Illinois Department of Transportation

DRAFT

Local Public Agency Engineering Services Agreement

Using Federal Funds? ☐ Yes ☒ No

Agreement For: MFT PE

Agreement Type: Original

LOCAL PUBLIC AGENCY

Local Public Agency	County	Section Number	Job Number
Lake County Division of Transportation	Lake	24-00999-08-WR	

Project Number	Contact Name	Phone Number	Email
	Angel Montero	(847) 377-7540	amontero2@lakecountyil.gov

SECTION PROVISIONS

Local Street/Road Name	Key Route	Length	Structure Number
Gages Lake Road (CH 34)	FAU 1224	3.17 mi	

Location Termini: US Rte 45 to IL 21 (Milwaukee Avenue)

Add Location | Remove Location

Project Description:

The scope of services consists of a Phase I study for the improvements along Gages Lake Road between US Route 45 and IL Route 21. The project study limits will also extend west towards the existing path within the College of Lake County campus, north-south along US 45 from Center Street to Washington Street, and north along IL 21 to the Lake Carina Forest Preserve.

Engineering Funding: ☒ MFT/TBP ☐ State ☐ Other — Motor Fuel Tax – State Allocation

Anticipated Construction Funding: ☐ Federal ☐ MFT/TBP ☐ State ☐ Other

AGREEMENT FOR

☒ Phase I - Preliminary Engineering ☐ Phase II - Design Engineering

CONSULTANT

Prime Consultant (Firm) Name	Contact Name	Phone Number	Email
GFT Infrastructure, Inc.	Jesse Vuorenmaa	(815) 451-8028	jlvuorenmaa@gftinc.com

Address	City	State	Zip Code
1475 East Woodfield Road Suite 600	Schaumburg	IL	60173-5058

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	A full time LPA employee authorized to administer inherently governmental PROJECT activities
Contractor	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 __ : Direct Costs Check Sheet (attach BDE 436 when using Lump Sum on Specific Rate Compensation)

☒ Exhibit E: Subconsultant Scope and Cost - HLR

☒ Exhibit F: Subconsultant Scope and Cost - ASE

☒ Exhibit G: Subconsultant Scope and Cost - Wang

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 original 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
GFT Infrastructure, Inc.	25-1613591	$1,741,771.00

Subconsultants	TIN/FEIN/SS Number	Agreement Amount
Hampton, Lenzini and Renwick, Inc.	36-2555986	$821,488.00
American Surveying & Engineering, LTD	36-3307274	$453,579.00
Wang Engineering, Inc. a Terracon Company	36-3191909	$220,999.00
	Subconsultant Total	$1,496,066.00
	Prime Consultant Total	$1,741,771.00
	Total for all work	$3,237,837.00

AGREEMENT SIGNATURES

Executed by the LPA:

Attest: The Local Public Agency Type: County of Local Public Agency: Lake County Division of Transportation

By (Signature & Date)

By (Signature & Date)

Local Public Agency: Lake County Division of Tra

Local Public Agency Type: County Clerk

Title

(SEAL)

Executed by the ENGINEER:

Attest:

Prime Consultant (Firm) Name: GFT Infrastructure, Inc.

By (Signature & Date) 9/17/2025

Title: Senior Vice President

By (Signature & Date) 9/17/2025

Title: Vice President

APPROVED:

Regional Engineer, Department of Transportation (Signature & Date)

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake County Division of Transport	GFT Infrastructure, Inc.	Lake	24-00999-08-WR

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

See attached scope of services and level of effort.

Exhibit A – Scope of Engineering Services

Gages Lake Road Improvements – Phase I Study **Section: 24-00999-08-WR**	
Date:	September 2, 2025
To:	Julian Rozwadowski, P.E. – Manager of Complex Projects Angel Montero, E.I. – Project Manager Lake County Division of Transportation (LCDOT)
From:	Jesse Vuorenmaa, P.E., ENV SP – Project Manager
RE:	Scope of Services

The scope of services consists of a locally-funded Phase I preliminary engineering study for the improvements along Gages Lake Road between US Route 45 and IL Route 21, including intersection improvements at Hunt Club Road and Almond Road, as detailed in the Lake County Division of Transportation Project Scoping Report dated January 13, 2025 and in accordance with the Illinois Department of Transportation's (IDOT) Bureau of Local Roads & Streets Policies. The project study limits will also extend west towards the existing path within the College of Lake County campus, north-south along US 45 from Center Street to Washington Street, and north along IL 21 to the Lake Carina Forest Preserve.

Gages Lake Road is a two/three-lane major collector that runs west to east through the Gages Lake community in unincorporated Warren Township and into the Village of Gurnee. The average daily traffic (ADT) ranges from 7,850 vehicles per day (vpd) east of US 45 to 5,300 vpd west of IL 21. The posted speed limit along the corridor is 40 mph with a 20 mph school zone along the Woodland Primary and Elementary Schools.

The work will include field surveys; preparation of an existing plat of highways; utility coordination and Subsurface Utility Engineering (SUE) Level B, traffic and safety analysis, intersection design studies; alternatives analysis including non-motorized travel investigations and ADA improvements, wetland delineation, tree survey, and other environmental coordination and approvals (biological, cultural, wetland, special waste); geotechnical investigation; structural design work for retaining walls and culverts; drainage studies including the identification of stormwater detention requirements and floodplain encroachments; public involvement activities and stakeholder coordination with the Lake Count Stormwater Management Commission (LCSMC), utility companies, school districts, permitting agencies, and local communities; and preparation of a Project Development Report.

The following is a summary of the items that are included in the proposed scope of services:

1.0 Data Collection and Review

The following data will be collected, organized, and reviewed:

A. Roadway and bikeway plans, right-of-way data, development plans, flooding history, drainage atlases, Flood Insurance Studies (FIS) and Flood Insurance Rate Maps (FIRM), wetland maps, bus routes, heavy vehicle and truck routes, emergency response routes, public and private utility atlases, and benchmark and survey datum information from LCDOT and other appropriate agencies.

B. Digital aerial photography, parcel, right-of-way, topographic, and other GIS-layer data from Lake County.

C. Summarize the data collected in tables and exhibits for use throughout the duration of the project including location maps and typical sections.

D. Conduct field site visit with the project team to document the existing project features and identify potential concerns to be addressed by the design. Documentation will be via a photo log.

E. Conduct and process intersection counts for a typical Tuesday-Wednesday-Thursday period while school is in session and one Sunday peak at key intersections surrounding the places of worship (noted with + below). Traffic counts will include standard vehicle classifications with pedestrian and bicycles detection at crosswalks. Intersection counts will include near miss detection analysis.

Intersection Counts (72 hr):
Gages Lake Rd/US 45 +
Gages Lake Rd/Wright Ave+
Gages Lake Rd/Tangueray Dr +
Gages Lake Rd/Wooded Glen Dr
Gages Lake Rd/Old Gages Lake Rd +
Gages Lake Rd/Evergreen Rd
Gages Lake Rd/Royal Oak Ln
Gages Lake Rd/Greentree Rd
Gages Lake Rd/Mill Rd
Gages Lake Rd/Almond Rd +
Gages Lake Rd/Pine Creek Trail
Gages Lake Rd/West School Driveway
Gages Lake Rd/East School Driveway
Gages Lake Rd/Gagewood Ln
Gages Lake Rd/Hunt Club Rd +
Gages Lake Rd/St Paul the Apostle Driveway +
Gages Lake Rd/Murifield Dr
Gages Lake Rd/Leonard Dr
Gages Lake Rd/Colby Rd
Gages Lake Rd/Hickory Haven Dr
Gages Lake Rd/IL 21 +

Total # of Tuesday-Wednesday-Thursday counts – 21 locations
Total # of Sunday counts – 8 locations (+)

F. Review existing signal timings for US 45/Gages Lake Rd, Gages Lake Rd/Mill Rd, Gages Lake Rd/Almond Rd, Gages Lake Rd/Hunt Club Rd, and Gages Lake Rd/IL 21.

G. Request and compile the most recent five-year period of crash history along the corridor from Lake County's MS2 datasource as well as crash reports provided by IDOT and the Lake County Sheriff's

Office. Based on the project schedule, it is anticipated that two additional years will need to be evaluated.

H. Collect and process drone video along Gages Lake Road within the project limits which includes focusing on the following intersections/segments:

Gages Lake Rd/US 45
Gages Lake Rd/Tangueray Dr
Gages Lake Rd/Old Gages Lake Rd
Gages Lake Rd from Mill Rd to Almond Rd
Gages Lake Rd from Winnebago Dr to Gagewood Ln
Gages Lake Rd/Hunt Club Rd
Gages Lake Rd from Colby Rd to IL 21

The drone will hover over each intersection/segment for 10 to 15 minutes during the AM and PM peak hours.

2.0 Topographic Survey

Topographic survey will be completed by Hampton, Lenzini and Renwick (HLR) within the project study limits based on LCDOT Survey procedures. The survey will extend 30 feet beyond the existing right-of-way along Gages Lake Road and 10 feet beyond the existing right-of-way along Almond Road, Hunt Club Road, US 45, and IL 21. The survey also includes a 100-foot wide strip west of US 45 from Gages Lake Road to the existing path withing the College of Lake County campus. See HLR's attached scope for further detail.

The following tasks will be completed by HLR as detailed below and in their scope:

A. Set Control will be horizontally located with GPS on NAD 83 IL East State plane coordinates.

B. Conduct ground-based scanner/LIDAR and extract features on a 50-ft cross section interval, perpendicular to the street. Drone-based LIDAR survey will also be completed, (+/- 1.5-inch vertical accuracy) to fill in data outside of the right-of-way and in heavily vegetated areas like the 1,350-foot section west of Gages Lake Road and US 45. Additional conventional work may still be needed in highly vegetated areas during leaf-on periods.

C. Locate visible utilities and culverts. Conduct utility survey which will collect invert directions and elevations on storm sewer, water main, and sanitary sewer structures within the project area and one structure away, allowing pipe elevations to be interpolated within the project location.

D. Prepare linework and surface file in a .dgn format utilizing IDOT layers and codes. Provide point cloud data in a .las file and 1.5" resolution aerial photo in a .tiff format.

E. Conduct hydraulic survey for the following waterways:

1. Unnamed tributary to the Des Plaines River west of Hunt Club Road.
2. Belvidere Road Tributary to the Des Plaines River east of Leonard Drive.

F. Conduct supplemental survey for areas not initially surveyed by the ground-based scanner/LIDAR and determined necessary by the alternative analysis.

G. Conduct pick-up survey to locate utility test holes, soil borings, and wetland flags.

The following tasks will be completed by GFT:

H. Establish existing project centerline and stationing along Gages Lake Road, Almond Road, Hunt Club Road, and Washington Street based on LCDOT records.

I. Complete plan-in-hand reviews in the field to verify accuracy of displayed information.

J. Coordinate survey tasks with HLR.

3.0 Right-of-Way Verification

Right-of-Way verification will be completed by Hampton, Lenzini and Renwick (HLR) within the project study limits. See HLR's attached scope for further detail.

The following tasks will be completed by HLR as detailed below and in their scope:

A. Identify initial existing right-of-way based on field locating existing property corners by utilizing available tax parcel information, recorded subdivision plats, and other existing documentation provided by LCDOT.

B. Prepare report detailing right-of-way encroachments and setback variances.

C. Prepare existing right-of-way and encroachments linework file in a .dgn format.

D. If necessary, prepare updated existing right-of-way linework file in a .dgn format based on title commitments from affected parcels or those that need further clarification.

The following tasks will be completed by GFT:

E. Coordinate right-of-way tasks with HLR.

4.0 Utility Coordination and Subsurface Utility Engineering (SUE) Level B

Utility data collection, investigation, and coordination with the utility companies will be conducted by American Surveying & Engineering (ASE). ASE will lead all coordination with the utility companies, with the LCDOT Utility Coordinator assisting in instances where the utility companies are unresponsive. See ASE's attached scope for further detail.

The following tasks will be completed by ASE as detailed below and in their scope:

A. Submit JULIE planning/design stage notification request.

B. Create existing utility CADD file based on review of utility atlases and verifying locations where possible through information provided via the JULIE request and/or topographic survey. This file will be in 3D format with standard depths assumed for all underground mains and conduits where elevations are not available via plans and/or topographic survey.

C. Submit plans to the utility companies to verify the location of existing facilities and any future planned upgrades.

D. Identify utilities that will be potentially affected.

E. Perform Subsurface Utility Engineering (SUE) Quality Level B within the project limits. SUE Level B plan sheets will be prepared with different linestyles used to depict Level B versus Level D information. SUE Quality Level A and all potholing will be conducted in Phase II.

F. Prepare preliminary utility conflict exhibits with supporting summary table identifying specific conflicts. These sheets will be transmitted to the utility companies to determine possible relocation concepts.

The following tasks will be completed by GFT:

G. Coordinate utility and SUE tasks with ASE.

5.0 Traffic and Safety Analysis

Traffic operations and crash analysis will be completed in accordance with LCDOT and IDOT BLRS guidelines and standard practices.

Traffic Projections

A. Coordinate traffic projections with CMAP to determine future traffic volumes along the corridor. As no major roadway expansions or travel pattern changes are anticipated due to this project, travel demand modeling is not included.

Streetlight Data

B. Purchase streetlight data along the corridor to provide additional analysis. This may include travel pattern determination, hourly congestion, additional turning movement analysis, and O-D analysis. The zone coverage, which includes nine zones, will be extensive enough to cover both Washington Street and IL 120. Analyze speeding trends along the corridor using Streetlight or enforcement data; evaluate potential traffic calming or speed feedback measures near school zones.

Traffic Analysis

Traffic analysis will be conducted throughout the corridor in Synchro. All counted locations will be included in the model along with any substantial driveways/entrances identified in Streetlight. The future build alternatives will be analyzed at key locations identified with these key intersections and segments analyzed separately. Then a preferred improvement model will be created with all locations included. The school peak hours are anticipated to be peak hours along the corridor but a maximum of four peak hours

will be analyzed. These would include traditional AM and PM peaks, a school day afternoon peak, and Sunday weekend peak hour.

C. Evaluate new or modified intersection control using MUTCD signal warrants where volume and crash data suggest need for traffic control upgrades at four unsignalized intersections. The anticipated locations are at Gages Lake Road/Tangueray Drive, Gages Lake Road/Greentree Road, Gages Lake Road/Leonard Drive, and Gages Lake Road/Colby Road.

D. Conduct Synchro and Simtraffic analysis for the following scenarios: Existing, future no-build, future build for ten key locations identified in the alternatives analysis, and future build for the selected combined improvements. Synchro analysis will be used to determine intersection level improvements. Simtraffic analysis will be used to evaluate and compare network performance using key measures of effectiveness such as travel time, delay, and speed. Synchro and Simtraffic analysis will exclude roundabout analysis.

E. Conduct roundabout analysis in Sidra for the following nine locations: Gages Lake Road/Tangueray Drive, Gages Lake Road/Greentree Road, Gages Lake Road/Mill Road, Gages Lake Road/Almond Road, Gages Lake Road/Woodland School Driveways West, Gages Lake Road/Woodland School Driveways East, Gages Lake Road/Hunt Club Road, Gages Lake Road/Leonard Drive, and Gages Lake Road/Colby Road.

F. Evaluate current signal timings and coordination plans for potential retiming opportunities or ITS upgrades, especially if turn lane or phasing changes are considered.

G. Review drone footage for the following four key intersections during the peak hours: Gages Lake Road/Almond Road, Gages Lake Road/Mill Road, Gages Lake Road/Woodland School Driveway West, and Gages Lake Road/Woodland School Driveway East. This will provide additional insight into driver behavior(s), aid in identifying the appropriate safety countermeasure(s), and to inform the Synchro model for driver behavior(s). The school driveway locations will also help confirm school peak hour operations and verify if any improvements to school circulation can be made.

H. Observe and document school-related vehicular and pedestrian circulation during pick-up/drop-off periods at Woodland Schools to assess site access efficiency and identify improvement recommendations.

Safety Analysis:

I. Review crash data and police reports for the previous five years of available to verify the data. It is anticipated that two additional years will need to be evaluated based on the projected project schedule. This also includes reviewing the recently finalized Lake County Safety Action Plan for findings and recommendations along the Gages Lake Road corridor. Examine crash types, severity of injuries, pavement, and lighting conditions.

J. Identify crash patterns, prepare crash summaries and collision diagrams. Provide recommendations to improve safety.

K. Analyze near miss detection data captured with the traffic counts.

L. Summarize all the results in the report. The report will include summaries of crash data by type and a crash heat map to highlight spatial patterns of high-risk areas along the corridor.

M. Based on the projected project schedule, the crash data and report will be updated at the end of the Phase 1 Study with the most current five-year crash data period.

N. Conduct analysis for existing and five potential mid-block and intersection pedestrian crossing locations along the corridor in accordance with IDOT TRA-23 policy for appropriate crossing design. These locations will be analyzed based on public feedback, geometric conditions, adjacent pedestrian accommodations, and estimated usage. A report summarizing these findings will be prepared.

O. Initiate student driver safety outreach, in consultation with the Warren Township High School Drivers Education program.

Note: Initial coordination will be conducted with the Warren Township High School Drivers Education program and the transportation departments. Once the desired level of engagement and outreach is determined, the scope will be updated to reflect the anticipated level of effort. A nominal number of hours has been included at this time.

P. Evaluate the potential application of Crash Modification Factors (CMFs) for proposed countermeasures using FHWA's CMF Clearinghouse. If warranted, conduct a predictive safety analysis for high-crash locations based on the existing crash data and CMFs. Future crash projections via HSM analysis will not be conducted for this corridor.

Intersection Design Studies

Q. Conduct intersection design studies (IDS) at signalized intersections or roundabout locations based on the preferred alternative geometry. The anticipated intersections for IDS analysis are:

US 45/Gages Lake Rd
Mill Rd/Gages Lake Rd
Almond Rd/Gages Lake Rd
Woodland School Driveway West/Gages Lake Rd
Woodland School Driveway East/Gages Lake Rd
Hunt Club Rd/Gages Lake Rd
IL 21/Gages Lake Rd

The intersections at US 45 and IL 21 will be sent to IDOT for review and approval. Any other intersections along Gages Lake Road will be sent to LCDOT. This includes identifying design exceptions and addressing comments from LCDOT and/or IDOT. ADA will be verified at each intersection but detailed design is not included.

6.0 Alternative Analysis

The Alternate Analysis will be based on results from the traffic and safety analysis (Task 5), non-motorized travel accommodations, and cross section considerations to develop the right-of-way footprint. Engineering studies will be performed to establish a continuous 3-lane section for the entire corridor with full ADA-compliant bicycle and pedestrian accommodations. The type of alternate analysis will vary

depending on the segment's existing conditions. 3D modeling tools using Open Roads Designer will be used to determine construction limits and impacts for various alternates. A full 3D model for the roadway will not be developed until the preferred alternative is selected (Task 6.H).

A. Establish a smooth best-fit existing profile based on survey information. This profile will be evaluated to determine if there is enough longitudinal slope to effectively drain the roadway with the addition of curb and gutter. Alternate proposed profiles will be developed for three segments where it has been determined that it will improve drainage, reduce the proposed footprint, and/or minimize right-of-way or utility impacts. The proposed profiles will also aim to avoid the need to reconstruct the pavement where it is in good condition.

B. Develop roadway widening geometrics to convert existing 2-lane sections to 3 lanes. An alternate proposed roadway alignment will be developed to evaluate symmetrical vs offset roadway widening. An alternate proposed roadway profile will also be developed to evaluate the costs and benefits of reconstructing segments of Gages Lake Road compared to resurfacing and widening. These studies will be developed along Gages Lake Road at the following locations for a total of 9,405 feet (1.78 mi):

   - Wooded Glen Dr to Evergreen Dr: 1,660 feet (0.31 mi). Note that this location includes the intersection with Old Gages Lake Road as discussed below in Task 6.3.a. Although Gages Lake Road is already 3 lanes at this intersection, this stretch is not omitted from the widening study due to the potential alternate option to offset the alignment.
   - Woodland Schools West Entrances to 445 feet west of the Almond Rd Centerline: 1,710 feet (0.32 mi).
   - 360 feet east of the Hunt Club Rd centerline to 305 feet west of the IL 21 centerline: 6,035 feet (1.14 mi). Note that there is a 930-foot segment between the Murifield Road and Leonard Drive intersections which already has 3 lanes. This stretch is not omitted from the widening study because of the potential alternate option to offset the alignment.

C. Develop geometrics for the following locations:

   1. West Old Gages Lake Road: This side street connects to Gages Lake Road at two points approximately 2,000 feet apart. Both connection points are located at horizontal curves, which causes potential safety issues. Horizontal sight distance will be evaluated at both intersections to determine if modifications are necessary. Two configurations will be developed at the west intersection to: 1) convert West Old Gages Lake Road to right-in-right-out access and 2) convert West Old Gages Lake Road to three-quarter access, eliminating northbound left turn movements. Three configurations will be developed at the east intersection to: 1) convert the existing bypass lane along Gages Lake Road to a standard left turn lane, 2) convert East Old Gages Lake Road to right-in-right-out access, and 3) eliminate the intersection altogether via barrier median and/or cul-de-sac. Changes to access at the west intersection will depend on the recommendations at the east intersection.

   2. Roundabouts and signalized or minor leg stop controlled intersections for the following nine locations: Gages Lake Road/Tangueray Drive, Gages Lake Road/Greentree Road, Gages Lake Road/Mill Road, Gages Lake Road/Almond Road, Gages Lake Road/Woodland School Driveways West, Gages Lake Road/Woodland School Driveways East, Gages Lake Road/Hunt Club Road, Gages Lake Road/Leonard Drive, and Gages Lake Road/Colby Road.. For roundabouts, turning

movements will be verified using AutoTURN to verify that fire vehicles, school buses, snowplows, and PACE buses (where applicable) will not encroach on the truck apron. Rough grading limits will be established to confirm the location chosen for the roundabout results in acceptable impacts. Sight distance will be evaluated for all alternate options.

3. Mid-block and intersection crossing geometrics will be developed at locations determined by the results from Task 5.N.

D. Conduct an access management review to identify locations with closely spaced or high-conflict driveways and side streets, using FHWA guidelines, where consolidation of access would provide safety and/or operational benefits.

E. Compile a pedestrian and bicycle infrastructure inventory.

1. Identify gaps and assess compatibility with Lake County's and CMAP's Complete Streets policies and programs. Prepare aerial exhibit identifying deficiencies.

2. Evaluate both sides of Gages Lake Road to identify the optimal location for the proposed multi-use path. An alignment and profile will be developed for the multi-use path on each side of the road. A constant offset option will be developed and compared to a variable alignment and profile.

3. Evaluate the feasibility of a sidewalk on the side opposite the multi-use path. Offset sidewalks and carriage walks at the back of curb will be considered and analyzed. An alignment and profile will be developed for the sidewalk to determine the optimal solution.

F. Evaluate bike path connections at each end of the corridor to connect the multi-use path to existing facilities beyond Gages Lake Road.

1. At the west end of Gages Lake Road, alternate multi-use path options will be studied to extend the path:

   i. Northbound along US 45 to the Washington Street intersection which will connect to the future bike path along Washington Street. Both sides of US 45 will be assessed for the feasibility of adding a multi-use path.
   ii. Westbound across US 45 to continue west and connect to Lancer Lane at the College of Lake County campus.
   iii. Southbound along US 45 to connect to the Center Street intersection which will connect to the future bike path along Center Street. Both sides of US 45 will be assessed for the feasibility of adding a multi-use path.

2. At the east end of Gages Lake Road, an offset bike path along the east side of IL 21 north of Gages Lake Road will be considered to connect to the existing path at the entrance to the Lake Carina Forest Preserve.

G. Create Alternative Analysis Matrix to compare the traffic and geometric alternatives and draw comparisons to costs, ROW, safety performance, public support, environmental impacts, drainage

concerns, operations, and utility conflicts. The preferred intersection alternatives will be determined after coordination with the County, Villages, and IDOT. Meetings and coordination to determine the preferred alternative are covered under Task 13.

H. Development of Preferred Alternative

Based on the results of the alternatives analysis and stakeholder and agency coordination, the Preferred Alternative will be identified and will be the basis for development of a preliminary 3D model and proposed improvement plans as well as the determination of right-of-way requirements for the project. The preliminary 3D model will be developed for the full corridor using Open Roads Designer.

The proposed improvement plans will include preliminary plan and profile sheets showing existing and proposed horizontal and vertical geometry at a scale of 1" = 20'. The proposed geometry will be designed to meet all applicable IDOT BLR and LCDOT design criteria or approved design exceptions.

Existing and proposed cross sections will be evaluated using the 3D model throughout the corridor and at all side streets, driveways, and other grade controlling features to determine right-of-way and easement requirements, wetland impacts, ditch locations and drainage patterns, and fine-tune the proposed vertical geometry. The cross sections will show existing right-of-way, existing and proposed top surface grade elevation, and the proposed right-of-way and temporary construction easements. This task also includes development of the construction cost estimate for the Preferred Alternative.

Specific work tasks will include:

1. Prepare preliminary documents for the Preferred Alternative and submit them to LCDOT for review/comment. All plan sheets, CAD Files, and 3D Model deliverables will be developed and formatted to facilitate direct integration into Phase 2 design.

    i. Typical sections at nine locations.
    ii. Plan & profile sheets along Gages Lake Road and major side streets including pavement markings and preliminary right-of-way and easement requirements. Assume two sheets will be included along Mill Road, Almond Road, Woodland School Driveway West, Woodland School Driveway East, and Hunt Club Road.
    iii. Plan sheets along US 45 and IL 21 showing the non-motorized accommodations and preliminary right-of-way and easement requirements.
    iv. 3D model with cross sections along Gages Lake Road incorporating drainage, environmental, and non-motorized considerations/recommendations. Detailed modeling of the intersections is not included.

2. Finalize the proposed improvement plans and 3-D model, with disposition of comments, and resubmit to LCDOT for approval. Improvements at the US 45 and IL 21 intersections will be shown on the IDSs which will be submitted to IDOT for review.

3. Prepare preliminary engineer's estimate of construction cost.

7.0 Environmental Studies

Environmental field studies and documentation will be performed by HLR. See HLR's attached scope for further detail.

The following items will be completed by HLR as detailed below and in their scope:

A. Conduct an environmental desktop screening to determine potential wetlands and special waste for each preliminary alternate to assist in the selection of the preferred alternative.

B. Perform a formal wetland delineation of all potential wetlands identified within the proposed project area for the preferred alternative. This includes preparation of a wetland delineation report and preliminary jurisdictional determination in the field with LCSMC staff potentially followed by a boundary verification.

C. Complete a Preliminary Environmental Site Assessment (PESA) for all properties along Gages Lake Road and side streets excluding US 45 (Lake Street) and IL 21 (Milwaukee Avenue) as these are state routes and will be cleared by IDOT for the preferred bike path connections.

D. Prepare PESA update as an addendum to the original report at the end of the Phase 1 Study as the PESA is only valid for six months.

E. Conduct a tree survey of all trees 3 inches and greater within the project limits for the preferred alternative.

F. Identify and incorporate natural based solutions and/or green infrastructure BMPs along Gages Lake Road for three locations.

The following items will be completed by GFT:

G. Prepare Environmental Survey Request (ESR) Screening forms to determine the need for a full ESR submittal. It is assumed that a full submittal will be required.

H. Prepare an Environmental Survey Request (ESR) Form to obtain environmental clearances for biological, wetlands, and cultural resources, and special waste though IDOT (State ROW) or LCDOT (local ROW). This will consist of preparation of an aerial based exhibit depicting the existing right-of-way and environmental survey limits to clear areas where proposed right-of-way and/or easements are necessary for the preferred alternative. Prepare a photo log with ground-level photos and individual photos of all structures estimated to be over 50 years old or potentially historically significant. Prepare an exhibit and wetland impact evaluation (WIE) form showing the wetland impacts. The ESR Form and supporting documents will be submitted electronically to LCDOT for processing. This task will also include incidental coordination with IDOT related to the ESR submittal and review.

I. Coordinate environmental tasks with HLR.

8.0 Geotechnical Studies

Geotechnical engineering services will be performed by Wang. Geotechnical investigation will include soil boring and pavement core sample collection, laboratory testing, engineering, analyses, recommendations, and reporting. The number of borings and locations will be coordinated with and approved by LCDOT after the preliminary alternate analysis included in Task 6 has been completed and the project improvements have been determined. See Wang's attached scope for further detail.

The following tasks will be completed by Wang:

A. Conduct 50 roadway soil borings every 300 feet at locations with proposed roadway widening and/or an offset alignment shift. No borings will be taken within existing 3-lane roadway sections where it has been determined that only resurfacing is required. The only location where borings are anticipated to be required for bike path or sidewalk improvements is west of the Gages Lake Road at US 45 intersection if the west extension / connection to Lancer Lane at the College of Lake County campus is selected as the preferred routing.

B. Conduct 15 pavement cores along Gages Lake Road between US 45 and IL 21 when it is determined which segments will be reconstructed or resurfaced.

C. Conduct 10 structural borings where it has been determined that retaining walls are necessary to minimize right-of-way impacts or culvert replacement is required.

D. Prepare Roadway Geotechnical Report (RGR) and Structure Geotechnical Report (SGR), if necessary, documenting the analysis and recommendations.

The following tasks will be completed by GFT:

E. Coordinate geotechnical tasks with Wang.

9.0 Structural Studies

Retaining walls may be necessary to minimize right-of-way impacts where widening Gages Lake Road from 2 to 3 lanes, shifting the existing alignment, and/or adding bike and pedestrian accommodations. Replacement of the existing culverts are also unknown and pending site inspection and hydraulic analysis. While the exact locations of retaining walls are unknown, it is anticipated that three retaining walls will be necessary and that the walls will not exceed five feet in exposed height or two hundred feet in length. The preliminary structural analysis includes:

A. Conduct construction feasibility study for each retaining wall to identify potential wall types and address cost and site constraints such as right-of-way, construction staging, and existing utility conflicts. The study will also include a list of potential aesthetic enhancements in coordination with LCDOT and as requested by stakeholders.

B. Prepare technical memorandum including recommendations on the retaining wall type(s) and locations for the Preferred Alternative. The memo will include the structural borings and recommendations from the geotechnical analysis.

C. Conduct field visit to inspect existing culverts and identify any deteriorations and/or concerns.

D. Prepare technical memorandum documenting the condition of the culverts and rehabilitation/replacement recommendations.

10.0 Drainage Studies

This task consists of preparing a Location Drainage Study and two Hydraulic Reports to document the existing drainage conditions along Gages Lake Road and the proposed drainage improvements.

Location Drainage Study

A. Completed a Location Drainage Study (LDS) for the Gages Lake Road corridor and bike/pedestrian accommodations along US 45 and IL 21. This includes both an Existing and Proposed Drainage analysis which will be submitted to LCDOT for review and approval. The LDS will also include coordination with LCSMC to identify stormwater infrastructure capital projects along the corridor which will be shown on the proposed drainage plans and discussed in the report. The following scope of work will be completed:

1. Prepare an Existing Drainage Plan (EDP) at 1" = 50' to document the existing drainage patterns and conditions in the project area. The EDP will include delineation of drainage areas and identification of major drainage features such as watershed divides, identified flooding areas, floodplains, and existing detention or depressional storage areas. Existing outlets leaving the project limits will be analyzed to determine adequacy and existing flows leaving the project site will be calculated. Known drainage issues include 1) the poorly defined ditch along the south side of Gages Lake Road immediately west of Gagewood Lane which results in standing water within the right-of-way and adjacent properties, and 2) standing water/wetlands within the roadside ditch west of Wooded Glenn Drive. These known drainage issues, along with others that are identified along the corridor, will be reviewed with LCSMC to determine potential improvements.

2. Determine the criteria (design storm(s), size(s), freeboard, etc.) that will be used to design the proposed drainage improvements. The drainage criteria will be largely based on the IDOT Drainage Manual and supplemented with the Lake County Watershed Development Ordinance. This list will be submitted to LCDOT for approval prior to design.

3. Prepare a Proposed Drainage Plan (PDP) after the preferred roadway improvement plan has been developed. The PDP will document the proposed drainage improvements to the existing drainage system. The PDP will include the delineation of proposed drainage areas and proposed flows to each outlet determined suitable for continued use. A proposed drainage analysis will be prepared for the proposed storm sewer system, ditches, and culverts according to the LCDOT-approved drainage criteria. Per the scoping report, detention and retention/BMPs are anticipated for the improvements. For planning purposes, the required detention and retention volumes will be based on the preferred improvements to the entire roadway corridor, not individual intersections or segments.

4. Prepare a formal report following the format detailed in the IDOT Drainage Manual which includes subsections such as a narrative, exhibits, source data received, correspondence, and

supporting documents. Recommendations to alleviate existing drainage and/or flooding problems will be provided. The identification of required permits will also be detailed. Permit applications and submittals are anticipated to be completed in Phase II.

Hydraulic/Waterway Study #1 – 600 feet west of Hunt Club Road

B. Perform a Hydraulic/Waterway Study for the unnamed tributary to the Des Plaines River 600 feet west of Hunt Club Road, which is not a mapped floodplain but is a USGS Flood of Record in the project area. Due to their proximity, the culvert under North Summersfield Drive and private foot bridge will be studied and incorporated into the hydraulic model.

1. Conduct hydraulic survey which will consist of the following:

   Culvert Openings:
   - Diameter and/or span and rise at the upstream and downstream faces
   - Inverts and flowline elevations (if different than the invert)
   - Survey shots along any headwalls to accurately document shape

   Foot Bridge Opening:
   - Shape/configuration at the upstream and downstream faces
   - Inverts and flowline elevations (if different than the invert)

   Roadway profile:
   - A profile shall be taken along the roadway centerline for a minimum of 500 feet in both directions of each culvert/bridge crossing.

   Cross Sections (a total of 14):
   - 1,000 feet upstream and downstream of the Gages Lake Road culvert (2)
   - 200 feet upstream and downstream of the Gages Lake Road culvert (2)
   - 50 feet upstream and downstream of the confluence south of the culvert under North Summersfield Drive and the private foot bridge (4)
   - At upstream and downstream face of the culverts/foot bridge (6)
   - Cross sections should be perpendicular to the stream flow and extend horizontally 150 feet in each direction from the centerline of the stream. The model will be supplemented with 1-foot contour from Lake County where required.

   Waterway/Stream Profile:
   - A stream profile shall be taken along the lowest point in the stream every 100 feet upstream and downstream of the culvert crossing through the limits of the cross section survey.

2. Conduct hydrologic analysis as the tributary is not a mapped floodway or floodplain. A detailed hydrologic analysis must be performed to determine the peak flows from the upstream tributary areas. Existing and proposed drainage areas will be delineated, and a HEC-HMS model will be developed to calculate the existing 2, 10, 30, and 100-year drainage flows to the stream and split at appropriate cross sections. Sub-area time of concentrations and curve numbers will also be calculated.

3. Prepare a detailed hydraulic model of the tributary utilizing the peak flows determined in the hydrologic study. Impacts resulting from the Preferred Alternative will be evaluated. A hydraulic model using the HEC-RAS program will be completed. Information from the existing hydraulic survey, drainage flows, and proposed improvements will be incorporated into this model. This task will include generation of the existing hydraulic model, natural model, and a proposed model based on the preferred alternative design.

4. Since this crossing is not mapped as floodplain, no compensatory storage is required. However, fill placed below both the 10-year and 100-year storms will be quantified for the Preferred Alternative to determine potential impacts on flood elevations.

5. Prepare a formal Hydraulic Report including Waterway Information Tables (WITs). The report will include all necessary information such as a narrative, exhibits, cross sections, supporting calculations and documents.

Hydraulic/Waterway Study #2 – 100 feet east of Leonard Drive

C. Perform a Hydraulic/Waterway Study for the Belvidere Road Tributary to the Des Plaines River 100 feet east of Leonard Drive, which is mapped as Zone A floodplain and a USGS Flood of Record in the project area. Due to their proximity, the culverts under Murifield Drive and Pebble Creek Court will be studied and incorporated into the hydraulic model. Although this culvert was replaced in 2015 after a collapse, this analysis will determine if the previously installed 72" EQRS pipe culvert is of adequate size for Bulletin 75 rainfall events.

1. Conduct hydraulic survey which will consist of the following:

   Culvert Openings:
   - Diameter and/or span and rise at the upstream and downstream faces
   - Inverts and flowline elevations (if different than the invert)
   - Survey shots along any headwalls to accurately document shape

   Roadway profile:
   - A profile shall be taken along the roadway centerline for a minimum of 500 feet in both directions of each culvert crossing.

   Cross Sections (a total of 10):
   - 1,000 feet upstream and downstream of the Gages Lake Road culvert (2)
   - 200 feet upstream and downstream of the Gages Lake Road culvert (2)
   - At upstream and downstream face of the culverts (6)
   - Cross sections should be perpendicular to the stream flow and extend horizontally 150 feet in each direction from the centerline of the stream. The model will be supplemented with 1-foot contour from Lake County where required.

   Waterway/Stream Profile:
   - A stream profile shall be taken along the lowest point in the stream every 100 feet upstream and downstream of the culvert crossing through the limits of the cross section survey.

2. Conduct hydrologic analysis as the tributary is currently mapped as Zone A floodplain. Zone A designation indicates areas of known flood hazard where a detailed study to determine the Base Flood Elevation (BFE) has not been performed. A detailed hydrologic analysis must be performed to determine the peak flows from the upstream tributary areas. The peak flows determined in the hydrologic analysis will be used to determine the BFE in the hydraulic analysis. Existing and proposed drainage areas will be delineated, and a HEC-HMS model will be developed to calculate the existing 2, 10, 30, and 100-year drainage flows to the stream and split at appropriate cross sections. Sub-area time of concentrations and curve numbers will also be calculated.

3. Prepare a detailed hydraulic model of the tributary utilizing the peak flows determined in the hydrologic study. The hydraulic analysis will determine the existing BFE for the Zone A floodplain. Impacts resulting from the Preferred Alternative will be evaluated based on the BFE established by the hydraulic modeling. A hydraulic model using the HEC-RAS program will be completed. Information from the existing hydraulic survey, drainage flows, and proposed improvements will be incorporated into this model. This task will include generation of the existing hydraulic model, natural model, and a proposed model based on the preferred alternative design.

4. Identify encroachments into the floodplain as determined by the hydraulic modeling. Floodplain fill impacts for both the 10-year and 100-year storms will be quantified for the Preferred Alternative to determine the compensatory storage required. Proposed compensatory storage locations will be shown and summarized on exhibits and cut/fill cross sections provided to verify adherence with the applicable Lake County Watershed Development Ordinance and Illinois Department of Natural Resources Office of Water Resources (IDNR/OWR) requirements.

5. Prepare a formal Hydraulic Report including Waterway Information Tables (WITs). The report will include all necessary information such as a narrative, exhibits, cross sections, supporting calculations and documents.

11.0 Public Involvement and Stakeholder Coordination

The project team will create a public involvement program with input from LCDOT. It is assumed that the project will follow a public involvement strategy that will include 3 public meeting activities combined with individual and small group meetings with various stakeholder groups and the public in general.

The following provides the overall scope of work for this task.

A. An initial project kickoff meeting focused on public involvement activities will be held to confirm the overall public involvement approach and to confirm initial public involvement activities. No project branding is planned for this project. Coordination of project data with Lake County's communications team will be reviewed and a plan developed for the project. This meeting will be held in person. GFT will coordinate meeting attendance and location, prepare meeting agenda, handouts, and exhibits, facilitate the meeting, and prepare a meeting summary.

B. Project stakeholder meetings – conduct 24 project stakeholder meetings with various agencies, school groups, community organizations, local business owners, homeowner associations and others needed to facilitate this project. The purpose of the meetings is to coordinate with the relevant stakeholders and to discuss the project, seek their input, review project specific elements, and review technical

studies. These meetings will be coordinated as individual meetings or as small group meetings based on subject matter and cooperation between the stakeholders. GFT will coordinate meeting attendance and location, prepare meeting agenda, handouts, and exhibits, facilitate the meeting, and prepare a meeting summary. It is assumed that 16 meetings will be in person while the remaining 8 will be virtual. It is assumed 3 staff members will attend in person meetings while 2 staff members will attend virtual meetings. Below is a list of expected project stakeholders sorted by interest area:

Agencies:
- Lake County SMC
- Lake County Forest Preserves
- Illinois Department of Transportation
- Warren Township
- Village of Gurnee

Schools:
- College of Lake County
- Warren Township School District
- Woodland School District
- Special Education District of Lake County (SEDOL)

Community Groups:
- St. Paul the Apostle Church
- Wildwood Church
- Gurnee Chinese Christian
- Wildwood Presbyterian
- Gages Lake Bible Church

Residential Groups:
- Heather Ridge
- Wildwood

Local Businesses:
- Jesse Oaks
- Cottage Tap
- Gages Lake Auto & Light Truck Repair

Private property owners

C. Public Meetings

Three Public Meetings are proposed for the project. All information for each event will be provided in both English and Spanish. The following meetings will be held:

- Virtual Public Forum (VPF) –The purpose of the meeting is to introduce the project scope, project team, schedule, public input process and to present results of traffic and crash studies. Public input will be solicited to help identify challenges and concerns throughout the study

area. This meeting will be conducted via a VPF. LCDOT will host and assemble the website while GFT will provide the materials and exhibits.

- Public Meeting #1 – The purpose of this meeting is to present the alternative analysis and to get public input on the technical studies presented. The meeting will be conducted as an in-person event in an open house format and will provide opportunities for public input.
- Public Meeting #2 – The final public meeting will be to present to show the preferred alternative, show the conclusion of the alternative analysis, respond to questions and concerns from earlier public coordination, and to document property acquisition needs for the project. The meeting will be conducted as an in-person event in an open house format and will provide opportunities for public input. A Court Reporter will not be secured for this meeting.

Tasks related to the public meetings include:

1. Compile mailing list including stakeholders and all adjacent property owners. Update mailing list for each subsequent meeting.
2. Prepare post card or notification letters advertising each meeting and mail them to individuals on the mailing list. The recently developed templates from LCDOT will be used.
3. Prepare brochures/handouts.
4. Prepare display exhibits (aerial displays with alternatives, cross sections, traffic data, crash data, environmental data, and other displays) as appropriate.
5. Develop second versions of public meeting materials in Spanish.
6. Attend dry run events (assume 2 dry runs per meeting and 3 project team members per event)
7. Attend Public Meeting #1 and #2 (assume 4 project team members per meeting). Note that a Spanish translator will attend Public Meeting #1 and #2. This includes time attend, setup/take down for, and drive to each meeting.
8. Secure location for Public Meeting #1 and #2, including two site visits.
9. Prepare of newspaper display ads and press releases. The recently developed templates from LCDOT will be used.
10. Create frequently asked questions (FAQs) document for use by the project team and on the LCDOT project website.
11. Prepare record summaries of each meeting that will include copies of all notices, presentation material, attendance lists, comments, and responses.
12. Prepare individual response letters to uncommon comments received, or requests for information received.
13. Create and send via US mail or certified mail potential property acquisition exhibits to document likely fee simple, permanent easement, and temporary easement needs for all affected property owners. The recently developed templates from LCDOT will be used. This task is only associated with the final public meeting. Monitor, track, and respond to questions and comments on this material from the property owners.

D. Design Visualization aids will be developed to assist the public in understanding the proposed concepts and alternatives at public meetings. These aids will also be made available on LCDOT's project website. Utilizing a 3D visualization model can help translate what a given proposed alternative will look like much more effectively than a 2D plan exhibit.

1. Create a drive/fly through video of the corridor for the following:

   i. Existing conditions identifying issues, constraints, needs, etc. (Virtual Public Forum)
   ii. Two alternatives identifying improvements, enhancements, benefits, etc. One alternative will include traffic signals while the second will include roundabouts. (Public Meeting #1)
   iii. Preferred alternative identifying improvements, enhancements, benefits, etc. This will reflect the recommended improvements at each intersection along the corridor which is anticipated to be a combination of traffic signals and roundabouts. (Public Meeting #2)

2. Create renderings of each proposed alternative as well as the preferred alternative for the following intersections/segments (15 total):

   i. Gages Lake Road at Old Gages Lake Road (From West Intersection to East Intersection)
   ii. Gages Lake Road from Mill Road to Almond Road
   iii. Gages Lake Road from Winnebago Drive to Gagewood Lane
   iv. Gages Lake Road at Hunt Club Road
   v. Gages Lake Road from Colby Drive to IL 21

3. Develop construction phasing visualization to show a time-lapse sequence of construction in areas of concern. Assume two areas: 1) roundabout and 2) roadway in residential areas with multiple driveways (example – Greentree Road to east of Almond Road).

4. Develop an interactive 3D model for the preferred alternative that will be published on the project website and allow the public to explore the corridor and move around their point of view to see what the project will look like.

5. Produce 10 still photo visualization images from the 3D model to be used for comparing alternatives.

E. Other activities

1. Coordinate with LCDOT communications group for each public meeting to provide data for the project website hosted by LCDOT.

12.0 Project Development Report

Develop a Project Development Report (PDR) to document all environmental, coordination, public involvement, and engineering aspects of the project, including a list of design variances.

A. Prepare draft Project Development Report (PDR) utilizing either IDOT BLR form BLR 22211 or BLR 22210. This will be submitted to LCDOT for review prior to the second public information meeting.

B. Prepare final PDR and disposition comments received from LCDOT on the draft submittal. The final PDR will be submitted after the final Public Information Meeting and after all clearances/approvals have been received.

13.0 Agency Coordination and Meetings

This task includes all required agency coordination to complete the Phase I Study. It is anticipated that three staff members will attend in person meetings while two staff members will attend virtual meetings. Each meeting will include an agenda and meeting minutes.

In person Meetings

A. Kickoff meeting with LCDOT (1 meeting)
B. Preliminary alternates review meeting with LCDOT (1 meeting)
C. Preferred alternative review meeting with LCDOT (1 meeting)
D. Preliminary bike path along US 45 and IL 21 concepts review meeting with IDOT (1 meeting)
E. Preferred bike path along US 45 and IL 21 alternative review meeting with IDOT (1 meeting)
F. Gages Lake Rd/US 45 and Gages Lake Rd/IL 21 IDS review meeting, including Design Exceptions, with IDOT (1 meeting)

Virtual Meetings

G. Monthly project status and coordination with LCDOT. These meetings will be used to coordinate work efforts, review the project schedule, discuss technical topics, prepare for upcoming meetings, and other project management subjects. (30 meetings)

All other agency meetings (local, permitting, and environmental resource) are included under Task 11.B

14.0 Project Management and Administration

Conduct project management and administration activities over the duration of the project. It is anticipated that the project will take 30 months to complete.

A. Prepare and submit monthly invoice and progress report. Each invoice will also include a log identifying out of scope work and estimated/accrued effort.

B. Conduct project management activities including contract administration, budget control, and internal project team meetings. Prepare and monitor the project schedule and update the schedule periodically as tasks or project scheduling change, as well as perform scope of work reviews, resource planning, and internal team coordination.

C. Maintain Web-Based Project Management System. GFT will establish and maintain a web-based file management system that facilitates information sharing and stores project documents which will be available to LCDOT staff. The web-based project management system will consist of two components, a project SharePoint site and ProjectWise site. The SharePoint site will store electronic copies of a wide variety of information including data collected, meeting minutes, reports, schedules, and budget information. The ProjectWise site will store CADD/MicroStation files to facilitate sharing of CADD files between the project team and LCDOT staff.

15.0 Quality Control / Quality Assurance (QC/QA)

Conduct QA/QC throughout the project to ensure consistency and accuracy of documents and deliverables. Deliverables will be checked by independent peer reviews prior to delivery to LCDOT. Documentation of QA/QC procedures will be maintained and will be furnished upon request.

A. Develop a QC/QA Plan to establish the internal processes that will be followed.

B. Conduct QC/QA reviews in accordance with the QC/QA Plan prior to all major submittals.

Assumptions

The Statement of Interest described this project as Phase I engineering services with an option to perform Phase II design engineering. It is assumed that a future scope of work will be developed by the consultant team to complete the Phase II engineering tasks which include plan developments, detailed cost estimates, permitting, plats, among others.

The following tasks or items are not included in this scope of services.

- Completion of Plat of Highways is deferred to Phase II Engineering
- Noise analysis as it is assumed that no through lanes will be added, and any alignment shifts will fall below the threshold to trigger the need to conduct the analysis.
- VISSIM simulations
- Permit(s)
- PSI and Clean Construction or Demolition Debris (CCDD) documentation
- Intergovernmental Agreement(s)
- Type Size and Location (TSL) Drawings
- Preliminary Bridge Design and Hydraulic Report (PBDHR) form BLR 10210
- Project branding or website hosted by GFT outside of the LCDOT-maintained website.
- Stakeholder Involvement Plan (SIP) or Stakeholder Involvement Group (SIG)
- IDOT/FHWA Coordination meetings
- NEPA/404 Merger meetings
- Environmental Assessment (EA) and Combined Design Report (CDR)
- Drain tile investigation

WORKHOUR SUMMARY

Lake County Division of Transportation
Gages Lake Road Improvements – Phase I Study
Section No. 24-00999-08-WR
9/2/2025

Task and Description	Total Manhours	GFT	HLR	Wang	ASE
Task 1 - Data Collection and Review					
A. Obtain and review record plans and other information from LCDOT and other agencies	24	24			
B. Obtain and review GIS data from Lake County	16	16			
C. Summarize data in tables and exhibits including maps and typical sections	40	40			
D. Conduct field visit (2 visits * 2 person/visit * 8 hours/person) and prepare photo log	40	40			
E. Conduct and process intersection counts - 72 hour counts (Tue-Wed-Thu) and 12 hour counts (Sur	80	80			
F. Review existing signal timings	20	20			
G. Request and compile crash data from MS2. Compile crash reports from IDOT and LCDOT Sheriffs Office.	12	12			
H. Collect and process drone video along Gages Lake Road	48	48			
Task 1 Subtotal	**280**	**280**	**0**	**0**	**0**
Task 2 - Topographic Survey					
Tasks completed by HLR					
A. Set horizontal control	180		180		
B. Conduct ground-based scanner/LIDAR	160		160		
C. Locate visible utilities and culverts and conduct utility survey	473		473		
D. Prepare linework and surface file	385		385		
E. Conduct hydraulic survey - 2 tributaries	66		66		
F. Conduct supplemental survey	51		51		
G. Conduct pick up survey to locate test holes, soil borings, and wetland flags	27		27		
Tasks completed by GFT					
H. Establish project centerline and stationing based on LCDOT records	40	40			
I. Complete plan-in-hand reviews to verify survey features (1 visit * 2 person/visit * 8 hours/person)	16	16			
J. Coordinate survey tasks with HLR	60	60			
Task 2 Subtotal	**1,458**	**116**	**1,342**	**0**	**0**
Task 3 - Right-of-Way Verification					
Tasks completed by HLR					
A. Identify initial existing right-of-way	1,396		1,396		
B. Prepare report detailing right-of-way encroachments and setback variances	90		90		
C. Prepare existing right-of-way and encroachments linework file	250		250		
D. If necessary, prepare updated existing right-of-way linework file based on title commitments from affected parcels or those that need further clarification	100		100		
Tasks completed by GFT					
E. Coordinate right-of-way tasks with HLR.	80	80			
Task 3 Subtotal	**1,916**	**80**	**1,836**	**0**	**0**
Task 4 - Utility Coordination and Subsurface Utility Engineering (SUE) Level B (ASE)					
Tasks completed by ASE					212
A. Submit JULIE planning/design stage notification request					
B. Create 3D existing utility CADD file based on utility atlases and/or topographic survey					
C. Submit plans to utility companies					
D. Identify utilities that will be potentially affected					
E. Perform SUE Quality Level B and prepare SUE plan sheets					
F. Prepare preliminary utility conflict exhibits with summary table					
Tasks completed by GFT					
F. Coordinate utility and SUE tasks with ASE	60	60			
Task 4 Subtotal	**60**	**60**	**0**	**0**	**212**
Task 5 - Traffic and Safety Analysis					
A. Coordinate traffic projections with CMAP	12	12			
B. Purchase and analyze Streetlight data	48	48			
C. Evaluate traffic signal warrants at four unsignalized locations (4 intersections * 6 hrs/intersection)	24	24			
D. Conduct Synchro and SimTraffic analysis for existing conditions, no-build alternative, 10 key location build alternatives, and preferred alternative (13 alternatives * 24 hrs/alternative)	312	312			
E. Conduct Sidra analysis at nine locations (9 locations * 4 hrs/location)	36	36			
F. Evaluate current signal timings for retiming or ITS upgrade opportunities	20	20			
G. Review drone footage and analyze operations at four key intersections (4 intersections * 8 hrs/intersection)	32	32			
H. Observe and document vehicular and pedestrian circulation at Woodland Schools to identify recommendations	40	40			
I. Review crash data, police reports, and County Safety Action Plan	40	40			
J. Identify crash patterns, prepare summary with collision diagrams, and provide recommended countermeasures	80	80			
K. Analyze near-miss detection data from traffic counts	40	40			
L. Summarize crash data, patterns, and recommendations in a report	40	40			
M. Update the crash report based on most current 5-year period prior to the end of the study	16	16			
N. Analyze existing non-motorized crossings along the corridor as well as five new crossing locations. Prepare a report documenting the findings	60	60			
O. Initiate student driver outreach in consultation with WTHS Drivers Education program. Note that this is a nominal effort to begin coordination.	40	40			
P. Evaluate potential Crash Modification Factors (CMFs)	40	40			
Q. Prepare Intersection Design Studies (IDSs) for seven locations. ADA will be verified but detailed design is not included. (7 intersections * 80 hrs/intersection)	560	560			
Task 5 Subtotal	**1,440**	**1,440**	**0**	**0**	**0**

WORKHOUR SUMMARY

Lake County Division of Transportation
Gages Lake Road Improvements – Phase I Study
Section No. 24-00999-08-WR
9/2/2025

Task and Description	Total Manhours	GFT	HLR	Wang	ASE
Task 6 - Alternate Analysis					
A. Establish smooth best-fit existing profile and alternate profiles for three segments (4 profiles * 12 hrs/profile)	48	48			
B. Develop roadway widening geometrics to widen 2 lane segments to 3 lanes for three segments. This includes evaluating symmetrical versus asymmetrical widening as well as widening and resurfacing versus reconstruction. (3 segments * 1 alignment/segment * 24 hrs/alignment + 3 segments * 1 profile/segment * 16 hrs/segment)	120	120			
C. Develop geometrics at the following locations					
1. West Old Gages Lake Road (West) to West Old Gages Lake Road (East) (5 alternatives * 20 hrs/alternative)	100	100			
2. Roundabout vs traffic signal/minor leg stop controlled at nine intersections (9 intersections * 2 alternatives/intersection * 20 hrs/alternative)	360	360			
3. Mid-block and intersection crossing at five locations (5 crossings * 8 hrs/crossing)	40	40			
D. Conduct access management review	60	60			
E. Compile pedestrian and bicycle infrastructure inventory					
1. Identify gaps and assess compatibility with Lake County's and CMAP's Complete Streets policies and programs. Prepare aerial exhibit identifying deficiencies.	24	24			
2. Evaluate both sides of Gages Lake Road to determine optimal location of bike path. This includes identifying the preferred alignment and profile. (2 sides * 120 hrs/side)	240	240			
3. Evaluate the feasibility of a sidewalk along the side opposite the bike path. This includes identifying the preferred alignment and profile.	100	100			
F. Evaluate bike path connections					
1. West of Gages Lake Road					
i. Northbound along US 45 to Washington Street (2 sides * 40 hrs/side)	80	80			
ii. Westbound across US 45 to Lancer Lane	40	40			
iii. Southbound along US 45 to Center Street (2 sides * 40 hrs/side)	80	80			
2. East of Gages Lake Road from IL 21 to Lake Carina Forest Preserve	20	20			
G. Create Alternatives Analysis Matrix	60	60			
H. Development of Preferred Alternative					
1. Prepare preliminary documents for the Preferred Alternative and submit to LCDOT.					
i. Typical sections at nine locations (9 sections * 4 hrs/section)	36	36			
ii. Plan and profile sheets along Gages Lake Road (17,700 feet - 35 sheets * 12 hrs/sht)	420	420			
Plan and profile sheets along five side streets (5 side streets * 2 shts/side street * 12 hrs/sh	120	120			
iii. Plan sheets (dual pane view) along US 45, IL 21, and west to Lancer Lane (9,800 total feet - 10 sheets @ 8 hrs/sht)	80	80			
iv. Create 3-D model (17,700 feet ~ 160 hrs/mi)	540	540			
2. Finalize preferred alternative documents and prepare disposition of comments	120	120			
3. Prepare preliminary engineer's estimates of construction cost	60	60			
Task 6 Subtotal	**2,748**	**2,748**	**0**	**0**	**0**
Task 7 - Environmental Studies					
Environmental tasks completed by HLR					
A. Conduct environmental desktop screening for each preliminary alternate.	16		16		
B. Perform wetland delineations and prepare report	232		232		
C. Complete PESA along all local routes	76		76		
D, Prepare PESA update prior to the end of the study	28		28		
E. Conduct a tree survey for the preferred alternative	126		126		
F. Identify and incorporate natural based solutions and/or green infrastructure BMPs	80		80		
Environmental tasks completed by GFT					
G. Prepare ESR Screening forms	8	8			
H. Prepare ESR and WIE forms and exhibits. Create photo log for cultural clearance.	126	120	6		
I. Coordinate environmental tasks with HLR	32	32			
Task 7 Subtotal	**724**	**160**	**564**	**0**	**0**
Task 8 - Geotechnical Studies					
Tasks completed by Wang	532			532	
A. Conduct 50 roadway soil borings					
B. Conduct 15 pavement cores					
C. Conduct 10 structural borings					
D. Prepare RGR and SGR, if necessary, to document analysis and recommendations					
Tasks completed by GFT					
E. Coordinate geotechnical tasks with Wang	32	32			
Task 8 Subtotal	**564**	**32**	**0**	**532**	**0**
Task 9 - Structural Studies					
A. Conduct feasibility study for three retaining walls (3 retaining walls * 40 hours/retaining wall)	120	120			
B. Prepare technical memo for the Preferred Alternative	60	60			
C. Conduct field visit to inspect existing culverts (1 visit * 2 person/visit * 8 hours/person)	16	16			
D. Prepare technical memo documenting the condition of the culverts and recommendations	80	80			
Task 9 Subtotal	**276**	**276**	**0**	**0**	**0**

WORKHOUR SUMMARY

Lake County Division of Transportation
Gages Lake Road Improvements – Phase I Study
Section No. 24-00999-08-WR
9/2/2025

Task and Description	Total Manhours	GFT	HLR	Wang	ASE	# of Meetings	Hours per Meeting	Staff per Meeting
Task 10 - Drainage Studies								
A. Complete a Location Drainage Study (LDS) along Gages Lake Road								
1. Prepare an Existing Drainage Plan (EDP) to document existing drainage patterns, conditions, problems, floodplains, and major drainage features (17 sheets along Gages Lake Road + 5 sheets along side streets * 12 hrs/sht)	264	264						
2. Determine the design criteria for the proposed drainage improvements	16	16						
3. Prepare a Proposed Drainage Plan (PDP) for the Preferred Alternative identifying outlets suitable for continued use, proposed improvements to the existing systems, stormwater detention, and BMP features (17 sheets along Gages Lake Road + 5 sheets along side streets * 20 hrs/sht)	440	440						
4. Prepare a report following the format detailed in the IDOT Drainage Manual.	80	80						
B. Perform a Hydraulic/Waterway Study for the Belvidere Road Tributary to the Des Plaines River 100 feet East of Leonard Drive								
1. Conduct hydraulic survey (completed by HLR - included in Task 2D)								
2. Conduct hydrologic analysis to determine flows	80	80						
3. Prepare a hydraulic model of the tributary for existing, natural and proposed conditions	80	80						
4. Determine potential impacts on flood elevations due to the proposed condition	16	16						
5. Prepare a Hydraulic Report including Waterway Information Table	60	60						
C. Perform a Hydraulic/Waterway Study for the unnamed tributary to the Des Plaines River 600 feet west of Hunt Club Road								
1. Conduct hydraulic survey (completed by HLR - included in Task 2D)								
2. Conduct hydrologic analysis to determine flows	80	80						
3. Prepare a hydraulic model of the tributary for existing, natural and proposed conditions	80	80						
4. Determine potential impacts on flood elevations due to the proposed condition	16	16						
5. Prepare a Hydraulic Report including Waterway Information Table	60	60						
Task 10 Subtotal	**1,272**	**1,272**	**0**	**0**	**0**			
Task 11 - Public Involvement and Stakeholder Coordination								
A. Conduct initial kick-off meeting to confirm public involvement approach and activities	12	12				1	4	3
B. Conduct project stakeholder meetings. Assume 16 meetings will be in person and 8 meetings will be virtual.								
In person meetings	192	192				16	4	3
Virtual meetings	32	32				8	2	2
C. Public Meetings (Three meetings - 1 Virtual Public Forum and 2 Public Meetings)								
1. Compile mailing list including stakeholders and property owners. Update list for each subsequent meeting. (32 hours for initial setup + 8 hrs/update * 2 updates)	48	48						
2. Prepare post card or notification letters and mail to individuals on the mailing list	12	12				3	4	
3. Prepare brochures/handouts	48	48				3	16	
4. Prepare display exhibits (VPF - 6 boards * 8 hrs/board, Public Meetings - 2 meetings * 8 boards/meeting * 8 hrs/board)	176	176						
5. Develop public meeting materials in Spanish	60	60				3	20	
6. Attend dry run events (Assume 2 dry runs per meeting)	72	72				6	4	3
7. Attend Public Meeting #1 and #2 (Attend, setup/take down for, and drive to meeting.)	48	48				2	6	4
8. Secure location for Public Meeting #1 and #2 (includes two site visits)	16	16						
9. Prepare newspaper display ads and press releases	12	12				3	4	
10. Create FAQs document	48	48				3	16	
11. Prepare record summaries of each meeting	72	72				3	24	
12. Prepare individual response letters to uncommon comments or requests for information (20 letters * 2 hrs/letter)	40	40						
13. Create and send potential property acquisition exhibits to all affected property owners (40 letters * 4 hrs/letter)	160	160						
D. Develop Design Visualization aids for use at public meetings								
1. Create a drive/fly through video of the corridor for the following:								
i. Existing conditions	100	100						
ii. Two proposed alternatives. One alternative will include traffic signals while the second will include roundabouts. (2 alternatives * 120 hrs/alternative)	240	240						
iii. Preferred Alternative (Anticipated to be a combination of traffic signals and roundabouts.)	60	60						
2. Develop interactive 3D model for the preferred alternative which will allow the public to explore the corridor	100	100						
3. Create renderings of each proposed alternative as well as the preferred alternative for the following intersections/segments (15 total renderings)								
i. Gages Lake at Old Gages Lake Road (West Intersection to East Intersection) (3 renderings * 20 hrs/rendering)	60	60						
ii. Gages Lake Road from Mill Road to Almond Road (3 renderings * 20 hrs/rendering)	60	60						
iii. Gages Lake Road from Winnebago Drive to Gagewood Lane (3 renderings * 20 hrs/render	60	60						
iv. Gages Lake Road at Hunt Club Road (3 renderings * 20 hrs/rendering)	60	60						
v. Gages Lake Road from Colby Drive to IL 21 (3 renderings * 20 hrs/rendering)	60	60						
4. Develop construction phasing visualization for two areas of concern (2 areas * 20 hrs/area)	40	40						
5. Produce still photo visualization images from the 3D model (10 images * 4 hrs/image)	40	40						
E. Other activities								
1. Coordinate with LCDOT communications group to provide data for project website	12	12						
Task 11 Subtotal	**1,940**	**1,940**	**0**	**0**	**0**			

WORKHOUR SUMMARY

Lake County Division of Transportation
Gages Lake Road Improvements – Phase I Study
Section No. 24-00999-08-WR
9/2/2025

Task and Description	Total Manhours	GFT	HLR	Wang	ASE	# of Meetings	Hours per Meeting	Staff per Meeting
Task 12 - Project Development Report								
A. Prepare draft Project Development Report (PDR) utilizing either IDOT BLR form BLR 22211 or BLR 22210	160	160						
B. Prepare final PDR and disposition of comments	80	80						
Task 12 Subtotal	**240**	**240**	**0**	**0**	**0**			
Task 13 - Agency Coordination and Meetings								
In person Meetings (Prepare agendas/minutes, attend meetings, and drive to meetings.)								
A. Kickoff meeting with LCDOT	12	12				1	4	3
B. Preliminary alternates review meeting with LCDOT	12	12				1	4	3
C. Preferred alternative review meeting with LCDOT	12	12				1	4	3
D. Preliminary bike path along US 45 and IL 21 concepts review meeting with IDOT	12	12				1	4	3
E. Preferred bike path along US 45 and IL 21 alternative review meeting with IDOT	12	12				1	4	3
F. Gages Lake Rd/US 45 and Gages Lake Rd/IL 21 IDS review meeting, including Design Exceptions, with IDOT	12	12				1	4	3
Virtual Meetings (Prepare agendas/minutes and attend meetings.)								
G. Monthly project status and coordination with LCDOT.	120	120				30	2	2
Task 13 Subtotal	**192**	**192**	**0**	**0**	**0**			
Task 14 - Project Management and Administration								
A. Prepare and submit monthly invoice and progress report (30 months * 2 hr/month)	96	60	36					
B. Conduct project management activities including contract administration, budget control, and internal project team meetings (30 months * 8 hrs/month)	240	240						
C. Maintain Web-Based Project Management System (30 months * 2 hrs/month)	60	60						
Task 14 Subtotal	**396**	**360**	**36**	**0**	**0**			
Task 15 - Quality Control / Quality Assurance (QC/QA)								
A. Develop a QC/QA Plan	16	16						
B. Conduct QC/QA reviews in accordance with the QC/QA Plan (assume 4% of hours)	360	360						
Task 15 Subtotal	**376**	**376**	**0**	**0**	**0**			
CONTRACT TOTAL	**13,882**	**9,572**	**3,778**	**532**	**212**			

GEWALT HAMILTON ASSOCIATES, INC.
CONSULTING ENGINEERS
625 Forest Edge Drive ■ Vernon Hills, IL 60061
847.478.9700 ■ GHA-Engineers.com

July 17, 2025

Mr. Joe Davenport, PE, PTOE
Traffic Engineer
GFT, Inc.
1475 Woodfield Rd, Suite 600
Schaumburg, IL 60173

Re: **Proposal for Traffic Data Collection Professional Services**
Lake County, IL
GHA Proposal No. 2025.D414

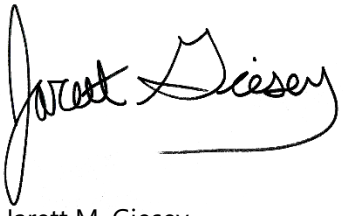
Dear Mr. Davenport:

Thank you for your consideration of Gewalt Hamilton Associates, Inc. (GHA) to provide Data Collection Services for the above-mentioned project.

This proposal is based on GHA's understanding of the project as per your recent request.

If our proposal is acceptable, please sign one copy and return it to our office. We are pleased to have the opportunity to make our services available to you and look forward to assisting you on this project.

Sincerely,
Gewalt Hamilton Associates, Inc.



Jarett M. Giesey
Data Collection Senior Project Manager/Service Lead
JGiesey@gha-engineers.com

Enc.: GHA Proposal No. 2025.D414

GEWALT HAMILTON ASSOCIATES, INC.
CONSULTING ENGINEERS
625 Forest Edge Drive ■ Vernon Hills, IL 60061
847.478.9700 ■ GHA-Engineers.com

Proposal for Professional Services
Traffic Data Collection
Lake County, IL
GHA Proposal No. 2025.D414

GFT, Inc. (Client), 1475 Woodfield Rd, Suite 600, Schaumburg, IL 60173, and Gewalt Hamilton Associates, Inc. (GHA), 625 Forest Edge Drive, Vernon Hills, IL 60061, agree and contract as follows:

I. Project Understanding

The Client is requesting twenty-nine (29) traffic counts in Lake County, IL.

II. Traffic Data Collection Services

GHA will provide the following services:

A. Safety Study

Location(s):

1. US-45 & West Gages Lake Road
2. West Gages Lake Road & North Wright Avenue
3. Gages Lake Rd & Tanguerary Dr
4. Gages Lake & Wooded Glen
5. Gages Lake Rd & Old Gages Lake Rd
6. Gages Lake Rd & Evergreen Rd
7. Gages Lake Rd & Royal Oak Ln
8. Gages Lake Rd & Greentree Rd
9. Gages Lake Rd & Mill Rd
10. Gages Lake Rd & Almond Rd
11. Gages Lake Rd & Pine Creek Trail
12. Gages Lake Rd & West Woodland School Driveway
13. Gages Lake Rd & East Woodland School Driveway
14. Gages Lake Rd & Gagewood Ln
15. Gages Lake Rd & Hunt Club Rd
16. Gages Lake Rd & St Paul the Apostle Driveway
17. Gages Lake Rd & Murifield Dr
18. Gages Lake Rd & Leonard Dr
19. Gages Lake Rd & Colby Rd
20. Gages Lake Rd & Hickory Haven Dr
21. Gages Lake Rd & IL-21

Collection Details

a. Typical Weekday (Tuesday, Wednesday and/or Thursday)
b. 72-hours at each location
c. 12AM-12AM (+3) CDT
d. Lights / Mediums / Articulated Trucks w/bicycles on roadway
    1. Classification Grouping includes Premium Rate Classification
    2. Bicycles and Pedestrians in Crosswalks are included.
    3. Bicycles on the Roadway are included.

Deliverable

a. Data will be processed with a normal processing turnaround time and will be shared with the Client as soon as it is available.

B. Turning Movement Count (TMC)

Location(s):

1. US-45 & West Gages Lake Road
2. West Gages Lake Road & North Wright Avenue
3. Gages Lake Rd & Tanguerary Dr
4. Gages Lake Rd & Old Gages Lake Rd
5. Gages Lake Rd & Almond Rd
6. Gages Lake Rd & Hunt Club Rd
7. Gages Lake Rd & St Paul the Apostle Driveway
8. Gages Lake Rd & IL-21

Collection Details

a. Sunday
b. 12-hours at each location
c. 6 AM - 6 PM CDT
d. Lights / Mediums / Articulated Trucks w/bicycles on roadway
    1. Classification Grouping includes Premium Rate Classification
    2. Bicycles and Pedestrians in Crosswalks are included.
    3. Bicycles on the Roadway are included.

Deliverable

a. Data will be processed with a normal processing turnaround time and will be shared with the Client as soon as it is available.

III. Project Schedule

GHA will schedule the work as soon as possible after written authorization to proceed.

IV. Services Not Included

Should additional services be required or expanded beyond those outlined in Section II: Traffic Data Collection Services of this Agreement, GHA will request written authorization prior to commencing the work and the Client will be billed on a time-and-materials (T&M) basis in accordance with the current GHA Professional Services Hourly Rate Guide.

V. Key Personnel

Mr. Jarett M. Giesey will serve as the Data Collection Senior Project Manager/Service Lead. Mr. AJ Mansfield will serve as the Data Collection Team Lead and Mr. Patrick M. Oster will serve as the Data Collection Processing Team Leader. The team will work with additional professional staff.

VI. Compensation for Services

Based upon the scope of services and understanding of the requested work, GHA proposes to complete the work as described above for a lump sum fee as outlined below:

	Item Description	Qty	Unit	Qty	Unit	Total	Unit	Fee	Unit	Fee
A.1	Complexity Level 2 Safety Study Video Only	18	ea	7.0	day	126.0	day	$215.00	day	$27,090.00
A.2	Complexity Level 3 Safety Study Video Only	3	ea	7.0	day	21.0	day	$260.00	day	$5,460.00
A.3	Safety Study with 72 hr TMC Included	21	ea	1.0	ea	21.0	ea	$5,000.00	ea	$105,000.00
								Sub-total Professional Service Fees (A):		$137,550.00

	Item Description	Qty	Unit	Qty	Unit	Total	Unit	Fee	Unit	Fee
B.1	TMC Local	8	ea	12.0	hr	96.0	hr	$80.00	hr	$7,680.00
B.2	Premium Classification - TMC	8	ea	12.0	hr	96.0	hr	$4.00	hr	$384.00
B.3	Crosswalks (pedestrians & bicycles)	8	ea	12.0	hr	96.0	hr	$4.00	hr	$384.00
B.4	~~Complexity Level 2 Safety Study Video Only Included abov~~	~~8~~	~~ea~~	~~7.0~~	~~day~~	~~56.0~~	~~day~~	~~$215.00~~	~~day~~	~~$12,040.00~~
B.5	Complexity Level 2 Safety Study Video Only Included abov	8	ea	7.0	day	56.0	day	($215.00)	day	($12,040.00)
B.6	~~Safety Study Cost Included above~~	~~8~~	~~ea~~	~~1.0~~	~~ea~~	~~8.0~~	~~ea~~	~~$5,000.00~~	~~ea~~	~~$40,000.00~~
B.7	Safety Study Cost Included above credit	8	ea	1.0	ea	8.0	ea	($5,000.00)	ea	($40,000.00)
								Sub-total Professional Service Fees (B):		$8,448.00
								Total for Professional Service Fees:		**$145,998.00**

The proposed lump sum fee includes all necessary personnel, equipment, deployment, and processing to complete the data collection as described. Reimbursable expenses, including items such as photos, postage, messenger services, printing, truck usage and/or mileage, etc., are included in the lump sum fee.

GHA assumes the study will be completed within one deployment. If additional deployments are requested, an adjustment to the fee may be necessary. GHA will provide the Client with a written estimate of any additional fees prior to commencing such work.

Recounts will be completed at no charge to the Client for equipment failures.

Cancellations shall be made within 24-hours of the scheduled deployment to avoid fees.

The Client shall be responsible for delayed or cancelled work that is out of GHA's control such as construction, road closures, accidents, vandalism, or theft of equipment.

The Client shall be responsible for obtaining all required permits and notifying the applicable regulatory agencies prior to the scheduled deployment.

An invoice will be submitted upon completion of the study and will detail charges made against the project and services provided.

VII. General Conditions

The delineated services provided by Gewalt Hamilton Associates, Inc., (GHA) under this Agreement will be performed as reasonably required in accordance with the generally accepted standards for civil engineering and surveying services as reflected in the contract for this project at the time when and the place where the services are performed.

Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the Client or GHA. GHA's services under this Agreement are being performed solely for the Client's benefit, and no other party or entity shall have any claim against GHA because of this Agreement or the performance or nonperformance of services hereunder. In no event shall GHA be liable for any loss of profit or any consequential damages.

The Client and GHA agree that all disputes between them arising out of or relating to this Agreement or the Project shall be submitted to nonbinding mediation in Chicago, Illinois unless the parties mutually agree otherwise.

This Agreement, including all subparts and Attachment A, which is attached hereto and incorporated herein as the General Provisions of this Agreement, constitute the entire integrated agreement between the parties which may not be modified without all parties consenting thereto in writing.

VIII. Authorization of Services

By signing below, you indicate your acceptance of this Agreement in its entirety.

Gewalt Hamilton Associates, Inc.	GFT, Inc.
Jarett M. Giesey	Joe Davenport, PE, PTOE
Data Collection Senior Project Manager/Service Lead	Traffic Engineer

Enc.: https://datalink.miovision.com/data_requests/52853?
Attachment A
GHA Hourly Rates

GEWALT HAMILTON ASSOCIATES, INC.
An Employee-Owned Company

GHA PROFESSIONAL SERVICES HOURLY RATE GUIDE:
2025

The following rates will remain in effect until December 31, 2025, at which time they are subject to anannual increase:

PRINCIPAL	$249.00
SENIOR PROJECT MANAGER II	$240.00
SENIOR PROJECT MANAGER I	$215.00
PROJECT MANAGER II	$190.00
PROJECT MANAGER I	$168.00

ENGINEER VI	$198.00
ENGINEER V	$184.00
ENGINEER IV	$171.00
ENGINEER III	$161.00
ENGINEER II	$146.00
ENGINEER I	$138.00

LAND SURVEYOR IV	$203.00
LAND SURVEYOR III	$167.00
LAND SURVEYOR II	$148.00
LAND SURVEYOR I	$130.00

GIS TECHNICIAN IV	$180.00
GIS TECHNICIAN III	$155.00
GIS TECHNICIAN II	$125.00
GIS TECHNICIAN I	$106.00

ENVIRONMENTAL CONSULTANT II	$143.00
ENVIRONMENTAL CONSULTANT I	$132.00

ENGINEERING TECHNICIAN V	$189.00
ENGINEERING TECHNICIAN IV	$159.00
ENGINEERING TECHNICIAN III	$145.00
ENGINEERING TECHNICIAN II	$123.00
ENGINEERING TECHNICIAN I	$92.00

LANDSCAPE ARCHITECT	$171.00

DATA MANAGER	$152.00
DATA TECHNICIAN III	$145.00
DATA TECHNICIAN II	$130.00
DATA TECHNICIAN I	$100.00

CAD MANAGER	$212.00
CAD TECHNICIAN III	$146.00
CAD TECHNICIAN II	$128.00
CAD TECHNICIAN I	$100.00

ADMINISTRATIVE II	$109.00
ADMINISTRATIVE I	$90.00

ACCOUNTING MANAGER	$184.00
ACCOUNTING II	$140.00
ACCOUNTING I	$125.00

**Services provided under this Agreement will be billed according to the rates in effect at the timeservices are rendered.*

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake County Division of Transport	GFT Infrastructure, Inc.	Lake	24-00999-08-WR

EXHIBIT B
PROJECT SCHEDULE

See attached schedule.

Project Schedule

Gages Lake Road Phase I Study

Section: 24-00999-08-WR

US 45 to IL 21

	2025												2026												2027												2028											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Overall Project November 1, 2025 to May 4, 2028																																															
County Board: October 14, 2025																																															
Notice to Proceed: October 21, 2025																																															
Kick-Off Meeting: October 28, 2025																																															
1.0 Data Collection and Review																																															
2.0 Topographic Survey																																															
Gound-based scanner/LIDAR																																															
Utility Survey																																															
3.0 Right-of-Way Verification																																															
Field Work / Establish EX ROW																																															
Title Commitments / EX ROW Update (For preferred alternative)																																															
4.0 Utility Coordination and Subsurface Utility Engineering (SUE Level B)																																															
5.0 Traffic and Safety Analysis																																															
Data Collection																																															
Synchro, Simtraffic, and Sidra Analysis																																															
Crash Data Analysis																																															
Non-Motorized Crossings																																															
Intersection Design Studies																																															
6.0 Alternate Analysis																																															
Roadway Widening Geometrics - 2 to 3 Lanes																																															
Intersection Geometrics																																															
Bike Path Connections																																															
Alternatives Analysis Matrix																																															
LCDOT Review and Select Preferred Alternative																																															
Preliminary Preferred Alternative Design																																															
LCDOT Review of Preliminary Preferred Alternative Design																																															
Finalize Preferred Alternative																																															
7.0 Environmental Studies																																															
Wetland Delineations																																															
PESA																																															
PESA Update																																															
Tree Survey (After Preferred Alternative is Selected)																																															
ESR, WIE, and Natural Based Solutions																																															
8.0 Geotechnical Studies																																															
Conduct Soil Borings / Pavement Cores																																															
Prepare Roadway Geotechnical Report																																															
Prepare Structural Geotechnical Report (If Necessary Based on Preferred Alternative)																																															

Project Schedule

Gages Lake Road Phase I Study

Section: 24-00999-08-WR

US 45 to IL 21

	[2025]												[2026]												[2027]												[2028]											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
9.0 Structural Studies																																															
Culvert Tech Memo																																															
Retaining Wall Type Feasibility Study																																															
Retaining Wall Tech Memo (If Walls Required for Preferred Alternative)																																															
10.0 Drainage Studies																																															
Location Drainage Study (Existing)																																															
Location Drainage Study (Proposed After Preferred Alternative is Selected)																																															
Hydraulic Water Studies (Existing)																																															
Hydraulic Water Studies (Proposed After Preferred Alternative is Selected)																																															
11.0 Public Involvement and Stakeholder Coordination																																															
Kick-Off Meeting																																															
Public Meeting #1: Introduce Project: May 27, 2026																																															
Public Meeting #2: Present Alternative Analysis																																															
Public Meeting #3: Present Preferred Alternative																																															
12.0 Project Development Report																																															
Preliminary PDR																																															
LCDOT Review																																															
Final PDR Submittal May 1, 2026																																															
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
	[2025]												[2026]												[2027]												[2028]											

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake County Division of Transport	GFT Infrastructure, Inc.	Lake	24-00999-08-WR

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?	☐	☐
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?	☐	☐
3	Was the scope of services for this project clearly defined?	☐	☐
4	Was public notice given for this project?	☐	☐
5	Do the written QBS policies and procedures cover conflicts of interest?	☐	☐
6	Do the written QBS policies and procedures use covered methods of verification for suspension and debarment?	☐	☐
7	Do the written QBS policies and procedures discuss the methods of evaluation?	☐	☐

Project Criteria	Weighting

8	Do the written QBS policies and procedures discuss the method of selection?	☐	☐

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?	☐	☐
10	Were negotiations for this project performed in accordance with federal requirements.	☐	☐
11	Were acceptable costs for this project verified?	☐	☐
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?	☐	☐
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)?	☐	☐
14	QBS according to State requirements used?	☐	☐
15	Existing relationship used in lieu of QBS process?	☐	☐
16	LPA is a home rule community (Exempt from QBS).	☐	☐

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake County Division of Transportation	GFT Infrastructure, Inc.	Lake	24-00999-08-WR

EXHIBIT D
COST ESTIMATE OF CONSULTANT SERVICES

Illinois Department of Transportation

EXHIBIT D

COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

FIXED RAISE

Local Public Agency	County	Section Number
Lake County Division of Transportation	Lake	24-00999-08-WR

Prime Consultant (Firm) Name	Prepared By	Date
GFT Infrastructure, Inc.	Jesse Vuorenmaa	9/17/2025

Consultant / Subconsultant Name	Job Number
GFT Infrastructure, Inc.	P401240182

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

Remarks

Gages Lake Road Improvements - Phase I Study

PAYROLL ESCALATION TABLE

CONTRACT TERM	**30**	**MONTHS**	**OVERHEAD RATE**	**140.84%**
START DATE	**11/1/2025**		**COMPLEXITY FACTOR**	**0**
RAISE DATE	**4/4/2026**		**% OF RAISE**	**3.00%**
END DATE	4/30/2028			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	11/1/2025	4/4/2026	5	16.67%
1	4/5/2026	4/4/2027	12	41.20%
2	4/5/2027	4/4/2028	12	42.44%
3	4/5/2028	5/4/2028	1	3.64%

The total escalation = 3.95%

Local Public Agency	County	Section Number
Lake County Division of Transportation	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
GFT Infrastructure, Inc.	P401240182

PAYROLL RATES

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

MAXIMUM PAYROLL RATE	**90.00**
ESCALATION FACTOR	**3.95%**

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Engineer I	$44.40	$46.15
Engineer II	$50.00	$51.97
Engineer III	$56.37	$58.59
Engineer IV	$68.04	$70.72
Engineer V	$84.51	$87.84
Engineer VI	$85.32	$88.69
Engineer VII	$84.46	$87.79
Engineer VIII	$85.67	$89.05
Arch/Eng Technician II	$39.80	$41.37
Project Manager Assistant	$40.90	$42.51

Local Public Agency	County	Section Number
Lake County Division of Transportation	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
GFT Infrastructure, Inc.	P401240182

SUBCONSULTANTS

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

NAME	Direct Labor Total	Contribution to Prime Consultant
Hampton, Lenzini and Renwick, Inc.	156,241.00	15,624.10
American Surveying & Engineering, LTD	12,186.00	1,218.60
Wang Engineering, Inc., a Terracon Company	26,044.00	2,604.40

Total **194,471.00** **19,447.10**

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

Local Public Agency	County	Section Number
Lake County Division of Transportation	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
GFT Infrastructure, Inc.	P401240182

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	5660	$0.70	$3,962.00
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)	10	$50.00	$500.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)			$0.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)	1500	$1.50	$2,250.00
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)	12	$1,375.00	$16,500.00
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)	2	$2,500.00	$5,000.00
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
Utliity 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 Counts	Actual Cost	1	$145,998.00	$145,998.00
Streetlight Traffic Information	Actual Cost	1	$15,000.00	$15,000.00
Postage for Public Meetings		1500	$0.78	$1,170.00
Translation Services		3	$4,000.00	$12,000.00
			TOTAL DIRECT COSTS:	**$204,380.00**

Local Public Agency
Lake County Division of Transportation

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
GFT Infrastructure, Inc.

Job Number
P401240182

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE 140.84%

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
1 - Data Collection & Review		280	15,327	21,587	5,058		41,972	1.30%
2 - Topographic Survey		116	7,463	10,510	2,463		20,436	0.63%
3 - Right-of-Way Verification		80	5,624	7,921	1,856		15,401	0.48%
4 - Utility Coordination & SUE		60	3,989	5,618	1,316		10,923	0.34%
5 - Traffic & Safety Analysis	160,998	1440	82,389	116,036	27,188		225,613	6.97%
6 - Alternate Analysis	2,750	2748	147,064	207,126	48,531		402,721	12.44%
7 - Environmental Studies		160	9,326	13,135	3,078		25,539	0.79%
8 - Geotechnical Studies		32	2,100	2,957	693		5,750	0.18%
9 - Structural Studies		276	16,340	23,013	5,392		44,745	1.38%
10 - Drainage Studies		1272	73,617	103,682	24,294		201,593	6.23%
11 - Public Involvement	36,670	1940	106,022	149,321	34,987		290,330	8.97%
12 - Project Development Report		240	15,505	21,838	5,117		42,460	1.31%
13 - Agency Coord & Meetings	3,962	192	13,758	19,377	4,540		37,675	1.16%
14 - Project Management & Admin		360	25,475	35,879	8,407		69,761	2.15%
15 - QC/QA		376	31,084	43,778	10,258		85,120	2.63%
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
HLR			-	-	-	821,488	821,488	25.37%
American Surveying & Eng., LTD			-	-	-	453,579	453,579	14.01%
Wang Eng., Inc. a Terracon Co.			-	-	-	220,999	220,999	6.83%
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
Subconsultant DL							$17,351.93	0.54%
Direct Costs Total ===>	$204,380.00						**$204,380.00**	6.31%
TOTALS		9572	555,083	781,778	183,178	1,496,066	3,237,837	100.00%

1,336,861

The subconsultant fee has been adjusted due to 15% fixed

Local Public Agency
Lake County Division of Transportation

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
GFT Infrastructure, Inc.

Job Number
P401240182

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			1 - Data Collection & Review			2 - Topographic Survey			3 - Right-of-Way Verification			4 - Utility Coordination & SUE			5 - Traffic & Safety 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
Engineer I	46.15	2,640.0	27.58%	12.73	100	35.71%	16.48										520	36.11%	16.67
Engineer II	51.97	2,932.0	30.63%	15.92	100	35.71%	18.56	76	65.52%	34.05	20	25.00%	12.99	36	60.00%	31.18	420	29.17%	15.16
Engineer III	58.59	1,396.0	14.58%	8.55	40	14.29%	8.37										160	11.11%	6.51
Engineer IV	70.72	1,052.0	10.99%	7.77	20	7.14%	5.05				40	50.00%	35.36				160	11.11%	7.86
Engineer V	87.84	552.0	5.77%	5.07	12	4.29%	3.76	20	17.24%	15.15							72	5.00%	4.39
Engineer VI	88.69	272.0	2.84%	2.52										12	20.00%	17.74	72	5.00%	4.43
Engineer VII	87.79	360.0	3.76%	3.30	8	2.86%	2.51	20	17.24%	15.14	20	25.00%	21.95	12	20.00%	17.56	36	2.50%	2.19
Engineer VIII	89.05	108.0	1.13%	1.00															
Arch/Eng Technician II	41.37	200.0	2.09%	0.86															
Project Manager Assistant	42.51	60.0	0.63%	0.27															
		0.0																	
		0.0																	
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		0.0																	
TOTALS		9572.0	100%	$57.99	280.0	100.00%	$54.74	116.0	100%	$64.33	80.0	100%	$70.30	60.0	100%	$66.48	1440.0	100%	$57.21

Local Public Agency
Lake County Division of Transportation

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
GFT Infrastructure, Inc.

Job Number
P401240182

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	6 - Alternate Analysis			7 - Environmental Studies			8 - Geotechnical Studies			9 - Structural Studies			10 - Drainage Studies			11 - Public Involvement		
		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 I	46.15	1040	37.85%	17.47	40	25.00%	11.54							300	23.58%	10.88	600	30.93%	14.27
Engineer II	51.97	1040	37.85%	19.67	60	37.50%	19.49	16	50.00%	25.99	120	43.48%	22.60	320	25.16%	13.07	600	30.93%	16.07
Engineer III	58.59	272	9.90%	5.80	20	12.50%	7.32				100	36.23%	21.23	320	25.16%	14.74	436	22.47%	13.17
Engineer IV	70.72	120	4.37%	3.09	20	12.50%	8.84	8	25.00%	17.68	40	14.49%	10.25	120	9.43%	6.67	140	7.22%	5.10
Engineer V	87.84	100	3.64%	3.20										60	4.72%	4.14			
Engineer VI	88.69	32	1.16%	1.03	16	10.00%	8.87							60	4.72%	4.18	80	4.12%	3.66
Engineer VII	87.79	32	1.16%	1.02				8	25.00%	21.95	8	2.90%	2.54	16	1.26%	1.10	12	0.62%	0.54
Engineer VIII	89.05	32	1.16%	1.04	4	2.50%	2.23				8	2.90%	2.58	16	1.26%	1.12	12	0.62%	0.55
Arch/Eng Technician II	41.37	80	2.91%	1.20										60	4.72%	1.95	60	3.09%	1.28
Project Manager Assistant	42.51																		
TOTALS		2748.0	100%	$53.52	160.0	100%	$58.29	32.0	100%	$65.62	276.0	100%	$59.20	1272.0	100%	$57.88	1940.0	100%	$54.65

Local Public Agency
Lake County Division of Transportation

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
GFT Infrastructure, Inc.

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	12 - Project Development Report			13 - Agency Coord & Meetings			14 - Project Management & Admin			15 - QC/QA								
		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 I	46.15	40	16.67%	7.69															
Engineer II	51.97	60	25.00%	12.99	48	25.00%	12.99				16	4.26%	2.21						
Engineer III	58.59				48	25.00%	14.65												
Engineer IV	70.72	104	43.33%	30.65				200	55.56%	39.29	80	21.28%	15.05						
Engineer V	87.84				48	25.00%	21.96				240	63.83%	56.07						
Engineer VI	88.69																		
Engineer VII	87.79	16	6.67%	5.85	32	16.67%	14.63	100	27.78%	24.39	40	10.64%	9.34						
Engineer VIII	89.05	20	8.33%	7.42	16	8.33%	7.42												
Arch/Eng Technician II	41.37																		
Project Manager Assistant	42.51							60	16.67%	7.09									
TOTALS		240.0	100%	$64.61	192.0	100%	$71.66	360.0	100%	$70.76	376.0	100%	$82.67	0.0	0%	$0.00	0.0	0%	$0.00

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake County Division of Transportation	GFT Infrastructure, Inc.	Lake	24-00999-08-WR

EXHIBIT E
SUBCONSULTANT SCOPE & COST
Hampton, Lenzini and Renwick, Inc.

Hampton, Lenzini and Renwick, Inc.
Civil Engineers • Structural Engineers • Land Surveyors • Environmental Specialists
www.hlrengineering.com

Gages Lake Corridor Environmental and Survey Scope

The following scope provides additional detailed Tasks in reference to GFT's Exhibit A.

Topographic and Land Survey

Limits along the following route - right-of-way to right-of-way plus 30' on each side, Gages Lake Road from Lake Street (US-45) to Milwaukee Avenue (IL-21); Almond Road from its intersection with Gages Lake Road south 820 feet and north 1100 feet, right-of-way to right-of-way plus 10' on each side; Hunt Club Road from 1000 feet North and South of its intersection with Gages Lake Road, right-of-way to right-of-way plus 10' on each side; Lake Street (US-45) from the north side of Lake Street intersection with Washington St South to the South side of the Brae Loch Road intersection; a 100' strip starting at the intersection of Lake Street (US-45) and Gages Lake Road going West for 1350 feet to the existing walking/biking path; Riverside Drive starting at Gages Lake Road going North 1200 feet to the Lake Carina Forest Preserve parking lot entrance, right-of-way to right-of-way plus 10' on each side.

Task 2 Survey Services

Based on our understanding of the project and the needs of the client the following services are included in the scope of service: Phase I Topographic Survey.

Task 2.A Control Points

Control will be horizontally located with GPS on NAD 83 IL East State plane coordinates. A digital level loop will be completed through the control; elevations will be based on NAVD 88 datum holding one of the GPS control points.

Task 2.B Topographic Survey

Topo of the area will be completed with a ground-based scanner/LIDAR and features will be extracted on a 50-ft cross section interval, perpendicular to the street. Hard surface items such as curbs, road centerline, sidewalks, trees, signs, driveways, overhead lines and building faces will be collected and defined in the LIDAR survey. This scope cannot be performed when snow is on the ground. Drone-based LIDAR survey will also be completed, (+/- 1.5-inch vertical accuracy) to fill in data outside of the right-of-way and in heavily vegetated areas like the 1,350-foot section west of Gages Lake Road and Lake Street. Additional conventional work may still be needed in highly vegetated areas during leaf-on periods.

Task 2.C - Culverts and Utilities

Visible utilities and culverts will be located within the project limits. Utility location will consist of ASCE standard 38-02 Level QL-C Data. This utility survey will collect invert directions and elevations on storm sewer, water main, and sanitary sewer structures within the project area and one structure away, allowing pipe elevations to be interpolated within the project location. If the one structure out is located on private property, contact information and access will be coordinated and provided by the client. Point numbers for structures will be painted, pictures / 360 videos will be taken of each structure. The utility locate shots will also be used as verification points for the ground and aerial based LIDAR scan data. Manhole lids that are not able to be opened with a manhole pick, and structures/culverts full of debris or clogged will be reported to the client. It will be the client's responsibility to coordinate with the utility provider for opening and or cleaning before data can be collected. Individual homeowner notification is not part of this scope. Traffic control, if deemed necessary, is not part of this scope and will be provided by the LPA. JULIE coordination is not part of this scope.

Task 2.D Data deliverables

Features extraction linework on 50-foot cross section intervals perpendicular to the street, and surface file will be delivered in a .dgn format utilizing IDOT layers and codes. Point cloud data will be delivered in a .las file. 1.5" resolution aerial photo will be delivered in a .tiff format.

Task 2.E Hydraulic Survey

Cross sections will be collected perpendicular to the stream. Cross sections will include CL of stream, toe, edge of water, top of banks and ground shots. Other data that will be collected: diameter of pipe, material, invert elevations, headwall shots, lowest point in stream. Conduct hydraulic survey for the following waterways:

1. Unnamed tributary to the Des Plaines River west of Hunt Club Road, hydraulic survey which will consist of the following:
   - Culvert Openings:
     - Diameter and/or span and rise at the upstream and downstream faces
     - Inverts and flowline elevations (if different than the invert)
     - Survey shots along any headwalls to accurately document shape
   - Foot Bridge Opening:
     - Shape/configuration at the upstream and downstream faces
     - Inverts and flowline elevations (if different than the invert)
   - Roadway profile:
     - A profile shall be taken along the roadway centerline for a minimum of 500 feet in both directions of each culvert/bridge crossing.
   - Cross Sections (a total of 14):
     - 1000 feet upstream and downstream of the Gages Lake Road culvert (2)
     - 200 feet upstream and downstream of the Gages Lake Road culvert (2)
     - 50 feet upstream and downstream of the confluence south of the culvert under North Summersfield Drive and the private foot bridge (4)
     - At upstream and downstream face of the culverts/foot bridge (6)
     - Cross sections should be perpendicular to the stream flow and extend horizontally 150 feet in each direction from the centerline of the stream. The model will be supplemented with 1foot contour from Lake County where required.
   - Waterway/Stream Profile:
     - A stream profile shall be taken along the lowest point in the stream every 100 feet upstream and downstream of the culvert crossing through the limits of the cross section survey.

2. Belvidere Road Tributary to the Des Plaines River east of Leonard Drive, hydraulic survey which will consist of the following:
   - Culvert Openings:
     - Diameter and/or span and rise at the upstream and downstream faces
     - Inverts and flowline elevations (if different than the invert)
     - Survey shots along any headwalls to accurately document shape
   - Roadway profile:
     - A profile shall be taken along the roadway centerline for a minimum of 500 feet in both directions of each culvert crossing.
   - Cross Sections (a total of 10):
     - 1000 feet upstream and downstream of the Gages Lake Road culvert (2)
     - 200 feet upstream and downstream of the Gages Lake Road culvert (2)
     - At upstream and downstream face of the culverts (6)

- Cross sections should be perpendicular to the stream flow and extend horizontally 150 feet in each direction from the centerline of the stream. The model will be supplemented with 1foot contour from Lake County where required.

o Waterway/Stream Profile:

- A stream profile shall be taken along the lowest point in the stream every 100 feet upstream and downstream of the culvert crossing through the limits of the cross section survey.

Task 3.0 Right-of-Way Verification

Task 3.A Existing ROW and adjacent property line determination

The existing right-of-way will be established using monumented property corners, section corners, recorded subdivision plats, plats of dedication, and other existing documentation Lake County DOT provides. This work will only show existing easements shown or contained in the documents provided. No other record searches for easements will be completed during this phase. Costs such as the cost of documents from the recorder's office will be billed as a direct cost. The existing right-of-way and the centerline of right-of-way will be determined by an Illinois Professional Land Surveyor. The deliverable for this task will be a .dgn file and an Existing Plat of Highways. Existing pavement centerlines will be developed by GFT.

Title commitments with supporting documents will be ordered as directed for any parcels determined to need an acquisition, or for those parcels with underlying interests to the centerline. Costs for title commitments and supporting documents will be billed as a direct cost.

Task 3.B/C Encroachment Report

Data from the drone and/or ground-based LIDAR survey will be utilized with the existing right-of-way file to determine right-of-way encroachments along the project corridor, including type, location, encroachment distance, and photos as necessary. This encroachment determination will be completed by an Illinois Professional Land Surveyor. All zoning setbacks and ordinances pertaining to this task will be provided by the client, Lake County DOT. The deliverables for this task will be a .pdf encroachment drawing with a photo to be provided to the property owner for each encroachment, along with a summary table of all encroachment details. Letters to the property owners are not included in this scope.

Task 7 Environmental Studies

We understand that there will be some alternate alignments to consider before a preferred alignment is decided on. We can complete an environmental desktop screening to determine potential wetlands and special waste for each alternative to assist in the selection of the preferred alignment. A wetland delineation and Preliminary Environmental Site Assessment (PESA) will be required for this project and the scope for these two tasks is detailed below. We have included a tree survey and memorandum scope below as well but recommend waiting to complete the tree survey until the preferred alignment is decided.

Task 7.A Desktop Screening

HLR will conduct an environmental desktop screening to determine potential wetland impacts and special waste to aid in selection of the preferred alternative. This will also be applicable to the bike path studies along IL 21, US 45, and west to Lancer Lane within the College of Lake County campus.

Task 7.B Wetland Delineation and Report

HLR will conduct a map review of the project. The following maps and documents will be reviewed prior to conducting the field investigation:

- U.S. Geological Survey Topographic Maps
- National Wetlands Inventory Maps
- Lake County Wetland and Advanced Identification (ADID) Maps
- USDA Soil Survey
- Hydric Soils of the United States
- Regulatory Flood Map

From a cursory map review, it appears that there are twenty-two (22) wetlands within the project area. The National Wetlands Inventory map shows two riverine wetlands, three wetlands, and four freshwater ponds along the project corridor. One 100-year floodplain associated with the Belvidere Road Tributary crosses Gages Lake Road east of Leonard Drive within the project area.

HLR will perform a formal wetland delineation of all potential wetlands identified within the proposed project area. The wetland delineation will be conducted to 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 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 as well as the requirements of the Lake County Stormwater Management Commission (LCSMC) by identifying the type, functions, and boundary of the involved wetlands.

"Wetlands" are defined by the U.S. Army Corps of Engineers (USACE) for jurisdictional purposes as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 323.3(c)).

The field investigation will be conducted by our environmental personnel who are experienced in Federal methods for conducting wetland delineations. Our staff will classify and define hydric soils, hydrophytic vegetation, and evidence of hydrology to determine if wetlands are present. The wetland perimeter (s) will be staked and surveyed. Wetland boundary stake locations will be surveyed using a handheld Trimble R1 GNSS receiver.

Wetlands found will be classified according to type using the "Classification of Wetlands and Deep Water Habitats of the United States" by Cowardin. Wetland boundaries will be defined in accordance with the Corps of Engineers Wetlands Delineation Manual: Midwest Region. This includes a soil investigation to determine the presence or absence of hydric soils and an analysis of the dominant plant species. Field observations will be made on any evidence indicating the hydrology of the area and on water sources that are supporting these wetlands. Functions of these wetlands will be evaluated from field observations.

A wetland delineation report will be prepared summarizing the findings of the fieldwork. Included in the report will be the required wetland delineation data sheets, floristic quality assessments, and photographs that summarize the findings of the field investigation as well as figures that detail the maps reviewed and current wetland boundaries of the site.

This task will include preliminary jurisdictional determination in the field with Lake County SMC staff potentially followed by a boundary verification. LCDOT will be responsible for paying the boundary verification fees to Lake County SMC, which are not anticipated to exceed $4,500.

Task 7.C Preliminary Environmental Site Assessment

HLR will complete the PESA for all properties along Gages Lake Road, Lake Street, Almond Road, Hunt Club Road, and Milwaukee Avenue. This scope includes completing a Preliminary Environmental Site Assessment. The PESA will be prepared using historical and geological information. The specific methods used to conduct the

assessment are contained in 1) ASTM Standards E1527-13, 2) A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Projects (Erdmann et al., 2012), 3) Special Wastes Procedures for Local Highway Improvements (IDOT Local Roads Manual, July 22, 2004), and 4) "IDOT Bureau of Design and Environment Manual (BDE Manual), Section 27-3.03 (b), October 2015). The PESA will include a database search, review of historical records, an on-site evaluation, and review of other project conditions that may give us insight into the existing environmental conditions along the route.

Within a half mile of the project area, there are six Leaking Underground Storage Tank (LUST) sites, one Site Remediation Program (SRP) listings, 18 Potential Contamination Sites, and seven database entries of Federal RCRA sites. No oil or gas pipelines are mapped within a half mile of the project area.

Once the review has been completed, a written report will be completed and submitted as documentation to the on-site analysis. This report will accompany various site photographs, maps, and the above referenced documentation, which will be utilized to assist the project evaluation and any applicable recommendations.

Task 7.D Preliminary Environmental Site Assessment Update (if needed)

The Preliminary Environmental Site Assessment (PESA) is valid for a period of 6 months; there we anticipate that we will need to update the initial PESA completed for this project. This will include ordering the environmental database record, conducting a site visit and completing a written PESA update as an addendum to the original report.

Task 7.E Tree Survey and Memorandum

A Certified Arborist will conduct a tree survey of all trees 3 inches and greater within the project limits. All trees will be tagged and surveyed. We will identify all trees by type, diameter, health and structure. During the tree survey we will evaluate potential bat habitat. The findings of the tree survey will be summarized in a tree memorandum.

Task 7.F Natural Based Solutions

There are opportunities to incorporate natural based solutions along this corridor at the County's discretion. We propose to provide up to three locations for natural based solutions and/or green infrastructure BMPs along the corridor, such as adjacent to the schools, forest preserves or detention areas for the project. The pedestrian and non-motorized vehicle paths along the project will provide access to these sites. Potential green infrastructure includes bioswales, rain gardens, bio infiltration basins, naturalized detention basins and constructed wetlands. These BMPs can be designed to fit available space and be as small or as large as the areas allow.

During the field site assessments, as well as discussions with GFT staff, we recognized several priority issues prevalent throughout the sites.

1. Aesthetics: High visibility areas are a priority, intended to be excellent examples of naturalized ecosystems for the public, very well kept and aesthetically appealing.
2. Public Education: Signage could be present at most sites, discussing the importance and function of the naturalized areas.
3. Economic Efficiency: LCDOT is dedicated to naturalizing as many sites as possible with the available resources.
4. LCDOT Identity: Similar features are utilized throughout the county roadway system.

We will be emphasizing these additional priorities in a comprehensive plan, which will be implemented as much as feasible in each BMP. The BMPs will intercept and hold the stormwater runoff from each drainage area. The basins will have amended soils to promote infiltration and healthy root growth for the native plants. BMPs will have

deep rooted, perennial, salt tolerant plants, via seed or live plugs that are adapted to fluctuating hydrologic conditions. Green infrastructure BMPs have the following benefits:

- Reduce runoff volume
- Filter pollutants, through soil particles (which trap pollutants) and plant material (which take up pollutants)
- Recharge groundwater
- Reduce stormwater temperature impacts
- Enhance aesthetics
- Provide habitat

High traffic and high profile BMP areas will be seeded or planted with live native plants to promote aesthetic appeal of the natural area. Strategic areas will be seeded with the project-wide, aggressive custom seed mix to combat invasive species, enhance the aesthetics of the site, and promote diversity of the ecosystem. In addition to native grasses, flowering species will be added to the seed mix, such as grey-headed coneflower (*Ratibida pinnata*), wild bergamot (*Monarda fistulosa*), purple coneflower (*Echinacea purpurea*) and black-eyed Susan (*Rudbeckia hirta*). These forbaceous plants are aggressive flowering natives that have very long blooming periods, making them an attractive and constructive addition to the ecosystem.

Several potential BMP sites are high traffic, high visibility area and very compact. These factors allow us to focus our efforts in ways that are not possible in larger naturalized areas. The high traffic and visibility of these areas also allow for unique education opportunities for adjacent education facilities and residents that should be utilized to the fullest extent possible. Our planting plan is designed to maximize the benefits and opportunities afforded to the sites within these distinctive criteria.

We are proposing to use the naturalized areas as an education tool, by showcasing individual species to educate the public. Intermixing these showcase areas within the naturalized ecosystem of native plants will allow users of the parks to identify the native species in their natural habitat. The showcase species will be labeled with UV stable photo sensitive aluminum engraved name plates, including common and Latin names and will be planted in groupings together to be prominent in the naturalized landscape. Live plantings will be used for these areas, and the species will include plants within the project- wide planting plan.

The showcase species should be located in the highest traffic sites within each project alternative.

Education through public involvement is a core part of our design process. We have had success with public involvement on other larger scale projects and we would like to implement similar techniques for the Gages Lake Corridor project. We can provide social media sites updates and educational information for release on LCDOT's social media. We would be able to supply educational material for the LCDOT's website.

We have utilized each of these public involvement techniques successfully and efficiently on other projects. Much of the work to implement these techniques is already being conducted under other portions of the scope of services, including assessment, monitoring reports, enhancements, etc., so the additional costs are limited.

Task 7.H Wetland Impact Evaluation Review

HLR will review the wetland impact exhibit and WIE form provided by GFT as required by the ESR.

Task 14 Coordination and Project Administration

This will include coordination with GFT and project administration necessary for the project.

Illinois Department of Transportation

EXHIBIT D

COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

FIXED RAISE

Local Public Agency	County	Section Number
Lake County	Lake	24-00999-08-WR

Prime Consultant (Firm) Name	Prepared By	Date
GFT	Austin Ridgely	9/17/2025

Consultant / Subconsultant Name	Job Number
Hampton, Lenzini and Renwick, Inc.	

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

Remarks

Environmental and survey work for Gages Lake Road Corridor Improvements

PAYROLL ESCALATION TABLE

CONTRACT TERM	**30**	**MONTHS**	**OVERHEAD RATE**	**199.06%**
START DATE	**11/1/2025**		**COMPLEXITY FACTOR**	**0**
RAISE DATE	**1/1/2026**		**% OF RAISE**	**3.00%**
END DATE	4/30/2028			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	11/1/2025	1/1/2026	2	6.67%
1	1/2/2026	1/1/2027	12	41.20%
2	1/2/2027	1/1/2028	12	42.44%
3	1/2/2028	5/1/2028	4	14.57%

The total escalation = 4.87%

Local Public Agency	County	Section Number
Lake County	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
Hampton, Lenzini and Renwick, Inc.	

PAYROLL RATES

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

MAXIMUM PAYROLL RATE	**90.00**
ESCALATION FACTOR	**4.87%**

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Administration 1	$31.15	$32.67
Administration 2	$54.17	$56.81
Engineer 1	$35.83	$37.58
Engineer 2	$38.05	$39.90
Engineer 3	$44.42	$46.58
Engineer 4	$59.33	$62.22
Engineer 5	$65.67	$68.87
Engineer 6	$71.50	$74.98
Environmental 1	$27.00	$28.32
Environmental 2	$41.20	$43.21
Environmental 3	$58.50	$61.35
Intern	$20.00	$20.97
Land Acquisition	$52.67	$55.24
Principal	$83.13	$87.18
Structural 1	$64.00	$67.12
Structural 2	$79.50	$83.37
Survey 1	$31.38	$32.91
Survey 2	$57.00	$59.78
Technician 1	$31.83	$33.38
Technician 2	$39.83	$41.77
Technician 3	$53.38	$55.98

Local Public Agency	County	Section Number
Lake County	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
Hampton, Lenzini and Renwick, Inc.	

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
Utliity 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
Environmental Database Report Package	Actual Cost	1	$800.00	$800.00
Environmental Database Report	Actual Cost	1	$250.00	$250.00
Lake County Clerk_Copies of Plats, Mon Records	Actual Cost	100	$5.00	$500.00
Title Commitments & Supporting Documents	Actual Cost	365	$825.00	$301,125.00
			TOTAL DIRECT COSTS:	**$302,675.00**

Local Public Agency
Lake County

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
Hampton, Lenzini and Renwick, Inc.

Job Number

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE 199.06%

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
2.A Control Points		180	7,009	13,952	2,313		23,274	2.83%
2.B Topographic survey		160	5,808	11,562	1,917		19,287	2.35%
2.C Culverts and Utilities		473	17,724	35,281	5,849		58,854	7.16%
2.D Data deliverables		385	16,536	32,916	5,457		54,909	6.68%
2.E Hydraulic survey		66	2,533	5,042	836		8,411	1.02%
2.F Supplemental Survey		51	1,912	3,806	631		6,349	0.77%
2.G Utility test holes		27	1,087	2,163	359		3,609	0.44%
3.A Establish Existing ROW	500	1396	55,710	110,896	18,384		184,990	22.52%
3.B Existing ROW Encroachment Reports		90	3,859	7,682	1,273		12,814	1.56%
3.C Prepare Existing ROW .dgn		250	10,919	21,735	3,603		36,257	4.41%
3.D Update Existing ROW	301,125	100	5,816	11,578	1,919		19,313	2.35%
7.A Desktop Screening		16	674	1,342	222		2,238	0.27%
7.B Wetland Delineation and Report		232	9,774	19,456	3,225		32,455	3.95%
7.C PESA		76	3,496	6,959	1,154		11,609	1.41%
7.D PESA Update	800	28	1,282	2,553	423		4,258	0.52%
7.E Tree Survey and Memorandum	250	126	4,641	9,238	1,531		15,410	1.88%
7.F Natural Based Solutions Analysis		80	4,050	8,062	1,337		13,449	1.64%
7.H Wetland Impact Evaluation Review		6	273	543	90		906	0.11%
14.0 Project Administration		36	3,138	6,247	1,036		10,421	1.27%
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
			-	-	-		-	
Subconsultant DL							$0.00	
Direct Costs Total ===>	$302,675.00						**$302,675.00**	36.84%
TOTALS		3778	156,241	311,013	51,559	-	821,488	100.00%

467,254

Local Public Agency
Lake County

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
Hampton, Lenzini and Renwick, Inc.

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			2.A Control Points			2.B Topographic survey			2.C Culverts and Utilities			2.D Data deliverables			2.E Hydraulic 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
Administration 1	32.67	0.0																	
Administration 2	56.81	0.0																	
Engineer 1	37.58	0.0																	
Engineer 2	39.90	40.0	1.06%	0.42															
Engineer 3	46.58	4.0	0.11%	0.05															
Engineer 4	62.22	0.0																	
Engineer 5	68.87	0.0																	
Engineer 6	74.98	0.0																	
Environmental 1	28.32	96.0	2.54%	0.72															
Environmental 2	43.21	314.0	8.31%	3.59															
Environmental 3	61.35	78.0	2.06%	1.27															
Intern	20.97	0.0																	
Land Acquisition	55.24	0.0																	
Principal	87.18	368.0	9.74%	8.49	20	11.11%	9.69	10	6.25%	5.45	20	4.23%	3.69	10	2.60%	2.26	6	9.09%	7.93
Structural 1	67.12	0.0																	
Structural 2	83.37	0.0																	
Survey 1	32.91	2,134.0	56.48%	18.59	160	88.89%	29.25	150	93.75%	30.85	332	70.19%	23.10				56	84.85%	27.92
Survey 2	59.78	0.0																	
Technician 1	33.38	0.0																	
Technician 2	41.77	744.0	19.69%	8.23							121	25.58%	10.69	375	97.40%	40.69	4	6.06%	2.53
Technician 3	55.98	0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
TOTALS		3778.0	100%	$41.36	180.0	100.00%	$38.94	160.0	100%	$36.30	473.0	100%	$37.47	385.0	100%	$42.95	66.0	100%	$38.38

Local Public Agency
Lake County

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
Hampton, Lenzini and Renwick, Inc.

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	2.F Supplemental Survey			2.G Utility test holes			3.A Establish Existing ROW			3.B Existing ROW Encroachment Reports			3.C Prepare Existing ROW .dgn			3.D Update Existing ROW		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Administration 1	32.67																		
Administration 2	56.81																		
Engineer 1	37.58																		
Engineer 2	39.90																		
Engineer 3	46.58																		
Engineer 4	62.22																		
Engineer 5	68.87																		
Engineer 6	74.98																		
Environmental 1	28.32																		
Environmental 2	43.21																		
Environmental 3	61.35																		
Intern	20.97																		
Land Acquisition	55.24																		
Principal	87.18	3	5.88%	5.13	3	11.11%	9.69	180	12.89%	11.24	10	11.11%	9.69	30	12.00%	10.46	40	40.00%	34.87
Structural 1	67.12																		
Structural 2	83.37																		
Survey 1	32.91	40	78.43%	25.81	20	74.07%	24.38	1216	87.11%	28.67	40	44.44%	14.63	100	40.00%	13.16	20	20.00%	6.58
Survey 2	59.78																		
Technician 1	33.38																		
Technician 2	41.77	8	15.69%	6.55	4	14.81%	6.19				40	44.44%	18.56	120	48.00%	20.05	40	40.00%	16.71
Technician 3	55.98																		
TOTALS		51.0	100%	$37.49	27.0	100%	$40.25	1396.0	100%	$39.91	90.0	100%	$42.88	250.0	100%	$43.68	100.0	100%	$58.16

Local Public Agency
Lake County

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
Hampton, Lenzini and Renwick, Inc.

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 3 **OF** 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	7.A Desktop Screening			7.B Wetland Delineation and Report			7.C PESA			7.D PESA Update			7.E Tree Survey and Memorandum			7.F Natural Based Solutions 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
Administration 1	32.67																		
Administration 2	56.81																		
Engineer 1	37.58																		
Engineer 2	39.90																40	50.00%	19.95
Engineer 3	46.58																		
Engineer 4	62.22																		
Engineer 5	68.87																		
Engineer 6	74.98																		
Environmental 1	28.32				40	17.24%	4.88							56	44.44%	12.58			
Environmental 2	43.21	4	25.00%	10.80	160	68.97%	29.80	60	78.95%	34.11	24	85.71%	37.03	64	50.79%	21.95			
Environmental 3	61.35				20	8.62%	5.29	12	15.79%	9.69	4	14.29%	8.76	2	1.59%	0.97	40	50.00%	30.68
Intern	20.97																		
Land Acquisition	55.24																		
Principal	87.18																		
Structural 1	67.12																		
Structural 2	83.37																		
Survey 1	32.91																		
Survey 2	59.78																		
Technician 1	33.38																		
Technician 2	41.77	12	75.00%	31.33	12	5.17%	2.16	4	5.26%	2.20				4	3.17%	1.33			
Technician 3	55.98																		
TOTALS		16.0	100%	$42.13	232.0	100%	$42.13	76.0	100%	$46.00	28.0	100%	$45.80	126.0	100%	$36.83	80.0	100%	$50.63

Local Public Agency
Lake County

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
Hampton, Lenzini and Renwick, Inc.

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 4 **OF** 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	7.H Wetland Impact Evaluation Review			14.0 Project Administration															
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Administration 1	32.67																		
Administration 2	56.81																		
Engineer 1	37.58																		
Engineer 2	39.90																		
Engineer 3	46.58	4	66.67%	31.06															
Engineer 4	62.22																		
Engineer 5	68.87																		
Engineer 6	74.98																		
Environmental 1	28.32																		
Environmental 2	43.21	2	33.33%	14.40															
Environmental 3	61.35																		
Intern	20.97																		
Land Acquisition	55.24																		
Principal	87.18				36	100.00%	87.18												
Structural 1	67.12																		
Structural 2	83.37																		
Survey 1	32.91																		
Survey 2	59.78																		
Technician 1	33.38																		
Technician 2	41.77																		
Technician 3	55.98																		
TOTALS		6.0	100%	$45.46	36.0	100%	$87.18	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake County Division of Transportation	GFT Infrastructure, Inc.	Lake	24-00999-08-WR

EXHIBIT F
SUBCONSULTANT SCOPE & COST
American Surveying & Engineering, LTD

Scope of Work

PROJECT SUMMARY

Project Name: Gages Lake Road SUE Quality Level B

ASE Proposal No.: 225059

Owner: Lake County DOT

Date: July 17, 2025

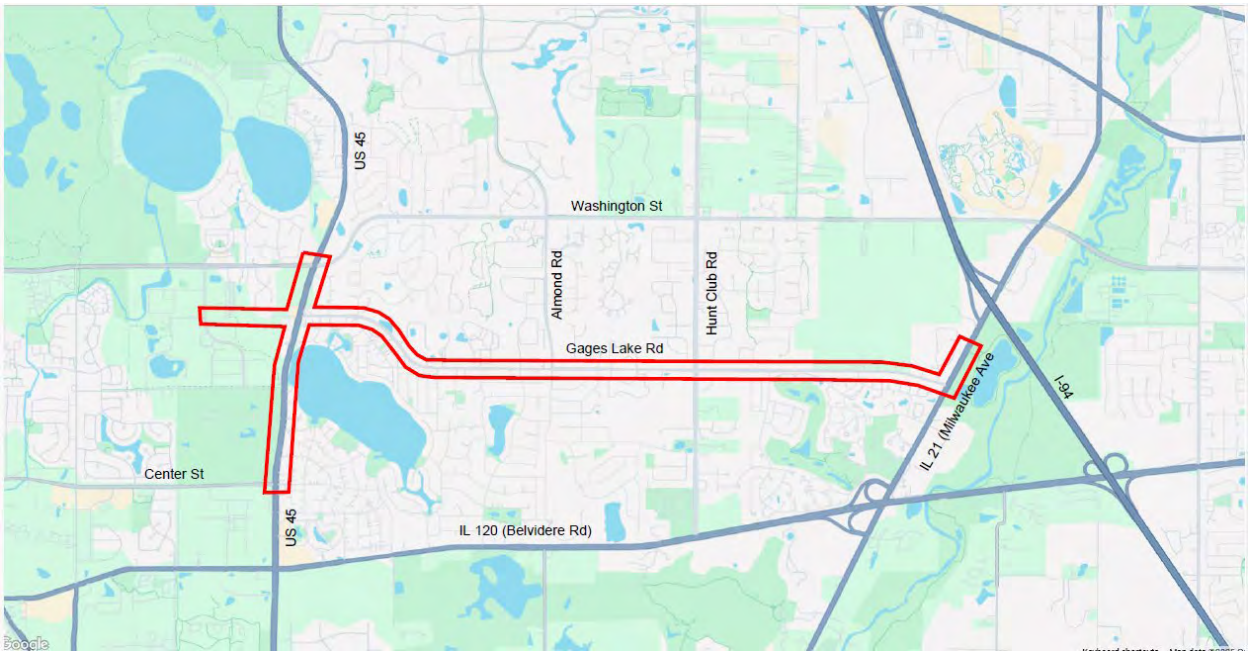
Agent: GFT

Revision Date:

Project Description – ASE will provide professional services to perform Subsurface Utility Engineering Quality Level B along more than 3 miles of Gages Lake Road.

Project Location – Grayslake, Lake County, IL

Project Limits – Gages Lake Road between US 45 and IL 21. The limits will also extend west of US 45 toward the existing path within the College of Lake County campus; north-south along US 45 from Center Street to Washington Street; and north along the east side of IL 21 to the Lake Carina Forest Preserve. The limits are shown in this exhibit provided by GFT:



GENERAL CONDITIONS AND SCOPE ASSUMPTIONS

1. All previous and relevant survey information, such as Preliminary Surveys and construction plans, if available, will be provided to ASE at no cost prior to starting the work.
2. Subsurface Utility Engineering (SUE) standards referred to within this scope of work are in accordance with the CI/ASCE 38-22 Standard Guideline for Investigating and Documenting Existing Utilities.

3. American Surveying & Engineering shall not be responsible for any erroneous or missing information provided by underground utility providers.
4. Owner/Agent will provide a Letter of Introduction to facilitate field operations.
5. Hazardous Waste sites designated as requiring protective equipment of "Class D" or greater will not be entered unless provided for otherwise in the Scope of Work Tasks.
6. American Surveying & Engineering is not signatory to any organized labor agreements. We will not provide services in any capacity where labor disputes may exist. We will not be responsible for costs or delays associated with labor disputes relevant to work on this project.
7. Field work performed on this project is subject to the vagaries of weather. In the event weather impairs our ability to perform any specified professional services, we will contact the Owner/Agent to determine changes in schedule or cost. No additional work will be performed until the Owner/Agent has reviewed and approved a revised cost or schedule.
8. Manholes or other confined spaces (as defined by OSHA) will not be entered or cleaned. Invert elevation, pipe size/type were obtained from surface level and should be used as a check on plan information only. For design purposes field verification by below grade examination (SUE) should be performed.
9. This proposal assumes the flowlines of project drainage structures (culverts, manholes, inlets, etc.) will be surveyed as existing conditions. ASE will not clean, excavate, pump or otherwise remove debris, silt, trash or other material from project structures.
10. If additional permit fees are required for access, we will contact the agent before proceeding.
11. No SUE Quality Level A test holes will be performed as part of this work.
12. This proposal assumes 120,500 linear feet of SUE Quality Level B. The cost of designating, surveying, and mapping SUE Quality Level B is $2.99 per linear foot.
13. This proposal assumes 236 utility poles will inventoried.
14. The SUE Quality Level B rates do not include professional service support hours. Those are included in the CECS form.
15. ASE will commence work within 10 days of the Notice to Proceed.
16. This SOW shall become part of the contract between Owner/Agent and ASE.

PROPOSED TASKS

1. Administration
   1.1. Meetings with Owner or Agent, including in-house meetings. Progress Reports, scheduling, invoicing and other project administrative tasks.
   1.2. Technical direction of staff
   1.3. Project Management, resource coordination.

2. Document Compilation
   2.1. Obtain relevant project documents from Owner/Agent and Courthouse.
   2.2. Compile, review and index information.
   2.3. Prepare compiled information for field and office tasks.

3. Horizontal and Vertical Control. Horizontal Control will use NAD 83 IL East Zone State Plane Coordinates – Vertical Control will GPS derived NAVD88 values.

3.1. Search and reconnaissance for record control points. Recover and verify previous control points.
3.2. Traverse/GPS/level through found monuments to establish primary control.
3.3. Office calculations, adjustment, tabulations of coordinates.

4. Subsurface Utility Engineering
   4.1. SUE Quality Level D
      4.1.1. Research and review existing utility information.
      4.1.2. Request Atlas information from One-Call system (JULIE). It is typically 30 days to receive all Atlases.
   4.2. SUE Quality Level C – **Only Pole Inventories are included. It is assumed that Storm and Sanitary Sewers will be picked up in the topography by the project surveyor and the pipe networks will be depicted on the exiting topography sheets.**
      4.2.1. This task, when required, consists of the data acquisition of Sanitary Sewer, Storm Sewer, and other utility structures to develop surface and utility pipe locations & elevations. This task is NOT included in this proposal.
      4.2.2. A structure data sheet detailing the structure type and information will be recorded in the field and provided to the client.

      Structures that are locked, blocked, or full of debris will prevent data acquisition. Manholes or vaults filled with water will not be pumped.
      4.2.3. Designated SUE Quality Level C utilities will be drawn in a coordinate correct CADD model file environment for distribution to the client. This task is NOT included in this proposal.
      4.2.4. Pole Inventories.
         4.2.4.1. Approximately 236 poles are believed to exist within the project area.
         4.2.4.2. Utility pole locations will be captured.
         4.2.4.3. Utility Poles will be inventoried. The various utility lines suspended from each pole will be noted on the pole inventory data sheet.
         4.2.4.4. Low wire elevations are assumed not required for the project.
         4.2.4.5. Pole data will be included with the SUE Report.
   4.3. SUE Quality Level B
      4.3.1. SUE Quality Level B information will be collected via applicable Radio Frequency (RF) geophysical techniques. When requested, and applicable, Ground Penetrating RADAR (GPR) technology is employed.
      4.3.2. Ground conditions, utility type and depth may prevent the acquisition of the accurate utility information. This may result in inaccurate utility locates. Utilities will be located to the best extent via the locating methods available. SUE Level B information does not provide elevation information.
      4.3.3. Designated SUE Quality Level B utilities will be drawn in a coordinate correct CADD model file environment for distribution to the client.
      4.3.4. The estimated depth to the centroid (vertical midpoint) of each utility will be recorded whenever conditions permit. This information is not acquired for all buried utilities when conducting the Level B Designation but will be reported when acquired. Approximate SUE Level B depths are not a replacement for actual SUE Level A data but

may aid the designer in other aspects.

4.3.5. Only the actual designated length will be invoiced. Those utilities that are believed to exist, but which ASE is unable to designate, will be drawn in the utility model as Level D data. This information will not be invoiced at the unit lineal foot price but rather included as part of the DGN drawing file and sheet preparation work.

4.3.6. Major traffic control and street lighting will be included in Level B. Where we are unable to designate in the field, Quality Level D information will be drawn for Traffic and Street Lighting if applicable atlas information is provided to ASE for these existing improvements. Assume 1,000 linear feet of signal and street lighting.

4.4. Final Review and SUE Report

4.4.1. ASE will prepare a final SUE Report in accordance with ASCE 38-22 standards. The report will include the results, preliminary conflict exhibits with supporting table identifying specific conflicts, SUE Quality Level B plan sheets with different line styles used to depict Quality Leve D information from Quality Level B information, and the report narrative per the ASCE 38-22 requirements.

4.4.2. The DGN file prepared will be in the Open Roads format selected by the Owner. The utilities file will be a 3D file with respect to X,Y,Z information captured. Individual utility conduit sizes (when known) will be represented in the DGN CADD file provided.

4.4.3. Storm and Sanitary pipe sizes will not be included in the DGN file (assumed to be provided by the topography survey)

5. Utility Company Coordination
   5.1. ASE will submit the existing utility plan sheets prepared to the various utility companies found in the project area.
   5.2. ASE will solicit Utility company input on the plans submitted.

6. Conflict Analysis
   6.1. Proposed Improvement will be reviewed with respect to the existing utilities found to exist.
   6.2. A Conflict Analysis Matrix will be prepared. The Matrix will identify potential conflicts of the proposed design with respect to the existing utilities.
   6.3. Exhibits depicting the potential conflicts will be prepared to accompany the Conflict Matrix.
   6.4. The Conflict Matrix and Exhibits will be updated at the conclusion of the Phase I design process to represent those potential conflicts and design considerations needed for the Phase II designer to consider.

7. QA/QC
   7.1. Review contract documents and survey requirements to verify ASE project QA/QC requirements.
   7.2. Periodic project review to ensure compliance with policy and contract documents.

DELIVERABLES

- Final SUE Report including Utility Plan Sheets.
- DGN formatted drawing file of the utility information captured

- Raw survey data (.CVS file of all points)
- Survey field book (PDF)

DIRECT COST ITEMS

A. Traffic control – assume $1,760 per day. Assume 10 days.
B. SUE Quality Level B Designating bill at $2.99 per linear foot. Assume 120,500 linear feet.
C. Pole Inventory - $160.00 per pole. Assume 236 poles.
D. ASE assumes any permit costs will be waived by Lake County and/or the local municipality.

Should permit costs become required, these will be invoiced as a direct cost without markup.

ITEMS SUPPLIED BY OTHERS

A. Record plans, including any previous survey information (if available).
B. Any and all pertinent site information including, but not limited to, previous horizontal and vertical survey control survey information, boundary surveys, existing aerial photography, Right-of-Way plans, centerline alignment, construction plans and plats of highway will be furnished to ASE, at no cost to ASE, prior to commencement of field operations.
C. Permission and access to closed or locked areas requiring access to complete the survey.
D. Letter of Introduction and written authorization for access to subject property for ASE's services on subject site.

PROJECT: Gages Lake Road SUE QLB

LOCATION: Lake County **PROPOSAL No.: 225059**

CLIENT: GFT **DATE: 7/17/2025**

TASK	1.0 Administration	Man Hours																				
ITEM	Description	PIC	PM	P S/E 4	P S/E 3	P S/E 2	P S/E 1	CADD	ST4	ST3	ST2	ST1	ROW 4	ROW 3	ROW2	ROW 1	SUE 4	SUE 3	SUE 2	SUE 1	A/C 3	A/C 2	TOTAL
1.1	Meetings, reports, scheduling, etc.		1														2				2		5
1.2	Technical Direction of Staff		2																				2
1.3	Project management & coordination		1																				1
1.4																							0
1.5																							0
1.6																							0
1.7																							0
1.8																							0
1.9																							0
																							0
	TOTAL HOURS	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	8

TASK	2.0 Data Compilation	Man Hours																				
ITEM	Description	PIC	PM	P S/E 4	P S/E 3	P S/E 2	P S/E 1	CADD	ST4	ST3	ST2	ST1	ROW 4	ROW 3	ROW2	ROW 1	SUE 4	SUE 3	SUE 2	SUE 1	A/C 3	A/C 2	TOTAL
2.1	Retrieve Existing Survey information		1		2																		3
2.2	Prepare working drawings		1		2																		3
2.3	Catalog and transfer to field		1		2												4						7
2.4																							0
2.5																							0
2.6																							0
2.7																							0
2.8																							0
2.9																							0
																							0
	TOTAL HOURS	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	13

TASK	3.0 Horizontal & Vertical Control	Man Hours																				
ITEM	Description	PIC	PM	P S/E 4	P S/E 3	P S/E 2	P S/E 1	CADD	ST4	ST3	ST2	ST1	ROW 4	ROW 3	ROW2	ROW 1	SUE 4	SUE 3	SUE 2	SUE 1	A/C 3	A/C 2	TOTAL
3.1	Recon. & locate existing mon's.		1															4	4				9
3.2	Traverse/GPS		1															4	4				9
3.3	Office Calc's.		1														4						5
3.4																							0
3.5																							0
3.6																							0
3.7																							0
3.8																							0
3.9																							0
																							0
	TOTAL HOURS	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	8	0	0	0	23

TASK	4.0 Subsurface Utility Engineering	Man Hours																				
ITEM	Description	PIC	PM	P S/E 4	P S/E 3	P S/E 2	P S/E 1	CADD	ST4	ST3	ST2	ST1	ROW 4	ROW 3	ROW2	ROW 1	SUE 4	SUE 3	SUE 2	SUE 1	A/C 3	A/C 2	TOTAL
4.1	SUE Quality Level D				4		8										8						20
4.2	SUE Quality Level C		1				2																3
4.3	SUE Quality Level B		1				4										4						9
4.4																							0
4.5																							0
4.6																							0
4.7																							0
4.8																							0
4.9																							0
																							0
	TOTAL HOURS	0	2	0	4	0	14	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	32

AMERICAN SURVEYING & ENGINEERING, LTD

PROJECT: Gages Lake Road SUE QLB
LOCATION: Lake County **PROPOSAL No.** 225059
CLIENT: GFT **DATE:** 7/17/2025

TASK	5.0 Utility Company Coordination	Man Hours																				
ITEM	Description	PIC	PM	P S/E 4	P S/E 3	P S/E 2	P S/E 1	CADD	ST4	ST3	ST2	ST1	ROW 4	ROW 3	ROW2	ROW 1	SUE 4	SUE 3	SUE 2	SUE 1	A/C 3	A/C 2	TOTAL
5.1	Submit Existing Utility Plan Sheets to utility companies		1		2		6										16						25
5.2	Solicit Utility Company input on the plans submitted.		2		2		4										8						16
5.3																							0
5.4																							0
5.5																							0
5.6																							0
5.7																							0
5.8																							0
5.9																							0
																							0
	TOTAL HOURS	0	3	0	4	0	10	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	41

TASK	6.0 Conflict Analysis	Man Hours																				
ITEM	Description	PIC	PM	P S/E 4	P S/E 3	P S/E 2	P S/E 1	CADD	ST4	ST3	ST2	ST1	ROW 4	ROW 3	ROW2	ROW 1	SUE 4	SUE 3	SUE 2	SUE 1	A/C 3	A/C 2	TOTAL
6.1	Review proposed improvements versus existing utilities		2		4	8	4										4						22
6.2	Prepare Conflict Analysis Matrix		1		2	4	8										6						21
6.3	Prepare Exhibit to accompany Matrix		2		2	4	12										6						26
6.4	Update Matrix and Exhibits at conclusion of Phase I Design		2		4	2	6										4						18
6.5																							0
6.6																							0
6.7																							0
6.8																							0
6.9																							0
																							0
	TOTAL HOURS	0	7	0	12	18	30	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	87

TASK	7.0 QA/QC	Man Hours																				
ITEM	Description	PIC	PM	P S/E 4	P S/E 3	P S/E 2	P S/E 1	CADD	ST4	ST3	ST2	ST1	ROW 4	ROW 3	ROW2	ROW 1	SUE 4	SUE 3	SUE 2	SUE 1	A/C 3	A/C 2	TOTAL
7.1	Project QA/QC		2																				2
7.2	Periodic Project review		4																				4
7.3	Final review and report		2																				2
7.4																							0
7.5																							0
7.6																							0
7.7																							0
7.8																							0
7.9																							0
																							0
	TOTAL HOURS	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

AMERICAN SURVEYING & ENGINEERING, LTD

PROJECT: Gages Lake Road SUE QLB

LOCATION: Lake County

CLIENT: GFT

PROPOSAL No. : 225059

DATE: 7/17/2025

SUMMARY OF TASKS — MANHOURS

TASK	PIC	PM	P S/E 4	P S/E 3	P S/E 2	P S/E 1	CADD	ST4	ST3	ST2	ST1	ROW 4	ROW 3	ROW2	ROW 1	SUE 4	SUE 3	SUE 2	SUE 1	A/C 3	A/C 2	TOTAL
1.0 Administration	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	8
2.0 Data Compilation	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	13
3.0 Horizontal & Vertical Control	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	8	0	0	0	23
4.0 Subsurface Utility Engineering	0	2	0	4	0	14	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	32
5.0 Utility Company Coordination	0	3	0	4	0	10	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	41
6.0 Conflict Analysis	0	7	0	12	18	30	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	87
7.0 QA/QC	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hours	0	30	0	26	18	54	0	0	0	0	0	0	0	0	0	66	8	8	0	2	0	212

Illinois Department of Transportation

EXHIBIT D

COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

FIXED RAISE

Local Public Agency	County	Section Number
Lake County DOT	Lake	24-00999-08-WR

Prime Consultant (Firm) Name	Prepared By	Date
GFT	Dan Woessner	8/23/2025

Consultant / Subconsultant Name	Job Number
AMERICAN SURVEYING & ENGINEERING, LTD.	

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	**30**	**MONTHS**	**OVERHEAD RATE**	**178.20%**
START DATE	**11/1/2025**		**COMPLEXITY FACTOR**	**0**
RAISE DATE	**1/1/2026**		**% OF RAISE**	**3.00%**
END DATE	4/30/2028			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	11/1/2025	1/1/2026	2	6.67%
1	1/2/2026	1/1/2027	12	41.20%
2	1/2/2027	1/1/2028	12	42.44%
3	1/2/2028	5/1/2028	4	14.57%

The total escalation = 4.87%

Local Public Agency	County	Section Number
Lake County DOT	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
AMERICAN SURVEYING & ENGINEERING, LTD.	

PAYROLL RATES

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

MAXIMUM PAYROLL RATE	**90.00**
ESCALATION FACTOR	**4.87%**

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
PRINCIPAL IN CHARGE	$89.44	$90.00
PROJECT MANAGER	$85.73	$89.91
PROJECT SURVEYOR/ENGINEER 4	$81.07	$85.02
PROJECT SURVEYOR/ENGINEER 3	$68.91	$72.27
PROJECT SURVEYOR/ENGINEER 2	$52.27	$54.82
PROJECT SURVEYOR/ENGINEER 1	$40.50	$42.47
CADD TECHNICIANS	$46.89	$49.17
ENGINEERING/SURVEY TECHNICIAN 4	$68.10	$71.42
ENGINEERING/SURVEY TECHNICIAN 3	$45.10	$47.30
ENGINEERING/SURVEY TECHNICIAN 2	$33.02	$34.63
ENGINEERING/SURVEY TECHNICIAN 1	$22.28	$23.37
RIGHT-OF-WAY SPECIALIST 4	$64.74	$67.89
RIGHT-OF-WAY SPECIALIST 3	$43.00	$45.10
RIGHT-OF-WAY SPECIALIST 2	$36.00	$37.75
RIGHT-OF-WAY SPECIALIST 1	$23.56	$24.71
SUBSURFACE UTILITY ENGINEER 4	$52.00	$54.53
SUBSURFACE UTILITY ENGINEER 3	$46.34	$48.60
SUBSURFACE UTILITY ENGINEER 2	$32.49	$34.07
SUBSURFACE UTILITY ENGINEER 1	$23.65	$24.80
ADMINISTRATIVE/CLERICAL 3	$33.40	$35.03
ADMINISTRATIVE/CLERICAL 2	$22.35	$23.44

Local Public Agency	County	Section Number
Lake County DOT	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
AMERICAN SURVEYING & ENGINEERING, LTD.	

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)	10	$1,760.00	$17,600.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Utliity 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
SUE Quality Level B Designating	Per Linear Foot	120500	$2.99	$360,295.00
Pole Inventory	Per Pole	236	$160.00	$37,760.00
				$0.00
				$0.00
			TOTAL DIRECT COSTS:	**$415,655.00**

Local Public Agency	County	Section Number
Lake County DOT	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
AMERICAN SURVEYING & ENGINEERING, LTD.	

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE **178.20%** **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
1.0 Administration		8	539	960	178		1,677	0.37%
2.0 Data Compilation		13	921	1,642	304		2,867	0.63%
3.0 Horizontal & Vertical Control		23	1,149	2,048	379		3,576	0.79%
4.0 Subsurface Utility Engineering	415,655	32	1,718	3,061	567		5,346	1.18%
5.0 Utility Company Coordination		41	2,292	4,085	756		7,133	1.57%
6.0 Conflict Analysis		87	4,848	8,639	1,600		15,087	3.33%
7.0 QA/QC		8	719	1,282	237		2,238	0.49%
			-	-	-		-	
			-	-	-		-	
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			-	-	-		-	
Subconsultant DL							$0.00	
Direct Costs Total ===>	$415,655.00						$415,655.00	91.64%
TOTALS		212	12,186	21,717	4,021	-	453,579	100.00%
			33,903					

Local Public Agency
Lake County DOT

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
AMERICAN SURVEYING & ENGINEERING, LTD.

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			1.0 Administration			2.0 Data Compilation			3.0 Horizontal & Vertical Control			4.0 Subsurface Utility Engineering			5.0 Utility Company 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
PRINCIPAL IN CHARGE	90.00	0.0			0			0			0			0			0		
PROJECT MANAGER	89.91	30.0	14.15%	12.72	4	50.00%	44.95	3	23.08%	20.75	3	13.04%	11.73	2	6.25%	5.62	3	7.32%	6.58
PROJECT SURVEYOR/EN	85.02	0.0			0			0			0			0			0		
PROJECT SURVEYOR/EN	72.27	26.0	12.26%	8.86	0			6	46.15%	33.35	0			4	12.50%	9.03	4	9.76%	7.05
PROJECT SURVEYOR/EN	54.82	18.0	8.49%	4.65	0			0			0			0			0		
PROJECT SURVEYOR/EN	42.47	54.0	25.47%	10.82	0			0			0			14	43.75%	18.58	10	24.39%	10.36
CADD TECHNICIANS	49.17	0.0			0			0			0			0			0		
ENGINEERING/SURVEY T	71.42	0.0			0			0			0			0			0		
ENGINEERING/SURVEY T	47.30	0.0			0			0			0			0			0		
ENGINEERING/SURVEY T	34.63	0.0			0			0			0			0			0		
ENGINEERING/SURVEY T	23.37	0.0			0			0			0			0			0		
RIGHT-OF-WAY SPECIAL	67.89	0.0			0			0			0			0			0		
RIGHT-OF-WAY SPECIAL	45.10	0.0			0			0			0			0			0		
RIGHT-OF-WAY SPECIAL	37.75	0.0			0			0			0			0			0		
RIGHT-OF-WAY SPECIAL	24.71	0.0			0			0			0			0			0		
SUBSURFACE UTILITY EI	54.53	66.0	31.13%	16.98	2	25.00%	13.63	4	30.77%	16.78	4	17.39%	9.48	12	37.50%	20.45	24	58.54%	31.92
SUBSURFACE UTILITY EI	48.60	8.0	3.77%	1.83	0			0			8	34.78%	16.90	0			0		
SUBSURFACE UTILITY EI	34.07	8.0	3.77%	1.29	0			0			8	34.78%	11.85	0			0		
SUBSURFACE UTILITY EI	24.80	0.0			0			0			0			0			0		
ADMINISTRATIVE/CLERIC	35.03	2.0	0.94%	0.33	2	25.00%	8.76	0			0			0			0		
ADMINISTRATIVE/CLERIC	23.44	0.0			0			0			0			0			0		
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
TOTALS		212.0	100%	$57.49	8.0	100.00%	$67.34	13.0	100%	$70.88	23.0	100%	$49.97	32.0	100%	$53.68	41.0	100%	$55.91

Local Public Agency
Lake County DOT

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
AMERICAN SURVEYING & ENGINEERING, LTD.

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	6.0 Conflict Analysis			7.0 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
PRINCIPAL IN CHARGE	90.00	0			0														
PROJECT MANAGER	89.91	7	8.05%	7.23	8	100.00%	89.91												
PROJECT SURVEYOR/ENG	85.02	0			0														
PROJECT SURVEYOR/ENG	72.27	12	13.79%	9.97	0														
PROJECT SURVEYOR/ENG	54.82	18	20.69%	11.34	0														
PROJECT SURVEYOR/ENG	42.47	30	34.48%	14.65	0														
CADD TECHNICIANS	49.17	0			0														
ENGINEERING/SURVEY TE	71.42	0			0														
ENGINEERING/SURVEY TE	47.30	0			0														
ENGINEERING/SURVEY TE	34.63	0			0														
ENGINEERING/SURVEY TE	23.37	0			0														
RIGHT-OF-WAY SPECIALIS	67.89	0			0														
RIGHT-OF-WAY SPECIALIS	45.10	0			0														
RIGHT-OF-WAY SPECIALIS	37.75	0			0														
RIGHT-OF-WAY SPECIALIS	24.71	0			0														
SUBSURFACE UTILITY ENG	54.53	20	22.99%	12.54	0														
SUBSURFACE UTILITY ENG	48.60	0			0														
SUBSURFACE UTILITY ENG	34.07	0			0														
SUBSURFACE UTILITY ENG	24.80	0			0														
ADMINISTRATIVE/CLERICA	35.03	0			0														
ADMINISTRATIVE/CLERICA	23.44	0			0														
TOTALS		87.0	100%	$55.73	8.0	100%	$89.91	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake County Division of Transportation	GFT Infrastructure, Inc.	Lake	24-00999-08-WR

EXHIBIT G
SUBCONSULTANT SCOPE & COST
Wang Engineering, Inc., a Terracon Company

1145 N. Main Street
Lombard, IL 60148
(630) 953-9928
WangEng.com | Terracon.com

July 23, 2025

Jesse Vuorenmaa, PE, ENV SP
Vice President
GFT
1475 East Woodfield Road, Suite 600
Schaumburg, IL 60173-5440

Re: Proposal for Geotechnical Engineering Services
Gages Lake Road from US 45 to IL 21 Phase I Design
Lake County, Illinois
Wang PKE255286

Dear Mr. Vuorenmaa:

Wang Engineering, Inc. (Wang), a Terracon Company, is pleased to submit this proposal for geotechnical engineering services to support the design of Gages Lake Road from US 45 to IL 21 Phase 1 Engineering Services. Our proposed scope of geotechnical work is discussed below.

SCOPE OF GEOTECHNICAL SERVICES

Wang understands that Lake County Department of Transportation (LCDOT) has selected the GFT team to provide a Phase I engineering study for an about 3-mile-long section of Gages Lake Road, from US 45 to IL 21. The project study limits will also extend west of US 45 towards the existing path within the College of Lake County campus, north-south along US 45 from Center Street to Washington Street, and north along the east side of IL 21 to the Lake Carina Forest Preserve.

As part of the design team, Wang will provide the subsurface investigations that will include roadway and structure borings, pavement cores, laboratory testing, engineering analyses, and recommendations presented in roadway and structure geotechnical reports. The following is our proposed subsurface investigation program:

- Drill 50 roadway borings spaced at 300 feet intervals at locations of proposed roadway widening and/or offset alignment shift. No borings will be taken within existing 3-lane roadway sections where it has been determined that only resurfacing is required. The only location where borings are anticipated to be required for bike path or sidewalk improvements is west of the Gages Lake Road at US 45 intersection if the west extension or connection to Lancer Lane at the College of Lake County Campus is selected as the preferred routing.
- Drill 10 structure borings where it has been determined that retaining walls are necessary to minimize right-of-way impacts or a culvert replacement is required.
- Collect 15 pavement cores along Gages Lake Road between US 45 and IL 21 along segments that will be reconstructed or resurfaced.

To accomplish the geotechnical scope of work, Wang will complete the following tasks.

Geotechnical Drilling Services

Wang will provide equipment, labor, and associated materials to drill and sample 60 soil borings to depths ranging from 10 to 50 feet below ground surface (bgs) for a total drilling and sampling of 1,000 feet. The boreholes will be advanced with hollow stem augers. The soil will be continuously sampled to 10 feet bgs and at 2.5-foot intervals thereafter. Soil samples will be collected with split-barrel samplers according to AASHTO T 206, "Penetration Test and Split-Barrel Sampling of Soils" and as needed to AASHTO T 207 "Thin-Walled Tube Sampling of Soils." After drilling completion, the boreholes will be backfilled with soil cuttings and bentonite chips. We will disperse any remaining soil cuttings evenly in the vicinity of the borehole locations. We will make reasonable efforts to avoid rutting the ground surface, but fees for landscape repair service are not included in our proposal. Since boring locations are not entirely known at this time, we assumed traffic control will be needed every day of drilling, a task estimated to be completed in 16 days.

Field Supervision: Prior to drilling, Wang will layout the borings and clear utilities through JULIE. A field engineer will monitor drilling activities, maintain daily field notes, log the soil borings, as well as receive, classify, and prepare soil samples for laboratory analysis. The field engineer will perform penetrometer and Rimac unconfined compressive strength tests on cohesive soil samples and observe the groundwater level in boreholes. The as-drilled boring locations will be surveyed with a mapping-grade GPS unit having an accuracy of +/-5.0 feet. The as drilled boring stations, offsets, and elevations will be provided by other team members.

Laboratory Testing: The soil testing program will include water content, Atterberg limits, particle size analysis, and organic content tests.

Engineering Analyses and Recommendations: Wang will prepare a roadway geotechnical report (SGR) and one or two structure geotechnical reports (SGR). The reports will include a site location map, boring location plan, descriptions of subsurface investigation and field methods, boring logs, laboratory test results, and assessments of the site soil and groundwater conditions. The report will also include a feasibility assessment of proposed improvements and emphasize geotechnical challenges the team will have to address when designing the various project elements. We will provide preliminary geotechnical recommendations for pavement design, wall types and foundations, excavation support, drainage, dewatering, and construction.

SCHEDULING

Wang will start the project expediently upon prior written authorization to proceed. We estimate the field investigation will require 16 working days after utility clearance. The laboratory testing program may require two additional weeks for completion. Draft geotechnical reports will be submitted within two to three weeks after receiving preliminary roadway and structural plans.

ESTIMATED COST

Wang proposes to provide the above tasks on time and expense basis according to the attached cost estimate for consultant services. This estimate was prepared assuming the following conditions:

- Boring locations are accessible to a truck mounted drill rig;
- Permits required to access boring locations will be the responsibility of others;
- Boring locations are on the roadway pavement and traffic control will be required;
- GFT will provide station, offset, and elevation of as-drilled boring locations;
- No hazardous materials are encountered;
- Environmental investigation and assessment to determine methods for soil disposal or reuse or are not included in our scope of services.

Wang Engineering, Inc. a Terracon Company appreciates the opportunity to present this proposal. We look forward to working with the GFT team and the LCDOT on this project. If you have questions or if you require additional information, please contact us at (630) 953-9928.

Wang Engineering, Inc., *A Terracon Company*

Corina T. Farez

Corina Farez, PE, PG
Principal, Senior Engineering Consultant

Liviu M Iordache

Liviu M. Iordache, PG
Principal, Department Manager III

Attachment: CECS BLR 05514

Illinois Department of Transportation

EXHIBIT D

COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

FIXED RAISE

Local Public Agency	County	Section Number
LCDOT	Lake	24-00999-08-WR

Prime Consultant (Firm) Name	Prepared By	Date
GFT	C. Farez	7/23/2025

Consultant / Subconsultant Name	Job Number
Wang Engineering, Inc. a Terracon Company	

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	**30**	**MONTHS**	**OVERHEAD RATE**	**204.64%**
START DATE	**11/1/2025**		**COMPLEXITY FACTOR**	**0**
RAISE DATE	**4/1/2026**		**% OF RAISE**	**3.00%**
END DATE	4/30/2028			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	11/1/2025	4/1/2026	5	16.67%
1	4/2/2026	4/1/2027	12	41.20%
2	4/2/2027	4/1/2028	12	42.44%
3	4/2/2028	5/1/2028	1	3.64%

The total escalation = 3.95%

Local Public Agency	County	Section Number
LCDOT	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
Wang Engineering, Inc. a Terracon Company	

PAYROLL RATES

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

MAXIMUM PAYROLL RATE	**90.00**
ESCALATION FACTOR	**3.95%**

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Principal in Charge	$93.61	$90.00
Project Manager	$71.23	$74.04
Senior Engineer	$71.23	$74.04
Project Engineer/Project Geologist	$47.64	$49.52
Assistant Engineer/Assistant Geologist	$34.11	$35.46
Laboratory Technician	$36.61	$38.05
Administrative Assistant	$31.70	$32.95
QC/QA Reviewer	$82.82	$86.09

Local Public Agency	County	Section Number
LCDOT	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
Wang Engineering, Inc. a Terracon Company	

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	County	Section Number
LCDOT	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
Wang Engineering, Inc. a Terracon Company	

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	20	$65.00	$1,300.00
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)	1	$34,800.00	$34,800.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Utliity Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
Testing of Soil Samples	Actual Cost	1	$84,100.00	$84,100.00
Lab Services	Actual Cost (Provide breakdown of each cost)	1	$12,864.00	$12,864.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			$0.00
				$0.00
				$0.00
				$0.00
				$0.00
			TOTAL DIRECT COSTS:	**$133,064.00**

Local Public Agency	County	Section Number
LCDOT	Lake	24-00999-08-WR

Consultant / Subconsultant Name	Job Number
Wang Engineering, Inc. a Terracon Company	

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE 204.64% **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
Desk Study, Site Access & Permitting		44	1,729	3,538	571		5,838	2.64%
Field Activities & Field Vehicle	1,300	176	6,465	13,230	2,134		21,829	9.88%
Laboratory Testing	12,864	6	240	491	79		810	0.37%
Data Analyses & Engineering		162	7,752	15,864	2,558		26,174	11.84%
Report Preparation		105	7,219	14,773	2,382		24,374	11.03%
Project Management		39	2,639	5,400	871		8,910	4.03%
Drilling and Sampling	84,100		-	-	-		-	0.00%
Traffic Control	34,800		-	-	-		-	0.00%
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Subconsultant DL							$0.00	
Direct Costs Total ===>	$133,064.00						$133,064.00	60.21%
TOTALS		532	26,044	53,296	8,595	-	220,999	100.00%

79,340

BLR 05514 (Rev. 02/06/25)

COST EST

Local Public Agency LCDOT

County Lake

Section Number 24-00999-08-WR

Consultant / Subconsultant Name Wang Engineering, Inc. a Terracon Company

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

SHEET 1 OF 2

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Desk Study, Site Access & Permitting			Field Activities & Field Vehicle			Laboratory Testing			Data Analyses & Engineering			Report Preparation		
		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 in Charge	90.00	5.0	0.94%	0.85															
Project Manager	74.04	26.0	4.89%	3.62															
Senior Engineer	74.04	82.0	15.41%	11.41										32	19.75%	14.63	50	47.62%	35.26
Project Engineer/Project Geologist	49.52	109.0	20.49%	10.15	12	27.27%	13.51	16	9.09%	4.50	1	16.67%	8.25	55	33.95%	16.81	25	23.81%	11.79
Assistant Engineer/Assistant Geologist	35.46	273.0	51.32%	18.19	32	72.73%	25.79	160	90.91%	32.23				75	46.30%	16.41	6	5.71%	2.03
Laboratory Technician	38.05	5.0	0.94%	0.36							5	83.33%	31.71						
Administrative Assistant	32.95	8.0	1.50%	0.50															
QC/QA Reviewer	86.09	24.0	4.51%	3.88													24	22.86%	19.68
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TOTALS		532.0	100%	$48.95	44.0	100.00%	$39.29	176.0	100%	$36.73	6.0	100%	$39.97	162.0	100%	$47.85	105.0	100%	$68.75

Local Public Agency
LCDOT

County
Lake

Section Number
24-00999-08-WR

Consultant / Subconsultant Name
Wang Engineering, Inc. a Terracon Company

Job Number

AVERAGE HOURLY PROJECT RATES

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Project Management			Drilling and Sampling			Traffic Control											
		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 in Charge	90.00	5	12.82%	11.54															
Project Manager	74.04	26	66.67%	49.36															
Senior Engineer	74.04																		
Project Engineer/Project Geologist	49.52																		
Assistant Engineer/Assistant Geologist	35.46																		
Laboratory Technician	38.05																		
Administrative Assistant	32.95	8	20.51%	6.76															
QC/QA Reviewer	86.09																		
TOTALS		39.0	100%	$67.66	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00	0.0	0%	$0.00