Phase III Only)	Actual Cost			\$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual Cost			\$0.00
CADD	Actual Cost (Max \$15/hour)			\$0.00
Web Site	Actual Cost (Submit supporting documentation)			\$0.00
Advertisements	Actual Cost (Submit supporting documentation)	4	\$250.00	\$1,000.00
Public Meeting Facility Rental	Actual Cost (Submit supporting documentation)	2	\$1,000.00	\$2,000.00
Public Meeting Exhibits/Renderings & Equipment	Actual Cost (Submit supporting documentation)	20	\$100.00	\$2,000.00
Recording Fees	Actual Cost			\$0.00
Transcriptions (specific to project)	Actual Cost			\$0.00
Courthouse Fees	Actual Cost			\$0.00
Storm Sewer Cleaning and Televising	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Utlility Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Testing of Soil Samples	Actual Cost			\$0.00
Lab Services	Actual Cost (Provide breakdown of each cost)			\$0.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Traffic Counting	Actual Cost	1	\$5,300.00	\$5,300.00
				\$0.00
TOTAL DIRECT COSTS:				\$11,342.26

Local Public Agency

Lake County Division of Transportation

Consultant / Subconsultant Name

Peralte-Clark, LLC

County

Lake

Section Number

22-00106-09-RS

Job Number

23-0005

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE **154.83%**

COMPLEXITY FACTOR **0**

TASK	DIRECT COSTS (not included in row totals)	STAFF HOURS	PAYROLL	OVERHEAD & FRINGE BENEFITS	FIXED FEE	SERVICES BY OTHERS	TOTAL	% OF GRAND TOTAL
Data Collection, Compilation, Review, and Evaluation		220	10,649	16,488	3,514		30,651	2.61%
Field Survey Work		8	451	698	149	230,958	232,256	19.79%
Traffic Counts	5,300	4	210	325	69		604	0.05%
Traffic Projections and 2050 Analysis		158	7,600	11,766	2,508		21,874	1.86%
Crash Analysis		128	6,045	9,359	1,995		17,399	1.48%
Roadway Drainage Analyses		740	39,084	60,513	12,898		112,495	9.58%
Alternate Geometric Studies		1084	53,057	82,149	17,509		152,715	13.01%
Traffic Maintenance Analysis		58	3,944	6,107	1,302		11,353	0.97%
Utility Coordination		164	7,862	12,172	2,594		22,628	1.93%
Intersection Design Studies		192	9,914	15,350	3,272		28,536	2.43%
Environmental Surveys, Analysis, and Coordination		24	1,595	2,470	526	75,974	80,565	6.86%
Land Acquisition Services		16	1,091	1,689	360	21,200	24,340	2.07%
Geotechnical Investigation		50	2,770	4,290	914	53,615	61,589	5.25%
Retaining Wall Design		16	1,243	1,925	410	57,319	60,897	5.19%
Project Coordination Meetings	650	348	24,999	38,706	8,250	15,662	87,617	7.46%
Public Meetings	5,000	514	28,438	44,030	9,384	3,048	84,900	7.23%
Project Report	393	168	9,406	14,563	3,104		27,073	2.31%
Project Administration		195	14,316	22,165	4,724	4,900	46,105	3.93%
Quality Control/Quality Assurance		195	16,099	24,926	5,313		46,338	3.95%
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
Subconsultant DL							\$12,474.85	1.06%
Direct Costs Total ==>	\$11,342.26						\$11,342.26	0.97%
TOTALS		4282	238,773	369,691	78,795	462,676	1,173,752	100.00%

608,464

The subconsultant fee has been adjusted due to 15% fixed



Phase I									
CECS Item	Total	Percentage	Peralte-Clark	Mathewson	Huff & Huff /GZA	Geocon	TranSystems	Robinson	Quality Counts
Data Collection	220	3.10%	220	0	0	0	0	0	0
Survey	1795	25.30%	8	0	0	0	0	1787	0
Traffic Counts	4	0.06%	4	0	0	0	0	0	0
Traffic Projections and 2050 Analysis	158	2.23%	158	0	0	0	0	0	0
Crash Analysis	128	1.80%	128	0	0	0	0	0	0
Roadway Drainage Analyses	740	10.43%	740	0	0	0	0	0	0
Alternate Geometric Studies	1084	15.28%	1084	0	0	0	0	0	0
Traffic Maintenance Analysis	58	0.82%	58	0	0	0	0	0	0
Utility Coordination	164	2.31%	164	0	0	0	0	0	0
Intersection Design Studies	192	2.71%	192	0	0	0	0	0	0
Environmental Surveys, Analysis, and Coordination	531	7.48%	24	0	507	0	0	0	0
Land Acquisition Services	16	0.23%	16	0	0	0	0	0	0
Geotechnical Investigation	114	1.61%	50	0	0	64	0	0	0
Retaining Wall Design (TranSystems)	288	4.06%	16	0	0	0	272	0	0
Project Coordination Meetings	476	6.71%	348	0	84	24	20	0	0
Public Meetings (Two Meetings)	514	7.24%	514	0	0	0	0	0	0
Project Report	168	2.37%	168	0	0	0	0	0	0
Project Administration	231	3.26%	195	0	16	0	20	0	0
Quality Assurance/Quality Control	214	3.02%	195	0	9	0	10	0	0
Totals	7,095	100.00%	4,282	0	616	88	322	1787	0

Local Public Agency

Lake County Division of Transportation

Consultant / Subconsultant Name

Peralte-Clark, LLC

County

Lake

Section Number

22-00106-09-RS

Job Number

23-0005

AVERAGE HOURLY PROJECT RATES
EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 1 OF 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Data Collection, Compilation, Review, and Evaluation			Field Survey Work			Traffic Counts			Traffic Projections and 2050 Analysis			Crash Analysis		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Engineering Chief - 4	86.00	210.0	4.90%	4.22	2	0.91%	0.78												
Project Manager -3	73.41	908.0	21.21%	15.57	24	10.91%	8.01	2	25.00%	18.35				16	10.13%	7.43	12	9.38%	6.88
Senior Project Engineer - 6	84.82	268.0	6.26%	5.31															
Senior Design Engineer - 4	52.54	822.0	19.20%	10.09	50	22.73%	11.94	4	50.00%	26.27	4	100.00%	52.54	60	37.97%	19.95	24	18.75%	9.85
Design Engineer - 3	46.97	920.0	21.49%	10.09	60	27.27%	12.81	2	25.00%	11.74				10	6.33%	2.97	40	31.25%	14.68
Design Engineer - 2	38.93	1,154.0	26.95%	10.49	84	38.18%	14.86							72	45.57%	17.74	52	40.63%	15.81
Administrator	55.64	0.0																	
		0.0																	
		0.0																	
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		0.0																	
		0.0																	
TOTALS		4282.0	100%	\$55.76	220.0	100.00%	\$48.40	8.0	100%	\$56.37	4.0	100%	\$52.54	158.0	100%	\$48.10	128.0	100%	\$47.22

Local Public Agency

Lake County Division of Transportation

Consultant / Subconsultant Name

Peralte-Clark, LLC

County

Lake

Section Number

22-00106-09-RS

Job Number

23-0005

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 2 OF 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Roadway Drainage Analyses			Alternate Geometric Studies			Traffic Maintenance Analysis			Utility Coordination			Intersection Design Studies			Environmental Surveys, Analysis, and Coordination		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Engineering Chief - 4	86.00	30	4.05%	3.49	24	2.21%	1.90	2	3.45%	2.97				6	3.13%	2.69			
Project Manager -3	73.41	80	10.81%	7.94	120	11.07%	8.13	10	17.24%	12.66	20	12.20%	8.95	40	20.83%	15.29	16	66.67%	48.94
Senior Project Engineer - 6	84.82	60	8.11%	6.88				24	41.38%	35.10									
Senior Design Engineer - 4	52.54	140	18.92%	9.94	210	19.37%	10.18	6	10.34%	5.44	26	15.85%	8.33	30	15.63%	8.21	8	33.33%	17.51
Design Engineer - 3	46.97	180	24.32%	11.42	340	31.37%	14.73	8	13.79%	6.48	54	32.93%	15.46	46	23.96%	11.25			
Design Engineer - 2	38.93	250	33.78%	13.15	390	35.98%	14.00	8	13.79%	5.37	64	39.02%	15.19	70	36.46%	14.19			
Administrator	55.64																		
TOTALS		740.0	100%	\$52.82	1084.0	100%	\$48.95	58.0	100%	\$68.00	164.0	100%	\$47.94	192.0	100%	\$51.64	24.0	100%	\$66.46

Local Public Agency

Lake County Division of Transportation

County

Lake

Section Number

22-00106-09-RS

Consultant / Subconsultant Name

Peralte-Clark, LLC

Job Number

AVERAGE HOURLY PROJECT RATES
EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 3 OF 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Land Acquisition Services			Geotechnical Investigation			Retaining Wall Design			Project Coordination Meetings			Public Meetings			Project Report		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Engineering Chief - 4	86.00									18	5.17%	4.45	24	4.67%	4.02	4	2.38%	2.05	
Project Manager -3	73.41	12	75.00%	55.06	16	32.00%	23.49	10	62.50%	45.88	166	47.70%	35.02	80	15.56%	11.43	40	23.81%	17.48
Senior Project Engineer - 6	84.82							6	37.50%	31.81	82	23.56%	19.99	50	9.73%	8.25			
Senior Design Engineer - 4	52.54	4	25.00%	13.14	20	40.00%	21.02				82	23.56%	12.38	100	19.46%	10.22	54	32.14%	16.89
Design Engineer - 3	46.97													110	21.40%	10.05	70	41.67%	19.57
Design Engineer - 2	38.93				14	28.00%	10.90							150	29.18%	11.36			
Administrator	55.64																		
TOTALS		16.0	100%	\$68.20	50.0	100%	\$55.41	16.0	100%	\$77.69	348.0	100%	\$71.84	514.0	100%	\$55.33	168.0	100%	\$55.99

Local Public Agency

Lake County Division of Transportation

County

Lake

Section Number

22-00106-09-RS

Consultant / Subconsultant Name

Peralte-Clark, LLC

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 4 OF 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Project Administration			Quality Control/Quality Assurance														
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg			
Engineering Chief - 4	86.00				100	51.28%	44.10												
Project Manager -3	73.41	195	100.00%	73.41	49	25.13%	18.45												
Senior Project Engineer - 6	84.82				46	23.59%	20.01												
Senior Design Engineer - 4	52.54																		
Design Engineer - 3	46.97																		
Design Engineer - 2	38.93																		
Administrator	55.64																		
TOTALS		195.0	100%	\$73.41	195.0	100%	\$82.56	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00

Robinson Engineering, Ltd. Scope and Fee Proposal



Local Public Agency Lake County Department of Transportation	County Lake	Section Number 22-00206-09-RS
Prime Consultant (Firm) Name Peralte - Clark	Prepared By Harry L. Gilmore, Jr.	Date 9/21/2023
Consultant / Subconsultant Name Robinson Engineering	Job Number 	

Note: This is name of the consultant the CECS is being completed for. This name appears at the top of each tab.

Remarks

Riverwoods Road (W24) from Deerfield Road (A47) to Illinois Route 22 (Half Day Road) and Duffy Lane (A43) from Riverwoods Road (W24) to I-94 Bridge

PAYROLL ESCALATION TABLE

CONTRACT TERM	12	MONTHS	OVERHEAD RATE	160.43%
START DATE	12/1/2023		COMPLEXITY FACTOR	0
RAISE DATE	4/1/2024		% OF RAISE	2.00%
END DATE	11/30/2024			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	12/1/2023	4/1/2024	4	33.33%
1	4/2/2024	12/1/2024	8	68.00%

The total escalation = 1.33%

Local Public Agency

County

Section Number

Lake County Department of Transportation

Lake

22-00206-09-RS

Consultant / Subconsultant Name

Job Number

Robinson Engineering

PAYROLL RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET FIXED RAISE

MAXIMUM PAYROLL RATE	86.00
ESCALATION FACTOR	1.33%

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Principal Engineer 1	\$79.30	\$80.36
Senior Project Manager 1	\$63.71	\$64.56
Resident Engineer 2	\$38.10	\$38.61
Resident Engineer 1	\$31.85	\$32.27
Field Superintendent	\$58.99	\$59.78
Field Crew Chief	\$39.78	\$40.31
Sr. Project Scientist	\$47.80	\$48.44
CAD Manager	\$52.50	\$53.20
CAD Technologist 2	\$35.54	\$36.01
Administrative 1	\$31.25	\$31.67
Project Engineer 2	\$42.27	\$42.83
Senior Project Manager 2	\$69.32	\$70.24
Chief Land Surveyor	\$57.69	\$58.46
Assistant Field Superintendent	\$50.48	\$51.15
Land Surveyor 3	\$48.41	\$49.06

Local Public Agency	County	Section Number
Lake County Department of Transportation	Lake	22-00206-09-RS
Consultant / Subconsultant Name		Job Number
Robinson Engineering		

SUBCONSULTANTS

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

NAME	Direct Labor Total	Contribution to Prime Consultant
Total	0.00	0.00

NOTE: Only subconsultants who fill out a cost estimate that splits out direct labor may be listed on this sheet.

Local Public Agency

Lake County Department of Transportation

County

Lake

Section Number

22-00206-09-RS

Consultant / Subconsultant Name

Robinson Engineering

Job Number

DIRECT COSTS WORKSHEET

List ALL direct costs required for this project. Those not listed on the form will not be eligible for reimbursement by the LPA on this project.

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

ITEM	ALLOWABLE	QUANTITY	CONTRACT RATE	TOTAL
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost (Up to state rate maximum)			\$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost			\$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			\$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			\$0.00
Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day			\$0.00
Vehicle Rental	Actual Cost (Up to \$55/day)			\$0.00
Tolls	Actual Cost			\$0.00
Parking	Actual Cost			\$0.00
Overtime	Premium portion (Submit supporting documentation)			\$0.00
Shift Differential	Actual Cost (Based on firm's policy)			\$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost (Submit supporting documentation)			\$0.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)			\$0.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)			\$0.00
Project Specific Insurance	Actual Cost			\$0.00
Monuments (Permanent)	Actual Cost			\$0.00
Photo Processing	Actual Cost			\$0.00
2-Way Radio (Survey or Phase III Only)	Actual Cost			\$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual Cost			\$0.00
CADD	Actual Cost (Max \$15/hour)			\$0.00
Web Site	Actual Cost (Submit supporting documentation)			\$0.00
Advertisements	Actual Cost (Submit supporting documentation)			\$0.00
Public Meeting Facility Rental	Actual Cost (Submit supporting documentation)			\$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual Cost (Submit supporting documentation)			\$0.00
Recording Fees	Actual Cost			\$0.00
Transcriptions (specific to project)	Actual Cost			\$0.00
Courthouse Fees	Actual Cost			\$0.00
Storm Sewer Cleaning and Televising	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Utility Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Testing of Soil Samples	Actual Cost			\$0.00
Lab Services	Actual Cost (Provide breakdown of each cost)			\$0.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Copies of Recorded Subdivision Plats	Actual Cost	50	\$75.00	\$3,750.00
Copies of Recorded Deeds For Parcels	Actual Cost	50	\$150.00	\$7,500.00
Title Commitments	Actual Cost	0	\$1,000.00	\$0.00
				\$0.00
TOTAL DIRECT COSTS:				\$11,250.00

Local Public Agency

Lake County Department of Transportation

County

Lake

Section Number

22-00206-09-RS

Consultant / Subconsultant Name

Robinson Engineering

Job Number

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE 160.43%

COMPLEXITY FACTOR 0

TASK	DIRECT COSTS (not included in row totals)	STAFF HOURS	PAYROLL	OVERHEAD & FRINGE BENEFITS	FIXED FEE	SERVICES BY OTHERS	TOTAL	% OF GRAND TOTAL
Field Topography		1033	42,407	68,034	13,994		124,435	53.88%
Existing ROW Determination	11,250	478	20,598	33,045	6,797		60,440	26.17%
Alignment & Ties		132	5,524	8,862	1,823		16,209	7.02%
Supplemental Site Surveys		66	3,079	4,939	1,016		9,034	3.91%
Supplemental MOT Site Surveys			-	-	-		-	0.00%
Plat of Highway Legal Descriptions			-	-	-		-	0.00%
Soil Boring Survey		78	3,268	5,243	1,079		9,590	4.15%
Subconsultant DL							\$0.00	
Direct Costs Total ==>	\$11,250.00						\$11,250.00	4.87%
TOTALS		1787	74,876	120,123	24,709	-	230,958	100.00%

Local Public Agency

Lake County Department of Transportation

County

Lake

Section Number

22-00206-09-RS

Consultant / Subconsultant Name

Robinson Engineering

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 1 OF 1

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Field Topography			Existing ROW Determination			Alignment & Ties			Supplemental Site Surveys			Supplemental MOT Site Surveys		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal Engineer 1	80.36	0.0																	
Senior Project Manager 1	64.56	61.0	3.41%	2.20	40	3.87%	2.50	8	1.67%	1.08	8	6.06%	3.91	5	7.58%	4.89	0		
Resident Engineer 2	38.61	0.0																	
Resident Engineer 1	32.27	0.0																	
Field Superintendent	59.78	0.0																	
Field Crew Chief	40.31	1,076.0	60.21%	24.27	684	66.21%	26.69	254	53.14%	21.42	28	21.21%	8.55	40	60.61%	24.43	0		
Sr. Project Scientist	48.44	0.0																	
CAD Manager	53.20	60.0	3.36%	1.79	40	3.87%	2.06							16	24.24%	12.90	0		
CAD Technologist 2	36.01	373.0	20.87%	7.52	240	23.23%	8.37	65	13.60%	4.90	68	51.52%	18.55				0		
Administrative 1	31.67	8.0	0.45%	0.14	8	0.77%	0.25												
Project Engineer 2	42.83	0.0																	
Senior Project Manager 2	70.24	0.0																	
Chief Land Surveyor	58.46	46.0	2.57%	1.50	21	2.03%	1.19	10	2.09%	1.22	6	4.55%	2.66	5	7.58%	4.43	0		
Assistant Field Superintendent	51.15	0.0																	
Land Surveyor 3	49.06	163.0	9.12%	4.47				141	29.50%	14.47	22	16.67%	8.18						
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
TOTALS		1787.0	100%	\$41.90	1033.0	100.00%	\$41.05	478.0	100%	\$43.09	132.0	100%	\$41.85	66.0	100%	\$46.65	0.0	0%	\$0.00

Local Public Agency

Lake County Department of Transportation

County

Lake

Section Number

22-00206-09-RS

Consultant / Subconsultant Name

Robinson Engineering

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 2 OF 1

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Plat of Highway Legal Descriptions			Soil Boring Survey														
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal Engineer 1	80.36																		
Senior Project Manager 1	64.56	0																	
Resident Engineer 2	38.61																		
Resident Engineer 1	32.27																		
Field Superintendent	59.78																		
Field Crew Chief	40.31	0			70	89.74%	36.18												
Sr. Project Scientist	48.44																		
CAD Manager	53.20	0			4	5.13%	2.73												
CAD Technologist 2	36.01	0																	
Administrative 1	31.67	0																	
Project Engineer 2	42.83																		
Senior Project Manager 2	70.24																		
Chief Land Surveyor	58.46	0			4	5.13%	3.00												
Assistant Field Superintende	51.15																		
Land Surveyor 3	49.06	0																	
TOTALS		0.0	0%	\$0.00	78.0	100%	\$41.90	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00

Quality Counts, LLC Scope and Fee Proposal

ESTIMATE



CHI:IL

BILL TO : Peralte-Clark, LLC
44 South Vail Ave , Suite 201
Arlington Heights,IL 60005-1841
(131) 296-5984

CLIENT PROJECT # :

ESTIMATE DATE : 11/7/2023

ORDER DATE : 9/15/2023

ORDER No	PROJECT NAME	PAYMENT TERMS	ORDER BY
163391	LCDOT Riverwoods and Duffy	PWP	John Clark

QTY	DESCRIPTION	RATE	TOTAL
5	Standard-Turn Count	\$1,060.00	\$5,300.00
	4 Location(s) for time period(s): 12:00 AM -- 12:00 AM-(Midweek) - 24 Hrs.		
	-Riverwoods Rd (W24)--Westwood Ln, Lincolnshire, IL		
	-Riverwoods Rd (W24)--Edward Ryerson Forest Preserve entrance, Lincolnshire, IL		
	-Riverwoods Rd (W24)--Duffy Ln (A43), Lincolnshire, IL		
	-TBD--TBD, Lincolnshire, IL		
	1 Location(s) for time period(s): 12:00 AM -- 12:00 AM-(Saturday) - 24 Hrs.		
	-Riverwoods Rd (W24)--Edward Ryerson Forest Preserve entrance, Lincolnshire, IL		
		TOTAL	\$5,300.00

Balances unpaid by end of Payment term (listed above) will be charged 1.5% interest per month

Quality Counts, LLC
15615 SW 74th Ave #100
Tigard, OR 97224
(877) 580-2212
qualitycounts.net

Huff & Huff, Inc. Scope and Fee Proposal



A Subsidiary of GZA

GEOTECHNICAL

ENVIRONMENTAL

ECOLOGICAL

WATER

CONSTRUCTION
MANAGEMENT

915 Harger Road
Suite 330
Oak Brook, IL 60523
T: 630.684.9100
F: 630.684.9120
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www.gza.com



November 9, 2023

via email: andrea.obrien@peralte-clark.com

Andrea S. O'Brien, P.E. – Senior Project Manager
Peralte-Clark, LLC
44 South Vail Avenue – Suite 201
Arlington Heights, IL 60005-1841

**Re: Phase I Environmental Services
LCDOT Riverwoods Road and Duffy Lane Improvements Project
Riverwoods, Lincolnshire, and Unincorporated Lake County, Lake County, Illinois
Proposal No. 81.P013045.24 R1**

Dear Ms. O'Brien:

Huff & Huff, Inc., a subsidiary of GZA, Inc. (H&H) is pleased to submit this proposal to Peralte-Clark, LLC (Client) to conduct transportation Phase I environmental services for the Lake County Division of Transportation's (LCDOT) Riverwoods Road and Duffy Lane Improvements Project, located in Riverwoods, Lincolnshire, and Unincorporated Lake County, Lake County, Illinois. This proposal presents our: Project Understanding; Scope of Services; Level of Effort, Cost, and Schedule; and Proposal Acceptance. Terms and Conditions are included as an attachment.

Proposed environmental services include the following consistent with task numbers identified by Client, including:

Task 12: Environmental Surveys, Analysis, and Coordination

- Preliminary Environmental Site Assessment (PESA);
- Wetland/Surface Waters Delineation;
- Wetland Report
- Tree Survey and Tree Survey Report;
- ESR Submittal (including Biological Clearances and Archeological Review);
- Section 4(f) and Section 6(f) coordination;
- Preliminary Jurisdictional Determination; and
- Bridge Bat Assessment

Please note, to avoid overlap of task items, we are not including scope and fee under Client identified Task 15 Environmental Screening, since services are already effectively covered by the sub-tasks identified under Task 12, above.

Task 20: Project Meetings

- a. Bi-weekly design team coordination meetings.

Task 21: Project Administration and QA/QC

- a. Project Management and Administration; and
- b. QA/QC



1. PROJECT UNDERSTANDING

H&H understands this project includes elements of Phase I Engineering, Environmental Studies and full Phase II plan preparation improvements of Riverwoods Road (W24) from Deerfield Road (A47) to the south right-of-way line of Illinois Route 22 (Half Day Road), as well as Duffy Lane (A43) from Riverwoods Road (W24) to the Interstate-94 (Tri-State Tollway) bridge overpass approach pavement on the west side of I-94. Intersection improvements at Illinois Route 22 (IL 22) and Deerfield Road are not included in this project. This project is located within the municipal boundaries of the Village of Riverwoods, Village of Lincolnshire, and Unincorporated Lake County. This project will be designed following 3R (Resurfacing, Restoration and Rehabilitation) guidelines. Roadway improvements are anticipated to include milling and grinding to correct profile, superelevation, and crown. Work will also include new curb and gutter, ADA ramps, and drainage improvements. The team will evaluate several design alternatives including bike friendly shoulders; off-road multi-use trail improvements; new pedestrian crossings; and the intersections of Riverwoods Road and the Edward Ryerson Forest Preserve entrance, Riverwoods Road and Westwood Lane, as well as Riverwoods Road and Duffy Lane will be evaluated to improve safety and mobility.

At this time, both Riverwoods Road and Duffy Lane have both matching tax and Motor Fuel Tax (MFT) funding. The Lake County Division of Transportation (LCDOT) will be the lead agency for the design, bidding, letting and construction stages. The preparation of a formal Phase I study is not anticipated for this project; however, elements of a Phase I study are included in this project. Details of the proposed scope are outlined below. Design will adhere to the current LCDOT plan preparation guidelines. Because LCDOT has an Agreement of Understanding (AOU) with IDOT, it is anticipated that IDOT reviews will only be necessary for work within IL 22 or other IDOT right of way. Also per the AOU, the project shall go through the IDOT environmental review process as outlined in the BLRS Manual; and if any structures on the project meet the policy in the BLRS Manual, they will require IDOT review and approval. Roadway improvements to IL 22 (Half Day Road), Deerfield Road (A47) and Interstate 94 (Tri-State Tollway) are not anticipated as part of this project. It has been assumed that the Riverwoods Road corridor and the Duffy Lane corridor will be prepared as separate contract bid packages in Phase II.

Phase I and Phase II Engineering portions of this project, project study and plan preparation work will be coordinated and reviewed by IDOT-BLRS in accordance with BLRS Chapter 10 requirements and the AOU between IDOT and LCDOT. Because federal dollars are not anticipated to be involved in this project, the schedule of these two phases can overlap. Although both LCDOT and the design team believe impacts to public park lands will be avoided, scope is being included to address Federal Section 4(f) consultation requirements should a federal action (such as a permit or approval from a federal agency) arise in Phase I.

The Riverwoods portion of the project is currently programmed and targeted for construction in 2026, with the Duffy Lane portion targeted in 2028. The following scope of work is based on scoping discussions between Client and the LCDOT staff on May 3, 2023, as well as meetings with Staff from the Villages of Lincolnshire and Riverwoods on May 25, 2023.

This scope only includes components necessary for Phase I and we understand that scoping for Phase II will be completed at a later date.



2. SCOPE OF SERVICES

The tasks follow the Client provided task items with sub-tasks identified below.

TASK 12: ENVIRONMENTAL SURVEYS, ANALYSIS, AND COORDINATION

Sub-Task 12A – Preliminary Environmental Site Assessment (PESA)

H&H will prepare a separate Preliminary Environmental Site Assessment for the Project Corridor. Based on aerial photography, there is one gas station and one automotive repair business located on the south side of the Riverwoods and Deerfield Roads intersection. Therefore, there is the potential to encounter special waste on the project. The process will follow general protocols associated with ASTM E1527-13, which is a standard environmental site assessment methodology and IDOT procedures. These protocols are consistent with the "Preliminary Environmental Site Assessment (PESA)" procedures outlined by the Illinois Department of Transportation (IDOT) in BDE #66-10A and the "Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Projects". No soil sampling is included in this task. The PESA will be limited to local road ROW and will not include IDOT ROW at Illinois Route 22.

Historical Research

The project corridors historical land use/ownership records will be developed from standard historical sources. Historical aerial photographs or historical maps, such as Sanborn Fire Insurance Maps, will be reviewed, as available. The review will identify land use over time and potential areas of environmental concern, such as areas of surface disturbance and outside storage.

Site Evaluation

Current environmental features and conditions of sites adjacent to the right-of-way/project areas will be evaluated. A site walkover of potential right-of-way/project areas designated for excavation and/or acquisition will be conducted for first-hand evaluation of current environmental conditions within the project limits. All the features and conditions listed above will be investigated and, as appropriate, documented in photographs. The land-use and housekeeping practices of adjacent properties also will be evaluated in accordance with ASTM protocols.

Records Review

A records review will be conducted to determine potential environmental concerns within the study areas. The reviews will include a search of standard state and federal environmental record databases in accordance with the specifications of ASTM standards. The searches are based on the outline of the study areas. Specifically, H&H will search each database to identify any potential sources requiring further investigation. As appropriate, Freedom of Information Act (FOIA) requests will be filed with the Illinois Environmental Protection Agency (IEPA) to obtain additional data pertaining to identified sites.

Report Preparation

A PESA report summarizing the results of the evaluation will be prepared for the project corridor. The following information will be included in these reports:

- The project location and description
- Historical uses of corridor.
- The area geology and hydrology.
- The environmental status of sites adjacent to the corridor regarding chemical use and storage, underground and



aboveground storage tanks, solid waste, special waste, and hazardous waste, wastewater, and PCBs.

- An analysis of the site inspection.
- A summary of the findings regarding environmental concerns. This will include IDOT's BDE Manual Chapter 27-3, Special Waste Procedures, and identification of Potentially Impacted Properties (PIPs) per Subpart F, Section 1100, 35 IAC, related to Clean Construction or Demolition Debris management.

Sub-Task 12B – Wetland and Surface Waters Delineation

H&H will conduct a wetland and surface water delineation using current methods and guidance from the U.S. Army Corps of Engineers (USACE), which is outlined in the 2010 *“USACE Midwest Region Manual”*. Based on a cursory review of available mapping and current aerial photography, it is anticipated that five wetlands and one waterway are present within the project limits. The assessment will include a document review (soils, topography, wetlands, surface waters, hydric soils, and aerial photography mapping), an on-site field investigation, and a report summarizing findings, including mapping.

Off-site Record/Document Review

The following records/documents will be reviewed prior to conducting the field investigation. Soils information will be reviewed to determine the soil types encountered during the delineation procedures. The maps reviewed and to be used include:

- U.S. Geological Survey Topographic Map
- National Wetlands Inventory (NWI) Map
- Lake County Wetland Inventory (LCWI) Maps
- Lake County Advanced Identification (ADID) Maps
- Lake County Soil Survey
- FEMA Floodplain Maps
- Hydric Soils of the United States
- Hydrologic Atlas
- Aerial Photographs

On-Site Investigation (Field Inventory)

The on-site investigation will be conducted by H&H staff experienced in Federal methods for conducting wetland delineations. H&H will classify and define hydric soils, hydrophytic vegetation, and evidence of hydrology to determine if wetlands are present. The wetland perimeters will be surveyed in the field by H&H.

Wetland and surface water delineations will be conducted that will meet the requirements of Executive Order 11990, “Protection of Wetlands” Section 404 of the Federal Water Pollution Control Act as amended by the Clean Water Act (Corps of Engineers, Section 404 Permit) and the Illinois Environmental Protection Agency (IEPA Section 401 Guidelines) regulations. These regulations pertain to the placement of fill or alterations of drainage within wetlands of any type and apply to private as well as publicly owned wetlands. The investigation will meet the requirements of these regulations by identifying the type, functions, and approximate boundaries of all wetlands and surface waters.

Wetlands and surface waters found will be classified according to type using the “Classification of Wetlands and Deep Water Habitats of the U.S.” by Cowardin. Wetland boundaries will be defined using the *Midwest Region Manual* (USACE, 2010). Each potential wetland area will be evaluated for the presence of wetland indicators comprised of hydrophytic vegetation, hydric soils, and wetland hydrology. Functions of wetlands will be evaluated from field observations.



The entire area within the project limits will be investigated if unmapped wetlands or waterways are present. The Lake County Wetland Inventory (LCWI) Map depicts five wetlands in the project limits. As the LCWI Maps were developed to be used as general planning tools, detailed field investigations are required to ascertain the presence of wetlands onsite. All areas exhibiting wetland characteristics within the project limits will be investigated.

H&H will survey the wetland and surface water perimeters using GPS. H&H will download the data and provide a shape file to Peralte-Clark, LLC. with all pertinent delineation survey data.

This task includes time for a boundary verification and preparation and submittal of preliminary jurisdictional determination to the Lake County Stormwater Management Commission (SMC). Fees for the boundary verification and jurisdictional determination will be paid by LCDOT directly to SMC and are not included in this cost estimate as the fees are based on the number of wetlands/surface waters present, which is not known at this time.

The wetland delineation will be scheduled according to the designated Lake County SMC and USACE growing season for Lake County, which begins on May 15th and ends October 1st. If the delineation is completed outside of the growing season, additional field visits may be required and are not included in this scope of services.

Sub-Task 12C – Wetland and Surface Waters Report

A wetland and surface waters delineation report will be prepared summarizing the findings of the fieldwork. Specific items to be included are as follows:

- Map showing the wetland/WOUS boundaries and project boundaries
- Aerial Photo with the appropriate limits of delineated wetlands and/or waterway
- USACE data sheets with color photos of the wetlands and the data points
- Floristic Quality Assessment
- Written description of wetland functional classification
- Permitting summary
- Jurisdictional Summary Table
- Identification of 303(d) impaired waterways
- Mitigation requirements

All wetland boundaries will be located using GPS. The wetland boundary map will be derived from the GPS survey of these features. The wetland layers will be separated for use by the Client for their construction drawings. Copies of the wetland report will be provided as a PDF.

Time under this task includes QA/QC of the report.

The preliminary jurisdictional determination and boundary verification will be conducted during this phase of the project.

Sub-Task 12D – Tree Survey and Tree Survey Report

Tree Survey/Data Collection

H&H will conduct a tree survey for the portion of the project located in the Lake County Forest Preserve Edward Ryerson Conservation Area. H&H will identify the trees to species level and determine health, structure, and origin. H&H will also note whether any trees are of exceptional size and condition. The tree survey will follow Lake County Forest Preserve guidance for conducting tree surveys. All trees located on FPD property with a DBH of three inches and shrubs greater than three feet in height will be identified.



H&H will provide the location of all individual trees surveyed by station and offset from the field survey to the Client. Ideally, the tree survey should only be conducted on the preliminary proposed construction limits. Due to the length of the forest preserve property along Riverwoods Road, conducting the tree survey within the total ESR limits will cause excessive work and will yield more information than is needed for the project. Therefore, H&H will conduct the detailed Lake County Forest Preserve tree survey for the proposed construction limits only.

Tree Survey Report

After all trees are evaluated within the forest preserve, a tabulation of trees will be compiled which summarizes trees present within the project limits and potential impacts. A summary tree memorandum will be prepared to document the tree assessment and summarize potential impacts.

It should be noted that the Edward Ryerson Nature Preserve has the highest level of protection of open lands in the state. The use or taking of land from a designated Nature Preserve requires an act of the State Legislature. Therefore, avoidance of impacts to the Nature Preserve is critical.

Sub-Task 12E – ESR Submittal

The environmental evaluation will be initiated through the submittal of the Environmental Survey Request Form (ESRF). The ESR will be completed in the event IDOT or federal funding is utilized in future phases. In addition, most MFT funded projects utilize the ESR process for obtaining biological and cultural information.

The ESR limits will be wide enough to incorporate reasonable alternatives and areas potentially affected, such as the drainage areas, detention areas, and compensatory storage sites. Environmental resource areas covered by the ESRF include wetlands, special waste, cultural (historical and archaeological) and state listed threatened and endangered (T&E) species.

Huff & Huff will prepare the ESRF package and send it to the Environmental Studies Unit at IDOT District 1 for review. If it is determined that the ESR process is not required due to funding, H&H will conduct the USFWS IPaC database review to assess whether federal threatened and endangered species may be present in the project. In addition, H&H will also conduct the IDNR EcoCAT database review to assess whether state listed species are present. The database reviews can be completed quickly but should only be completed if no ESR is required. There is a fee for conducting EcoCAT reviews.

Biological Clearances: Will be obtained through the ESR process as discussed previously.

Archeological Review: Will be obtained through the ESR process. If the project does not utilize the ESR process, H&H will conduct HARGIS review and will work with Peralte-Clark to conduct a historic photolog of all structures. If the SHPO requires a more detailed review or Phase 1 Archeological survey, a qualified historic/archeological firm will need to be included in the study.

Sub-Task 12F – Section 4(f) and 6(f) Scope

In coordination with the Section 6(f) coordination process, H&H will complete coordination of potential park district and forest preserve impacts through the Section 4(f) process if a federal action (such as a permit or approval from a federal agency) occurs. As the level of impacts to recreational lands and facilities is unknown at this time, H&H assumes that the Section 4(f) coordination would be Programmatic and not de minimis. H&H assumes that the FHWA will require the Section 4(f) approval through the use of MFT funding.

This scope of work includes coordination with the Lake County Forest Preserve District. This will include meetings, conference calls and email correspondence. H&H will document the potential impacts to the recreational facilities and present this to the Federal Highway Administration (through LCDOT) for a determination on the level of processing of



Section 4(f) impacts. A final Section 4(f) document will be prepared. There is the potential that the FHWA may determine that Section 4(f) is not applicable on this project through the use of MFT funds. If no federal action (such as a permit or approval from a federal agency) occurs, then Section 4(f) is not required. Again, it should be noted that avoidance of using land from the Edward Ryerson Nature Preserve is critical and if no other forest preserve or park district sites are involved, Section 4(f) and Section 6(f) may not be required.

Sub Task 12G – Bridge Bat Assessment

This proposal includes an assessment of NLEB habitat within the construction limits, specifically related to three (3) existing culvert structures present within the project corridor. The NLEB assessment entails only the assessment of bridge, culverts, and any other structure over four (4) feet in height that have the potential to provide roosting habitat for NLEB; and expressly does not constitute surveys, mist netting, echolocation, or other, for presence of NLEB within the project or adjacent areas, or specific tree surveys to identify trees that may provide suitable habitat for the NLEB or other listed bat species.

The USFWS and FHWA with the FRA and FTA standardized their approach to assessing impacts to federally listed bat species from highway construction and expansion projects, and for developing avoidance, minimization, and mitigation strategies. For projects with bridges, culverts, or any other structure over four (4) feet tall that have the potential to provide suitable roosting habitat, a preliminary assessment of the structure is required to confirm the presence or absence of evidence of bats. The methodology for the assessment follows guidelines from *“Appendix D: Bridge Inspection Guidance of the User’s Guide for the Range-wide Programmatic Informal Consultation for Indiana Bat and Northern Long-eared Bat.”* As this project will be processed through IDOT, an inspection of the bridge, culverts, and any other structure over four (4) feet tall that has the potential to provide suitable roosting habitat for NLEB, present within survey limits will be conducted to confirm evidence for the potential presence of bats.

Bridges and structures located along large bodies of water associated with wide floodplains generally provide suitable habitat for the NLEB and other bat species by providing areas to roost, sources of food, and opportunities to mate. Suitable roosting habitat for the NLEB includes cracks in concrete and expansion joints and congregate in areas where a cave-like environment is present. These specific areas are mostly associated with the substructure or lower portion of a bridge.

The bridge/structure assessment guidelines focus on four indicators of bats, which include the following;

- Visual – bats flying or roosting;
- Audible – chirping or high-pitched squeaking;
- Physical – droppings, referred to as guano, consisting of black or brown pellets, which accumulate underneath roosting location. Older guano appears grey in color. Guano can adhere to support beams, columns, and walls; and
- Staining – “wet” and dark looking stains may be visible on the walls, support beams, columns, beneath joints, and on the ceiling of bridge. Stains are typically in dark places. Stains are approximately four to six inches wide.

The identification of any of the above listed indicators is sufficient documentation to confirm recent bat usage. All indicators and observations of live or dead bats and their approximate location on the bridge or structure will be recorded on the bridge/structure inspection form. Time under this task includes the field assessment and the completion of the formal IDOT BBA Form and an associated photographic log of each structure assessed. Time under this task does not include formal coordination with any agency for impacts to listed species.

The following limitations apply to this task:



- Bridge and structure inspections can typically only be completed during non-flood conditions, and/or conditions when water levels safely allow for human passage within culverts and beneath bridge structures.
- Bridge and structure inspections typically cannot be completed within traditional navigable waterways without use of a boat or other mechanical means and are not included within this scope of services.
- Bridge and structure inspections cannot typically be conducted within gated or fenced structures.
- In some cases, debris build-up within culverts and other structures may not allow for physical inspection.
- The USFWS and IDNR have the authority to require additional assessments.

Sub-Task 12G – Discipline Specific QA/QC

Per Client request, a task has been included for discipline specific QA/QC for the various sub-tasks within Section 12, items A-G, as indicated above and as further discussed under Task 21 below.

TASK 15: ENVIRONMENTAL SCREENING

The scope of work for the various Phase I environmental screening tasks undertaken by H&H is included in the respective Task 12 items as discussed above under each specific sub-task. Therefore, we propose to not include costs in Task 15 that would overlap with efforts already proposed and covered under Task 12 items.

TASK 20: PROJECT COORDINATION MEETINGS

Per Client, this task includes time for bi-weekly coordination meetings with the design team, as necessary.

TASK 21: PROJECT ADMINISTRATION AND QUALITY ASSURANCE /QUALITY CONTROL

This task includes overall project administration and management, as well as Quality Assurance/Quality Control (QA/QC) reviews associated with major project deliverables described above

Project administration includes managing the day-to-day work effort on the project to ensure an efficient project development process including work force allocations, budget oversight, monthly progress reviews to ensure project milestones are being met to the extent possible.

QA/QC reviews will occur as part of major project deliverables in accordance with Peralte-Clark's established QA/QC procedures. Specific work tasks will include:

- General project management/administration including staff resource allocation, task/schedule oversight, quality reviews, etc.
- Prepare monthly progress reports including a copy of the overall project schedule.

3. LEVEL OF EFFORT AND SCHEDULE

The fee for the currently proposed scope of services is included on the attached IDOT cost plus fixed fee (CPFF) worksheets. PESA work will commence within five (5) business days of the notice to proceed (NTP) from Client and will require ten (10) weeks to complete.



The wetland delineation work be completed during the growing season, approximately between May 15th and October 1st, and anticipated completion of the Wetland Delineation Report within six weeks of field work. H&H will initiate the wetland delineation upon receipt of the ESR limits in digital file (Shapefiles, .DGN, .DWG., or KMZ) format. The tree survey tasks will be initiated upon receipt of the construction limits in digital file (Shapefiles, .DGN, .DWG., or KMZ) format. H&H will coordinate with Client to establish a schedule that is appropriate for the project needs.



Conditions of Engagement

The conditions of engagement are described in the attached Terms and Conditions for Professional Services. H&H's reports will be prepared on behalf of and for the exclusive use of Client. Client acknowledges and agrees that the report and the findings in the report shall not, in whole or in part, be disseminated or conveyed to any other party, or used or relied upon by any other party, in whole or in part, except for the specific purpose and to the specific parties alluded to above, without the written consent of H&H. H&H would be pleased to discuss the conditions associated with any additional dissemination, use, or reliance by other parties.



4. ACCEPTANCE

This agreement may be accepted by signing in the appropriate space below and returning one complete copy to H&H. We appreciate the opportunity to submit this proposal. Please feel free to contact me at (630) 684-4425 with any questions.

Very truly yours,

Huff & Huff, Inc., a subsidiary of GZA, Inc.

James Novak, P.W.S.
Associate Principal

Jeremy J. Reynolds, P.G.
Associate Principal

Attachments: Terms and Conditions and IDOT BLR 05514 Cost Sheets

This Proposal for Services, Schedule of Fees and Terms and Conditions for Professional Services are hereby accepted and executed by a duly authorized signatory, who by execution hereof, warrants that he/she has full authority to act for, in the name, and on behalf of _____.

By: _____

Title: _____

Printed/Typed Name: _____

Date: _____

The Proposal for Services, Schedule of Fees and Terms and Conditions for Professional Services may be executed in two or more counterparts, each of which together shall be deemed an original, but all of which together shall constitute one and the same instrument. In the event that any signature is delivered by facsimile transmission or by an e-mail delivery of a document in “.pdf” format, each such signature shall create a valid and binding obligation of the party executing the document, or on whose behalf each document is executed, with the same force and effect as if each such facsimile or “.pdf” signature were an original thereof.



November 9, 2023
Peralte-Clark, LLC – Phase I Environmental Services
81.P013045.24 R1 – LCDOT Riverwoods Road and Duffy Lane, Lake County, Illinois
ATTACHMENTS

ATTACHMENT A
TERMS AND CONDITIONS



November 9, 2023
Peralte-Clark, LLC – Phase I Environmental Services
81.P013045.24 R1 – LCDOT Riverwoods Road and Duffy Lane, Lake County, Illinois
ATTACHMENTS

ATTACHMENT B

IDOT BLR 05514 CPFF CECS COST WORKSHEETS



Local Public Agency Lake County Division of Transportation	County Lake	Section Number 22-00206-09-RS
Prime Consultant (Firm) Name Peralte-Clark, LLC	Prepared By JJR/SC/JCN	Date 11/9/2023
Consultant / Subconsultant Name Huff & Huff, Inc., a subsidiary of GZA, Inc.	Job Number 	

Note: This is name of the consultant the CECS is being completed for. This name appears at the top of each tab.

Remarks

Phase I Environmental Services

PAYROLL ESCALATION TABLE

CONTRACT TERM	24	MONTHS			
START DATE	12/1/2023			OVERHEAD RATE	190.00%
RAISE DATE	3/1/2024			COMPLEXITY FACTOR	0
				% OF RAISE	2.00%
END DATE	11/30/2025				

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	12/1/2023	3/1/2024	3	12.50%
1	3/2/2024	3/1/2025	12	51.00%
2	3/2/2025	12/1/2025	9	39.02%

The total escalation = 2.52%

Local Public Agency	County	Section Number
Lake County Division of Transportation	Lake	22-00206-09-RS
Consultant / Subconsultant Name		Job Number
Huff & Huff, Inc., a subsidiary of GZA, Inc.		

PAYROLL RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET FIXED RAISE

MAXIMUM PAYROLL RATE	86.00
ESCALATION FACTOR	2.52%

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Principal	\$84.29	\$86.00
Associate Principal III	\$79.45	\$81.45
Associate Principal II	\$72.15	\$73.96
Associate Principal I	\$68.96	\$70.69
Senior Consultant II	\$78.93	\$80.92
Senior Consultant I	\$43.23	\$44.32
Senior Project Manager III	\$68.98	\$70.71
Senior Project Manager II	\$57.21	\$58.65
Senior Project Manager I	\$53.79	\$55.14
Senior Landscape Architect	\$59.54	\$61.04
Senior Planning PM	\$56.62	\$58.04
Senior Technical Specialist I	\$55.05	\$56.43
Senior Scientist PM II	\$57.08	\$58.52
Senior Technical Scientist	\$54.50	\$55.87
Scientist PM II	\$49.25	\$50.49
Scientist PM I	\$43.14	\$44.22
Assistant PM Scientist	\$38.22	\$39.18
Environmental Engineer PM II	\$49.99	\$51.25
Environmental Engineer PM I	\$46.24	\$47.40
Assistant PM Engineer I	\$42.77	\$43.85
Engineer II	\$30.87	\$31.65
Engineer I	\$33.43	\$34.27
Scientist SII	\$28.92	\$29.65
Scientist SI	\$32.79	\$33.61
Technical Graphics Technician	\$25.96	\$26.61
Administrative Manager	\$48.89	\$50.12
Senior Administrative Assistant	\$34.50	\$35.37

Consultant / Subconsultant Name

Huff & Huff, Inc., a subsidiary of GZA, Inc.

Job Number

DIRECT COSTS WORKSHEET

List ALL direct costs required for this project. Those not listed on the form will not be eligible for reimbursement by the LPA on this project.

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

ITEM	ALLOWABLE	QUANTITY	CONTRACT RATE	TOTAL
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost (Up to state rate maximum)			\$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost			\$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			\$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum	675	\$0.66	\$442.13
Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day			\$0.00
Vehicle Rental	Actual Cost (Up to \$55/day)			\$0.00
Tolls	Actual Cost	18	\$6.80	\$122.40
Parking	Actual Cost			\$0.00
Overtime	Premium portion (Submit supporting documentation)			\$0.00
Shift Differential	Actual Cost (Based on firm's policy)			\$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost (Submit supporting documentation)			\$0.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)			\$0.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)			\$0.00
Project Specific Insurance	Actual Cost			\$0.00
Monuments (Permanent)	Actual Cost			\$0.00
Photo Processing	Actual Cost			\$0.00
2-Way Radio (Survey or Phase III Only)	Actual Cost			\$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual Cost			\$0.00
CADD	Actual Cost (Max \$15/hour)			\$0.00
Web Site	Actual Cost (Submit supporting documentation)			\$0.00
Advertisements	Actual Cost (Submit supporting documentation)			\$0.00
Public Meeting Facility Rental	Actual Cost (Submit supporting documentation)			\$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual Cost (Submit supporting documentation)			\$0.00
Recording Fees	Actual Cost			\$0.00
Transcriptions (specific to project)	Actual Cost			\$0.00
Courthouse Fees	Actual Cost			\$0.00
Storm Sewer Cleaning and Televising	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)	8	\$10.00	\$80.00
Utility Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Testing of Soil Samples	Actual Cost			\$0.00
Lab Services	Actual Cost (Provide breakdown of each cost)			\$0.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Database (2 corridor packages)	Actual Cost (\$325+\$400 = \$725)	1	\$725.00	\$725.00
Field Kit - Expendible Materials	Daily Rate	1	\$30.00	\$30.00
				\$0.00
				\$0.00
TOTAL DIRECT COSTS:				\$1,399.53

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE

COMPLEXITY FACTOR

TASK	DIRECT COSTS (not included in row totals)	STAFF HOURS	PAYROLL	OVERHEAD & FRINGE BENEFITS	FIXED FEE	SERVICES BY OTHERS	TOTAL	% OF GRAND TOTAL	
11: Environmental Surveys, Analysis & Coordiantion (See Sub-Tasks)			-	-	-	0	-	0.00%	
Task 11A: PESA	818	80	2,929	5,565	967	0	9,461	9.50%	
Task 11B: Wetland/Surface Waters Delineation	63	29	1,116	2,121	368	0	3,605	3.62%	
Task 11C: Wetland/Waters Report	80	56	2,210	4,199	729	0	7,138	7.17%	
Task 11D: Tree Survey and Report	251	108	4,434	8,426	1,463	0	14,323	14.38%	
Task 11E: ESR Submittal (w/bio & archeological)	63	50	2,824	5,365	932	0	9,121	9.16%	
Task 11F: Section 4(f) and Section 6(f)	125	151	8,791	16,702	2,901	0	28,394	28.51%	
Task 11G: Bridge Bat Assessment	0	21	784	1,489	259	0	2,532	2.54%	
Task 11H: Discipline Specific QA/QC	0	12	868	1,649	286	0	2,803	2.81%	
Task 15: Project Meetings (Bi-Weekly Design Team Coordination)	0	84	4,849	9,213	1,600	0	15,662	15.73%	
18/19. Project Administration and QAQC (See sub tasks)	0		-	-	-	0	-	0.00%	
Task 18: Project Management and Adminstration	0	16	944	1,793	311	0	3,048	3.06%	
Task 19: QAQC	0	9	649	1,234	214		2,097	2.11%	
			-	-	-		-		
			-	-	-		-		
Subconsultant DL							\$0.00		
Direct Costs Total ==>	\$1,399.53		< = = MUST MATCH = = >					\$1,399.53	1.41%
TOTALS		616	30,398	57,756	10,030	-	99,584	100.00%	

88,154

Local Public Agency

Lake County Division of Transportation

Consultant / Subconsultant Name

Huff & Huff, Inc., a subsidiary of GZA, Inc.

County

Lake

Section Number

22-00206-09-RS

Job Number

AVERAGE HOURLY PROJECT RATES
EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 1 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			11: Environmental Surveys, Analysis & Coordiantion (See Sub-Tasks)			Task 11A: PESA			Task 11B: Wetland/Surface Waters Delineation			Task 11C: Wetland/Waters Report			Task 11D: Tree Survey and Report		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	86.00	0.0																	
Associate Principal III	81.45	0.0																	
Associate Principal II	73.96	38.0	6.17%	4.56				1	1.25%	0.92				2	3.57%	2.64	2	1.85%	1.37
Associate Principal I	70.69	27.0	4.38%	3.10				2	2.50%	1.77									
Senior Consultant II	80.92	0.0																	
Senior Consultant I	44.32	0.0																	
Senior Project Manager III	70.71	0.0																	
Senior Project Manager II	58.65	58.0	9.42%	5.52															
Senior Project Manager I	55.14	0.0																	
Senior Landscape Architect	61.04	0.0																	
Senior Planning PM	58.04	138.0	22.40%	13.00															
Senior Technical Specialist I	56.43	34.0	5.52%	3.11															
Senior Scientist PM II	58.52	6.0	0.97%	0.57										3	5.36%	3.13	3	2.78%	1.63
Senior Technical Scientist	55.87	40.0	6.49%	3.63													40	37.04%	20.69
Scientist PM II	50.49	0.0																	
Scientist PM I	44.22	74.0	12.01%	5.31				4	5.00%	2.21	14	48.28%	21.35	20	35.71%	15.79			
Assistant PM Scientist	39.18	4.0	0.65%	0.25				4	5.00%	1.96									
Environmental Engineer PM II	51.25	0.0																	
Environmental Engineer PM I	47.40	4.0	0.65%	0.31				4	5.00%	2.37									
Assistant PM Engineer I	43.85	4.0	0.65%	0.28				4	5.00%	2.19									
Engineer II	31.65	0.0																	
Engineer I	34.27	50.0	8.12%	2.78				50	62.50%	21.42									
Scientist SII	29.65	72.0	11.69%	3.47													60	55.56%	16.47
Scientist SI	33.61	38.0	6.17%	2.07							14	48.28%	16.23	24	42.86%	14.41			
Technical Graphics Technician	26.61	21.0	3.41%	0.91				10	12.50%	3.33	1	3.45%	0.92	6	10.71%	2.85	1	0.93%	0.25
Administrative Manager	50.12	0.0																	
Senior Administrative Assistant	35.37	8.0	1.30%	0.46				1	1.25%	0.44				1	1.79%	0.63	2	1.85%	0.65
TOTALS		616.0	100%	\$49.35	0.0	0.00%	\$0.00	80.0	100%	\$36.61	29.0	100%	\$38.50	56.0	100%	\$39.46	108.0	100%	\$41.06

Local Public Agency

Lake County Division of Transportation

Consultant / Subconsultant Name

Huff & Huff, Inc., a subsidiary of GZA, Inc.

County

Lake

Section Number

22-00206-09-RS

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 2 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Task 11E: ESR Submittal (w/bio & archeological)			Task 11F: Section 4(f) and Section 6(f)			Task 11G: Bridge Bat Assessment			Task 11H: Discipline Specific QA/QC			Task 15: Project Meetings (Bi-Weekly Design Team Coordination)			18/19. Project Administration and QAQC (See sub tasks)		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	86.00																		
Associate Principal III	81.45																		
Associate Principal II	73.96	2	4.00%	2.96	6	3.97%	2.94	1	4.76%	3.52	6	50.00%	36.98	10	11.90%	8.81			
Associate Principal I	70.69										6	50.00%	35.35	10	11.90%	8.42			
Senior Consultant II	80.92																		
Senior Consultant I	44.32																		
Senior Project Manager III	70.71																		
Senior Project Manager II	58.65	12	24.00%	14.08	12	7.95%	4.66							32	38.10%	22.34			
Senior Project Manager I	55.14																		
Senior Landscape Architect	61.04																		
Senior Planning PM	58.04				130	86.09%	49.97							8	9.52%	5.53			
Senior Technical Specialist I	56.43	34	68.00%	38.38															
Senior Scientist PM II	58.52																		
Senior Technical Scientist	55.87																		
Scientist PM II	50.49																		
Scientist PM I	44.22							8	38.10%	16.85				24	28.57%	12.64			
Assistant PM Scientist	39.18																		
Environmental Engineer PM II	51.25																		
Environmental Engineer PM I	47.40																		
Assistant PM Engineer I	43.85																		
Engineer II	31.65																		
Engineer I	34.27																		
Scientist SII	29.65							12	57.14%	16.94									
Scientist SI	33.61																		
Technical Graphics Technician	26.61	2	4.00%	1.06	1	0.66%	0.18												
Administrative Manager	50.12																		
Senior Administrative Assistant	35.37				2	1.32%	0.47												
TOTALS		50.0	100%	\$56.47	151.0	100%	\$58.22	21.0	100%	\$37.31	12.0	100%	\$72.33	84.0	100%	\$57.73	0.0	0%	\$0.00

Local Public Agency

Lake County Division of Transportation

County

Lake

Section Number

22-00206-09-RS

Consultant / Subconsultant Name

Huff & Huff, Inc., a subsidiary of GZA, Inc.

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 3 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Task 18: Project Management and Administration			Task 19: QAQC														
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg			
Principal	86.00																		
Associate Principal III	81.45																		
Associate Principal II	73.96	4	25.00%	18.49	4	44.44%	32.87												
Associate Principal I	70.69	4	25.00%	17.67	5	55.56%	39.27												
Senior Consultant II	80.92																		
Senior Consultant I	44.32																		
Senior Project Manager III	70.71																		
Senior Project Manager II	58.65	2	12.50%	7.33															
Senior Project Manager I	55.14																		
Senior Landscape Architect	61.04																		
Senior Planning PM	58.04																		
Senior Technical Specialist I	56.43																		
Senior Scientist PM II	58.52																		
Senior Technical Scientist	55.87																		
Scientist PM II	50.49																		
Scientist PM I	44.22	4	25.00%	11.06															
Assistant PM Scientist	39.18																		
Environmental Engineer PM II	51.25																		
Environmental Engineer PM I	47.40																		
Assistant PM Engineer I	43.85																		
Engineer II	31.65																		
Engineer I	34.27																		
Scientist SII	29.65																		
Scientist SI	33.61																		
Technical Graphics Technician	26.61																		
Administrative Manager	50.12																		
Senior Administrative Assistant	35.37	2	12.50%	4.42															
TOTALS		16.0	100%	\$58.97	9.0	100%	\$72.15	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00

Mathewson Land Services, Inc. Scope and Fee Proposal

**AGREEMENT FOR
LAND ACQUISITION AND VALUE CONSULTING**

**Peralte-Clark, LLC
SCOPE OF SERVICES AND BUDGET
Riverwoods Road**

1. The Lake County Division of Transportation has engaged Peralte-Clark, LLC (P-C) to provide Phase 1 Engineering Services as part of the Riverwoods Road Project.
2. P-C hereby engages Mathewson Land Services, Inc. (MLS), to provide professional assistance with regard to right of way issues arising as part of the Phase 1 Engineering and Analysis. The Riverwoods Road Project is anticipated to involve approximately 44 parcels.
3. MLS shall perform the following services in conjunction with the above referenced Project:

Ownership Research and Analysis: MLS shall provide research and advice on the ownership of properties potentially impacted by the proposed improvements. The research may also include identifying any potential acquisition complications apparent in the public record.

Valuation: MLS shall provide opinions on probable costs associated with various design alternatives (Cost Estimate). The opinions may be based in whole or part on cost analysis prepared by licensed appraisers. MLS shall identify valuation challenges and potential cost savings arising from design options.

Other Services: MLS agrees to provide additional services as the parties may agree are appropriate in furtherance of the project.

4. Services shall be invoiced approximately monthly at the rates set forth below. MLS fees shall not exceed the following:

Task/Provider	Hours/Parcels	Rate	Extension
Attorney	20	\$350.00	\$7,000.00
Staff	5	\$200.00	\$1,000.00
Cost Estimate Appraiser	44 Parcels	\$300.00	\$13,200.00
Total Fees			\$21,200.00

Total cost for all services: \$21,200.00.

Respectfully submitted:

Mathewson Land Services, Inc.

By: _____

Mark D. Mathewson, President

Geocon Professional Services, LLC Scope and Fee Proposal



**Geocon Professional Services, LLC
Estimate Worksheet**

Client: Peralte-Clark, LLC
 Project: Riverwoods Road 3R Project
 Location: Lake County, IL
 Geocon Proposal No.: 23-P1003.2_ **REVISED**
 Date: November 8, 2023

**Scope: 25 pavement cores with one subgrade sample and DCP;
 8 subgrade borings for the Duffy Rd bike path, 5 ft deep;
 2 subgrade borings for new turn lanes, 5 ft deep;
 2 structure borings for new traffic signals, 20 ft deep;
 10 structure borings for up to 5 new retaining walls, 20 ft deep.**

	<u>Quantity</u>	<u>Unit Fee</u>	<u>Total</u>
I. Field Exploration Services			
1. Drill rig mobilization	1 Lsum	\$0.00	\$0.00
2. Project Engineer for coordination and field logging	48 Hours	\$140.00	\$6,720.00
3. Soil drilling with split-spoon sampling, daily minimum	5 Days	\$4,200.00	\$21,000.00
4. Bulk samples	3 Each	\$0.00	\$0.00
5. Pavement core with stone subgrade thickness	25 Each	\$0.00	\$0.00
6. Field DCP Testing	35 Each	\$0.00	\$0.00
7. Traffic control including signage and 2 flaggers	4 Days	\$2,600.00	\$10,400.00
8. IDOT or County permits	1 Lsum	\$500.00	<u>\$500.00</u>
	Subtotal For Field Exploration Services:		\$38,620.00
II. Laboratory Soil Testing Services			
1. Rimac compressive strength tests, calibrated hand penetrometer tests, visual engineering classification and moisture content tests	141 Tests	\$15.00	\$2,115.00
2. Extrude and classify TWT	0 Tests	\$40.00	\$0.00
3. Unconfined Compressive Strength Tests	0 Tests	\$100.00	\$0.00
4. Grain size analyses including hydrometer	4 Tests	\$240.00	\$960.00
5. Atterberg Limits Tests	4 Tests	\$130.00	\$520.00
6. Standard Proctor Tests	2 Tests	\$180.00	\$360.00
	Subtotal for Laboratory Services:		\$3,955.00
III. Engineering Services for Roadway Geotechnical Report			
1. Senior Engineer to write report	24 Hours	\$180.00	\$4,320.00
2. CAD Operator to prepare plan and profile sheets	0 Hours	\$180.00	\$0.00
3. Project Engineer to prepare report exhibits and attend progress meetings	48 Hours	\$140.00	<u>\$6,720.00</u>
	Subtotal for Engineering Services:		\$11,040.00
	Total Estimated Fee:		\$53,615.00

TranSystems Corporation Scope and Fee Proposal



Local Public Agency Lake County Division of Transportation	County Lake	Section Number 22-00206-09-RS
Prime Consultant (Firm) Name Peralte-Clark, LLC	Prepared By JRM	Date 11/9/2023
Consultant / Subconsultant Name TranSystems Corporation	Job Number 	

Note: This is name of the consultant the CECS is being completed for. This name appears at the top of each tab.

Remarks

PAYROLL ESCALATION TABLE

CONTRACT TERM	24	MONTHS	OVERHEAD RATE	134.78%
START DATE	1/1/2023		COMPLEXITY FACTOR	0
RAISE DATE	4/6/2024		% OF RAISE	2.00%
END DATE	12/31/2024			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	1/1/2023	4/6/2024	15	62.50%
1	4/7/2024	1/6/2025	9	38.25%

The total escalation = 0.75%

Local Public Agency**County****Section Number**

Lake County Division of Transportation

Lake

22-00206-09-RS

Consultant / Subconsultant Name**Job Number**

TranSystems Corporation

PAYROLL RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET FIXED RAISE

MAXIMUM PAYROLL RATE	86.00
ESCALATION FACTOR	0.75%

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Engineer 5 (E5)	\$86.00	\$86.00
Engineer 4 (E4)	\$85.05	\$85.69
Engineer 3 (E3)	\$75.03	\$75.59
Engineer 2 (E2)	\$63.36	\$63.84
Engineer 1 (E1)	\$48.30	\$48.66
Planner 5 (P5)	\$86.00	\$86.00
Planner 4 (P4)	\$72.55	\$73.09
Planner 3 (P3)	\$49.97	\$50.34
Planner 2 (P2)	\$54.87	\$55.28
Architect 4 (AR4)	\$77.47	\$78.05
Architect 3 (AR3)	\$57.38	\$57.81
Architect 2 (AR2)	\$46.52	\$46.87
Architect 1 (AR1)	\$35.86	\$36.13
Analyst 2 (AN2)	\$36.40	\$36.67
Environmental Scientist 4 (SC4)	\$80.00	\$80.60
Industry Specialist 4 (IS4)	\$86.00	\$86.00
Industry Specialist 3 (IS3)	\$66.82	\$67.32
Surveyor 4	\$86.00	\$86.00
Construction Services 5 (CS5)	\$86.00	\$86.00
Construction Services 4 (CS4)	\$67.62	\$68.13
Construction Services 3 (CS3)	\$50.43	\$50.81
Construction Services 2 (CS2)	\$38.42	\$38.71
Construction Services 1 (CS1)	\$35.64	\$35.91
Technician 3 (T3)	\$44.02	\$44.35
Technician 1 (T1)	\$20.96	\$21.12
Administrative 3 (A3)	\$54.82	\$55.23
Administrative 2 (A2)	\$33.40	\$33.65

Local Public Agency	County	Section Number
Lake County Division of Transportation	Lake	22-00206-09-RS
Consultant / Subconsultant Name		Job Number
TranSystems Corporation		

SUBCONSULTANTS

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

NAME	Direct Labor Total	Contribution to Prime Consultant

Total	0.00	0.00
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NOTE: Only subconsultants who fill out a cost estimate that splits out direct labor may be listed on this sheet.

Local Public Agency

Lake County Division of Transportation

County

Lake

Section Number

22-00206-09-RS

Consultant / Subconsultant Name

TranSystems Corporation

Job Number

DIRECT COSTS WORKSHEET

List ALL direct costs required for this project. Those not listed on the form will not be eligible for reimbursement by the LPA on this project.
EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

ITEM	ALLOWABLE	QUANTITY	CONTRACT RATE	TOTAL
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost (Up to state rate maximum)			\$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost			\$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			\$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			\$0.00
Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day			\$0.00
Vehicle Rental	Actual Cost (Up to \$55/day)			\$0.00
Tolls	Actual Cost			\$0.00
Parking	Actual Cost			\$0.00
Overtime	Premium portion (Submit supporting documentation)			\$0.00
Shift Differential	Actual Cost (Based on firm's policy)			\$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost (Submit supporting documentation)			\$0.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)			\$0.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)			\$0.00
Project Specific Insurance	Actual Cost			\$0.00
Monuments (Permanent)	Actual Cost			\$0.00
Photo Processing	Actual Cost			\$0.00
2-Way Radio (Survey or Phase III Only)	Actual Cost			\$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual Cost			\$0.00
CADD	Actual Cost (Max \$15/hour)			\$0.00
Web Site	Actual Cost (Submit supporting documentation)			\$0.00
Advertisements	Actual Cost (Submit supporting documentation)			\$0.00
Public Meeting Facility Rental	Actual Cost (Submit supporting documentation)			\$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual Cost (Submit supporting documentation)			\$0.00
Recording Fees	Actual Cost			\$0.00
Transcriptions (specific to project)	Actual Cost			\$0.00
Courthouse Fees	Actual Cost			\$0.00
Storm Sewer Cleaning and Televising	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Utility Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Testing of Soil Samples	Actual Cost			\$0.00
Lab Services	Actual Cost (Provide breakdown of each cost)			\$0.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Copies B/W 11x17	Actual Cost			\$0.00
Copies Color 8.5x11	Actual Cost			\$0.00
Traffic Counts/Geofencing	Actual Cost (See separate calculations)			\$0.00
				\$0.00
TOTAL DIRECT COSTS:				\$0.00

Local Public Agency

Lake County Division of Transportation

County

Lake

Section Number

22-00206-09-RS

Consultant / Subconsultant Name

TranSystems Corporation

Job Number

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE **134.78%**

COMPLEXITY FACTOR **0**

TASK	DIRECT COSTS (not included in row totals)	STAFF HOURS	PAYROLL	OVERHEAD & FRINGE BENEFITS	FIXED FEE	SERVICES BY OTHERS	TOTAL	% OF GRAND TOTAL
Retaining Wall Design		272	17,642	23,778	5,822		47,242	82.42%
Project Meetings		20	1,394	1,879	460		3,733	6.51%
Project Administration and QA/QC		30	2,369	3,193	782		6,344	11.07%
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
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			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
Subconsultant DL							\$0.00	
Direct Costs Total ==>	\$0.00						\$0.00	
TOTALS		322	21,405	28,850	7,064	-	57,319	100.00%

Local Public Agency

Lake County Division of Transportation

County

Lake

Section Number

22-00206-09-RS

Consultant / Subconsultant Name

TranSystems Corporation

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 1 OF 1

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Retaining Wall Design			Project Meetings			Project Administration and QA/QC								
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Engineer 5 (E5)	86.00	0.0																	
Engineer 4 (E4)	85.69	34.0	10.56%	9.05	24	8.82%	7.56				10	33.33%	28.56						
Engineer 3 (E3)	75.59	102.0	31.68%	23.95	72	26.47%	20.01	10	50.00%	37.80	20	66.67%	50.40						
Engineer 2 (E2)	63.84	114.0	35.40%	22.60	104	38.24%	24.41	10	50.00%	31.92									
Engineer 1 (E1)	48.66	72.0	22.36%	10.88	72	26.47%	12.88												
Planner 5 (P5)	86.00	0.0																	
Planner 4 (P4)	73.09	0.0																	
Planner 3 (P3)	50.34	0.0																	
Planner 2 (P2)	55.28	0.0																	
Architect 4 (AR4)	78.05	0.0																	
Architect 3 (AR3)	57.81	0.0																	
Architect 2 (AR2)	46.87	0.0																	
Architect 1 (AR1)	36.13	0.0																	
Analyst 2 (AN2)	36.67	0.0																	
Environmental Scientist 4 (E4)	80.60	0.0																	
Industry Specialist 4 (IS4)	86.00	0.0																	
Industry Specialist 3 (IS3)	67.32	0.0																	
Surveyor 4	86.00	0.0																	
Construction Services 5 (C5)	86.00	0.0																	
Construction Services 4 (C4)	68.13	0.0																	
Construction Services 3 (C3)	50.81	0.0																	
Construction Services 2 (C2)	38.71	0.0																	
Construction Services 1 (C1)	35.91	0.0																	
Technician 3 (T3)	44.35	0.0																	
Technician 1 (T1)	21.12	0.0																	
Administrative 3 (A3)	55.23	0.0																	
Administrative 2 (A2)	33.65	0.0																	
TOTALS		322.0	100%	\$66.47	272.0	100.00%	\$64.86	20.0	100%	\$69.71	30.0	100%	\$78.96	0.0	0%	\$0.00	0.0	0%	\$0.00