

Using Federal Funds? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Agreement For <div style="border: 1px solid black; padding: 2px;">MFT PE</div>	Agreement Type <div style="border: 1px solid black; padding: 2px;">Original</div>
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**LOCAL PUBLIC AGENCY**

Local Public Agency <div style="border: 1px solid black; padding: 2px;">Lake</div>	County <div style="border: 1px solid black; padding: 2px;">Lake</div>	Section Number <div style="border: 1px solid black; padding: 2px;">20-00104-10-DR</div>	Job Number <div style="border: 1px solid black; padding: 2px;">#B-01434</div>
Project Number <div style="border: 1px solid black; padding: 2px;"></div>	Contact Name <div style="border: 1px solid black; padding: 2px;">Matt Emde</div>	Phone Number <div style="border: 1px solid black; padding: 2px;">(847) 377-7452</div>	Email <div style="border: 1px solid black; padding: 2px;">memde@lakecountyil.gov</div>

**SECTION PROVISIONS**

Local Street/Road Name <div style="border: 1px solid black; padding: 2px;">Fairfield Road (CH-49)</div>	Key Route <div style="border: 1px solid black; padding: 2px;">CH 49</div>	Length <div style="border: 1px solid black; padding: 2px;">0.15</div>	Structure Number <div style="border: 1px solid black; padding: 2px;">N/A</div>
Location Termini <div style="border: 1px solid black; padding: 2px;">At Round Lake Drain</div>			<div style="border: 1px solid black; padding: 2px; width: 50px; margin: 0 auto;">Add Location</div> <div style="border: 1px solid black; padding: 2px; width: 50px; margin: 0 auto;">Remove Location</div>

**Project Description**  
 Phase II preparation of contract plans, specifications and construction cost estimate for the replacement of existing culvert #257 crossing under Fairfield Road, located approximately 800' north of the intersection of IL Route 134 in the Village of Round Lake Beach.

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

**AGREEMENT FOR**

Phase I - Preliminary Engineering     Phase II - Design Engineering

**CONSULTANT**

Prime Consultant (Firm) Name <div style="border: 1px solid black; padding: 2px;">HDR Engineering, Inc</div>	Contact Name <div style="border: 1px solid black; padding: 2px;">Thomas M. Hein</div>	Phone Number <div style="border: 1px solid black; padding: 2px;">(773) 867-7244</div>	Email <div style="border: 1px solid black; padding: 2px;">thomas.hein@hdrinc.com</div>
Address <div style="border: 1px solid black; padding: 2px;">9450 West Bryn Mawr Avenue, Suite 400</div>	City <div style="border: 1px solid black; padding: 2px;">Rosemont</div>	State <div style="border: 1px solid black; padding: 2px;">IL</div>	Zip Code <div style="border: 1px solid black; padding: 2px;">60018</div>

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

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

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

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

## AGREEMENT EXHIBITS

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

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

### I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance of the Scope of Services presented in EXHIBIT A for the LPA in connection with the proposed improvements herein before described.
2. The Classifications of the employees used in the work shall be consistent with the employee classifications and estimated staff hours. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
3. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections required as a result of the ENGINEER'S error, omissions or negligent acts without additional compensation. Acceptance of work by the LPA or DEPARTMENT will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or the responsibility for clarifying ambiguities.
4. That the ENGINEER will comply with applicable Federal laws and regulations, State of Illinois Statutes, and the local laws or ordinances of the LPA.
5. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LPA.
6. To invoice the LPA, The ENGINEER shall submit all invoices to the LPA within three months of the completion of the work called for in the AGREEMENT or any subsequent Amendment or Supplement.
7. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of US Department of Transportation (US DOT) assisted contract. Failure by the Engineer to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LPA deems appropriate.
8. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LPA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall be construed to relieve the ENGINEER of any responsibility for the fulfillment of this AGREEMENT.
9. For Preliminary Engineering Contracts:
  - (a) To attend meetings and visit the site of the proposed improvement when requested to do so by representatives of the LPA or the DEPARTMENT, as defined in Exhibit A (Scope of Services).
  - (b) That all plans and other documents furnished by the ENGINEER pursuant to the AGREEMENT will be endorsed by the ENGINEER and affixed the ENGINEER's professional seal when such seal is required by law. Such endorsements must be made by a person, duly licensed or registered in the appropriate category by the Department of Professional Regulation of the State of Illinois. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the DEPARTMENT.
  - (c) That the ENGINEER is qualified technically and is thoroughly conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated in Exhibit A (Scope of Services).
10. That the engineering services shall include all equipment, instruments, supplies, transportation and personnel required to perform the duties of the ENGINEER in connection with this AGREEMENT (See DIRECT COST tab in BLR 05513 or BLR 05514).

### II. THE LPA AGREES,

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

shall be due and payable to the ENGINEER.

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

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

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

Method of Compensation:

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

Total Compensation = DL + DC + OH + FF

Where:

DL is the total Direct Labor,

DC is the total Direct Cost,

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

FF is the Fixed Fee.

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

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

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

### III. IT IS MUTUALLY AGREED,

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

The LPA will notify the ENGINEER of any error or omission believed by the LPA to be caused by the negligence of the ENGINEER as soon as practicable after the discovery. The LPA reserves the right to take immediate action to remedy any error or omission if notification is not successful; if the ENGINEER fails to reply to a notification; or if the conditions created by the error or omission are in need of urgent correction to avoid accumulation of additional construction costs or damages to property and reasonable notice is not practicable.
3. This AGREEMENT may be terminated by the LPA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LPA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such materials becomes the property of the LPA. The LPA will be responsible for reimbursement of all eligible expenses incurred under the terms of this AGREEMENT up to the date of the written notice of termination.

4. In the event that the DEPARTMENT stops payment to the LPA, the LPA may suspend work on the project. If this agreement is suspended by the LPA for more than thirty (30) calendar days, consecutive or in aggregate, over the term of this AGREEMENT, the ENGINEER shall be compensated for all services performed and reimbursable expenses incurred prior to receipt of notice of suspension. In addition, upon the resumption of services the LPA shall compensate the ENGINEER, for expenses incurred as a result of the suspension and resumption of its services, and the ENGINEER's schedule and fees for the remainder of the project shall be equitably adjusted.
5. This AGREEMENT shall continue as an open contract and the obligations created herein shall remain in full force and effect until the completion of construction of any phase of professional services performed by others based upon the service provided herein. All obligations of the ENGINEER accepted under this AGREEMENT shall cease if construction or subsequent professional services are not commenced within 5 years after final payment by the LPA.
6. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and have harmless the LPA, the DEPARTMENT, and their officers, employees from all suits, claims, actions or damages liabilities, costs or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.
7. The ENGINEER and LPA certify that their respective firm or agency:
  - (a) has not employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for the LPA or the ENGINEER) to solicit or secure this AGREEMENT,
  - (b) has not agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
  - (c) has not paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for the LPA or the ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
  - (d) that neither the ENGINEER nor the LPA is/are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
  - (e) has not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property.
  - (f) are not presently indicated for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph and
  - (g) has not within a three-year period preceding this AGREEMENT had one or more public transaction (Federal, State, local) terminated for cause or default.

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

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

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

9. This certification is required by the Drug Free Workplace Act (30 ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the DEPARTMENT unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to suspension of contract on grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the DEPARTMENT for at least one (1) year but not more than (5) years.

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

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

- (a) Publishing a statement:
  - (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
  - (2) Specifying actions that will be taken against employees for violations of such prohibition.
  - (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
    - (a) abide by the terms of the statement; and
    - (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than (5) days after such conviction.
- (b) Establishing a drug free awareness program to inform employees about:
  - (1) The dangers of drug abuse in the workplace;

- (2) The grantee's or contractor's policy to maintain a drug free workplace;
- (3) Any available drug counseling, rehabilitation and employee assistance program; and
- (4) The penalties that may be imposed upon an employee for drug violations.
- (c) Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.
- (d) Notifying the contracting, or granting agency within ten (10) days after receiving notice under part (b) of paragraph (3) of subsection (a) above from an employee or otherwise, receiving actual notice of such conviction.
- (e) Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program.
- (f) Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.

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

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

**AGREEMENT SUMMARY**

Prime Consultant (Firm) Name	TIN/FEIN/SS Number	Agreement Amount
HDR Engineering, Inc	47-0680568	\$463,409.00
<b>Subconsultants</b>		
INTERRA, Inc	36-4045796	\$42,857.00
SAM	74-270-4974	\$14,745.00
Subconsultant Total		\$57,602.00
Prime Consultant Total		\$463,409.00
Total for all work		\$521,011.00

**AGREEMENT SIGNATURES**

Executed by the LPA:

Local Public Agency Type      Local Public Agency

Attest:

The County of Lake

By (Signature & Date)

By (Signature & Date)

[Signature & Date box for LPA representative]

[Signature & Date box for NEER representative]

Local Public Agency

Local Public Agency Type

Title

Lake

County

Clerk

Chair, Lake County Board

(SEAL)

Recommended for Execution

Shane Schneider, P.E.  
Director of Transportation/County Engineer

Executed by the ENGI NEER:

Prime Consultant (Firm) Name

Attest:

HDR Engineering, Inc

By (Signature & Date)

By (Signature & Date)

[Signature of Aniko Shuey]

[Signature of Thomas M. Hein]

Title

Title

Senior Project Controller, Aniko Shuey

Vice President, Thomas M. Hein

APPROVED:

Regional Engineer, Department of Transportation (Signature & Date)

[Signature & Date box for Regional Engineer]

Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake	HDR Engineering, Inc	Lake	20-00104-10-DR

**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

Attached
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Local Public Agency	Prime Consultant (Firm) Name	County	Section Number
Lake	HDR Engineering, Inc	Lake	20-00104-10-DR

**EXHIBIT B  
PROJECT SCHEDULE**

Attached





## A. PHASE II PROJECT INFORMATION

Project Type	Culvert Replacement
Route	Fairfield Road (CH49)
Project Limits	at Round Lake Drain
Location	Round Lake Beach, Lake County, IL

## B. INTRODUCTION AND GENERAL ASSUMPTIONS

This proposal is for the Phase II preparation of contract plans, specifications, and construction cost estimate for the replacement of existing Culvert 257 crossing under Fairfield Road, located approximately 800 feet north of the intersection with Long Lake Road (Illinois Route 134) in the Village of Round Lake Beach, Illinois.

The culvert is located within the Planning Environmental Linkage (PEL) Study for the Fairfield Road corridor for the Lake County Division of Transportation (LCDOT). Maintenance of culvert is the responsibility of LCDOT. It is assumed that replacement of existing Culvert 257 will be financed only with local funding and does not include the use of Motor Fuel Tax (MFT) funds or any other not wholly local funds. The length of culvert will accommodate the ultimate improvement per the preferred alternative determined in the PEL study. Construction may extend outside the existing right-of-way on each end of the culvert. HDR will provide land acquisition negotiation services for easement or ROW acquisition.

The proposed culvert replacement design will be per the recommended scope of work in the DCEO Round 2: Round Lake Drain Master Plan Engineering Report (Revised 6/13/2024) as prepared by Manhard Consulting for the Lake County Stormwater Management Commission (LCSMC). The report recommended replacing the existing 13.25-ft x 9.33-ft arch corrugated metal pipe (CMP) with a 37'-0" span by 12'-6 1/8" rise Conspan O-series precast concrete three-sided structure with no roadway profile raise. LCSMC will retain Manhard Consulting to provide permitting assistance to LCDOT and HDR to permit wetland impacts and floodplain modification with the applicable agencies. LCSMC will provide the stormwater modeling to LCDOT and HDR.

Roadway pavement reconstruction will be limited to reestablishing the disturbed pavement over the proposed culvert replacement. The roadway section will be replaced in kind. Traffic modeling and capacity analysis is not included in the scope of work.

Value Engineering is not anticipated. Effort to participate in Value Engineering activities is not included.

Construction work is assumed to occur north of the Metra crossing at Fairfield Road with no anticipated impacts to Metra facilities. Railroad coordination is not included in the scope of work.

One construction bid package will be prepared for the final Contract to be advertised by LCDOT. General tasks include the following:

- Field visits to confirm scope
- Land Acquisition Services for easements or ROW acquisition



- SUE Level B
- Type Size and Location (TSL) Plan
- Preliminary Plans, Specifications, Estimate of Cost, and Estimate of Time
- Pre-Final Plans, Specifications, Estimate of Cost, and Estimate of Time
- Final PS&E Plans, Specifications, Estimate of Cost, and Estimate of Time
- Updates for Advertisement Submittal
- Phase III coordination

Drawing production will be for size 11"x17" sheets. CADD work will be performed with the use of Bentley OpenRoads or similar. Drawings will be submitted to LCDOT electronically.

Work for this project will be in English units. No design exceptions are required for this project. Project deliverables and invoicing will be submitted electronically.

### C. SUBMITTAL SCHEDULE

Milestone	Date
Notice to Proceed	10/25/2024
Preliminary Plans	3/17/2025
Pre-Final Plans	6/30/2025
Final Plan Submittal	9/15/2025
Construction	Summer 2026

### D. SCOPED SERVICES

#### 1. Administration/Management

The CONSULTANT will monitor the progress of the contract document preparation and the deliverables schedule. This task includes the administration of the project team and coordination with the project subconsultants to complete the contract documents according to approved scope. Preparing of monthly progress report and invoices according to the LCDOT's format requirements is included. CONSULTANT shall communicate and coordinate with the LCDOT Project Manager on any financial and technical issues that may impact the project progress and the deliverables.

Tasks to administer the scope of work include:

- Prepare monthly progress reports for inclusion with monthly invoices.
- Prepare, maintain, and monitor the project budget and schedule.
- Develop, distribute, and maintain the Project Management Plan, Safety Plan, and Quality Management Plan.

#### 2. QA/QC

Internal Quality Assurance/Quality Control (QA/QC) plan activities performed by the CONSULTANT to promote quality and conformance in the professional services that are being provided to LCDOT. The CONSULTANT will follow and implement the prime CONSULTANT'S Quality Manual that serves to establish and document the required quality activities that will be executed on the project to ensure quality deliverables to the LCDOT. This Quality Manual describes the procedures for how the

quality activities are conducted, monitored, and recorded. A Quality Representative will be assigned to this project by the CONSULTANT who will be responsible for implementing and administering the Quality Manual, and who will also have the authority to act in all matters pertaining to quality of the CONSULTANT services being provided

### 3. Site Visits / Data Evaluation

CONSULTANT will perform a field evaluation of the condition of existing structure, pavement, guardrail, and curb and gutter, collect and record necessary field data for engineering design and analysis, and observe and photograph the project area and immediate surroundings and document in a photo log. CONSULTANT will perform a plan-in-hand review to verify field conditions after the Preliminary submittal. Up to three site visits by two CONSULTANT team members each are included.

CONSULTANT will conduct an inspection of the existing culvert during the design phase to review for critical findings that require interim repairs. A technical memorandum will be prepared to summarize inspection findings and submitted to LCDOT.

Data review includes review of the existing as-built plans, the DCEO Round 2: Round Lake Drain Master Plan Engineering Report, utility company responses, and the draft recommendations from the Fairfield Road PEL Study.

### 4. Survey

Horizontal and Vertical Control are assumed to have already been established. A 3D scan at the existing Culvert 257 was provided by LCDOT for the CONSULTANT's use. This survey will be supplemented by the topographic survey of existing Fairfield Road (centerline, edge of roadway) and the Lidar survey that extended 50 feet beyond the apparent right of way limits. CONSULTANT will convert LCDOT's survey from Microstation V8i into Microstation OpenRoads for this project. LCDOT will provide supplemental survey. All survey will be performed to LCDOT Design Survey Standards.

The CONSULTANT will prepare a single alignment and ties drawing for the Fairfield Road centerline alignment, including tie diagrams and horizontal and vertical control points and benchmarks data.

### 5. Existing Utilities

Submit electronic preliminary, prefinal, and final plans to utility companies identified during PEL Study. File the utility company responses. Maintain existing utility CAD base file. Identify potential utility conflicts with the proposed Work. Incorporate utility protection requirements into the contract documents. Create a Utility Contact Matrix for inclusion in the plans and/or specifications.

Subsurface Utility Engineering (SUE) Quality Level B (QLB) services will be provided by the CONSULTANT within the construction limits. One (1) utility plan sheet will be provided.

QLB services include:

- Utilizing LCDOT/IDOT traffic control standards, including standard placement of traffic cones, freestanding warning signage and vehicle-mounted traffic directional sign.
- Designating and marking underground utilities within the project limits using an appropriate suite of surface geophysical methods. Typical equipment utilized includes:
  - o Radiodetection - RD8100 and Metrotech Vivax VM 810 & vLocML Cable and Pipe Locator

- o Acoustic - ULTRA-TRAC® Acoustic Pipe Locator
- o GPR - Single and/or Dual Frequency
- o Magnetic locators
- o Rodders, Sondes (transmitters) and Receivers for non-conductive utility detection, other than electric
- Marking the utilities at maximum 50-foot intervals and at changes in direction
- Attempting to locate water lines, force mains, and other non-tonable utilities using ground penetrating radar. If successful, these utilities will be marked as Quality Level B. If unsuccessful, these utilities will be drawn on deliverables according to records marked as Quality Level D.
- CONSULTANT will survey markings, and any other pertinent information, as is reasonably ascertainable, that indicate the presence of a utility. Horizontal data will be held to the accuracies and precision dictated by the project's survey control.
- Plotting survey data
- Providing a deliverable including engineering drawing(s) shown in plan view using the approved color codes for found utilities in accordance with ASCE Standard 38-22 complete with engineering seal and signature.

See SAM subconsultant scope for additional details.

## 6. General Plans

### Title Sheet

Prepare a single title sheet utilizing the LCDOT template.

### Notes/Index/Standards

Prepare a single sheet containing the index of drawings, general notes, and list of applicable standard drawings.

### Summary of Quantities

Prepare up to four (4) Summary of Quantities sheets that will include the pay item number, pay item description, unit of measure and quantity as it appears on the IDOT Coded Pay Item List. Quantity calculation is included with this item and will be calculated per IDOT BDE Chapter 64.

### Schedule of Quantities

Prepare a tabular breakdown of the quantities of up to thirty (30) key pay items. Prepare a tabular breakdown of the earthwork quantities including excavation, embankment, topsoil, and unsuitable material.

## 7. Roadway Plans

### Typical Sections

Prepare one (1) sheet containing the existing typical sections and 1 sheet containing the proposed typical section. Sections anticipated include 1 existing and proposed section representing conditions at the existing and proposed culvert, and 1 section representing existing and proposed conditions north and south of the culvert. Pavement section material types and thicknesses will be labeled. A hot-mix asphalt table will be prepared in accordance with IDOT District One standard practice. The

LCDOT provided pavement design spreadsheet will be used to determine the appropriate pavement section.

#### Removals

One (1) roadway removal plan sheets are assumed.

#### Plan and Profile

Design and prepare proposed roadway plan, profile, and details. Two (2) roadway plan/profile sheets and one (1) detail sheet are assumed. Design of ADA sidewalk curb ramps is not included in this scope.

#### Barrier Warrants

Analyze the need for roadside barriers based on grading, clear zones, horizontal geometry, cross section slopes, design ADT volumes, and the design speed limit. Provide a technical memorandum summarizing the results of the analysis including location, length of need, type of barrier, actual length to be provided, and traffic barrier terminal types for warranted roadside barriers. Up to four (4) locations will be analyzed, anticipated to be each quadrant of the proposed culvert.

#### Maintenance of Traffic (MOT)

Develop a MOT plan, which will include plans, typical sections and staging notes for one major stage of construction. A detour is anticipated for the culvert replacement work, resulting in one main stage. Pre-stage or post-stage work will be included as required. Prepare associated quantity calculations and specifications.

A detour is anticipated to complete the proposed Work. The anticipated detour will essentially be the same for NB and SB traffic diverted from Fairfield Road, in reverse. While we anticipate local traffic will reroute themselves through local streets, the approved detour is expected to include the intersections of Fairfield Road and Rollins Road; Rollins Road and Wilson Road; Wilson Road and IL 134/Longlake Road; and IL 134/Longlake Road and Fairfield Road. Five (5) crosswalks are included within the detour route. Traffic Counts will be utilized for determining whether signal timing adjustments are required at the above four (4) signalized intersections. A detour report will be created, detailing the Existing, No-Build, and Build conditions (i.e., signal timing adjustments or not). Presentation and submittals to the LCDOT and IDOT Detour Committee are included.

A Transportation Management Plan (TMP) is not included in the scope of work.

One (1) general notes and staging notes sheet, one (1) typical section sheet, one (1) MOT plan sheet, and one (1) detour plan sheet is assumed.

#### Pavement Marking and Signing

Design and prepare proposed pavement marking plans. Pavement marking notes will be included on the General Notes sheet. Pay item quantities will be provided for removal of existing pavement markings, but the removal work will not be reflected on the drawings.

A permanent signing plan will be provided by LCDOT and thus is not included in the CONSULTANT's scope of work.

Two (2) pavement marking plan drawings one (1) detail sheet are assumed.



## Landscaping

Design and prepare landscape plans and details. Prepare associated quantity calculations and specifications. A planting/seeding schedule and landscape detail (if applicable) will also be prepared. The landscape plan will incorporate final seeding only. Tree planting and aesthetic landscape aspects are not included in this scope.

Two (2) landscaping plan drawings and one (1) combined schedule and detail sheet are assumed.

## Erosion Control

Design and prepare erosion control plans and details. Erosion control plans are expected to be developed for up to two (2) MOT stages. Prepare associated quantity calculations and specifications. Erosion control schedules and details (if applicable) will also be prepared. Prepare erosion control specifications including a Storm Water Pollution Prevention Plan (SWPPP).

Two (2) erosion control plan drawings, and one (1) combined schedule and detail sheet are assumed. Submittal of SWPPP is included.

## Cross Sections

Cross sections for Fairfield Road will be developed at 50' intervals and at critical locations including beginning and end of construction, and at the proposed three-sided structure. Utilities (watermain, gas, telephone, cable, electric, fiber optic, and similar) will be shown on cross sections at assumed elevations relative to existing ground. Existing and proposed storm sewers, storm sewer structures, ROW and easements will be shown on cross sections. Cross sections sheets will be 1" = 10' horizontal and 1" = 5' vertical scale.

Ten (10) cross section sheets are assumed with two (2) cross sections per sheet.

## 8. Utility Relocation

Existing electric service may be impacted by the proposed improvement, as well as potential utilities carried by the electrical poles by lease (e.g., cable, telephone). Utility relocation plans will be provided by the affected utility owner. The CONSULTANT will provide the utility owner with CADD drawings for use as base for utility relocation plans and will review the utility relocation permit plan to confirm the proposed relocation resolve the potential conflict with proposed Work.

## 9. Geotechnical

### Pavement Cores

Provide two (2) full-depth pavement cores, patched with cold patch unless otherwise requested. Field work will be within the right of way and performed behind moving lane closures. Task will include preparation of a data report, including photos and description of pavement cores, and a pavement core location plan.

### Soil Borings

Provide two (2) structural soil borings and two (2) full depth pavement cores. Perform laboratory testing program on soil samples, generally including a visual engineering classification and determining natural moisture content. Prepare a pavement core data report with photographs.

Prepare a Structural Geotechnical Report (SGR) for the proposed three-sided structure. The report will include final foundation design recommendations and construction recommendations, and other information specified by the IDOT Geotechnical Manual.

See INTERRA subconsultant scope for additional details.

### 10. Special Provisions

Prepare the Special Provisions required for the project including Lake County, IDOT Recurring, IDOT D1, GBSP, and BDE in accordance with LCDOT procedures and formatting. Prepare up to four (4) project-specific special provisions. Special provisions will be prepared for each milestone submittal: Preliminary, Prefinal, and Final.

### 11. Estimate of Cost

Utilize recent IDOT bid tab data to prepare an estimate of cost for the proposed improvements. Estimates of Cost will be submitted with each milestone, including a preliminary, pre-final, and final cost estimate. A quantity calculation book including calculations for each pay item will be submitted with the final submittal.

### 12. Estimate of Time

Prepare an estimate of time for preliminary, pre-final and final submittals in accordance with IDOT BDE Manual Section 66-2.03. The estimate of time will utilize the production rates in the IDOT BDE Manual. Only the major pay items with durations greater than one week will be included. This task will not include development of a bar chart.

### 13. Environmental Studies and Permit Coordination

This scope of work assumes the following:

- No cultural resources are present
- No threatened/endangered species are present
- No Section 4(f) or 6(f) impacts
- Preliminary Environmental Site Assessment (PESA) is not required

The Wetland Delineation Report included in the Round Lake Drain Master Plan Engineering Report indicated no historic properties around the project site and stated the probability of historical artifacts is very low. The Wetland Delineation Report also showed a “High Probability Archaeology Area” at the standard 500-foot buffer adjacent to creeks in the included HARGIS map. HDR can provide archeological review services as a change order if requested by LCDOT.

A PESA is not included since a preliminary desktop analysis was already performed as part of the LCDOT Fairfield Road PEL with no sites found.

Soil testing and preparation of the 663 Form will be provided by CONSULTANT near the end of the design phase, typically no earlier than 12 months before the associated construction activities. A soil boring mobilization independent of the structural boring operation has been included in the direct cost estimate.

### Threatened/Endangered Species

HDR will review the IDNR Ecological Compliance Assessment Tool (EcoCAT) and USFWS Information for Planning and Consultation (IPaC) database query that was completed by JHWetco in July 2023 and incorporate it into the permit applications.

HDR will perform a bat survey of the existing culvert since it is greater than 48” in height. Bat survey will utilize the DOT Bridge/Structure Bat Assessment Form to document bat occupancy or bat use of the culvert. This will include collecting visual evidence of bat use including visual observation (live and/or dead), presence of guano, presence of staining, audible observation, and/or odor observation. If one or more indicators are detected, this will be evidence that bats may be using the culvert. If bats are observed, the additional studies required during bat active season (typically between April and November) to identify the specific bat species utilizing the culvert or protected bat species presence will be addressed via separate negotiation.

### Wetlands and Waters of the US

HDR will prepare and submit a Clean Water Act Section 404 Nationwide Permit application along with supporting wetlands documentation. HDR will respond to technical questions from the regulatory agencies.

#### Deliverables:

- Joint Application Form
- General project information including project purpose and need and direct and indirect effects to WOTUS
- Detailed drawings identifying impacts to onsite resources, both temporary and permanent impacts
- Soil Erosion and Sediment Control Plans (prepared under separate task)
- Wetland Delineation Report (prepared by JHWetco)

### Lake County WDO Permit

HDR will prepare and submit a Lake County Watershed Development Ordinance (WDO) permit application along with supporting technical documentation including all requirements listed under Section 402 of the WDO, Public Road Developments including: a copy of the IDNR/OWR permit application, the USACE permit application, soil erosion and sediment control plans, and wetland delineation report (prepared by JHWetco). Drainage plans, schedules, and hydraulic calculations will also be included as necessary.

#### Deliverables:

- Completed WDO permit application

### National Pollutant Discharge Elimination System (NPDES)

HDR will prepare the Illinois Environmental Protection Agency (IEPA) Notice of Intent (NOI) prior to start of construction to fulfill requirements of the NPDES permit and submit to LCDOT. The NOI will include the SWPPP that is prepared under the Erosion Control task.





## 14. Structural

The existing culvert (Culvert ID Number 257) is comprised of a single Corrugated Steel Structural Plate Pipe Arch, measuring 13.25-ft span and 9.33-ft rise. The structure is 114' in total length, and the ends are in a permanent drainage easement. Plan dimensions and details relative to the existing culvert will be based on the as-built plans. The culvert ends are sloped at a 2:1 and are protected by 6-inch concrete slope walls. The Round Lake Drain Master Plan recommended a 37'-0" span by 12'-6 1/8" rise Conspan O-series three-sided precast concrete structure to replace the existing culvert. The proposed structure will cross the roadway in the same location and alignment as the existing culvert. The proposed scope and hours include necessary coordination with Conspan.

The roadway profile is assumed to match the existing conditions. The proposed three-sided structure is assumed to be buried beneath the pavement, and therefore the top of structure will not be designed or detailed as the driving surface. It is assumed that the full depth of roadway pavement can be provided over the proposed three-sided structure. Therefore, approach slabs and moment slabs are not anticipated and are not included in the scope of work.

Construction under a complete detour is assumed. A temporary soil retention system is not anticipated and is not included in the scope of work. Temporary repairs to the existing culvert are not included in the scope of work. Temporary construction easements or ROW acquisition may be needed at both ends of the pavement to accommodate grading improvements, and/or to accommodate bypass pumping for dewatering operations.

A Type Size and Location Plan (TSL) and Preliminary Bridge Design and Hydraulic Report (PBDHR) will be prepared for submittal to IDOT. Final structural design plans and specifications adequate for a Contractor to procure a supplier designed structure will be provided. The recommended three-sided precast concrete structure will be based on confirmation of the hydraulic analysis and the determined geotechnical conditions. Cast-in-place foundations and wingwalls will be assumed to be designed and detailed, but precast elements will also be considered if they are compatible with the recommended three-sided precast concrete structure. Final structural design and shop drawings for the three-sided precast concrete structure is the responsibility of the supplier.

Assumed final structural sheets are as follows:

<b>Proposed Culvert carrying Round Lake Drain at Fairfield Road</b>		
<b>Design Plan</b>	<b>Description</b>	<b>No. of Sheets</b>
General Plan and Elevation	General Plan, Longitudinal Section, Design Info, Profile Grade, Structure Description, Name Plate, Waterway information, Location Sketch	1
General Notes & Details (1 of 2)	General Notes, Index of Sheets, Total Bill of Material	1
General Notes & Details (2 of 2)	End Section Elevation, Section Thru Structure, Wingwall Drain Details	1
Foundations	Plan View, Elevation View, Section thru Footing/Wall, Bar Bend Details, Notes, Bill of Material	2
Wingwalls	Plan View, Elevation View of each of four walls, Weep Hole Details, Bar Bend Details, Notes, Bill of Material	2

Soil Boring Log	Soil Boring Logs	2
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## 15. Drainage Design

This task involves the compilation of data to enable the Hydrologic and Hydraulic Analysis to be developed for the existing and proposed conditions for the Major Culvert Crossing at Fairfield Road and Round Lake Drain.

### Existing Drainage and Utility Plan and Schedule

Develop plan sheets and schedules for the existing drainage and utilities. Compile hydraulic survey information per IDOT Drainage Manual Sec. 2-602. The removal of the existing drainage elements will be shown on these sheets and the existing utility CADD file will be referenced into these plan sheets. Prepare associated quantity calculations and specifications.

Existing drainage plan sheets will include two panels / viewports, each for the existing drainage along Fairfield Road. Storm sewer removal schedules and details (if applicable) will also be prepared.

2 existing drainage sheets are assumed: 1 split plan sheet (plan/plan), and 1 combined schedule and detail sheet.

### Proposed Condition Drainage Plan and Schedule

Update the drainage plan and schedule developed in the Round Lake Drain Master Plan, revised 6/13/24, based on the proposed condition hydrologic and hydraulic analyses. Prepare associated quantity calculations and specifications. Identify and include 2 yr / 24 hr elevation and note on plans to assist contractor with cofferdam heights based on 2 year storm design.

Proposed drainage plan sheets will include two panels / viewports: one for the proposed plan view and one for existing and proposed storm drainage profile view of Fairfield Road.

Four (4) proposed drainage sheets are assumed: two (2) sheets (plan/profile) focused on the culvert, One (1) proposed drainage plan sheet focused on improvements along Fairfield Road, and one (1) combined schedule and detail sheet.

### Additional Proposed Condition Hydraulic Analysis to Determine IDNR/OWR Permittability

Update the existing condition and proposed condition models, if necessary, to confirm the project is permissible under IDNR/OWR guidelines. Analyze proposed upstream and downstream impacts with respect to IDNR Part 3708 Rules.

### Compensatory Storage Analysis

If fill is placed within the floodplain, verify that the net cut-fill balance satisfies the compensatory storage requirements of Round Lake Beach at below the normal 10-year and between the 10- and 100-year intervals. Cross sections and tabular calculations will be provided.

### Scour Analysis

Projected contraction and pier scour depths will be computed using equations and methodologies discussed in HEC-18 by the FHWA, as recommended in Chapter 36 of the Bureau of Local Roads and Streets Manual. Prepare Scour Critical Evaluation Form (BBS SCE), based on IDOT Drainage Manual Chapter 11 and recommendations of IDOT Local Bridge Unit.

### Location Drainage Technical Memorandum & Hydraulic Report

Prepare the Location Drainage Technical Memorandum that summarizes the existing and proposed condition drainage analyses along Fairfield Road. Provide the results of the Round Lake Drain hydraulic analysis in a Hydraulic Report. Prepare existing and proposed Waterway Information Table and define the required waterway opening per the IDOT BLRS Manual.

### Detention Analysis

It is not anticipated that detention will be required for this project; detention calculations and design will not be provided.

### Floodway Permit

HDR will prepare and submit a floodway permit application to the IDNR along with supporting documentation including hydraulic models of Round Lake Drain, the Round Lake Drain Hydraulic Report, and the compensatory storage calculations.

### Quantity Calculations

Drainage quantities will be computed for insertion into the overall Schedule of Quantities and bid pages.

## 16. Constructability Review

Review the Preliminary, Pre-Final, and Final submittals for constructability concerns. Constructability Reviews will be shared with LCDOT for each submittal stage.

## 17. Phase III Coordination

Provide the following services in support of the Phase III Engineering (Construction Management / Oversight):

- Attend the pre-bid meeting (2 attendees); prepare meeting agenda and meeting minutes.
- Review and respond to up to three (3) RFI's during the bid phase.
- Support and coordinate with LCDOT during the bidding phase. Review bid tabs and prepare a bid analysis memorandum to identify bid items requiring greater oversight during construction and recommending award of the contract to a bidder.
- Review and respond to up to ten (10) RFI's during construction from the Contractor or Resident Engineer.
- Review shop drawings and design calculations for the prefabricated three-sided structure.
- Develop up to four (4) Construction Revision drawing sheets based on field conditions previously unknown to the design team.

## 18. Meetings and Coordination

The Consultant will prepare agendas and meeting minutes for each meeting. Effort for this task includes preparation time, travel time (if applicable), meeting attendance, and follow-up. Meetings are assumed to be virtual unless noted otherwise. The following meetings are included:

- Design phase kick-off meeting (1 meeting with 2 attendees)
- Miscellaneous coordination meetings (3 meetings with 2 attendees)
- Utility coordination meetings (1 meeting with 2 attendees)

- IDOT Detour Committee (2 meetings with 2 attendees)
- Public Outreach: CONSULTANT will provide LCDOT up to six digital exhibit graphics to inform and educate the public on the project and associated detour route and traffic impacts during construction. HDR will provide digital materials designed and formatted for use on the LCDOT website and social media platforms including Facebook and X/Twitter. LCDOT will provide HDR with necessary file format and sizing specifications. HDR assumes up to 40 hours for digital materials development and one round of edits.

### 19. Real Estate Services

CONSULTANT will provide limited Real Estate Services as part of the contract, to include review of documents provided by LCDOT for existing R.O.W. CONSULTANT will order Title Commitments from Wheatland Title to ascertain “Last Deed of Record’s” showing the current vested owner and up to four Title Commitments, and perform calculations as required to determine existing R.O.W. CONSULTANT will prepare up to four exhibits to show construction easements that may be required to complete the proposed work. The scope of work includes development of legal descriptions, negotiations, and appraisals for 4 parcels. Plats of Highway are not included.

## E. LIST OF DELIVERABLES

The following list of project deliverables will be submitted electronically. Hard copies will not be provided:

- Technical Memorandum summarizing initial culvert inspection findings
- Location Drainage Technical Memorandum and Hydraulic Report
- Type Size and Location (TSL) Plan, Preliminary Bridge Design and Hydraulic Report (PBDHR), Scour Critical Evaluation Form (BBS SCE)
- Plans and Special Provisions (Preliminary, Pre-Final and Final Submittals)
- Estimate of Time (Preliminary, Pre-Final and Final Submittals)
- Estimate of Cost (Preliminary, Pre-Final and Final Submittals)
- Quantity Calculations (at Final Submittal)

## F. DESIGN GUIDELINES

The construction specifications for this project will be the Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction. Lake County Special Provisions, IDOT Guide Bridge Special Provisions, IDOT District One Specifications, and BDE Specifications will be included as applicable. Survey will be per LCDOT Design Survey Procedures as published on the LCDOT website.

## G. MANUALS, CRITERIA, AND CAD STANDARDS

- LCDOT Standard Details and Special Provisions
- IDOT Bureau of Local Roads and Streets Manual, December 2018
- IDOT Bureau of Design and Environment Manual, May 2024
- IDOT Bridge Manual 2023

- IDOT All Bridge Designers Memorandums
- IDOT District 1 Specific Standards 12/19/2023
- IDOT Coded Pay Item Book
- IDOT Computer Aided Design, Modeling, and Deliverables Manual July 2021
- 2020 AASHTO LRFD Bridge Design Specifications, 9<sup>th</sup> Edition

## H. BACKGROUND DOCUMENTS

The design basis for the project is the DCEO Round 2: Round Lake Drain Master Plan Engineering Report (Revised 6/13/2024) as prepared by Manhard Consulting for the Lake County Stormwater Management Commission. The Wetland Delineation Report dated 7/31/2023 is included as Exhibit I in the Round Lake Drain Master Plan Engineering Report. JHWetco performed the wetland delineation on July 17-18, 2023.

LCSMC will provide the storm water modeling to LCDOT and HDR.

Existing culvert details and roadway section will be based on as-built plans provided by LCDOT. LCDOT has provided the 3D survey in the vicinity of the existing culvert in Microstation v8i format.

Additional information will be obtained from the Fairfield Road PEL Study, including:

- Topographic Survey
- Existing utilities company responses
- Preferred alternative for the ultimate Fairfield Road section

		Level of Effort - Hours by Firm			Total by Task	Assumptions
		HDR	SAM	Interra		
<b>Task 01</b>	<b>Administration / Management</b>	<b>168.0</b>	<b>4.0</b>	<b>5.0</b>	<b>177.0</b>	
01.1	Invoicing, Monthly Progress Reports, etc.	168	4	5	177.0	1 year design schedule; 12 hours/month PM coordination, + 2 hours/month admin + sub admin
<b>Task 02</b>	<b>Quality Assurance/Quality Control (QA/QC)</b>	<b>109.0</b>	<b>2.0</b>	<b>4.0</b>	<b>115.0</b>	
02.1	QA/QC	109	2	4	115.0	5%, not including Task 1, Task 3, Task 16, or Task 18
<b>Task 03</b>	<b>Site Visits / Data Evaluation</b>	<b>84.0</b>	<b>6.5</b>	<b>6.0</b>	<b>96.5</b>	
03.1	Site Visits	36			36.0	3 site visits x 2 attendees at 6 hours/each visit
03.2	Photo Log	8			8.0	
03.3	Data Review	16	6.5	6	28.5	(engineering review on SAM's CECS)
03.4	Culvert Inspection & Technical Memo	24			24.0	1 inspection with 2 people at 8 hours/each + 8 hours for tech memo
<b>Task 04</b>	<b>Survey</b>	<b>40.0</b>	<b>0.0</b>	<b>0.0</b>	<b>40.0</b>	
04.1	Review Existing Survey	12			12.0	
04.2	Alignment and Ties	12			12.0	
04.3	Conversion of V8i files to Open Roads	16			16.0	survey files received will require some conversion/manipulation.
<b>Task 05</b>	<b>Existing Utilities</b>	<b>66.0</b>	<b>64.0</b>	<b>0.0</b>	<b>130.0</b>	
05.1	Maintain utility CAD base file	12			12.0	
05.2	Incorporate utility requirements into contract documents	16			16.0	
05.3	Evaluate potential utility conflicts	16			16.0	16 hours, spread out over early design as design develops
05.4	Utility Contact Matrix	18			18.0	8 hours submittal 1, 6 hours submittal 2, 4 hours submittal 3
05.5	SUE Quality Level B Services	4	64		68.0	(Field Investigation & CADD on SAM's CECS)
<b>Task 06</b>	<b>General Plans</b>	<b>128.0</b>	<b>0.0</b>	<b>0.0</b>	<b>128.0</b>	
06.1	Title Sheet	12			12.0	12 hours per sheet x 1 sheet
06.2	Notes/Index/Standards	16			16.0	8 hours per sheet x 2 sheets
06.3	Summary of Quantities	40			40.0	10 hours per sheet x 4 sheets
06.4	Schedule of Quantities	60			60.0	2 hours per item x 30 items
<b>Task 07</b>	<b>Roadway Plans</b>	<b>556.0</b>	<b>0.0</b>	<b>0.0</b>	<b>556.0</b>	
07.1	Existing typical Sections (1 at culvert, 1 E/W of culvert, 2 total)	16			16.0	16 hours per sheet x 1 sheet, 2 sections (1 at culvert, 1 N/S of culvert)
07.2	Proposed typical Sections (1 at culvert, 1 E/W of culvert, 2 total)	16			16.0	16 hours per sheet x 1 sheet, 2 sections (1 at culvert, 1 N/S of culvert)
07.3	Removals	16			16.0	16 hours per sheet x 1 sheet
07.4	Plan and Profile	48			48.0	20 hours per sheet x 2 sheets; 8 hours for details
07.5	Barrier Warrants	64			64.0	16 hours per quadrant x 4 quadrants
07.6	Maintenance of Traffic	44			44.0	MOT gen notes - 1 sheet at 4 hours/sheet; MOT typical sections - 1 sheets at 16 hours/sheet; MOT plan sheets - 1 sheet at 24 hours/sheet
07.7	Detour Plan	16			16.0	Overall Plan, 1 sheet at 16 hours/sheet (same detour for both NB and SB traffic, reversed)
07.8	Detour - Signal Timing Adjustments	64			64.0	assume adjustments at 4 signalized intersections x 16 hours per sheet
07.9	Detour Report	32			32.0	
07.10	Pavement Marking and Signing	60			60.0	PMK plan sheet - 2 sheets at 24 hours/sheet; PMK details - 1 sheet at 12 hours
07.11	Landscaping	24			24.0	2 plan sheets at 8 hours/sheet + 1 schedule/detail sheet at 8 hours
07.12	Erosion Control	48			48.0	16 hours per sheet x 2 sheets; 8 hours for details; 8 hours for SWPPP
07.13	Cross Sections	60			60.0	6 hours per sheet x 10 sheets
07.14	Quantity Calculations	48			48.0	24 hours prelim, 16 hours prefinal, 8 hours final
<b>Task 08</b>	<b>Utility Relocation</b>	<b>16.0</b>	<b>0.0</b>	<b>0.0</b>	<b>16.0</b>	
08.1	CADD Transfer & Coordination	8			8.0	includes updating project files per utility relocation drawings received from others
08.2	Utility Relocation Review	8			8.0	includes review of files submitted to Lake County/HDR by utility companies to confirm relocation design is free from anticipated conflict with the proposed work.
<b>Task 09</b>	<b>Geotechnical</b>	<b>6.0</b>	<b>0.0</b>	<b>149.0</b>	<b>155.0</b>	
09.1	Field Services (structural borings early + env. borings within 12 mo. of construction)			54	54.0	
09.2	Laboratory Services			13	13.0	
09.3	Pavement Data Report	2		10	12.0	
09.4	Structural Geotechnical Report (SGR)	4		32	36.0	See additional breakdown in INTERRA's scope and hours proposal; includes HDR review time of the relevant reports.
09.5	CCDD Environmental Report			40	40.0	Soil testing report for contaminated soils (CCDD)
<b>Task 10</b>	<b>Special Provisions</b>	<b>84.0</b>	<b>0.0</b>	<b>0.0</b>	<b>84.0</b>	
10.1	Prepare project-specific special provisions	24			24.0	4 specs at 6 hours/spec
10.2	Assemble special provision package	60			60.0	20 hours per submittal x 3 submittals
<b>Task 11</b>	<b>Estimate of Cost</b>	<b>48.0</b>	<b>0.0</b>	<b>0.0</b>	<b>48.0</b>	
11.1	Estimate of Cost	48			48.0	16 hours per submittal x 3 submittals
<b>Task 12</b>	<b>Estimate of Time</b>	<b>12.0</b>	<b>0.0</b>	<b>0.0</b>	<b>12.0</b>	
12.1	Estimate of Time	12			12.0	4 hours per submittal x 3 submittals
<b>Task 13</b>	<b>Environmental Studies and Permit Coordination</b>	<b>108.0</b>	<b>0.0</b>	<b>0.0</b>	<b>108.0</b>	
13.1	Watershed Development Ordinance Permit Application	40			40.0	Permit application is lengthy
13.2	CWA Section 404 NW Permit	40			40.0	
13.4	IEPA NOI	6			6.0	
13.5	SESC Plan Review	8			8.0	
13.6	Bat Survey	14			14.0	

		Level of Effort - Hours by Firm			Total by Task	Assumptions
		HDR	SAM	Interra		
<b>Task 14</b>	<b>Structural</b>	<b>582.0</b>	<b>0.0</b>	<b>0.0</b>	<b>582.0</b>	
<b>14.1</b>	<b>Type Size and Location Plan</b>					
14.1.1	Geometric Layout	20			20.0	
14.1.2	Multi-Discipline Design Coordination	8			8.0	Includes design iterations with hydraulics, and coordination with potential precast suppliers
14.1.3	General Plan and Elevation	48			48.0	
14.1.4	Details	36			36.0	
14.1.5	Prelim Bridge Design and Hydraulic Report Form	8			8.0	
14.1.6	Scour Critical Evaluation Form	2			2.0	
14.1.7	TSL Detailed Checking	61			61.0	50% of origination hours
<b>14.2</b>	<b>Structural Analysis</b>					
14.2.1	Foundation Design	16			16.0	
14.2.2	Wingwall Design	24			24.0	
14.2.3	Structural Analysis Detailed Checking	20			20.0	50% of origination hours
<b>14.3</b>	<b>Structural Quantities</b>					
14.3.1	Quantity Calculations (Preliminary)	21			21.0	Estimate 14 pay items x 1.5 hours/pay item
14.3.2	Quantity Calculations (Prefinal)	14			14.0	Estimate 14 pay items x 1 hours/pay item
14.3.3	Quantity Calculations (Final)	7			7.0	Estimate 14 pay items x 0.5 hours/pay item
14.3.4	Pay Item Worksheet	4			4.0	
14.3.5	Detailed Checking of Quantities	23			23.0	50% of origination hours
<b>14.4</b>	<b>Structural Contract Drawings</b>					
14.4.1	Plan Sheet Origination	180			180.0	20 hrs sheet x 9 sheets
14.4.2	Plan Sheet Detailed Checking	90			90.0	50% of origination hours
<b>Task 15</b>	<b>Drainage Design</b>	<b>242.0</b>	<b>0.0</b>	<b>0.0</b>	<b>242.0</b>	
15.1	Existing Drainage and Utility Plan and Schedule	30			30.0	1 plan sheet (18 hours) + 1 schedule/detail sheet (12 hours)
15.2	Proposed Condition Drainage Plan and Schedule	84			84.0	2 plan sheets (24 hours ea, culvert) + 1 plan sheet (24 hours along fairfield) + 1 schedule/detail sheet (12 hours)
15.3	Additional Proposed Condition Hydraulic Analysis & Model Updates	16			16.0	assumes an existing model and that revisions will not destabilize the HEC-RAS model
15.4	Compensatory Storage Analysis	8			8.0	1 day
15.5	Scour Analysis	12			12.0	1.5 days
15.6	Location Drainage Technical Memorandum & Hydraulic Report	32			32.0	4 days
15.8	Floodway Permit	32			32.0	Larger than normal due to complex unsteady-state HEC-RAS model
15.9	Quantity Calculations	28			28.0	16 hours prelim, 8 hours prefinal, 4 hours final
<b>Task 16</b>	<b>Constructability Review</b>	<b>16.0</b>	<b>0.0</b>	<b>0.0</b>	<b>16.0</b>	
16.1	Constructability Review	16			16.0	8 hours submittal 1, 6 hours submittal 2, 2 hours submittal 3
<b>Task 17</b>	<b>Phase III Consultation</b>	<b>122.0</b>	<b>0.0</b>	<b>0.0</b>	<b>122.0</b>	
17.1	Pre-bid Meeting	8			8.0	2 attendees x 1 hour each; 6 hours prep
17.2	Bid-phase RFIs	6			6.0	3 RFIs x 2 hours each
17.3	Bid Tab Review	24			24.0	8 hours of bid coordination; 16 hours for bid analysis memo
17.4	Construction RFIs	20			20.0	10 RFIs x 2 hours each
17.5	Structure Shop Drawing and Calculation Review	32			32.0	Assume 16 hours drawings, 16 hours calculations
17.6	Construction Revisions	32			32.0	assume 4 drawings x 8 hours per drawing
<b>Task 18</b>	<b>Meetings and Coordination</b>	<b>110.0</b>	<b>6.0</b>	<b>7.0</b>	<b>123.0</b>	
18.1	Kick-Off	8	2	2	12.0	4 attendees x 2 hour each; 8 hours prep
18.2	Miscellaneous Coordination	28	4	5	37.0	(2 hours per meeting x 2 attendees + 4 hours prep) x 4 meetings assume group utility meeting with follow up coordination as necessary with individual utilities, including Comcast, ComEd, Nicor, AT&T, LCPW & Round Lake Park.
18.3	Utility Coordination	18			18.0	
18.4	IDOT Detour Committee	16			16.0	(2 hours per meeting x 2 attendees + 4 hours prep) x 2 meetings
18.5	Public Outreach	40			40.0	CONSULTANT will provide LCDOT up to six digital exhibit graphics related to the project and associated detour route and traffic impacts during construction. HDR assumes up to 40 hours for digital materials development and one round of edits.
<b>Task 19</b>	<b>Real Estate Services</b>	<b>176.0</b>	<b>0.0</b>	<b>0.0</b>	<b>176.0</b>	
19.1	Develop Legal Descriptions	16				Four legal descriptions
19.2	Parcel Negotiations	88				Assume one negotiation per each of the 4 parcels
19.3	Develop Easement Exhibits	48				Develop up to 4 easement exhibits, 12 hours each
19.4	"Last Deed of Records" and easement calculations	24				Order "Last deed of records" and perform calculations as necessary to determine existing ROW
<b>Total by Firm</b>		<b>2,673.0</b>	<b>82.5</b>	<b>171.0</b>	<b>2,926.5</b>	



<b>Local Public Agency</b> Lake County	<b>County</b> Lake	<b>Section Number</b> 20-00104-10-DR
<b>Prime Consultant (Firm) Name</b> HDR Engineering, Inc.	<b>Prepared By</b> Aniko Shuey	<b>Date</b> 9/10/2024
<b>Consultant / Subconsultant Name</b> HDR Engineering, Inc.	<b>Job Number</b> TIP # B-01434	

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

<b>CONTRACT TERM</b>	24	MONTHS	<b>OVERHEAD RATE</b>	157.57%
<b>START DATE</b>	10/25/2024		<b>COMPLEXITY FACTOR</b>	0
<b>RAISE DATE</b>	12/29/2024		<b>% OF RAISE</b>	2.00%
<b>END DATE</b>	10/24/2026			

### ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	10/25/2024	12/29/2024	2	8.33%
1	12/30/2024	12/29/2025	12	51.00%
2	12/30/2025	10/29/2026	10	43.35%

The total escalation = 2.68%



**Local Public Agency**

**County**

**Section Number**

Lake County

Lake

20-00104-10-DR

**Consultant / Subconsultant Name**

**Job Number**

HDR Engineering, Inc.

TIP # B-01434

**PAYROLL RATES**

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

<b>MAXIMUM PAYROLL RATE</b>	<b>86.00</b>
<b>ESCALATION FACTOR</b>	<b>2.68%</b>

<b>CLASSIFICATION</b>	<b>IDOT PAYROLL RATES ON FILE</b>	<b>CALCULATED RATE</b>
Principal	\$86.00	\$86.00
Project Manager III	\$82.61	\$84.83
Senior Civil Engineer IV	\$86.00	\$86.00
Senior Civil Engineer III	\$81.05	\$83.22
Senior Civil Engineer I	\$65.30	\$67.05
Civil Engineer II	\$45.99	\$47.22
Civil Engineer I	\$36.48	\$37.46
Senior Structural Engineer III	\$83.62	\$85.86
Structural Technician IV	\$67.48	\$69.29
Structural Engineer III	\$58.99	\$60.57
Structural Engineer II	\$45.86	\$47.09
CADD Technician IV	\$57.22	\$58.76
Senior Environmental Scientist	\$63.36	\$65.06
Senior Transportation Planner	\$86.00	\$86.00
Environmental Scientist I	\$30.78	\$31.61
Senior Communications Coordinator	\$61.01	\$62.65
Realty Specialist III	\$58.20	\$59.76
Realty Specialist II	\$47.37	\$48.64
Professional Land Surveyor	\$66.90	\$68.70
Clerical IV	\$46.57	\$47.82
Clerical III	\$36.45	\$37.43



## Local Public Agency

Lake County

## County

Lake

## Section Number

20-00104-10-DR

## Consultant / Subconsultant Name

HDR Engineering, Inc.

## Job Number

TIP # B-01434

**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	225	\$0.67	\$150.75
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	30	\$1.80	\$54.00
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)	450	\$0.06	\$27.00
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)	5	\$1,000.00	\$5,000.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Utility Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Testing of Soil Samples	Actual Cost			\$0.00
Lab Services	Actual Cost (Provide breakdown of each cost)			\$0.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Printing BW 11x17	Actual Cost			\$0.00
Appraisal Reports	Actual Cost	4	\$3,300.00	\$13,200.00
Title Commitments	Actual Cost	2	\$750.00	\$1,500.00
Traffic Counts at Signalized Inter. (8hrs ea*80/hr)	Actual Cost	5	\$640.00	\$3,200.00
<b>TOTAL DIRECT COSTS:</b>				<b>\$23,131.75</b>

Local Public Agency

Lake County

County

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Section Number

20-00104-10-DR

Consultant / Subconsultant Name

HDR Engineering, Inc.

Job Number

TIP # B-01434

COST ESTIMATE WORKSHEET

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE 157.57%

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
01 - Admin / Management	23,132	168	12,808	20,182	4,227		37,217	7.14%
02 - QA/QC		109	9,248	14,571	3,052		26,871	5.16%
03 - Site Visits/Data Evaluation		84	3,927	6,188	1,296		11,411	2.19%
04 - Survey		40	1,942	3,061	641		5,644	1.08%
05 - Existing Utilities		66	3,019	4,757	996		8,772	1.68%
06 - General Plans		128	5,415	8,533	1,787		15,735	3.02%
07 - Roadway Plans		556	25,949	40,888	8,563		75,400	14.47%
08 - Utility Relocation		16	756	1,191	249		2,196	0.42%
09 - Geotechnical		6	515	812	170		1,497	0.29%
10 - Special Provisions		84	4,696	7,399	1,550		13,645	2.62%
11 - Estimate of Cost		48	2,564	4,040	846		7,450	1.43%
12 - Estimate of Time		12	793	1,250	262		2,305	0.44%
13 - Environ Studies & Permit Coord		108	4,952	7,803	1,634		14,389	2.76%
14 - Structural		582	36,082	56,854	11,907		104,843	20.12%
15 - Drainage Design		242	12,853	20,252	4,241		37,346	7.17%
16 - Constructability Review		16	1,376	2,168	454		3,998	0.77%
17 - Phase III Coordination		122	7,010	11,046	2,313		20,369	3.91%
18 - Meetings and Coordination		110	7,281	11,473	2,403		21,157	4.06%
19 - Real Estate Services		176	9,887	15,579	3,263		28,729	5.51%
INTERRA (pavmt cores, geotech, CCDD)			-	-	-	42,857	42,857	8.23%
SAM (SUE survey)			-	-	-	14,745	14,745	2.83%
			-	-	-		-	-
			-	-	-		-	-
			-	-	-		-	-
			-	-	-		-	-
			-	-	-		-	-
			-	-	-		-	-
			-	-	-		-	-
			-	-	-		-	-
<b>Subconsultant DL</b>							\$1,303.30	0.25%
<b>Direct Costs Total ==&gt;</b>	\$23,131.75						<b>\$23,131.75</b>	<b>4.44%</b>
<b>TOTALS</b>		2673	151,073	238,047	49,854	57,602	521,011	100.00%

**Local Public Agency**

Lake County

**County**

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20-00104-10-DR

**Consultant / Subconsultant Name**

HDR Engineering, Inc.

**Job Number**

TIP # B-01434

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

SHEET 1 OF 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			01 - Admin / Management			02 - QA/QC			03 - Site Visits/Data Evaluation			04 - Survey			05 - Existing Utilities		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	86.00	12.0	0.45%	0.39	12	7.14%	6.14												
Project Manager III	84.83	160.0	5.99%	5.08	120	71.43%	60.59	10	9.17%	7.78									
Senior Civil Engineer IV	86.00	46.0	1.72%	1.48				24	22.02%	18.94							6	9.09%	7.82
Senior Civil Engineer III	83.22	128.0	4.79%	3.99				40	36.70%	30.54									
Senior Civil Engineer I	67.05	128.0	4.79%	3.21															
Civil Engineer II	47.22	406.0	15.19%	7.17							16	19.05%	9.00	36	90.00%	42.50			
Civil Engineer I	37.46	550.0	20.58%	7.71							20	23.81%	8.92				48	72.73%	27.24
Senior Structural Engineer III	85.86	141.0	5.27%	4.53				27	24.77%	21.27									
Structural Technician IV	69.29	180.0	6.73%	4.67															
Structural Engineer III	60.57	172.0	6.43%	3.90							12	14.29%	8.65	4	10.00%	6.06			
Structural Engineer II	47.09	306.0	11.45%	5.39							36	42.86%	20.18						
CADD Technician IV	58.76	76.0	2.84%	1.67													12	18.18%	10.68
Senior Environmental Scientist	65.06	46.0	1.72%	1.12															
Senior Transportation Planner	86.00	8.0	0.30%	0.26				8	7.34%	6.31									
Environmental Scientist I	31.61	62.0	2.32%	0.73															
Senior Communications Coordinator	62.65	40.0	1.50%	0.94															
Realty Specialist III	59.76	76.0	2.84%	1.70															
Realty Specialist II	48.64	76.0	2.84%	1.38															
Professional Land Surveyor	68.70	24.0	0.90%	0.62															
Clerical IV	47.82	24.0	0.90%	0.43	24	14.29%	6.83												
Clerical III	37.43	12.0	0.45%	0.17	12	7.14%	2.67												
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
<b>TOTALS</b>		2673.0	100%	\$56.52	168.0	100.00%	\$76.24	109.0	100%	\$84.84	84.0	100%	\$46.75	40.0	100%	\$48.56	66.0	100%	\$45.74

**Local Public Agency**

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

SHEET 2 OF 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	06 - General Plans			07 - Roadway Plans			08 - Utility Relocation			09 - Geotechnical			10 - Special Provisions			11 - Estimate of Cost		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	86.00																		
Project Manager III	84.83																		
Senior Civil Engineer IV	86.00																		
Senior Civil Engineer III	83.22				48	8.63%	7.18							16	19.05%	15.85	4	8.33%	6.94
Senior Civil Engineer I	67.05																		
Civil Engineer II	47.22	32	25.00%	11.81	160	28.78%	13.59	16	100.00%	47.22				52	61.90%	29.23	28	58.33%	27.55
Civil Engineer I	37.46	64	50.00%	18.73	284	51.08%	19.13												
Senior Structural Engineer III	85.86										6	100.00%	85.86	4	4.76%	4.09	4	8.33%	7.16
Structural Technician IV	69.29																		
Structural Engineer III	60.57																		
Structural Engineer II	47.09	32	25.00%	11.77										12	14.29%	6.73	12	25.00%	11.77
CADD Technician IV	58.76				64	11.51%	6.76												
Senior Environmental Scientist	65.06																		
Senior Transportation Planner	86.00																		
Environmental Scientist I	31.61																		
Senior Communications Coordinat	62.65																		
Realty Specialist III	59.76																		
Realty Specialist II	48.64																		
Professional Land Surveyor	68.70																		
Clerical IV	47.82																		
Clerical III	37.43																		
<b>TOTALS</b>		128.0	100%	\$42.31	556.0	100%	\$46.67	16.0	100%	\$47.22	6.0	100%	\$85.86	84.0	100%	\$55.90	48.0	100%	\$53.41

**Local Public Agency**

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**AVERAGE HOURLY PROJECT RATES**

**EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET**

SHEET 3 OF 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	12 - Estimate of Time			13 - Environ Studies & Permit Coord			14 - Structural			15 - Drainage Design			16 - Constructability Review			17 - Phase III 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	86.00																		
Project Manager III	84.83																		
Senior Civil Engineer IV	86.00													16	100.00%	86.00			
Senior Civil Engineer III	83.22	2	16.67%	13.87													10	8.20%	6.82
Senior Civil Engineer I	67.05										128	52.89%	35.47						
Civil Engineer II	47.22	6	50.00%	23.61													32	26.23%	12.39
Civil Engineer I	37.46										114	47.11%	17.65				20	16.39%	6.14
Senior Structural Engineer III	85.86	4	33.33%	28.62				72	12.37%	10.62							24	19.67%	16.89
Structural Technician IV	69.29							180	30.93%	21.43									
Structural Engineer III	60.57							140	24.05%	14.57							12	9.84%	5.96
Structural Engineer II	47.09							190	32.65%	15.37							24	19.67%	9.26
CADD Technician IV	58.76																		
Senior Environmental Scientist	65.06				46	42.59%	27.71												
Senior Transportation Planner	86.00																		
Environmental Scientist I	31.61				62	57.41%	18.14												
Senior Communications Coordinato	62.65																		
Realty Specialist III	59.76																		
Realty Specialist II	48.64																		
Professional Land Surveyor	68.70																		
Clerical IV	47.82																		
Clerical III	37.43																		
<b>TOTALS</b>		12.0	100%	\$66.10	108.0	100%	\$45.85	582.0	100%	\$62.00	242.0	100%	\$53.11	16.0	100%	\$86.00	122.0	100%	\$57.46

**Local Public Agency**

Lake County

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HDR Engineering, Inc.

**Job Number**

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

SHEET 4 OF 4

PAYROLL CLASSIFICATION	AVG HOURLY RATES	18 - Meetings and Coordination			19 - Real Estate Services			INTERRA (pavmt cores, geotech, CCDD)			SAM (SUE survey)								
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	86.00																		
Project Manager III	84.83	30	27.27%	23.13															
Senior Civil Engineer IV	86.00																		
Senior Civil Engineer III	83.22	8	7.27%	6.05															
Senior Civil Engineer I	67.05																		
Civil Engineer II	47.22	28	25.45%	12.02															
Civil Engineer I	37.46																		
Senior Structural Engineer III	85.86																		
Structural Technician IV	69.29																		
Structural Engineer III	60.57	4	3.64%	2.20															
Structural Engineer II	47.09																		
CADD Technician IV	58.76																		
Senior Environmental Scientist	65.06																		
Senior Transportation Planner	86.00																		
Environmental Scientist I	31.61																		
Senior Communications Coordinator	62.65	40	36.36%	22.78															
Realty Specialist III	59.76				76	43.18%	25.81												
Realty Specialist II	48.64				76	43.18%	21.00												
Professional Land Surveyor	68.70				24	13.64%	9.37												
Clerical IV	47.82																		
Clerical III	37.43																		
<b>TOTALS</b>		110.0	100%	\$66.19	176.0	100%	\$56.18	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00



9/5/2024

Mr. Brad Sayers, PE  
HDR Engineering, Inc.  
9450 W. Bryn Mawr Avenue, Suite 400  
Rosemont, Illinois 60018

**Proposal**

**Phase II Engineering Services  
Geotechnical & Environmental Services  
Section: 20-00104-10-DR  
Job: TIP # B-01434  
Culvert 257 Replacement  
Fairfield Road at Barberry Lane  
Round Lake Beach, Lake County, Illinois**

Dear Mr. Sayers:

Interra, Inc. (INTERRA) is pleased to submit this cost estimate to perform geotechnical and environmental services for the above referenced project in Round Lake Beach, Illinois.

We understand that the project involves replacement of 13.25-foot x 9.33-foot corrugated metal pipe culvert with a 37-foot span by 12.5-foot rise three-sided buried structure. The proposed culvert is anticipated to be supported over spread footings. The roadway profile is not expected to change, and the roadway reconstruction will be limited to the area disturbed at the culvert replacement. Qualified soil excavated from the site is planned to be disposed of at a CCDD facility.

**Proposed Scope of Work**

Our scope of work includes:

- Obtaining two (2) full-depth pavement cores on North Fairfield Road.
- Performing two (2) geotechnical soil borings to a depth of 40 feet each.

- Geotechnical laboratory testing of soil samples.
- Preparation of a pavement core data report with photographs.
- Preparation of a Structure Geotechnical Report for the proposed culvert.
- Perform historical database search to identify potentially impacted properties and identify contaminants of concern.
- Perform 2 environmental soil borings for collection of 2 soil samples for analytical testing. One sample will be collected from each environmental soil boring. Environmental soil sampling will be performed separately from the geotechnical investigation.
- Preparation of an environmental report, including LPC 663 certification if site soils qualify.

Based on readily available information, bedrock is expected to be greater than 100 feet deep and rock coring is not anticipated.

### **Field Work**

The pavement cores and borings will be located by INTERRA. The location of the borings and pavement cores will be adjusted based on field conditions, accessibility and utility conflicts. Proposed locations are shown on the attached plan.

The borings will be drilled with a truck-mounted drill rig. Drilling, sampling and field testing of the soil samples will be performed in general accordance with the IDOT Geotechnical Manual (2020), All Geotechnical Manual Users (AGMU) memoranda and AASHTO guidelines. Soil sampling will be performed as per AASHTO T-206, "Penetration Test and Split Barrel Sampling of Soils". Observation for groundwater will be made during and immediately after the completion of the drilling. Collection of 24-hour water levels is not included in the scope of work. Unconfined compressive strength tests will be performed on all cohesive soil samples in the field using a RIMAC tester.

After the completion of the drilling, the boreholes will be backfilled with the soil auger cuttings from the same borehole. Where required, the surface will be patched with asphalt or cement grout to match surrounding elevations.

Environmental sample selection will be based on the findings of the Historical Data review. A Photoionization Detector will be used to screen all soil samples for signs of Volatile Organic Compounds (VOCs) to aid in sample selection for environmental analytical testing. Soil sampling and preservation will be performed in accordance with applicable SW 846 methods. All soil sampling equipment will be decontaminated between samples.

### **Laboratory Work**

Laboratory testing of soil samples will be performed by INTERRA. Moisture content tests will be performed on all recovered soil samples at INTERRA's Bolingbrook, Illinois laboratory. Selected samples will be tested for unconfined compressive strength, grainsize analysis and Atterberg limits. Organic content tests may be performed on selected samples based on visual observations and moisture content test results.

Analytical testing will be performed by a NELAC accredited laboratory on a Standard turnaround 7 business days basis. The anticipated analytical parameters are Volatile Organic Compounds (VOCs), Semivolatile Organic Compounds (SVOCs), RCRA Metals, PCBs, Pesticides and pH.

### **Deliverables**

The pavement core data report will include a core location plan, thicknesses and description of the cores and photographs.

The geotechnical report will be prepared in accordance with the IDOT Geotechnical manual guidelines and will include a boring location plan, soil boring logs and profiles, foundation recommendations and design parameters for potential temporary sheet piles.

The analytical results will be compared to the Clean Construction & Demolition Debris (CCDD) Maximum Allowable Concentration (MAC) values, and Illinois Environmental Protection Agency's (IEPA) Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Soil Remediation Objectives (SROs). Recommendations on Soil Management and disposal will be included. CCDD certification (LPC 663) will be provided if the site soils qualify based on Historical data and analytical results.

### **Schedule**

The fieldwork could be started within three weeks of receiving authorization to proceed. We anticipate the fieldwork to be completed one to two working days. Draft Geotechnical and environmental reports report will be issued within three weeks after completion of fieldwork. Final reports will be issued within two weeks of receiving review comments.

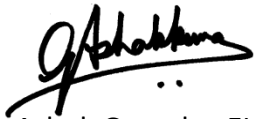
### **Cost Estimate**

The cost to provide the above-mentioned services is provided in the attached CECS and Direct Costs estimate.

INTERRA appreciates the opportunity to submit this proposal. Should you at any time require any additional information or clarifications, please do not hesitate to contact us.

Very truly yours,

**Interra, Inc.**



Ashok Guntaka, EI  
Project Manager



Sanjeev Bandi, Ph.D., PE  
Principal Engineer

# Boring/Core Location Plan

Section: 20-00104-10-DR  
Job: TIP # B-01434  
Fairfield Road at Barberry Lane  
Round Lake, Lake County, IL. 8/28/2024

## Legend

- Pavement Core
- Soil Boring
- Soil Boring + Pavement Core

BCB-02

PC-02

BCB-01/PC-01





<b>Local Public Agency</b> Lake County Division of Transportation	<b>County</b> Lake	<b>Section Number</b> 20-00104-10-DR
<b>Prime Consultant (Firm) Name</b> HDR Engineering, Inc.	<b>Prepared By</b> Ashok Guntaka	<b>Date</b> 9/3/2024
<b>Consultant / Subconsultant Name</b> INTERRA, Inc.	<b>Job Number</b> TIP # B-01434	

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

**Remarks**

Pavement cores, geotechnical investigation and environmental report for Culvert 257 replacement and associated roadway improvements.

**PAYROLL ESCALATION TABLE**

<b>CONTRACT TERM</b>	24	MONTHS		<b>OVERHEAD RATE</b>	132.67%
<b>START DATE</b>	10/25/2024			<b>COMPLEXITY FACTOR</b>	0
<b>RAISE DATE</b>	1/1/2025			<b>% OF RAISE</b>	2.00%
<b>END DATE</b>	10/24/2026				

**ESCALATION PER YEAR**

Year	First Date	Last Date	Months	% of Contract
0	10/25/2024	1/1/2025	2	8.33%
1	1/2/2025	1/1/2026	12	51.00%
2	1/2/2026	11/1/2026	10	43.35%

**The total escalation = 2.68%**

<b>Local Public Agency</b>	<b>County</b>	<b>Section Number</b>
Lake County Division of Transportation	Lake	20-00104-10-DR
<b>Consultant / Subconsultant Name</b>		<b>Job Number</b>
INTERRA, Inc.		TIP # B-01434

**PAYROLL RATES**

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

<b>MAXIMUM PAYROLL RATE</b>	<b>86.00</b>
<b>ESCALATION FACTOR</b>	<b>2.68%</b>

<b>CLASSIFICATION</b>	<b>IDOT PAYROLL RATES ON FILE</b>	<b>CALCULATED RATE</b>
Sr. Admin Assistant	\$31.00	\$31.83
Staff Engineer	\$33.00	\$33.89
Geologist	\$37.00	\$37.99
Geotechnical Engineer	\$54.50	\$55.96
Senior Project Manager	\$77.33	\$79.41
Principal Engineer	\$86.00	\$86.00

<b>Local Public Agency</b>	<b>County</b>	<b>Section Number</b>
Lake County Division of Transportation	Lake	20-00104-10-DR
<b>Consultant / Subconsultant Name</b>	<b>Job Number</b>	
INTERRA, Inc.	TIP # B-01434	

**SUBCONSULTANTS**

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

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

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



**Local Public Agency**

Lake County Division of Transportation

**County**

Lake

**Section Number**

20-00104-10-DR

**Consultant / Subconsultant Name**

INTERRA, Inc.

**Job Number**

TIP # B-01434

**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	5	\$65.00	\$325.00
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
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)	2	\$2,800.00	\$5,600.00
Historical Data	Direct Cost	1	\$350.00	\$350.00
Environmental Analytical Testing	Direct Cost	2	\$1,000.00	\$2,000.00
Geotechnical Drilling & Pavement Coring	Actual Cost (See attached)	1	\$5,510.00	\$5,510.00
Environmental Drilling	Actual Cost (See attached)	1	\$2,580.00	\$2,580.00
Lab - Moisture Content	Direct Cost (in-house)	32	\$27.00	\$864.00
Lab - Grainsize Analysis	Direct Cost (in-house)	3	\$255.00	\$765.00
Lab - Atterberg Limits	Direct Cost (in-house)	3	\$145.00	\$435.00
Lab - Unconfined Compressive Strength	Direct Cost (in-house)	3	\$130.00	\$390.00
Lab - Organic Content	Direct Cost (in-house)	2	\$170.00	\$340.00
Lab - Pavement Core Analysis	Direct Cost (in-house)	2	\$90.00	\$180.00
<b>TOTAL DIRECT COSTS:</b>				<b>\$19,339.00</b>

**Local Public Agency**

Lake County Division of Transportation

**County**

Lake

**Section Number**

20-00104-10-DR

**Consultant / Subconsultant Name**

INTERRA, Inc.

**Job Number**

TIP # B-01434

**COST ESTIMATE WORKSHEET**

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE **132.67%**

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
Administrative		5	159	211	53		423	0.99%
Field Services	14,015	54	2,202	2,921	726		5,849	13.65%
Laboratory Services	4,974	13	585	776	193		1,554	3.63%
Data Evaluation		6	396	525	131		1,052	2.45%
Meetings/Coordination		7	522	693	172		1,387	3.24%
Geotechnical Report		42	2,542	3,372	839		6,753	15.76%
Environmental Report	350	40	2,116	2,807	698		5,621	13.12%
QA/QC		4	331	439	109		879	2.05%
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<b>Subconsultant DL</b>							\$0.00	
<b>Direct Costs Total ==&gt;</b>	\$19,339.00						\$19,339.00	45.12%
<b>TOTALS</b>		171	8,853	11,744	2,921	-	42,857	100.00%

**Local Public Agency**

Lake County Division of Transportation

**County**

Lake

**Section Number**

20-00104-10-DR

**Consultant / Subconsultant Name**

INTERRA, Inc.

**Job Number**

TIP # B-01434

**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			Administrative			Field Services			Laboratory Services			Data Evaluation			Meetings/Coordination		
		Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg
Sr. Admin Assistant	31.83	5.0	2.92%	0.93	5	100.00%	31.83												
Staff Engineer	33.89	44.0	25.73%	8.72				24	44.44%	15.06	8	61.54%	20.85						
Geologist	37.99	32.0	18.71%	7.11				24	44.44%	16.89	2	15.38%	5.85						
Geotechnical Engineer	55.96	54.0	31.58%	17.67										4	66.67%	37.31	2	28.57%	15.99
Senior Project Manager	79.41	20.0	11.70%	9.29				6	11.11%	8.82	3	23.08%	18.32				3	42.86%	34.03
Principal Engineer	86.00	16.0	9.36%	8.05										2	33.33%	28.67	2	28.57%	24.57
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<b>TOTALS</b>		171.0	100%	\$51.77	5.0	100.00%	\$31.83	54.0	100%	\$40.77	13.0	100%	\$45.02	6.0	100%	\$65.97	7.0	100%	\$74.59

**Local Public Agency**

Lake County Division of Transportation

**County**

Lake

**Section Number**

20-00104-10-DR

**Consultant / Subconsultant Name**

INTERRA, Inc.

**Job Number**

TIP # B-01434

**AVERAGE HOURLY PROJECT RATES**

**EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET**

SHEET 2 OF 2

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Geotechnical Report			Environmental Report			QA/QC											
		Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg
Sr. Admin Assistant	31.83																		
Staff Engineer	33.89				12	30.00%	10.17												
Geologist	37.99	2	4.76%	1.81	4	10.00%	3.80												
Geotechnical Engineer	55.96	32	76.19%	42.64	16	40.00%	22.38												
Senior Project Manager	79.41	2	4.76%	3.78	4	10.00%	7.94	2	50.00%	39.70									
Principal Engineer	86.00	6	14.29%	12.29	4	10.00%	8.60	2	50.00%	43.00									
<b>TOTALS</b>		42.0	100%	\$60.51	40.0	100%	\$52.89	4.0	100%	\$82.70	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00

				<b>QUOTE DRILLING, PAVEMENT CORING &amp; TRAFFIC CONTROL</b>	
<b>Date</b>	8/27/2024				
<b>Project</b>	LCDOT Culvert 257				
<b>Site Address</b>	Fairfield Avenue & Barberry Lane, Round Lake Beach, IL				
<b>Details</b>	Utility clearances, mobilization, traffic control, drilling, backfilling				
<b>Client</b>	INTERRA, Inc. - 600 Territorial Drive, Suite G, Bolingbrook, IL 60440				
<b>Contact</b>	Ashok Guntaka	<b>Cell:</b>	630-675-1357	<b>Email</b>	aguntaka@interraservices.com

### GEOTECHNICAL DRILLING

Item #	Description	Unit	Quantity	Unit Rate	Amount
1	Drilling Coordination & Utility Clearances	HOUR	4	\$ 150.00	\$ 600.00
2	Full depth pavement coring (assume 12-16 inches)	EACH	2	\$ 125.00	\$ 250.00
3	Soil Drilling: 2 borings at 40 feet each	FEET	80	\$ 57.00	\$ 4,560.00
4	3-inch shelby tubes	EACH	2	\$ 50.00	\$ 100.00
5	Traffic Control (Flaggers)	DAY	1	\$ 2,800.00	\$ 2,800.00
				<b>Total</b>	<b>\$ 8,310.00</b>

### ENVIRONMENTAL DRILLING

Item #	Description	Unit	Quantity	Unit Rate	Amount
1	Drilling Coordination & Utility Clearances	HOUR	2	\$ 150.00	\$ 300.00
2	Soil Drilling: 2 borings at 20 feet each	FEET	40	\$ 57.00	\$ 2,280.00
3	Traffic Control (Flaggers)	DAY	1	\$ 2,800.00	\$ 2,800.00
				<b>Total</b>	<b>\$ 5,380.00</b>

<b>Notes:</b>	
1	Sample interval is 2.5-feet up to 30 ft. Sample interval beyond 30' is 5-feet.
2	Sampling, Backfill, Mobilization & Demobilization of truck or ATV rig, jars, hole plug and asphalt patching is included in soil drilling per foot rate
3	Prevailing Wage project
4	Traffic Control sub provided by Drilling Company
5	Driller to perform and manage JULIE tickets and joint meets as needed

<b>Submitted By</b>	Geocon Professional Services
<b>Valid until</b>	10/31/2026
<b>Contact</b>	Brandon Fifulusi
<b>Phone</b>	815-823-2623
<b>Email</b>	<a href="mailto:brandon.filafusi@geoconcompanies.com">brandon.filafusi@geoconcompanies.com</a>

Signature \_\_\_\_\_

Date: \_\_\_\_\_



Via Email: [Brad.Sayers@hdrinc.com](mailto:Brad.Sayers@hdrinc.com)

September 4, 2024

Brad Sayers  
HDR Engineering, Inc.  
9450 W. Bryn Mawr Avenue, Suite 400  
Rosemont, Illinois 60018

**RE:** LCDOT – Fairfield Rd Culvert 257 Phase II  
Fairfield Rd Culvert 257  
Professional Surveying Services: SUE  
SAM Proposal No.: 1024092095

Mr. Sayers:

Surveying And Mapping, LLC (SAM) is pleased to provide HDR Engineering, Inc. (Client) with this proposal for professional surveying services in connection with the above-referenced project. Based upon the information provided to SAM and previous discussions with you concerning similar projects, we have prepared the attached proposed Scope of Services.

As you may be aware, we provide a wide array of Professional Land Surveying and Geospatial services with extensive experience preparing surveys for solar energy projects as well as other large-scale renewable energy developments. We are well versed in the state and jurisdictional requirements and the specific requirements associated with your project.

Much of our experience is based on large, energy related projects that consist of large amounts of acreage, with some broken down into multiple phases. As you well know, there can be many challenges, changes, and issues that arise during the development and pre-construction period of a renewable energy project. We will work closely with you in this area and provide our best advice and support and are always open to conversations.

We have the personnel with the experience to complete your project timely and accurately. With over 40 offices located across the country, 250 field crews, 150 licensed professionals and a total staff of over 1,600, we have the staff, technology, tools, and skills to provide a comprehensive set of surveying and mapping products, all through a single point of contact. Our commitment to safety, quality, and client satisfaction delivers the highest quality of work to our clients, on time and on budget.

Once again, we thank you for this opportunity to work with you and your group on this project endeavor and we look forward to working with you on this project.

Respectfully,

William J. Kenter  
Project Manager

cc: Andy Wesley, PLS, Associate | Regional Operations Manager  
Brandon Espinosa, PLS, Senior Associate | Regional Leader  
Mark Johnson, PLS, Area Manager

**SAM COMPANIES**

1224 Fern Ridge Parkway | Suite 105 | St. Louis, MO 63141  
314-576-9878 Office | 844-273-6046 Fax

**sam.biz**



# Fairfield Rd, Phase II

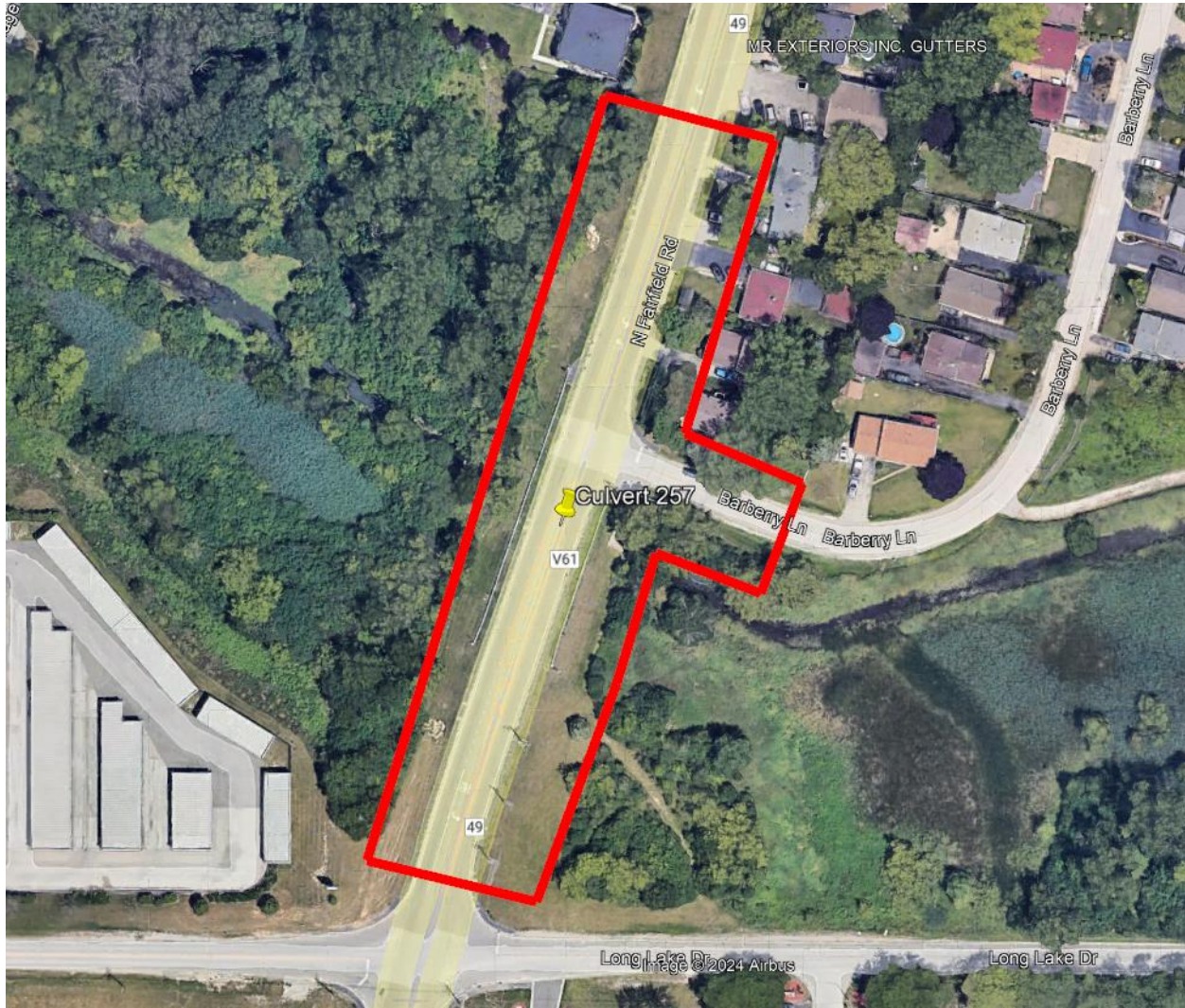
## SUE

### Scope of Services

#### Project Overview

Surveying And Mapping, LLC (SAM) proposes to perform level B SUE services with the intent of identifying the placement and depth of utilities for a culvert replacement. Located in Round Lake Beach, IL, along Fairfield road is Culvert #257. Project Extent are shown in **Exhibit A** below:

**Exhibit A**  
(subject parcel boundary)





## **Assumptions**

The following assumptions were made for the preparation of this Scope of Services. If these assumptions do not prove correct, a modification to the scope and budget resulting in negotiation of a supplemental agreement could be required. For the basis of this scope and fee, SAM assumes the following:

### **Access**

- Client will provide complete access to the project sites between the hours of 7:00 a.m. and 5:30 p.m. This is inclusive of sidewalks in front of businesses and private residences and curbside parking on either side of the road.
- Client will provide right-of-entry, for any areas requiring access, prior to deployment of SAM field crew(s). Access to the site will allow for the use of Trucks or ATVs in performing the services if required.

### **Notification and Coordination**

- Client will notify local property owners of the work activities and schedule to the extent required.
- Client will facilitate coordination with the site owners to the extent required.

### **Records**

- To the extent available, client will provide copies of available records for existing facilities and improvements prior to commencement of work.
- To the extent available, client will provide a CAD file of all survey information including previously found utilities, topographic features, and survey control prior to the commencement of work.

### **Work Permits, Entry, and Training**

- Client will facilitate work, excavation permits, and entry forms to the extent required by the project.
- Project specific training will not be required.
- Confined space entry is not required.

### **Safety**

Client will facilitate safe access for vehicles, equipment, and personnel to the extent required.

### **Traffic Control**

Traffic control requiring lane closures, traffic detouring, flag persons, police, etc., is considered special traffic control and is not included in this scope of services. If special traffic control is required, SAM, LLC can provide this service utilizing a specialty subcontractor.

### **Weather**

SAM will notify the client of snow cover or other issues that may impede or delay the investigation.

### **Gravity Utilities**

SAM will be including sanitary and storm sewer mains in the subsurface utility engineering task, including rim and invert information.





## **Task 1: Subsurface Utility Engineering**

### **1.0 Quality Level D - Records Research**

SAM will conduct utility records research to assist in identifying utility owners that may have facilities on or be affected by the project. Applicable utility owner records will be requested, responses will be documented, and record information will be compiled.

### **1.1 Quality Level C - Incorporate above ground features**

SAM will identify surface features on the topographic plan and ground surface that are surface appurtenances of existing subsurface utilities. If records and features do not agree, further record review and field reconnaissance will be undertaken to resolve discrepancies. Work will incorporate Quality Level D findings.

### **1.2 Quality Level B - Designating and Surveying**

SAM staff will utilize a suite of geophysical equipment in an attempt to designate the utilities identified in the Project Description within the area(s) of interest. Quality Level B services for this project include:

- Utilizing normal traffic control, including standard placement of traffic cones, freestanding warning signage and vehicle-mounted traffic directional sign.
- Designating and marking underground utilities within the project limits using an appropriate suite of surface geophysical methods. Typical equipment utilized includes:
  - Radiodetection - RD8100 and Metrotech Vivax VM 810 & vLocML Cable and Pipe Locator
  - Acoustic - ULTRA-TRAC® Acoustic Pipe Locator
  - GPR - Single and/or Dual Frequency
  - Magnetic locators
  - Rodders, Sondes (transmitters) and Receivers for non-conductive utility detection, other than electric
- Marking the utilities at maximum 50-foot intervals and at changes in direction
- Attempting to locate water lines, force mains, and other non-tonable utilities using ground penetrating radar. If successful, these utilities will be marked as Quality Level B. If unsuccessful, these utilities will be drawn on deliverables according to records marked as Quality Level D.
- SAM will survey markings, and any other pertinent information, as is reasonably ascertainable, that indicate the presence of a utility. Horizontal data will be held to the accuracies and precision dictated by the project's survey control.
- Plotting survey data using Auto CAD .dwg format.
- Providing a deliverable including engineering drawing(s) shown in plan view using the approved color codes for found utilities in accordance with ASCE Standard 38-22 complete with engineering seal and signature.

### **Limits of Technology and Liability**

The scope of services is limited to the extent of the technology utilized. Non-metallic piping, inactive electric and/or communication lines, utilities that cannot be directly connected to, or access points that cannot be seen from the project scope may or may not be identifiable. SAM will not be responsible for omission of utility information in these situations.

The accuracy of subsurface data can be influenced by factors beyond our control such as conductivity of materials and their surroundings, soil moisture content, proximity of other underground utilities or structures, depth of utility, etc. Therefore, physical verification (through



vacuum excavation or otherwise) is the only subsurface utility data that is collected to applicable engineering and/or surveying standards.

Other surface geophysical methods, such as terrain conductivity and point to source transmitters can be used, as appropriate. These techniques, although typically involving extra expense, can further refine the utility model. Generally, these extra refinements are not cost effective, and SAM, LLC will not apply these techniques without authorization of the client.

Paint markings placed on the ground by SAM are to be used for design purposes only and not for construction. The use of this information does not relieve any contractor or the Client from the duty to comply with applicable utility damage prevention laws and regulations, including, but not limited to, providing notification to utility owners or One-Call centers before excavation.

**Project Schedule**

Based on Work Order approval and notice to proceed, SAM will mobilize at a mutually agreed upon schedule, and complete the designating work working 8:00 a.m. to 5:00 p.m. Monday - Friday pending no weather delays or conditions beyond our control. The project manager for SAM will keep HDR Engineering, Inc. apprised of progress and any delays that occur.

**Project Fee**

SAM will provide the following services on a lump sum basis. Anything outside this scope of work will be billed on a Time and Materials basis according to the attached rate schedule.

**Task 1 – SUE Services ..... \$14,745**

**The Benefits of SAM SUE**

As an industry leader recognized as the most trusted and sought after company in the infrastructure ecosystem, SAM offers the staff, the technology, and the expertise that many firms do not have available. Every project can become complicated quickly and you want team members positioned to adjust to those changes with the assets to follow through. SAM is that team member for your project.

**Additional SUE Services**

SAM will perform additional field and office surveying tasks to supplement the Project on a time and material basis:

- Changes in scope made by the Client.
- Overhead electric crossing survey.
- Subsurface Utility Engineering (SUE) services.
- Additional services not explicitly stated within this Scope of Services.
- Additions & Adjustments to project limits

Pricing for additional efforts shown in Attachment A



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

<b>Local Public Agency</b> LCDOT	<b>County</b> Lake	<b>Section Number</b> 
<b>Prime Consultant (Firm) Name</b> HDR	<b>Prepared By</b> William J. Kenter	<b>Date</b> 8/29/2024
<b>Consultant / Subconsultant Name</b> SAM, LLC	<b>Job Number</b> 	

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

**Remarks**

**PAYROLL ESCALATION TABLE**

CONTRACT TERM	24	MONTHS		OVERHEAD RATE	192.66%
START DATE	10/25/2024			COMPLEXITY FACTOR	0
RAISE DATE	1/1/2025			% OF RAISE	2.00%
END DATE	10/24/2026				

**ESCALATION PER YEAR**

Year	First Date	Last Date	Months	% of Contract
0	10/25/2024	1/1/2025	2	8.33%
1	1/2/2025	1/1/2026	12	51.00%
2	1/2/2026	11/1/2026	10	43.35%

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The total escalation = 2.68%





Local Public Agency

LCDOT

County

Lake

Section Number

Job Number

Consultant / Subconsultant Name

SAM, LLC

**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)	3	\$107.00	\$321.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost	3	\$18.00	\$54.00
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	310	\$0.67	\$207.70
Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day			\$0.00
Vehicle Rental	Actual Cost (Up to \$55/day)			\$0.00
Tolls	Actual Cost			\$0.00
Parking	Actual Cost			\$0.00
Overtime	Premium portion (Submit supporting documentation)			\$0.00
Shift Differential	Actual Cost (Based on firm's policy)			\$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost (Submit supporting documentation)			\$0.00
Copies of Deliverables/Mylars (In-house)	Actual Cost (Submit supporting documentation)			\$0.00
Copies of Deliverables/Mylars (Outside)	Actual Cost (Submit supporting documentation)			\$0.00
Project Specific Insurance	Actual Cost			\$0.00
Monuments (Permanent)	Actual Cost			\$0.00
Photo Processing	Actual Cost			\$0.00
2-Way Radio (Survey or Phase III Only)	Actual Cost			\$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual Cost			\$0.00
CADD	Actual Cost (Max \$15/hour)			\$0.00
Web Site	Actual Cost (Submit supporting documentation)			\$0.00
Advertisements	Actual Cost (Submit supporting documentation)			\$0.00
Public Meeting Facility Rental	Actual Cost (Submit supporting documentation)			\$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual Cost (Submit supporting documentation)			\$0.00
Recording Fees	Actual Cost			\$0.00
Transcriptions (specific to project)	Actual Cost			\$0.00
Courthouse Fees	Actual Cost			\$0.00
Storm Sewer Cleaning and Televising	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Traffic Control and Protection	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Aerial Photography and Mapping	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Utility Exploratory Trenching	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
Testing of Soil Samples	Actual Cost			\$0.00
Lab Services	Actual Cost (Provide breakdown of each cost)			\$0.00
Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
SUE Equipment Package	Hourly (approved depreciated basis)	26.5	\$8.00	\$212.00
GPS Receiver System	Hourly (approved depreciated basis)	16	\$10.00	\$160.00
Meals (Per Diem)	Daily	3	\$59.00	\$177.00
				\$0.00
<b>TOTAL DIRECT COSTS:</b>				<b>\$1,131.70</b>

**Local Public Agency**

LCDOT

**County**

Lake

**Section Number**

**Consultant / Subconsultant Name**

SAM, LLC

**Job Number**

**COST ESTIMATE WORKSHEET**

EXHIBIT D COST ESTIMATE OF CONSULTANT SERVICES (CECS) WORKSHEET

OVERHEAD RATE **192.66%**

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
CADD		11	550	1,061	182		1,793	12.16%
Engineering Review		6.5	465	896	153		1,514	10.27%
QA/QC		2	158	304	52		514	3.49%
Field Investigation	1,132	53	2,292	4,415	756		7,463	50.61%
Admin/Management		4	286	551	94		931	6.31%
Meetings/Coordination		6	429	827	142		1,398	9.48%
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<b>Subconsultant DL</b>							\$0.00	
<b>Direct Costs Total ==&gt;</b>	\$1,131.70						\$1,131.70	7.68%
<b>TOTALS</b>		82.5	4,180	8,054	1,379	-	14,745	100.00%

**Local Public Agency**

LCDOT

**County**

Lake

**Section Number**

**Consultant / Subconsultant Name**

SAM, LLC

**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			CADD			Engineering Review			QA/QC			Field Investigation			Admin/Management		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Associate	86.00	1.0	1.21%	1.04							1	50.00%	43.00						
Senior Staff	71.56	17.5	21.21%	15.18				6.5	100.00%	71.56	1	50.00%	35.78				4	100.00%	71.56
Staff 3	59.39	0.0																	
Staff 2	52.59	8.0	9.70%	5.10	8	72.73%	38.25												
Staff 1	43.24	56.0	67.88%	29.35	3	27.27%	11.79							53	100.00%	43.24			
Senior Office Technician	34.94	0.0																	
Office Technician 3	31.53	0.0																	
Office Technician 2	30.06	0.0																	
Office Technician 1	22.22	0.0																	
Senior Field Technician	39.88	0.0																	
Field Tech 3	35.85	0.0																	
Field Tech 2	29.31	0.0																	
Filed Tech 1	23.54	0.0																	
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<b>TOTALS</b>		82.5	100%	\$50.67	11.0	100.00%	\$50.04	6.5	100%	\$71.56	2.0	100%	\$78.78	53.0	100%	\$43.24	4.0	100%	\$71.56



