



DRAFT

Local Public Agency Engineering Services Agreement



Using Federal Funds? Yes No Agreement For

Agreement Type

LOCAL PUBLIC AGENCY

Local Public Agency		County	Section Number	Job Number
<input type="text" value="Lake County Division of Transportation"/>		<input type="text" value="Lake"/>	<input type="text" value="15-00289-01-BT"/>	<input type="text"/>
Project Number	Contact Name	Phone Number	Email	
<input type="text"/>	<input type="text" value="Chuck Gleason"/>	<input type="text" value="(847) 377-7447"/>	<input type="text" value="CGleason@lakecountyil.gov"/>	

SECTION PROVISIONS

Local Street/Road Name	Key Route	Length	Structure Number
<input type="text" value="Patriot Path - IL Route 137 Bike Path (Seg 1)"/>	<input type="text" value="IL Route 137"/>	<input type="text" value="13,621 ft"/>	<input type="text"/>
Location Termini			<input type="button" value="Add Location"/>
<input type="text" value="Des Plaines River Trail to Sage Court/Brookhaven Dr."/>			<input type="button" value="Remove Location"/>

SECTION PROVISIONS

Local Street/Road Name	Key Route	Length	Structure Number
<input type="text" value="Patriot Path - IL Route 137 Bike Path (Seg 4)"/>	<input type="text" value="IL Route 137"/>	<input type="text" value="7,000 ft"/>	<input type="text"/>
Location Termini			<input type="button" value="Add Location"/>
<input type="text" value="Great Lakes Dr. (entrance into Veterans Memorial Golf Course) to the Robert McClory Bike Path"/>			<input type="button" value="Remove Location"/>

Project Description

Engineering Funding MFT/TBP State Other

Anticipated Construction Funding Federal MFT/TBP State Other

AGREEMENT FOR

Phase I - Preliminary Engineering Phase II - Design Engineering

CONSULTANT

Consultant (Firm) Name	Contact Name	Phone Number	Email
<input type="text" value="HR Green, Inc."/>	<input type="text" value="Stephen Bicking, PE"/>	<input type="text" value="(815) 759-8306"/>	<input type="text" value="sbicking@hrgreen.com"/>
Address	City	State	Zip Code
<input type="text" value="1391 Corporate Drive, Suite 203"/>	<input type="text" value="McHenry"/>	<input type="text" value="IL"/>	<input type="text" value="60050"/>

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: Direct Costs Check Sheet
- EXHIBIT D: Qualification Based Selection (QBS) Checklist
- EXHIBIT E: Cost Estimate of Consultant Services Worksheet (BLR 05513 or BLR 05514)
- EXHIBIT F: Direct Cost Worksheet
- EXHIBIT G: Subconsultant Services
- _____

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 Exhibit C).

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 D).
2. To furnish the ENGINEER all presently available survey data, plans, specifications, and project information.

3. To pay the ENGINEER:
- (a) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
 - (b) Final payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and DEPARTMENT a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.
 - (c) For Non-Federal County Projects - (605 ILCS 5/5-409)
 - (1) For progressive payments - Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LPA, monthly payments for the work performed shall be due and payable to the ENGINEER. Such payments to be equal to the value of the partially completed work in all previous partial payments made to the ENGINEER.
 - (2) Final payment - Upon approval of the work by the LPA but not later than 60 days after the work is completed and reports have been made and accepted by the LPA and STATE, a sum of money equal to the basic fee as determined in the AGREEMENT less the total of the amount of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

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

Method of Compensation:

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

Total Compensation = DL + DC + OH + FF

Where:

DL is the total Direct Labor,

DC is the total Direct Cost,

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

FF is the Fixed Fee.

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

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

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

III. IT IS MUTUALLY AGREED,

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

The LPA will notify the ENGINEER of any error or omission believed by the LPA to be caused by the negligence of the ENGINEER as soon as practicable after the discovery. The LPA reserves the right to take immediate action to remedy any error or omission if notification is not successful; if the ENGINEER fails to reply to a notification; or if the conditions created by the error

or omission are in need of urgent correction to avoid accumulation of additional construction costs or damages to property and reasonable notice is not practicable.

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

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

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

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

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

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

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

- (a) Publishing a statement:

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

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

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

AGREEMENT SUMMARY

Prime Consultant	TIN/FEIN/SS Number	Agreement Amount
HR Green, Inc.	42-0927178	\$1,663,592.00

Subconsultants	TIN/FEIN/SS Number	Agreement Amount
- AMES Engineering, Inc.	36-4404761	\$25,870.00
- HBK Engineering, LLC	46-1255956	\$38,028.00
- HDR Engineering, Inc.	47-0680568	\$606,518.00
- Rubino Engineering, Inc.	80-0450719	\$48,993.00
Subconsultant Total		\$719,409.00
Prime Consultant Total		\$1,663,592.00
Total for all work		\$2,383,001.00

Add Subconsultant

AGREEMENT SIGNATURES

Executed by the LPA:

Attest: The Local Public Agency Type
County of Name of Local Public Agency
Lake

By	Date
Name of Local Public Agency	Local Public Agency Type
Lake	County
	Clerk

By	Date
Title	

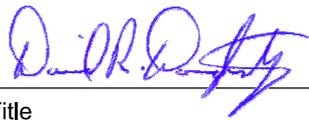
(SEAL)

Executed by the ENGINEER:

Consultant (Firm) Name

Attest: HR Green, Inc.

By	Date
	9/15/21
Title	
Senior Engineer	

By	Date
	9/15/21
Title	
President - Transportation	

APPROVED:

Regional Engineer, Department of Transportation	Date

Local Public Agency

County

Section Number

Lake County Division of Transportation

Lake

15-00289-01-BT

**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

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SCOPE OF SERVICES

For

**Lake County Division of Transportation
Patriot Path - IL Route 137 Bike Path
Des Plaines River Trail to Robert McClory Bike Path – Segments 1 and 4
Section No. 15-00289-01-BT**

Chuck Gleason, Project Manager
Lake County Division of Transportation
600 West Winchester Road
Libertyville, IL 60048
847.377.7447

Stephen R. Bicking, PE
HR Green, Inc.
420 N. Front St.
McHenry, IL 60050
HR Green Project Number 191892

September 15, 2021

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THIS **AGREEMENT** is between Lake County Division of Transportation, (hereafter “CLIENT”) and HR GREEN, INC. (hereafter "COMPANY").

1.0 Project Understanding

1.1 General Understanding

CLIENT desires Phase II engineering services from COMPANY, who is prequalified with the Illinois Department of Transportation (IDOT) in the relevant categories, to develop plans, specifications, estimates and bid documents for the construction of Patriot Path Segments 1 and 4 in Lake County, Illinois (Section 15-00289-01-BT). Segment 1 has limits from the Des Plaines River Trail to Sage Court/Brookhaven Drive (length of 13,621 feet). Segment 4 is from Great Lakes Drive (entrance into Veterans Memorial Golf Course) to the Robert McClory Bike Path (length of 7,000 feet). Additionally, IDOT and regulatory agency coordination will be necessary for the renewal/updating of various environmental signoffs as their Phase I approvals expire. The proposed project will provide for the construction of two (2) of the four (4) total segments of the Patriot Path, which will ultimately connect the Des Plaines River Trail and the Robert McClory Bike Path. The Patriot Path will be incorporated into the CLIENT’s overall bike path network and provide the surrounding communities and other entities connection opportunities.

The scope of the proposed improvements includes hot-mix asphalt bike path pavement, a new bridge, retaining walls, bicycle railings, culvert extensions, combination concrete curb and gutter, and storm sewer appurtenances. The plans, specifications and estimates for Segment 1 and Segment 4 will be separated into two (2) distinct construction contracts so the projects can be bid and constructed separately, if desired.

In general, this SCOPE OF SERVICES governs the Phase II engineering services required for the construction of Patriot Path Segments 1 and 4. These services will include, but are not limited to, the following: supplemental field survey, right-of-way (ROW) plats/legal descriptions, ROW appraisals/negotiations, traffic signal/lighting modifications, pavement striping, ADA plans, utility coordination/relocation, storm sewer and stormwater detention design, geotechnical explorations/testing, permitting and wetland mitigation, landscaping restoration, environmental coordination, public involvement and the preparation of contract plans, specifications and estimates. For the purposes of this SCOPE OF SERVICES, it is assumed that the Phase II engineering services will conclude within 24 months of COMPANY receiving notice to proceed from CLIENT.

As CLIENT intends to use Federal funding for construction, the Phase II engineering for the project will need to be processed through the IDOT Bureau of Local Roads and Streets (BLRS) and be completed according to Federal Highway Administration (FHWA) and National Environmental Policy Act (NEPA) requirements, in addition to applicable State and local requirements.



1.2 Design Criteria/Assumptions

CLIENT intends to use a combination of Motor Fuel Tax (MFT) and local funds for the Phase II engineering. No Federal funds will be used.

The project's design criteria will be from the IDOT Bureau of Design and Environment (BDE) Manual Chapter 58 for Special Elements and the AASHTO Guide for the Development of Bicycle Facilities.

Additional project criteria will include CLIENT's Plan Preparation Guidelines, CLIENT's Design Survey Procedures, the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, the 2017 AASHTO LRFD Bridge Design Specifications, the 8th Edition AASHTO LRFD Guide Specification for Design of Pedestrian Bridges, and the Lake County Division of Transportation Standard Details and Specifications.

Improvements to municipal jurisdictional roadways and underground facilities will be designed in accordance with the local agency ordinances and standards, where applicable.

This SCOPE OF SERVICES includes floodplain permitting coordination time for IDOT and the Lake County Stormwater Management Commission (LCSMC).

COMPANY has assumed that no detours will be required as part of the Phase II engineering.

2.0 Scope of Services

The CLIENT agrees to employ COMPANY to perform the following services:

2.1 Land Surveying

COMPANY will coordinate with CLIENT to prepare a survey right-of-entry letter for survey work on private property. COMPANY will contact property owners, to the extent possible, in advance of surveying on private property.

On this basis, COMPANY will perform the following survey tasks:

A. Supplemental Survey

Additional topographic survey will be collected in select areas identified during the Phase II design of Segments 1 and 4. This includes but is not limited to the Des Plaines River Trail, Veterans Memorial Golf Course parking lot, roadway pavement, and utility markings or elevations.

B. Tree Survey

COMPANY will conduct a survey of trees exceeding six (6) inch diameter within the proposed limits of construction that includes size, species, condition, and tags (if



desired). The tree survey limits will match the construction limits developed during the Phase II design of Segments 1 and 4, excluding the Lake County Forest Preserve District (LCFPD) lands that were already surveyed during Phase I. COMPANY will provide a summary of findings and anticipated replacement values in a memo format.

C. Easement Plats and Legal Descriptions

COMPANY will prepare a plat of highways and legal descriptions for an assumed maximum of 93 adjacent parcels of land to be acquired for ROW, permanent easements, and/or temporary construction easements in Segments 1 and 4. Boundary survey will be performed on the 93 subject parcels as described in the title commitments Schedule A (obtained by COMPANY) as required to complete the proposed plat of highways. Following construction, each proposed ROW parcel will be monumented with 5/8" steel bars with CLIENT ROW caps or other suitable markers.

2.2 ROW Acquisition (HDR Engineering, Inc.)

As a subconsultant to COMPANY, HDR Engineering, Inc. (HDR) will perform the land acquisition services.

A. Delivery and Review of Project Information

COMPANY will provide HDR with plats of highway, legal descriptions, the most recent title commitments, and any other pertinent information regarding the property owner for each parcel assigned for acquisition. In addition, COMPANY will also provide HDR with a set of project plans, including plan and profiles, drainage and utility plans, pavement marking plans, and cross sections.

B. HDR's land acquisition services, responsibilities, and deliverables will consist of the following:

1. Manage their contracted ROW subconsultants, including:
 - a. Ordering and monitoring delivery of appraisal reports; and
 - b. Ordering and monitoring delivery of appraisal review reports.
2. Participate in one (1) kickoff meeting and any additional meetings with COMPANY and/or the CLIENT to discuss project related items.
3. Provide land acquisition report that details the status of each parcel. The report will be provided on a weekly basis or upon request from COMPANY.
4. Prepare and distribute an introductory letter to impacted landowners via certified mail with a general statement of the project that briefly describes the necessary land acquisition requirements.
5. Review plat of highway, title documents and appraisal reports for each parcel prior to negotiation activities.
6. Prepare offer packages for up to 93 parcels and send to landowners via certified mail.



7. Conduct quality reviews on offer packages to check conveyance documents are consistent with offers.
8. Conduct negotiations with landowners to reach a settlement. HDR's land acquisition budget allows for 25 hours of negotiation services for each parcel. This includes one (1) in-person meeting with impacted property owners to explain the offer package and property impacts, as well as follow-up due diligence either by phone, email or through virtual meetings, until a settlement is reached and the conveyance documents are signed and notarized. Upon request from COMPANY and with prior approval from CLIENT, HDR can exceed the number of allotted hours to make reasonable efforts to reach a settlement before recommending condemnation proceedings. A supplemental agreement may be required.
9. Upon successful negotiations, HDR will submit the completed parcel file to COMPANY with original signed conveyance documents, the Negotiator's report documenting all negotiation activities, and all other documentation as required.
10. Assist property owner in obtaining partial release of mortgages, as necessary.
11. Prepare administrative settlements, as necessary.
12. Record executed temporary easement agreements at the Lake County Recorder's Office.
13. If negotiations are not successful, HDR will submit the parcel file along with all necessary documentation to COMPANY with a recommendation to acquire the parcel through condemnation. The Negotiator will attend any pre-trial meetings and provide expert witness testimony, as necessary. HDR's condemnation budget accounts for up to five (5) of the parcels to go to condemnation. In the event more parcels go to condemnation a supplemental agreement may be required.
14. Project close out.

2.3 Geotechnical Investigation (Rubino Engineering, Inc.)

As a subconsultant to COMPANY, Rubino Engineering, Inc. (Rubino) will perform the geotechnical investigation for the project in accordance with the IDOT Geotechnical Manual. The tasks to be performed by Rubino as part of the geotechnical investigation will include soil borings, soil analysis and preparation of a Geotechnical Report summarizing the investigation.

Boring Locations

The proposed borings for each segment include:

- A. 15 bridge, culvert, and wall boring locations in Segment 1.
- B. 10 path borings (5 feet deep) in Segment 1.
- C. Eight (8) path borings (5 feet deep) in Segment 4.

COMPANY will incorporate the findings from the geotechnical fieldwork and Geotechnical Report into the Phase II plans and specifications, as appropriate.



2.4 Lighting (Ames Engineering, Inc.)

As a subconsultant to COMPANY, Ames Engineering, Inc. (AEI) will perform the lighting design, plans and specifications for the relocation of existing lighting along IL 137 that will be impacted by the construction of the Patriot Path. In Segment 1, the lighting to be relocated includes parking lot lights, decorative light poles at entrances and IDOT light poles west of I-94. In Segment 4, the lighting to be relocated is IDOT roadway lighting.

2.5 Permitting and Environmental Coordination

As part of Phase I engineering services the Illinois State Geological Survey (ISGS) is preparing the Preliminary Environmental Site Assessment (PESA) for the entire Environmental Survey Request (ESR) limits. The PESA has not yet been finalized and therefore is not available for review. It is anticipated that the PESA will identify sites with Recognized Environmental Conditions (RECs). For the purposes of this SCOPE OF SERVICES, it is assumed that 15 REC sites will be identified.

As part of the Phase II engineering services, COMPANY will prepare the PESA Response Form (BDE 2735) and plan exhibits detailing any anticipated construction impacts for sites identified by ISGS as a REC. The plan exhibits will identify the REC location, excavation volumes and depth of excavation. COMPANY will attempt to avoid all REC sites to the extent practical. However, in the event REC involvement cannot be avoided, it is anticipated that IDOT will task ISGS with performing a Preliminary Site Investigation (PSI). The results of the PSI will yield detailed specifications and quantities pertaining to special waste management for COMPANY to incorporate into the contract plans and specifications. It is anticipated that one (1) PESA Response Form will be submitted to cover both Segment 1 and Segment 4, and 15 sites will need to be included in the form to address the PSI comments.

The analytical requirements (including pH samples required by the CCDD facility) for the CCDD coordination LPC-663 will be provided by IDOT as part of the PSI documentation. COMPANY will coordinate with the CCDD facility provided by LCDOT to request precertification.

Biological resource clearances have not yet been received as part of the Phase I coordination. For the purposes of this SCOPE OF SERVICES, it is assumed that the biological clearances will be provided and require no additional surveys or coordination. It is also assumed that an Addendum ESR (AESR) will need to be submitted at some point during Phase II, given the validity of some clearances are likely to expire, though the updated clearances are not expected to involve any additional surveys or coordination. As such, no additional coordination with the Illinois Department of Natural Resources (IDNR) and/or the US Fish and Wildlife Service (USFWS) to address threatened and endangered (T&E) species, or the Lake County Forest Preserve District (LCFPD) regarding the Section 4(f) document is included in this SCOPE OF SERVICES.



Some regulatory agency coordination will be necessary to acquire the permits necessary for the project. COMPANY will conduct the environmental coordination and obtain the necessary permits from the appropriate agencies as detailed below. This will be limited to permit coordination only.

A. Addendum ESR Update

COMPANY will submit an AESR to update the Phase I environmental clearances as needed. This applies to only cultural and biological resources. It is anticipated that one (1) AESR will be submitted for both Segment 1 and Segment 4. This will be for updating clearances only and assumes no additional coordination will be necessary, as indicated above. It is also assumed that the PESA will be valid throughout this process with the continued coordination described above.

B. USACE Levee Coordination

COMPANY will coordinate the path location on the levee with the US Army Corps of Engineers (USACE) as part of the final path design.

C. Wetland Permitting

A wetland/water assessment was completed during Phase I in 2018. It is anticipated that the assessment will still be valid for the submittal of the regional permit application to USACE. A preliminary impact analysis of Lake County Wetland Inventory wetlands within 25 feet of the existing ROW along the project corridor suggests total wetland impacts will be less than one (1) acre. The threshold for total wetland impacts for a Regional General Permit 3 for transportation projects is 1.0 acre. This SCOPE OF SERVICES assumes the total wetland impacts will remain below 1.0 acre. COMPANY will complete and submit to USACE a permit package including all items on the regional permit checklist.

It is assumed that any wetland impacts will be handled via wetland banking. Wetland banking will be coordinated by CLIENT.

It is anticipated that one (1) regional permit application and one LCSMC permit application will be submitted for both Segment 1 and Segment 4.

2.6 Structural Engineering

COMPANY will complete the analysis, design plans and specifications for the following structural elements along the proposed Patriot Path alignment.

A. Des Plaines River Crossing Pedestrian Bridge

A prefabricated pedestrian truss superstructure will be specified for the Des Plaines River crossing. The proposed pedestrian bridge will consist of a single span, steel



through truss configuration with transverse framing limited to the bottom chord/deck elevation. The proposed bridge will be supported on open abutments with H-Pile foundations. The following plans will be developed for the crossing:

1. A final Type, Size and Location (TS&L) will be completed based on the concept TS&L developed during Phase I. The TS&L will be submitted to IDOT and LCDOT for approval. Once approved, COMPANY will proceed with the development of structural plans and documents listed below for the crossing.
2. Bridge General Plan and Elevation.
3. General Notes and Bill of Materials (with quantities and pay items).
4. Bridge Foundation Layout.
5. Bridge Abutment Details (with Bill of Bars, quantities and pay items consistent with an IDOT letting).
6. Pile details and design lengths with factored and nominal capacity requirements.
7. Structural Soil Boring Logs.

The use of COR-TEN (weathering) steel is a common material choice for its corrosion resistance. However, due to the proximity of the adjacent roadway and the likelihood of salt spray onto the pedestrian bridge, a protective paint coating will be recommended regardless.

It is understood that a concrete deck capable of supporting the guide specified pedestrian live loads or up to a H-5 truck (10,000 lb. vehicle) is required.

COMPANY will obtain preliminary design reactions from an IDOT prequalified vendor, or a vendor of CLIENT's choosing for the design of the foundation elements.

B. Cast-In-Place Concrete Retaining Wall

A cast-in-place, reinforced concrete T-Wall type retaining wall may be required west of the Des Plaines River crossing to help limit fill in the existing floodplain and reduce compensatory storage demand. Assuming such a wall is necessary, COMPANY will complete the structural analysis and detailing sufficient to furnish the following plan sheets:

1. Retaining Wall General Plan and Elevation (T-Wall).
2. Retaining Wall General Notes and Bill of Materials (with quantities and pay items) (T-Wall).
3. Retaining Wall Foundation Layout and Footing Details (T-Wall).
4. Retaining Wall Details and Bill of Bars (T-Wall).
5. Retaining Wall Aesthetic Form Liner Details (T-Wall).

It is assumed that the retained height of the wall will not meet or exceed seven (7) feet, thus a TS&L submittal will not be required.



C. Precast Concrete Segmental Block Retaining Walls

Based on the Phase I cross-sections, up to 11 potential retaining wall locations have been identified to reduce the construction footprint and are included in this SCOPE OF SERVICES. For these locations COMPANY anticipates the use of precast concrete segmental block retaining walls. These wall types will be reviewed against ROW and other site constraints at each location early in design process to verify construction feasibility or if a different wall type is better suited. For the purposes of this SCOPE OF SERVICES, the total combined plan length of retaining wall is estimated to be 3,500 feet, and it is assumed the walls will retain less than seven (7) feet of soil so a TS&L submittal will not be required.

For the precast concrete segmental block retaining walls, COMPANY will furnish the following:

1. Retaining Wall GP&E (11 potential locations; height varies 1 to 5 feet).
2. Retaining Wall General Notes and Bill of Materials.
3. Retaining Wall General Notes, Typical Sections and Details.
4. Structural Bicycle Railing Details will be required based on the Phase I design cross-sections, it generally appears the retaining walls can be constructed next to the existing roadway pavement without temporary sheet pile or other designed temporary shoring. The proposed bike path will be supported on the high side of the wall. Therefore, an IDOT standard bicycle railing will be added behind or on top of the wall, depending on the wall type selected. The railing may use vertical pickets in place of the wire mesh that is employed by the IDOT standard details depending on CLIENT preference.

D. Existing Culvert Crossings

In Segment 1 there are two (2) existing culvert crossing locations, including an 8'x4' box culvert conveying Meadow Haven Creek near N. River Road on the south side of IL 137; and dual 36" diameter storm sewer outlets near Reigate Lane on the north side of IL 137. The 8'x4' box culvert at Meadow Haven Creek will not require a culvert extension. Instead, a combination of a segmental block retaining wall (one of the 11 potential wall locations previously noted), grading, and a concrete slab will be used to construct the proposed path adjacent to the existing culvert. The dual 36" diameter storm sewer outlet near Reigate Lane is located in an area where two (2) other drainage outlets (one from a subdivision detention pond and one from an adjacent storm sewer running parallel to IL 137) converge. Pipe extensions and/or a drainage structure modification to accommodate the path construction in that area may be needed. Structural details for the concrete slab modification at Meadow Haven Creek and a drainage structure modification at Reigate Lane are included in this SCOPE OF SERVICES.



- E. COMPANY will make up to two (2) submittals of the TS&L to IDOT and CLIENT for approval. Submittals for the structural design plans and specifications will be made at the preliminary (60%), pre-final (90%) and final (100%) milestones.

2.7 Drainage Design Calculations

COMPANY will perform the following calculations, which will be used in developing the drainage plans for the project:

- A. Final Storm Sewer Design and Inlet Spacing

The storm sewer sizing for the proposed pipe in the levee will be determined using XP-SWMM and the latest Bulletin #75 rainfall data. The inlet capacity calculations will be completed to verify the depth in the swales above the storm sewer.

- B. Stormwater Detention Analysis and Design

COMPANY will calculate the stormwater detention volume required per IDOT requirements for the outlets in the corridor. The detention volumes will be provided for up to eight (8) locations using pipe or ditch storage. Eight (8) outlet structures will be designed.

- C. Water Quality Analysis and Design

COMPANY will evaluate and determine the water quality volume required for the eight (8) detention basin outlets. The water quality volume will be provided in the ditches.

- D. Compensatory Storage Analysis

COMPANY will prepare compensatory storage calculations for the cut/fill in the floodplain at three (3) locations. Two (2) floodplain crossings and the levee will be checked. The calculations will be used to compare the cut of the site grading for balance with the proposed fill due to the path and the proposed structures.

- E. IDNR-OWR Floodway Permitting

COMPANY will coordinate the Part 3708 floodway permit with IDNR-OWR for the proposed bridge at the Des Plaines River. A joint application permit will be completed and submitted.

- F. Drainage Field Checks

COMPANY will conduct four (4) field checks as needed at the site.

- G. LCSMC Permitting

COMPANY will prepare the drainage and floodplain permit for LCSMC. The wetland permitting and soil erosion and sediment control plans will be incorporated into the



permit for submittal to LCSMC. It is anticipated that one (1) LCSMC permit will be submitted for the combined areas of Segment 1 and Segment 4.

2.8 Preliminary (60%) Plan Preparation

COMPANY will develop preliminary (60%) plans for two (2) separate construction contracts (Segments 1 and 4) and submit to CLIENT and IDOT for review and comment. The work to be performed by COMPANY as part of the preliminary (60%) plan development will consist of the following tasks:

A. Field Review

Preparation of materials for a field exam, participation in the field exam to review the existing conditions, take photographs, and assess if there have been any changes to the corridor since Phase I that might affect the design.

For the purposes of this SCOPE OF SERVICES, it is assumed that two (2) people from COMPANY will attend one (1) field exam.

B. Cover Sheet and General Information Sheets

Preliminary cover and general information sheets. The plans will be developed in two (2) separate sets for Segment 1 and Segment 4. The preliminary sheets will include the following: Index of Sheets, Index of Highway Standards, Index of CLIENT Standards, General Notes, Location Map, Project Number, Traffic Data and Design Designation.

C. Alignment, Ties & Benchmarks

Reference ties (via northing and easting coordinates) to the plan control points and the benchmark data so this information can be preserved throughout construction of the project.

D. Typical Sections

Existing and proposed typical sections to be used for the proposed improvements as well as a preliminary determination of the limits that each typical section will apply.

E. Summary of Quantities

Preliminary determination/listing of the pay items to be included in the project.

F. Removal Plans

Develop existing condition and removal plan sheets at a scale of 1"=20'. These drawings will show existing features as identified during the topographic survey,



private and municipal utility atlas information, and contract removal items for construction of the improvements.

G. Plan and Profiles for Path and Drainage

Prepare preliminary plan and profile drawings at a scale of 1"=20' horizontal and 1"=5' vertical. These drawings will show base mapping, existing public and private utility locations, proposed bike path and existing roadway alignments. Plans will also include existing and proposed ROW, easements, and side streets. Intersecting angles and station equations between mainline path and side road reference lines will also be shown. Profiles will show existing ground and proposed path pavement elevations, ditch profiles, ditch elevations, vertical curve lengths and "K" values, and elevations for PVC, PVI, and PVT.

H. Suggested Maintenance of Traffic Plans

The construction staging and traffic control plans will include typical sections, general notes and special provisions for through traffic and temporary access to adjacent properties during construction. The traffic control devices, procedures, and layouts shall be as per the BDE Manual and the MUTCD. It is anticipated IDOT Highway Standards will be utilized for the traffic control and protection. Detailed maintenance of traffic plans will not be provided.

I. Traffic Signal Modification Plans

Prepare traffic signal modification plans for a total of nine (9) intersection locations within Segments 1 and 4. The traffic signal plan sheets will consist of proposed traffic signal modification plans, cable plans, and traffic signal details. Impacts to the existing interconnect/communication (PASSAGE) infrastructure are not anticipated.

The traffic signal design will also include coordination with ComEd. Please note, no signal upgrades are anticipated based on Phase I coordination with IDOT. The signal plans are required for relocation of existing equipment to accommodate the proposed path.

J. Lighting Plans

As a subconsultant to COMPANY, AEI will complete the lighting design, plans and specifications as described in Section 2.4. COMPANY will incorporate the lighting plans and specifications into the overall contract documents and review for compatibility with the other design elements.

K. Golf Course Parking Lot



COMPANY will complete a removal plan, site plan, restoration plan and striping plan for the golf course parking lot that will be impacted by construction of the Patriot Path.

L. Erosion Control Plans

Develop a suitable plan for pollution prevention measures to be implemented during construction. The plan will include provisions for the protection of adjacent properties and waterways during construction. The pollution prevention devices, procedures, and layouts shall comply with LCSMC, IDOT and IEPA requirements.

M. Intersection and Sidewalk Grading Plans

Provide identification of geometric plan view layouts for intersection plans, sidewalk ramps and driveway entrances. The scale of these plan sheets will be 1"=10'.

Detailed grading (vertical) information will be added to these sheets at the pre-final (90%) plans. Please note, as part of Phase I, IDOT required these sheets at all State roadway crossings, which are not included herein. Additional detail work will be required for the Phase II plans for local intersections. No further work is anticipated at IDOT intersections.

N. Cross-Sections

Generate preliminary cross sections at 1"=10' horizontal and 1"=5' vertical scale at key locations for each project segment. Mainline and side road cross sections will generally be developed at culvert locations, driveway entrances, and at 50-foot intervals depicting finished grade line elevation.

2.9 Pre-Final (90%) Plan Preparation

Upon completion of the preliminary design and plan preparation, and receipt of CLIENT and IDOT review comments, COMPANY will prepare pre-final (90%) design plans for the two (2) separate construction contracts (Segments 1 and 4). The work to be performed by COMPANY as part of the pre-final (90%) plan development will consist of the plan sheets identified in Section 2.8 above (revised per CLIENT and IDOT comment) and the additional plan sheets and tasks identified below:

A. Pavement Marking and Landscaping/Restoration Plans

Develop pavement marking and restoration (seeding, etc.) plans. The bike path and pavement markings shall be as per the MUTCD and CLIENT standards.

COMPANY will also develop detailed landscaping plans, planting schedules, and specifications for the installation of new trees within the project corridor to replace any trees removed by the proposed improvements, and/or develop aesthetic



landscaping plans for impacted sites (i.e., private flower beds, Green Oaks Village Hall signage and landscaping and/or if the Navy wants landscaping incorporated into the areas along their property).

B. Schedule of Quantities

Develop a Schedule of Quantities for each project segment, non-lump sum, pay items will be tabulated. Each Schedule of Quantities will be placed onto a plan sheet meeting CLIENT standards.

C. Intersection and Sidewalk Grading Plans

Refine the geometric layouts of the intersections in accordance with the preliminary (60%) plan comments received from CLIENT and IDOT. This item also includes the identification of geometric layouts and elevation data for all non-typical pavement areas, such as splitter islands. These plan sheets will also include detailed grading for ADA compliant sidewalk ramp and driveway entrance areas. The scale of these plan sheets will be 1"=10'.

D. Guardrail Details

Design and drafting of guardrail details for various locations throughout the corridor where the path is adjacent to the back of curb.

E. Miscellaneous Details

Design and drafting of miscellaneous details not included or addressed in other areas of the plans. These details could include items such as special grading, special storm sewer and/or manhole structures, special paving requirements, and other necessary details.

F. Tabulation of Earthwork Quantities

This task consists of the calculation of earthwork volumes to identify the estimated earthwork volume for each proposed construction stage, which includes the tabulation of quantities and the development of plan sheets for the various earthwork pay items.

2.10 Final (100%) Plan Preparation

Upon completion of the pre-final design and plan preparation, and receipt of CLIENT and IDOT review comments, COMPANY will prepare final (100%) design plans for the two (2) separate construction contracts (Segments 1 and 4). The work to be performed by COMPANY as part of the final (100%) plan development will consist of the plan sheets identified in Sections 2.8 and 2.9 above, revised per CLIENT and IDOT comment.

2.11 Project Specifications



COMPANY will prepare the contract special provisions and project specification manual. The document will include standard CLIENT Contract Specifications, as well as IDOT Supplemental, Recurring, BDE, BLR, District One, and project specific special provisions. The project specific special provisions will be written to cover any items not covered by the CLIENT Contract Specifications, the IDOT Standard Specifications for Road and Bridge Construction or the other IDOT specifications/special provisions. A Storm Water Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI) for the project will be completed for each segment to comply with the requirements of the NPDES, established by the IEPA. The SWPPP and the NOI will be included with the project specifications. Two (2) project specification submittals to the CLIENT and IDOT are anticipated at the pre-final (90%) and final (100%) plan submittal stages.

2.12 Estimates

A. Construction Cost Estimates

Opinions of probable construction cost will be developed at the pre-final (90%) and final (100%) plan submittal stages so that the CLIENT has the most current cost estimate. These costs will be determined using IDOT pay items and the latest historical unit prices available for the area. Two (2) sets of estimates will be completed, one (1) for Segment 1 and one (1) for Segment 4.

Two (2) estimate of cost submittals to the CLIENT are anticipated at the pre-final (90%), and final (100%) plan submittal stages for each contract.

B. Estimates of Time

The estimate of time will be developed based upon pay items and quantities and will be used to develop the number of working days or completion date for each contract. Two (2) sets of estimates will be completed, one (1) for Segment 1 and one (1) for Segment 4.

Two (2) estimate of time submittals to the CLIENT are anticipated at the pre-final (90%), and final (100%) plan submittal stages for each contract.

2.13 Utility Coordination (HBK Engineering, LLC)

As a subconsultant to COMPANY, HBK Engineering, LLC (HBK) will perform the utility coordination for the project. HBK will continue with the informal utility coordination process initiated in Phase I by submitting a JULIE design stage ticket and follow up by sending electronic preliminary (60%) plans to private utility companies and the municipalities within the corridor. This coordination will allow the utilities and municipalities to provide atlas maps, which the design team will review to determine if there are any potential conflicts.



HBK will perform SUE Level D and B locating of any utility facilities located within the project limits. Level D information will be obtained from utility atlases, JULIE requests, and other reliable sources. Qualified HBK staff will perform Level B locates of underground utilities within the project limits and mark them with appropriately colored paint and/or flags. HBK staff will coordinate with the Client's survey crew or survey subconsultant so that utility locate markings are in place at the time survey field work commences in the subject area.

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

HBK will also submit pre-final (90%) engineering plans to private utility companies and the municipalities within the corridor to confirm the location (horizontal and vertical) of their utilities and to address the potential abandonment, protection, or relocation of their facilities.

COMPANY will complete a Utility Coordination Log and conduct general coordination with HBK and utility requests for information.

Level A locating (exposing buried utilities by potholing or excavation) is NOT included in this SCOPE OF SERVICES. Should the project require Level A locating the work can be coordinated and/or provided by HBK as an additional service.

2.14 Letting / Bidding Assistance

COMPANY will be available to answer questions from contractors prior to the IDOT letting and shall issue addenda as appropriate to interpret, clarify or expand the bidding documents.

2.15 Project Coordination Meetings

Numerous coordination meetings will be required during the project. Anticipated meetings will be with CLIENT, IDOT, various local agencies, utilities, LCFPD, and LCSMC. COMPANY will coordinate the meeting times and locations with the attendees, provide required exhibits, and include preparation of meeting minutes. Meetings will be held in person or virtually as appropriate. The number of coordination meetings and attendees are estimated below:

A. At CLIENT Office

1. Project kickoff meeting, one (1);
2. LCSMC drainage meeting, one (1);
3. Phase II design coordination meetings, two (2); and
4. Joint utility coordination meetings, two (2).

B. On-site



1. Drainage Coordination Review Meetings, four (4);
2. Wetland site review with LCSMC and/or USACE, one (1); and
3. Utility coordination review meetings, two (2).

C. IDOT Office

1. Project kickoff meeting, one (1);
2. Land acquisition kickoff meeting, one (1); and
3. Final design review meeting, one (1).

D. Local Agency Meetings

1. Utility Coordination Review meetings, two (2);
2. Plan review meetings, nine (9).

E. Meeting Requirements

1. COMPANY will have two (2) representatives at meetings held at CLIENT;
2. COMPANY will have one (1) representative at meetings held on-site;
3. COMPANY will have two (2) representatives at meetings held at IDOT or local agencies;
4. COMPANY will have one (1) representative at utility coordination meetings with utilities/municipalities; and
5. COMPANY will prepare and distribute the meeting minutes for all meetings attended.

2.16 Stakeholder Involvement

The stakeholder involvement process will consist of various agency coordination throughout the duration of the project. Additional coordination with the Navy will be required as part of Segment 4. Coordination with the railroad and the Illinois Commerce Commission (ICC) will be required for the one (1) at-grade crossing in Segment 4. Coordination with Libertyville Township regarding the levee in Segment 1 will be necessary. Coordination with LCFPD will need to occur due to the path on their property and the potential tree removal that will need to occur. COMPANY will also coordinate with CLIENT, IDOT and various other stakeholders throughout the duration of the project.

2.17 Quality Assurance and Quality Control

Quality Assurance and Quality Control (QA/QC) will be provided in accordance with COMPANY's current Quality Manual (QM), which outlines processes for project planning, including design input, outputs, review and verification. The QM also outlines internal processes, such as standardization, internal project audits, selection/rating of subconsultants, and monitoring of deliverables.

COMPANY will perform the following reviews prior to each of the three (3) milestone submittals:



- A. Quality Control Check – Project Manager;
- B. Peer Review – Senior Engineer not involved with project on a daily basis; and
- C. Constructability Review – Construction Personnel.

2.18 Phase III Support

- A. Two (2) people from COMPANY will attend the preconstruction meeting at IDOT.
- B. Two (2) people from COMPANY will attend a total of four (4) field meetings to assist with questions that may arise during construction of the proposed improvements.
- C. COMPANY will assist with questions related to the design of the proposed improvements that may arise throughout construction. For the purposes of this SCOPE OF SERVICES, 25 responses to contractor Requests for Information (RFIs) have been assumed.
- D. COMPANY will complete shop drawing reviews for structural submittals.

2.19 Administration

COMPANY will conduct general project administration throughout the duration of the project (24 months), including management and oversight of the project team; periodic review of the project execution; document control; scope, schedule and budget monitoring; billing and invoicing; contract file management; and preparation of monthly progress reports.

3.0 Deliverables and Schedules Included in this SCOPE OF SERVICES

The following deliverables are included in the SCOPE OF SERVICES:

- A. Tree Survey Memorandum.
- B. Plat of Highways and legal descriptions for an assumed maximum of 93 adjacent parcels of land.
- C. Maximum of ninety-three (93) land conveyance documents in order to complete the ROW/easement acquisition and obtain title approval for the properties.
- D. Geotechnical Report.
- E. IEPA LPC-662 for CCDD Certification.
- F. PESA response form (BDE-2735).
- G. AESR.
- H. USACE Wetlands Regional Permit Application.
- I. TS&L for Des Plaines River Crossing.
- J. IDNR-OWR Joint Permit Application Submittal.
- K. LCSMC Permit Application.
- L. Preliminary (60%) Design Plans.
- M. Pre-Final (90%) Design Plans.
- N. Final (100%) Design Plans.
- O. Pre-Final and Final Project Specifications.
- P. Pre-Final and Final Construction Cost Estimates.



- Q. Pre-Final and Final Estimates of Time.
- R. Utility Coordination Log.
- S. Meeting minutes of all meetings attended.
- T. Public meeting invitation letters, newspaper display advertisement, meeting brochure, sign-in sheets, public meeting exhibits, meeting summaries, and meeting disposition of comments.
- U. Project text and exhibits for CLIENT and appropriate municipal website(s).
- V. Monument proposed ROW parcels with 5/8” steel bars with CLIENT ROW caps or other suitable markers.

This schedule was prepared to include reasonable allowances for review and approval times required by the CLIENT and public authorities having jurisdiction over the project. This schedule shall be equitably adjusted as the project progresses, allowing for changes in the scope of the project requested by the CLIENT or for delays or other causes beyond the control of COMPANY.

COMPANY shall complete the following phases of the project in accordance with the schedule shown; assuming notice to proceed is issued by the CLIENT in September 2021. If notice to proceed is issued at a later date, time of completion shall be extended accordingly.

Preliminary (60%) Plans	August 1, 2022
Pre-final (90%) Plans, Specifications & Cost Estimates	April 14, 2023
Final (100%) Plans, Specifications & Cost Estimates	June 12, 2023
Letting Phase	September 22, 2023
Construction Start	March 2024

4.0 Items not included in this SCOPE OF SERVICES

The following items are not included as part of this SCOPE OF SERVICES:

- A. Condemnation Support.
- B. Irrigation Design.
- C. Wetland Delineation/Assessment Update.
- D. Coordination for Wetland Banking and Wetland Banking Fees
- E. Conservation Plans and Incidental Take Authorization (ITA) application.
- F. Coordination with USFWS (Section 7 or Section 10).
- G. Travel Demand Modeling.
- H. Trip Generation for estimating future trips with new development.
- I. Railroad Design.
- J. Construction Layout.
- K. Construction Engineering Services.
- L. Coordination and fees associated with PIM facility.
- M. Interconnect/Communication (PASSAGE) impacts and/or plans.

Supplemental services not included in the SCOPE OF SERVICES can be provided by COMPANY under separate agreement, if desired.



5.0 Services by Others

- A. ROW acquisition services will be performed by HDR.
- B. Geotechnical soil borings, investigation and report will be performed by Rubino.
- C. Lighting design will be performed by AEI.
- D. Utility coordination will be performed by HBK.

6.0 Client Responsibilities

- A. Attend PIM as needed and obtain PIM facility. Participate as needed in other stakeholder involvement activities.
- B. Participate in project design reviews and provide written comments.
- C. Assist in coordination with sister county agencies.
- D. Provide available record drawings and other information on existing roadways and utilities as available or as can be procured.

Sincerely,

HR GREEN, INC.

A handwritten signature in black ink, appearing to read 'Stephen R. Bicking'.

Stephen R. Bicking, PE, D.WRE, CFM
Senior Engineer - Transportation

SRB/tcn

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Local Public Agency

County

Section Number

Lake County Division of Transportation

Lake

15-00289-01-BT

**EXHIBIT B
PROJECT SCHEDULE**

Lake County Division of Transportation

Lake

15-00289-01-BT

**Exhibit C
Direct Costs Check Sheet**

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.

Item	Allowable	Quantit	Contract Rate	Total
<input type="checkbox"/> Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost (Up to state rate maximum)			\$0.00
<input type="checkbox"/> Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual Cost			\$0.00
<input type="checkbox"/> Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			\$0.00
<input checked="" type="checkbox"/> Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum	8678	\$0.56	\$4,859.68
<input type="checkbox"/> Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day			\$0.00
<input type="checkbox"/> Vehicle Rental	Actual cost (Up to \$55/day)			\$0.00
<input type="checkbox"/> Tolls	Actual cost			\$0.00
<input type="checkbox"/> Parking	Actual cost			\$0.00
<input type="checkbox"/> Overtime	Premium portion (Submit supporting documentation)			\$0.00
<input type="checkbox"/> Shift Differential	Actual cost (Based on firm's policy)			\$0.00
<input checked="" type="checkbox"/> Overnight Delivery/Postage/Courier Service	Actual cost (Submit supporting documentation)	1	\$1,500.00	\$1,500.00
<input checked="" type="checkbox"/> Copies of Deliverables/Mylars (In-house)	Actual cost (Submit supporting documentation)	1	\$26,530.37	\$26,530.37
<input type="checkbox"/> Copies of Deliverables/Mylars (Outside)	Actual cost (Submit supporting documentation)			\$0.00
<input type="checkbox"/> Project Specific Insurance	Actual Cost			\$0.00
<input checked="" type="checkbox"/> Monuments (Permanent)	Actual Cost	160	\$5.00	\$800.00
<input type="checkbox"/> Photo Processing	Actual Cost			\$0.00
<input type="checkbox"/> 2-Way Radio (Survey or Phase III Only)	Actual Cost			\$0.00
<input type="checkbox"/> Telephone Usage (Traffic System Monitoring Only)	Actual Cost			\$0.00
<input type="checkbox"/> CADD	Actual cost (Max \$15/hour)			\$0.00
<input type="checkbox"/> Web Site	Actual cost (Submit supporting documentation)			\$0.00
<input type="checkbox"/> Advertisements	Actual cost (Submit supporting documentation)			\$0.00
<input type="checkbox"/> Public Meeting Facility Rental	Actual cost (Submit supporting documentation)			\$0.00
<input type="checkbox"/> Public Meeting Exhibits/Renderings & Equipment	Actual cost (Submit supporting documentation)			\$0.00
<input checked="" type="checkbox"/> Recording Fees	Actual Cost	1	\$600.00	\$600.00
<input type="checkbox"/> Transcriptions (specific to project)	Actual Cost			\$0.00
<input type="checkbox"/> Courthouse Fees	Actual Cost			\$0.00
<input type="checkbox"/> Storm Sewer Cleaning and Televising	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00
<input type="checkbox"/> Traffic Control and Protection	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00
<input type="checkbox"/> Aerial Photography and Mapping	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00
<input type="checkbox"/> Utility Exploratory Trenching	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00
<input type="checkbox"/> Testing of Soil Samples	Actual Cost			\$0.00
<input type="checkbox"/> Lab Services	Actual Cost (Provide breakdown of each cost)			\$0.00
<input type="checkbox"/> Equipment and/or Specialized Equipment Rental	Actual Cost (Requires 2-3 quotes with IDOT approval)			\$0.00
<input checked="" type="checkbox"/> Title Commitments	Actual Cost	93	\$825.00	\$76,725.00
<input checked="" type="checkbox"/> Database Review for PESA Updates	Actual Cost	1	\$500.00	\$500.00
<input checked="" type="checkbox"/> IDNR-OWR Fee	Actual Cost	3	\$3,400.00	\$10,200.00
<input type="checkbox"/>				\$0.00
<input type="checkbox"/>				\$0.00
Total Direct Costs				\$121,715.05

Local Public Agency	County	Section Number
Lake County Division of Transportation	Lake	15-00289-01-BT

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

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

Form Not Applicable (engineering services less than the threshold)

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

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



Local Public Agency Lake County Division of Transportation	County Lake	Section Number 15-00289-01-BT
Consultant (Firm) Name HR Green, Inc.	Prepared By Stephen Bicking, PE	Date 9/15/2021

PAYROLL ESCALATION TABLE

CONTRACT TERM	24	MONTHS	OVERHEAD RATE	180.16%
START DATE	11/1/2021		COMPLEXITY FACTOR	
RAISE DATE	4/1/2022		% OF RAISE	2.00%
END DATE	10/31/2023			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	11/1/2021	4/1/2022	5	20.83%
1	4/2/2022	4/1/2023	12	51.00%
2	4/2/2023	11/1/2023	7	30.35%

The total escalation = 2.18%

Local Public Agency

County

Section Number

Lake County Division of Transportation

Lake

15-00289-01-BT

AVERAGE HOURLY PROJECT RATES

Exhibit E Cost Estimate of Consultants Services Worksheet Fixed Raise

SHEET 1 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			2.01 - Land Surveying			2.02 - ROW Acquisition			2.03 - Geotechnical Investigation			2.04 - Lighting			2.05 - Permitting and Envir 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
Regional Director	78.00	160.0	1.70%	1.33															
Senior Project Manager	74.33	1,234.0	13.10%	9.74				93	50.00%	37.17	18	50.00%	37.17	18	50.00%	37.17	116	34.52%	25.66
Senior Engineer	72.18	1,031.0	10.95%	7.90				93	50.00%	36.09	18	50.00%	36.09	18	50.00%	36.09	12	3.57%	2.58
Lead Environmental Planner	55.13	94.0	1.00%	0.55	40	1.68%	0.93										48	14.29%	7.88
Lead Engineer	57.73	319.0	3.39%	1.96													16	4.76%	2.75
Project Engineer II	45.23	1,602.0	17.01%	7.69													42	12.50%	5.65
Staff Engineer II	34.11	1,480.0	15.71%	5.36													8	2.38%	0.81
Sr. Design Tech	39.90	1,047.0	11.12%	4.44													94	27.98%	11.16
Design Tech I	25.58	0.0																	
Group Leader	71.03	63.0	0.67%	0.48	63	2.64%	1.88												
Project Land Surveyor I	46.43	460.0	4.88%	2.27	460	19.30%	8.96												
Project Land Surveyor II	48.56	300.0	3.19%	1.55	300	12.59%	6.11												
Staff Land Surveyor III	48.20	760.0	8.07%	3.89	760	31.89%	15.37												
Staff Land Surveyor II	40.13	760.0	8.07%	3.24	760	31.89%	12.80												
Construction Engineer II	46.23	60.0	0.64%	0.29															
Administrative Assistant II	27.29	24.0	0.25%	0.07															
Accounting Specialist II	28.12	24.0	0.25%	0.07															
		0.0																	
		0.0																	
		0.0																	
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		0.0																	
TOTALS		9418.0	100%	\$50.81	2383.0	100.00%	\$46.05	186.0	100%	\$73.26	36.0	100%	\$73.26	36.0	100%	\$73.26	336.0	100%	\$56.49

Local Public Agency

County

Section Number

Lake County Division of Transportation

Lake

15-00289-01-BT

AVERAGE HOURLY PROJECT RATES

Exhibit E Cost Estimate of Consultant Services Worksheet Fixed Raise

SHEET 2 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	2.06 - Structural Plans			2.07 - Drainage Design Calculations			2.08 - 2.10 - Permit, PreFinal, & Final Contract Plans			2.11 - Project Specifications			2.12 - Estimates			2.13 - Utility 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
Regional Director	78.00																		
Senior Project Manager	74.33							501	14.87%	11.05	120	84.51%	62.82	26	46.43%	34.51	64	48.48%	36.04
Senior Engineer	72.18	14	1.63%	1.18	80	15.75%	11.37	76	2.26%	1.63	2	1.41%	1.02						
Lead Environmental Planner	55.13																		
Lead Engineer	57.73	88	10.24%	5.91	128	25.20%	14.55				12	8.45%	4.88	3	5.36%	3.09	4	3.03%	1.75
Project Engineer II	45.23							1528	45.34%	20.51				24	42.86%	19.39	4	3.03%	1.37
Staff Engineer II	34.11	365	42.49%	14.49	300	59.06%	20.14	786	23.32%	7.95				3	5.36%	1.83	6	4.55%	1.55
Sr. Design Tech	39.90	392	45.63%	18.21				479	14.21%	5.67	8	5.63%	2.25				54	40.91%	16.32
Design Tech I	25.58																		
Group Leader	71.03																		
Project Land Surveyor I	46.43																		
Project Land Surveyor II	48.56																		
Staff Land Surveyor III	48.20																		
Staff Land Surveyor II	40.13																		
Construction Engineer II	46.23																		
Administrative Assistant II	27.29																		
Accounting Specialist II	28.12																		
TOTALS		859.0	100%	\$39.79	508.0	100%	\$46.06	3370.0	100%	\$46.81	142.0	100%	\$70.96	56.0	100%	\$58.82	132.0	100%	\$57.03

Local Public Agency

County

Section Number

Lake County Division of Transportation

Lake

15-00289-01-BT

AVERAGE HOURLY PROJECT RATES

Exhibit E Cost Estimate of Consultant Services Worksheet Fixed Raise

SHEET 3 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	2.14 - Letting / Bidding Assistance (IDOT)			2.15 - Project Coordination Meetings			2.16 - Stakeholder Involvement			2.17 - Quality Assurance and Quality Control			2.18 - Phase III Support			2.19 - Administration		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Regional Director	78.00										160	44.44%	34.67						
Senior Project Manager	74.33	24	100.00%	74.33	105	48.17%	35.80	108	50.00%	37.17				41	31.54%	23.44			
Senior Engineer	72.18				99	45.41%	32.78	108	50.00%	36.09	84	23.33%	16.84	49	37.69%	27.21	378	88.73%	64.05
Lead Environmental Planner	55.13				6	2.75%	1.52												
Lead Engineer	57.73				4	1.83%	1.06				24	6.67%	3.85	40	30.77%	17.76			
Project Engineer II	45.23				4	1.83%	0.83												
Staff Engineer II	34.11										12	3.33%	1.14						
Sr. Design Tech	39.90										20	5.56%	2.22						
Design Tech I	25.58																		
Group Leader	71.03																		
Project Land Surveyor I	46.43																		
Project Land Surveyor II	48.56																		
Staff Land Surveyor III	48.20																		
Staff Land Surveyor II	40.13																		
Construction Engineer II	46.23										60	16.67%	7.70						
Administrative Assistant II	27.29																24	5.63%	1.54
Accounting Specialist II	28.12																24	5.63%	1.58
TOTALS		24.0	100%	\$74.33	218.0	100%	\$71.99	216.0	100%	\$73.26	360.0	100%	\$66.41	130.0	100%	\$68.41	426.0	100%	\$67.17

EXHIBIT F

DIRECT COST WORKSHEET

Patriot Path
Phase II
Lake County Division of Transportation
HR Green Project Number: 191892

DATE: 9/15/2021

2.1 - Land Surveying

Mileage Rate:	\$0.560		
		Mileage	Number
Destination		Round-Trip	of Trips
HRG (McHenry) to Project Site		40	180

Subtotal: \$4,032.00

Title Commitments = 93 parcels (\$825 = \$750 + \$75 later date fee)	\$	76,725.00
Recorders Fees - 60 sheets mylar and record POH	\$	600.00
Monuments - 160 rebars with cap x \$5 each	\$	800.00

ROW Negotiation (HDR) \$ 606,518.00

2.1-2.2 - Total: \$688,675.00

2.3 Geotechnical Services

Geotechnical (Rubino) \$ 48,993.00

2.3 - Total: \$48,993.00

2.4 - Lighting

Lighting Ames \$ 25,870.00

2.4 - Total: \$25,870.00

2.5 Permitting and Environmental Coordination

Database Review for PESA Update \$ 500.00

2.5 - Total: \$500.00

2.7 Drainage Analysis

Field Checks (4@40miles) \$ 89.60
IDNR-OWR Review (3)/Permit Fee \$ 10,200.00

Hydraulic Report (3) and Exhibits (Copies to IDNR-OWR/LCSMC) \$ 1,500.00

2.7 - Total: \$11,789.60

2.6, 2.8, 2.9, 2.10 - Prelim, PreFinal & Final Contract Plans

Printing Cost (bond), per sq. ft.:	\$0.45
Reduced Sheets (11"x17"), sq. ft.:	1.3
Full Size Sheets (22"x34"), sq. ft.:	5.2
Full Size Mylar Sheet Cost, ea.:	\$7.50

Total Number of Sheets (Preliminary Submittal) =	379
Total Number of Sheets (Pre-Final Submittal) =	379
Total Number of Sheets (Final Submittal) =	379

Preliminary Submittal

	LCDOT	IDOT	Libertyville	Green Oaks	North Chicago	GLNTC	Utilities	Total
Reduced Plan Sets	2	0	2	2	2	2	7	17
Full-Size Plan Sets	1	0	0	0	0	0	0	1

Subtotal: \$4,656.02

Pre-Final Submittal

	LCDOT	IDOT	Libertyville	Green Oaks	North Chicago	GLNTC	Utilities	Total
Reduced Plan Sets	2	4	2	2	2	2	7	21
Full-Size Plan Sets	1	1	1	1	1	1	0	6

Subtotal: \$9,977.18

Final Submittal

	LCDOT	IDOT	Libertyville	Green Oaks	North Chicago	GLNTC	Utilities	Total
Reduced Plan Sets	2	4	2	2	2	2	7	21
Full-Size Plan Sets	1	1	1	1	1	1	0	6

Subtotal: \$9,977.18

Specs/Proposal: \$420.00 (\$10.00 per specifications/proposal booklet X 42 sets)

2.6, 2.8-2.10 - Total: \$25,030.37

2.13 Utility Coordination

Level B and D SUE (HBK) \$ 38,028.00

2.13 - Total: \$38,028.00

2.15 Meetings and Coordination

Mileage Rate: \$0.560

Destination	Mileage Round-Trip	Number of Trips	Assumes Project Site to be Average Mileage
HRG (MCH) to LCDOT	38	6	
HRG (MCH) to IDOT D1	50	3	
HRG (MCH) to Project Site	40	7	
HRG (MCH) to Stakeholder Sites	42	11	

2.15 - Total: \$627.20

2.18 Phase III Support

Mileage Rate: \$0.560

Destination	Mileage Round-Trip	Number of Trips
HRG (MCH) to LCDOT	38	1
HRG (MCH) to Project Site	40	4

2.18 - Total: \$110.88

2.19 Administration

Postage and Shipping Allowance: \$1,500.00

2.19 - Total: \$1,500.00

GRAND TOTAL: \$841,124.05



Project: Patriot Path – IL 137
Des Plaines River Trail to Robert McClory Bike Path
Lake County
AEI Ref. # 2020-07

November 11, 2020

Ames Engineering, Inc. (AEI) will be the sub-consultant to HR Green to provide lighting PS&E and to provide CADD services for the above project.

Scope of Work – Lighting

Ames Engineering, Inc. (AEI) scope of services consists of providing lighting plans for the relocation of existing lighting along IL 137 as impacted by the construction of the Patriot Path on the north and south sides of IL 137. In segment 1 the lighting to be relocated includes parking lot lights, decorative light poles at entrances and IDOT light poles west of I-94. In segment 4 the lighting to be relocated is IDOT roadway lighting. The work will consist of the following items:

1. Providing General Notes, Legend and Schedule of Quantities
2. Provide proposed lighting plans
3. Wiring Diagram/Load table
4. Electrical Detail sheets
5. Photometric Calculations
6. Special Provisions
7. Voltage Drop Calculations
8. Field visit
9. Engineers Cost Estimate
10. QA/QC
11. Project management and administration

Items not included in scope:

1. Any items outside the scope of work and project limits as shown above.
2. Additional hours will be required if changes to geometry are made after the final plan submittal.

Items to be furnished to AEI:

1. Base sheets in dgn format.
2. All underground utilities (dgn format).
3. Electronic files (dgn format) of proposed roadway geometry, alignment shall be provided by the Prime.
4. Existing Lighting Plans



Local Public Agency Lake County DOT	County Lake	Section Number 15-00289-01-BT
Consultant (Firm) Name AMES Engineering, Inc.	Prepared By Joan Somer	Date 7/12/2021

PAYROLL ESCALATION TABLE

CONTRACT TERM	24	MONTHS	OVERHEAD RATE	114.39%
START DATE	9/1/2021		COMPLEXITY FACTOR	0
RAISE DATE	1/1/2022		% OF RAISE	2.00%
END DATE	8/31/2023			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	9/1/2021	1/1/2022	4	16.67%
1	1/2/2022	1/1/2023	12	51.00%
2	1/2/2023	9/1/2023	8	34.68%

The total escalation = 2.35%

Local Public Agency

Lake County DOT

County

Lake

Section Number

15-00289-01-BT

AVERAGE HOURLY PROJECT RATES

Exhibit E Cost Estimate of Consultants Services Worksheet Fixed Raise

SHEET 1 OF 1

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Lighting			QC/QA											
		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 Electrical Engineer	60.91	61.0	29.47%	17.95	61	30.35%	18.48												
Project Engineer	53.05	81.0	39.13%	20.76	75	37.31%	19.79	6	100.00%	53.05									
CADD Technician	38.18	65.0	31.40%	11.99	65	32.34%	12.35												
		0.0																	
		0.0																	
		0.0																	
		0.0																	
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TOTALS		207.0	100%	\$50.69	201.0	100.00%	\$50.62	6.0	100%	\$53.05	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00

Patriot Path SUE Lake County DOT Section 15-00289-01-BT

Scope of Services

At the request of HR Green (HRG, Client), HBK Engineering, LLC (HBK) has prepared a scope of services and a manhour and fee estimate for Utility Coordination and Subsurface Utility Engineering (SUE) Services. These services are in support of the Lake County Department of Transportation Patriot Path bike trail project along IL RTE 137 (Buckley Rd) from the Des Plaines River to Sheridan Road. This scope of services pertains to project segments 1 and 4 (see Exhibit A – Project Location). Segment 1 runs between the Des Plaines River Trail on the west side of the Des Plaines River to the intersection of IL Rte 137 and Sage Court/Brookhaven Drive. Segment 4 runs between the intersection of IL Rte 137 and Great Lakes Drive and the intersection of Sheridan Road and D Street on the east side of the Great Lakes Metra Station.

The following represents HBK’s scope of work for services to be provided in support of the bike trail project.

UTILITY COORDINATION PHASE I

Subsurface Utility Engineering (SUE)/utility coordination for the project will be completed by **HBK Engineering, LLC**, as a subconsultant to HR Green.

Utility Locating

Descriptions of Subsurface Utility Engineering (SUE) quality levels are derived from the FHWA website on subsurface utility engineering. The website describes American Society of Civil Engineers (ASCE) Standard *CI/ASCE 38-02, Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data*. There are four recognized quality levels of underground utility information ranging from Quality Level QL-D (the lowest level) to Quality Level QL-A (the highest level).

HBK will perform SUE Level D and B locating of any utility facilities located within the project limits. Level D information will be obtained from utility atlases, JULIE requests, and other reliable sources. Qualified HBK staff will perform Level B locates of underground utilities within the project limits and mark them with appropriately colored paint and/or flags. HBK staff will coordinate with the Client’s survey crew or survey subconsultant so that utility locate markings are in place at the time survey field work commences in the subject area.

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

Level A locating (exposing buried utilities by potholing or excavation) is NOT included in this scope of work. Should the project require Level A locating the work can be coordinated and/or provided by HBK as an additional service.

Utility Data Base Mapping

HBK will coordinate with HR Green so that utilities can be depicted accurately in the survey data and utility base maps. This work includes time for QA/QC review of utility base maps generated by the Client.

Preliminary Design Coordination Meetings

HBK will work with HR Green to coordinate with utility companies during Phase I Engineering. HBK will send preliminary plans to utility companies for their verification of facility locations and review of the preliminary design for identification of conflicts that need additional review and coordination. HBK will also coordinate with the project design team to develop their understanding of the potential impact the design may impose on the protection and/or relocation of utilities present within the project limits.

UTILITY COORDINATION PHASE II

HBK Engineering, LLC will provide *supplemental support* on utility coordination as a subconsultant to HR Green.

Utility Locating

Should it be necessary for completion and/or coordination of the engineering design of the project, HBK will perform SUE Level D and B locating of any utility facilities located within the project limits as described herein under *Utility Coordination Phase I*, including exclusion of Level A locates.

Coordination

HBK will work with HR Green during the Phase II Engineering stage of the project to continue coordination efforts with utility companies initiated in Phase I. Prefinal plans and electronic files will be sent to utility companies for their review of the proposed improvements and identification of impacts/conflicts to their facilities. At the completion of Phase II Engineering, the final plans will be sent to utility companies for their use in preparing protection and/or relocation plans.

Final Design Coordination Meetings

HBK will work with HR Green to coordinate with their design team and the utility companies during Phase II Engineering. HBK will support HR Green in drafting and sending Notices of Interference and/or other required correspondence to the utilities to notify them of the project status/schedule and initiate their protection and relocation processes. HBK will also work with the HR Green design team to coordinate the integration of utility protection and relocation plans and timelines into the project contract documents.

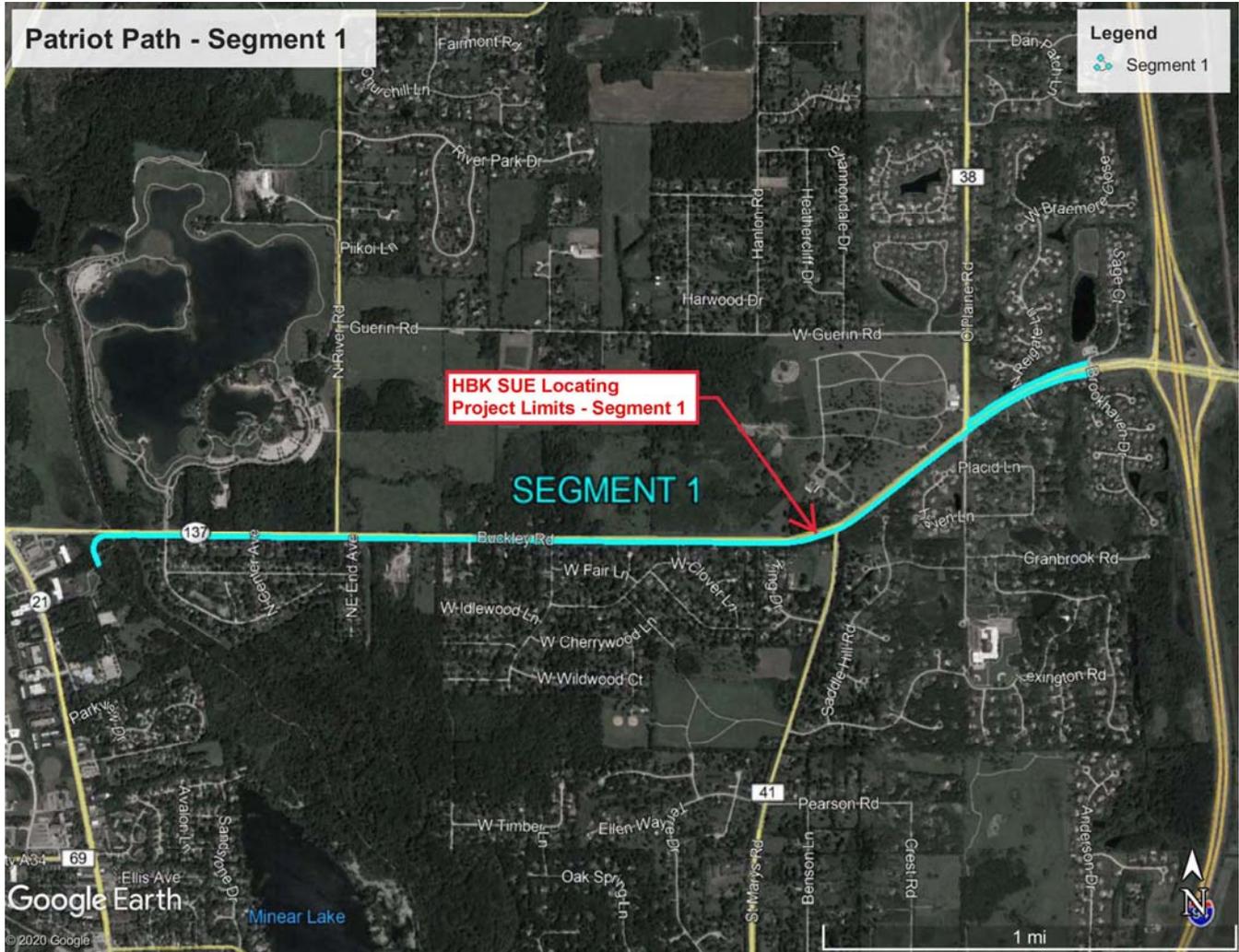
Utility Coordination Meetings

HBK will prepare and attend up to two (2) utility coordination meetings.

End of Document

(Patriot Path_Scope of Work_2020-04-27.docx)

EXHIBIT A – PROJECT LOCATION
PATRIOT PATH
Lake County DOT, Section 15-00289-01-BT





Local Public Agency Lake County DOT	County Lake	Section Number 15-00289-01-BT
Consultant (Firm) Name HBK Engineering, LLC	Prepared By Mark Moen	Date 7/12/2021

PAYROLL ESCALATION TABLE

CONTRACT TERM	24	MONTHS	OVERHEAD RATE	130.19%
START DATE	9/1/2021		COMPLEXITY FACTOR	0
RAISE DATE	1/1/2022		% OF RAISE	2.00%
END DATE	8/31/2023			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	9/1/2021	1/1/2022	4	16.67%
1	1/2/2022	1/1/2023	12	51.00%
2	1/2/2023	9/1/2023	8	34.68%

The total escalation = 2.35%

Local Public Agency

Lake County DOT

County

Lake

Section Number

15-00289-01-BT

AVERAGE HOURLY PROJECT RATES

Exhibit E Cost Estimate of Consultants Services Worksheet Fixed Raise

SHEET 1 OF 1

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Utility Coordination - Phase 1			Utility Coordination - Phase 2											
		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	78.00	4.0	1.16%	0.91	2	0.69%	0.54	2	3.70%	2.89									
SENIOR PROJECT MANA	57.14	36.0	10.47%	5.98	20	6.90%	3.94	16	29.63%	16.93									
PROJECT MANAGER	45.89	60.0	17.44%	8.00	44	15.17%	6.96	16	29.63%	13.60									
SENIOR ENGINEER	49.99	88.0	25.58%	12.79	80	27.59%	13.79	8	14.81%	7.41									
LOCATOR 3	26.43	128.0	37.21%	9.83	120	41.38%	10.93	8	14.81%	3.91									
LOCATOR 2	22.62	16.0	4.65%	1.05	16	5.52%	1.25	0											
ANALYST 2	41.41	12.0	3.49%	1.44	8	2.76%	1.14	4	7.41%	3.07									
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TOTALS		344.0	100%	\$40.01	290.0	100.00%	\$38.56	54.0	100%	\$47.80	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00

July 12, 2021

Mr. Stephen R. Bicking, PE
Senior Engineer - Transportation
HR Green
420 Front Street, Suite 100
McHenry County, IL 60050

RE: Patriot Path
HDR Real Estate Scope of Services

Dear Mr. Bicking:

HDR Engineering, Inc. (HDR) is pleased for the opportunity to provide Real Estate Services to HR Green for the Patriot Path Project. These services shall be performed in accordance with the Uniform Relocation and Real Properties Acquisition Policy Act of 1970, as amended and State and local laws and regulations. At your request, we have prepared and attached a Scope of Services.

HDR understands that it will contract directly with the sub consultants for preliminary services (appraisal and appraisal review). HDR will provide a Right-of-Way team to manage the sub consultants. HDR will also perform land acquisition services. Our agents have the experience to ensure the Scope of Services attached is completed in a professional and timely manner.

We look forward to working with you to successfully complete the Patriot Path Project. If modifications to the Scope of Services are required or you have any questions, please contact Adam Handy at 773.867.7261 or adam.handy@hdrinc.com.

Sincerely,

HDR Engineering, Inc.



Thomas M. Hein, PE
Vice President



Adam Handy
Project Manager

hdrinc.com

9450 W. Bryn Mawr Ave., Suite 400, Rosemont, IL 60018
773-380-7900

SCOPE OF SERVICES

PART 1.0 LAND ACQUISITION SERVICES

HDR's land acquisition services, responsibilities, and deliverables will consist of the following:

- Manage contracted sub consultants, including:
 - ordering and monitoring delivery of appraisal reports
 - ordering and monitoring delivery of appraisal review reports
- Participate in kick off meeting and any additional meetings with HR Green and/or the Lake County Division of Transportation (LCDOT) to discuss project related items.
- Provide land acquisition report that details status of each parcel. The report will be provided on a weekly basis or upon request from HR Green.
- Prepare and send an introductory letter to land owners via certified mail with a general statement of the project that briefly describes the necessary requirements.
- Review plat of highway, title documents and appraisal reports for each parcel prior to negotiation activities.
- Prepare offer packages for up to 93 parcels and send to land owners via certified mail.¹
- Conduct quality reviews on offer packages to ensure conveyance documents are accurate.
- Conduct negotiations with land owners to reach a settlement. HDR's land acquisition budget allows for 25 hours of negotiation services for each parcel. This includes any in-person meetings with property owners to explain offer package and impacts to property and follow up due diligence either by phone, email or through virtual meetings, until a settlement is reached and conveyance documents signed and notarized. Upon request from HR Green, HDR can exceed the number of allotted hours in an attempt to make reasonable efforts to reach a settlement before recommending condemnation proceedings. An additional supplement may be required.
- Upon successful negotiations, HDR will submit the completed parcel file to HR Green with original signed conveyance documents, the Negotiator's report documenting all negotiation activities, and all other documentation as required.
- Assist property owner in obtaining partial release of mortgages, as necessary.
- Prepare administrative settlements, as necessary.
- Record executed temporary easement agreements at the Lake County Recorder's Office.
- If negotiations are not successful, HDR will submit the parcel file along with all necessary documentation to HR Green with a recommendation to acquire the parcel through condemnation. The Negotiator will attend any pre-trial meetings and provide expert witness testimony, as necessary. HDR's condemnation budget accounts for up to 5% of the parcels to go to condemnation. In the event more parcels go to condemnation an additional supplement may be required.
- Project close out.

PART 2.0 SUB CONSULTANTS

The proposed sub consultants have provided fees associated with their respective service. HDR understands that it will contract directly with the sub consultants for appraisal reports and appraisal review reports. HDR will manage the sub consultants and perform quality reviews of their deliverables.

¹ Per HR Green, there are now approximately 93 parcels. 83 parcels are in Segment 1 and 10 parcels are in Segment 4. Several parcels are owned by the United States Navy and may require additional coordination efforts to reach a settlement. HDR's budget has accounted for this.

PART 3.0 PERIOD OF SERVICE

24 months from Notice to Proceed.

PART 4.0 INVOICING

HDR shall invoice on a monthly basis. All invoices shall include costs associated with each task performed. HDR will submit a Progress Report on a monthly basis with invoicing. The Progress Report will include a description of work accomplished that period as well as work anticipated for the next period for each parcel.

PART 5.0 COMPENSATION

Not to Exceed Fee is \$606,518.00.

PART 6.0 ASSUMPTIONS

- All title work will be provided by HR Green.
- Closing costs will be at the expense of LCDOT.

²Total based on 93 parcels

³Total based on 93 parcels



Local Public Agency Lake County Division of Transportation	County Lake County	Section Number
Consultant (Firm) Name HDR Engineering, Inc.	Prepared By Gayle Garcia	Date 7/11/2021

PAYROLL ESCALATION TABLE

CONTRACT TERM	24	MONTHS	OVERHEAD RATE	151.38%
START DATE	10/1/2021		COMPLEXITY FACTOR	
RAISE DATE	12/26/2021		% OF RAISE	2.00%
END DATE	9/30/2023			

ESCALATION PER YEAR

Year	First Date	Last Date	Months	% of Contract
0	10/1/2021	12/26/2021	3	12.50%
1	12/27/2021	12/26/2022	12	51.00%
2	12/27/2022	9/26/2023	9	39.02%

The total escalation = 2.52%

Local Public Agency

Lake County Division of Transportation

County

Lake County

Section Number

AVERAGE HOURLY PROJECT RATES

Exhibit E Cost Estimate of Consultants Services Worksheet Fixed Raise

SHEET 1 OF 1

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Project Management			QA/QC			Preliminary Work			Land Acquisition			Condemnation Support and Closeout		
		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	78.00	3.0	0.13%	0.10	3	1.30%	1.01												
Project Manager IV	78.00	18.0	0.77%	0.60	18	7.79%	6.08												
Realty Specialist III	51.49	674.0	28.79%	14.83	164	71.00%	36.56	75	37.50%	19.31	75	50.00%	25.75	350	20.59%	10.60	10	16.67%	8.58
Realty Specialist II	44.00	310.0	13.24%	5.83										300	17.65%	7.76	10	16.67%	7.33
Realty Specialist I	35.89	440.0	18.80%	6.75				75	37.50%	13.46	75	50.00%	17.95	280	16.47%	5.91	10	16.67%	5.98
Realty Technician III	42.46	435.0	18.58%	7.89				10	5.00%	2.12				425	25.00%	10.62			
Realty Techncian I	28.79	415.0	17.73%	5.10				40	20.00%	5.76				345	20.29%	5.84	30	50.00%	14.39
Clerical II	28.85	10.0	0.43%	0.12	10	4.33%	1.25												
Clerical V	56.30	36.0	1.54%	0.87	36	15.58%	8.77												
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TOTALS		2341.0	100%	\$42.08	231.0	100.00%	\$53.67	200.0	100%	\$40.65	150.0	100%	\$43.69	1700.0	100%	\$40.73	60.0	100%	\$36.29

COMPANY NAME: HDR Engineering, Inc.

PTB NUMBER: _____

 TODAY'S DATE: **7/11/2021**

ITEM	ALLOWABLE	UTILIZE W.O. ONLY	QUANTITY J.S. ONLY	CONTRACT RATE	TOTAL
Per Diem (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			\$0.00	\$0.00
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost (Up to state rate maximum)			\$0.00	\$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost			\$0.00	\$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			\$0.00	\$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum		6,500	\$0.560	\$3,640.00
Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day			\$65.00	\$0.00
Vehicle Rental	Actual cost (Up to \$55/day)			\$55.00	\$0.00
Tolls	Actual cost		200	\$1.95	\$390.00
Parking	Actual cost			\$20.00	\$0.00
Overtime	Premium portion (Submit supporting documentation)			\$0.00	\$0.00
Shift Differential	Actual cost (Based on firm's policy)			\$0.00	\$0.00
Overnight Delivery/Postage/Courier Service	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Copies of Deliverables/Mylars (In-house)	Actual cost (Submit supporting documentation)			\$200.00	\$0.00
Copies of Deliverables/Mylars (Outside)	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Project Specific Insurance	Actual cost			\$0.00	\$0.00
Monuments (Permanent)	Actual cost			\$0.00	\$0.00
Photo Processing	Actual cost			\$0.00	\$0.00
2-Way Radio (Survey or Phase III Only)	Actual cost			\$0.00	\$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual cost			\$0.00	\$0.00
CADD	Actual cost (Max \$15/hour)			\$0.00	\$0.00
Web Site	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Advertisements	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Public Meeting Facility Rental	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Recording Fees	Actual cost		75	\$72.00	\$5,400.00
Transcriptions (specific to project)	Actual cost			\$0.00	\$0.00
Courthouse Fees	Actual cost			\$0.00	\$0.00
Storm Sewer Cleaning and Televising	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Traffic Control and Protection	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Aerial Photography and Mapping	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Utility Exploratory Trenching	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Testing of Soil Samples*	Actual cost			\$0.00	\$0.00
Lab Services*	Actual cost (Provide breakdown of each cost)			\$0.00	\$0.00
Equipment and/or Specialized Equipment Rental*	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Appraisals	Actual cost		1	\$201,400.00	\$201,400.00
Certified Mail	Actual Cost		190	\$15.00	\$2,850.00
Lender Fees	Actual cost		12	\$500.00	\$6,000.00
Prints 8.5x11 B&W	Actual Cost		10,225	\$0.05	\$460.13
Prints 8.5x11 Color	Actual cost		9,400	\$0.40	\$3,760.00
Prints 11 x 17 B&W	Actual Cost		2,000	\$0.09	\$180.00
Prints 11 x 17 Color	Actual cost		2,000	\$0.80	\$1,600.00
Appraisals - Review	Actual Cost		1	\$100,700.00	\$100,700.00
				\$0.00	\$0.00
				\$0.00	\$0.00
TOTAL DIRECT COST					\$326,380.13

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

W.O. = Work Order

J.S. = Job Specific

September 23, 2020

To: Jason Whyte, PE
Lead Engineer
HR Green
McHenry, IL

Re: Proposal - Geotechnical Exploration
Proposed IL 137 Bike Path
Lake County, Illinois

Proposal No. Q20.286g REV1

Via email: jwhyte@hrgreen.com

Dear Mr. Whyte

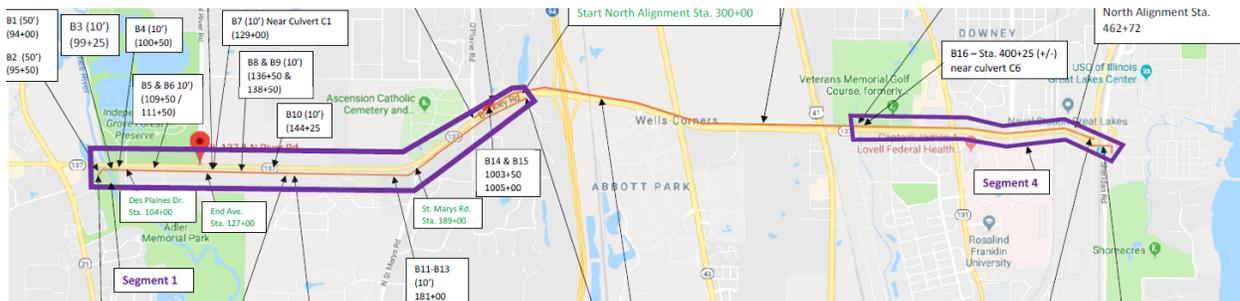
Rubino Engineering, Inc. (Rubino) is pleased to submit the following proposal to provide geotechnical engineering services for the above referenced project. Rubino received a request for proposal from Jason Whyte of HR Green via email on August 27, 2020.

PROJECT UNDERSTANDING

Rubino understands that Lake County is planning to construct a bike path along Route 137 between Rt 21 and Sheridan Rd in Lake County, Illinois. Rubino understands that the bike path construction will include a bridge and retaining walls.

Information received:

- RFP Email from Jason Whyte of HR Green on August 27, 2020
- Drawing – “Prop_Boring_Location_List” prepared by HR Green



Should any of the information on which this proposal has been based, including as described above, be inconsistent with the planned construction, Rubino requests to be contacted immediately in order to make any necessary changes to this proposal and scope of work.

SCOPE OF SERVICES

The following sections outline the scope of services developed based on the information provided by the client and the information listed above in order to provide a geotechnical exploration the planned project. The exploration will be performed in general accordance with both the requested proposal information and Rubino’s current understanding of the project.

Site Access and Traffic Control

Based on current site topography, surface conditions, and project discussions, Rubino anticipates that the project site will be accessible to track-mounted Geoprobe 7822DT drilling equipment.

Traffic control may be needed if the right of way is not wide enough to fit the field equipment. If necessary traffic control will consist of cones and approach signage

Boring Locations

The approximate proposed boring locations are shown below. Rubino recommends that the borings be located and surveyed for elevation by others prior to drilling. If the borings cannot be surveyed, Rubino will locate the borings in the field by measuring distances from known, fixed site features.



Exhibit 1) Approximate locations of borings near Des Plaines River

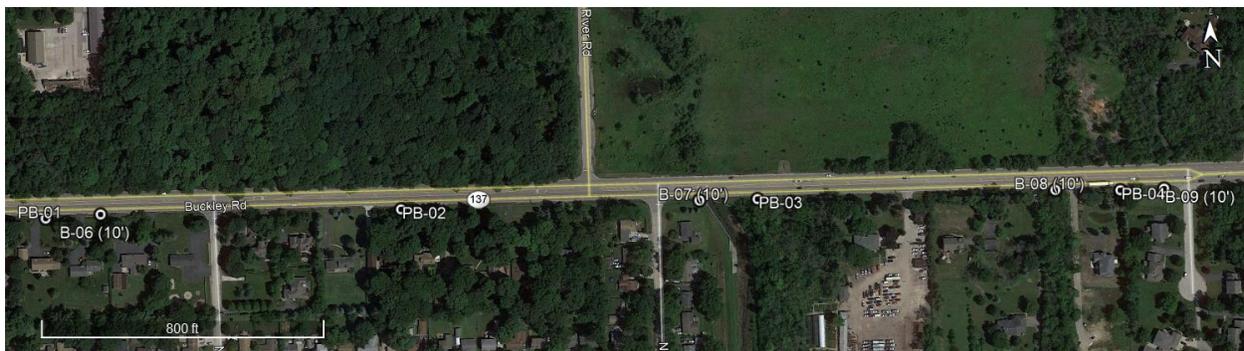


Exhibit 2) Approximate locations of borings along Section 1



Exhibit 3) Approximate locations of borings along Section 1



Exhibit 4) Approximate locations of borings along Section 1



Exhibit 5) Approximate locations of borings along Section 4

Boring Depths

To obtain data to evaluate subsurface conditions within the proposed development/construction areas, Rubino proposes to drill soil borings as specified below.

NUMBER OF BORINGS	DEPTH (FEET BEG*)	LOCATION
2	50	Boardwalk Boring – West of Des Plaines River (B-01 and B-02) 93+50 to 96+50
1	50	Bridge Boring – East of Des Plaines River (B-03) 99+00
1	10	Retaining Wall Boring (B-04) 100+50
2	10	Path Borings (B-05 and B-06) 109+50 & 111+50

1	10	Culvert Boring (B-07) 129+00
2	10	Path Borings (B-08 & B-09) 136+50 & 138+50
1	10	Retaining Wall Boring (B-10) 144+25
3	10	Retaining Wall Borings (B-11 to B-13) 181+00, 183+25, and 185+50
2	10	Mixed Path & Retaining Wall Borings (B-14 & B-15) 1003+50 & 1005+00
10	5	Path Borings at 1,000 foot spacing (PB-01 through PB-10)
6	5	Path Borings at 1,000 foot spacing (PB-11 through PB-16)
Total	350 Linear Feet	

*BEG = below existing grade

SPT - Soil Sampling - IDOT

Soil sampling will include split-barrel samples (ASTM D 1586) or thin-walled tube samples on cohesive soils (ASTM D 1587) at 2 ½ - foot intervals to a depth of 30 feet and 5 - foot intervals thereafter.

If unsuitable bearing soils are encountered within the borings as proposed herein, the borings will be extended an additional 5 feet to attempt to end the borings in suitable soils. If unsuitable soils persist at the end of an additional 5 feet the client will be contacted prior to demobilizing.

Unsuitable soils will be defined by field personnel using the following criteria:

- Cohesive soils with an N value less than or equal to 6.
- Granular soils with an N-value less than 10.
- Black cohesive or silty soil with visible signs of organic matter and / or organic odor and low blow counts as described above.

Completion of Borings

Upon completion of drilling, the borings will be backfilled with soil cuttings and capped with similar existing material / asphalt cold patch. Some damage to ground surface may result from the drilling operations near the work areas and along ingress/egress pathways. Rubino will attempt to minimize such damage, but no restoration other than backfilling the soil test borings is included.

It should be noted that over time, some settlement may occur in the bore hole. If Rubino is requested to return to the site for the purpose of filling any bore holes that may have settled, additional time and material charges may apply.

Laboratory Testing

The soil samples obtained during the field exploration program will be transported to the laboratory for classification and a limited number of laboratory tests. The nature and extent of the laboratory testing program is at the discretion of Rubino Engineering, Inc. and will depend upon the subsurface conditions encountered during drilling.

Laboratory testing will be performed in accordance with ASTM procedures and may include examination of selected samples to evaluate the soils' index properties and relative strength characteristics.

Based on the proposed quantity of soil borings, anticipated depths, and project type, a list of the anticipated laboratory tests are summarized below.

LABORATORY TEST	ESTIMATED QUANTITY	SAMPLE TYPE
Atterberg Limits	3	Split spoon, bulk, or Shelby Tube
Hydrometer	1	Split spoon, bulk, or Shelby Tube
Unconfined Compression Test	1	Shelby Tube
Natural Moisture Content	100	Shelby Tube, Cohesive Samples
Organic Content	5	Split spoon, bulk, or Shelby Tube

CCDD Testing – LPC 663

Rubino has obtained a “Potential Impacted Property” (PIP) evaluation of the area near the proposed multi-use path improvements.

The PIP evaluation indicates further testing is needed for form LPC-663, Rubino will perform PID testing on the soil samples and soil analytical testing in general compliance with the IEPA CCDD requirements. Laboratory testing will be at the discretion of the environmental professional based on knowledge of the location of the borings.

LPC 663 Testing Scope
<ul style="list-style-type: none"> • PIP Evaluation (Historical & Regulatory) <ul style="list-style-type: none"> ○ 9 Reports • Soil Analytical Tests (15 estimated): <ul style="list-style-type: none"> ○ Volatile Organic Compounds (VOCs), Polynuclear Aromatic Hydrocarbons (PNAs), Resource Conservation Recovery Act (RCRA) Metals, pH ○ TCLP / SPLP RCRA Metal (only if necessary) • P.E. / P.G. Review & Certification (LPC #663)

If the analytical testing indicates the soils are contaminated, additional testing and an additional disposal source may be necessary (Composite Non-Hazardous Non-Special Waste Analytical for landfill disposal if necessary).

Direct Push Depths

NUMBER OF DIRECT PUSHES	DEPTH (FEET BEG*)	LOCATION
15	10	TBD

*BEG = below existing grade

GEO REPORT

Upon completion of field and laboratory work, Rubino will prepare a geotechnical engineering report using the collected data. The geo report will include the following:

- *Summary of client-provided project information and report basis*
- *Overview of encountered subsurface conditions*
- *Overview of field and laboratory tests performed including results*
- *Geotechnical recommendations pertaining to:*
 - *Subgrade preparation and cut / fill recommendations*
 - *Pile supported pedestrian bridge foundation recommendations for Des Plaines River bridge*
 - *Pile supported boardwalk foundation for end of path at west end of Des Plaines River bridge*
 - *Segmental block retaining wall designs for walls that vary in exposed height from 2 feet to 7 feet along path alignment*
 - *Net allowable soil bearing pressure for proposed retaining wall locations in case a spread footing T-Wall or L-Wall design is necessary.*
 - *Lateral load recommendation for retaining wall locations*
 - *Review of retaining wall soil boring locations for potential problem areas and soil remediation recommendations*
 - *Seismic design site classification parameters (Bridge Borings)*
 - *Subgrade preparation (Path Borings)*
 - *Subgrade Stability (Path Borings)*
 - *Estimated IBV value at each boring location (Path Borings)*
- *Construction considerations, including temporary excavation and construction control of water*
- *LPC-663 CCDD Certification, as applicable*

An electronic copy of the report will be provided. The report will be addressed to HR Green.

PROJECT SCHEDULE

Rubino proposes to initiate work on this project within 5 working days after receiving written authorization to proceed and we will follow the schedule below in order to complete the project:

Task	Number of Working Days
Utility clearance and rig mobilization	10
Field work including site layout and drilling	5 - 10
Laboratory Testing	10
Preparation of the Geotechnical Report	10 - 15

Project schedules can be affected by weather conditions and changes in scope. If the report needs to be delivered by a specific day, please notify us as soon as possible. Preliminary verbal recommendations can be made to appropriate parties upon completion of the field investigation and laboratory testing. Rubino will need to receive a signed copy of this proposal intact prior to mobilizing the drill rig.

SPECIAL INSTRUCTIONS

Rubino will coordinate contacting the Utility “One-Call” for public utility clearance prior to the start of drilling activities. It is Rubino’s experience that this service does not mark the locations of privately owned utilities. This proposal is based on private utility lines and other subsurface appurtenances being located in the field by others prior to our mobilization.

FEES

Rubino proposes to charge the fee for performance of the outlined scope of services on a cost-plus fixed fee basis. Based on the scope of services outlined above, **the estimated fee is \$41,254** (See attached BDE 3608 & BDE 436).

Extras:

Traffic Control	Shoulder or Single Lane Closure – Arterial Roads	\$1,000.00	Per Closure
	Attenuator Truck (port to port)	\$2,300.00	Per Day

Please see the attached fee schedule for additional unit rates for services requested after issuing the geotechnical report (drawing / spec review, scope or site layout change, etc.).

Scope Limitations

Project services do not include a site evaluation to determine the presence or absence of wetlands, hazardous substances, or toxic materials.

Rock coring is not included in the scope of this exploration, therefore, the character and continuity of refusal materials, if encountered, can be determined only with a more comprehensive scope of services. Therefore, the borings will be advanced to the depths referenced above, or to refusal, whichever is shallower.

Boring, sampling and testing requirements are a function of the subsurface conditions encountered. The proposed lump-sum fee is based on the existence of adequate bearing materials being encountered within the proposed boring depths. Should conditions be encountered which require a deepening of borings or additional investigation, Rubino will notify you to discuss modifying the outlined scope of services. Additional work beyond the lump-sum fee will not be performed without your prior authorization.

AUTHORIZATION

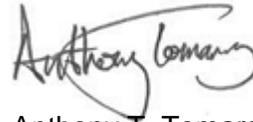
If this proposal is acceptable to you, Rubino will perform the work in accordance with the attached General Conditions that are incorporated into and made a part of this proposal. Please sign below as notice to proceed and return one copy of this proposal intact to our office. Rubino will proceed with the work upon receipt of authorization.

Rubino appreciates the opportunity to offer our services for this project and we look forward to working with your company. Please contact Rubino with questions pertaining to this proposal or requests for additional services.

Respectfully submitted,
RUBINO ENGINEERING, INC.



Michelle A. Lipinski, PE
President



Anthony T. Tomaras
Project Manager

Attachments: Proposal Acceptance and Data Sheet
 Schedule of Services and Fees
 General Conditions

**This is an electronic copy. Hard Copies of this proposal are available upon request.

Rubino Engineering, Inc.
2020 Schedule of Geotechnical Services & Fees

ENGINEERING

Professional and Technical Services for site evaluation, field supervision, analysis of test data and engineering recommendations and consultation:

Principal Engineer	Per Hour	\$	185.00
Project Engineer/Manager	Per Hour	\$	125.00
Engineering Field Technician / Field Engineer / Field Geologist	Per Hour	\$	95.00
Administrative Assistant	Per Hour	\$	65.00

SUBSURFACE EXPLORATION

Mobilization and moving of truck-mounted drilling equipment and crew (50-mile radius)	Per Trip	\$	650.00
All-Terrain Vehicle (ATV) Usage Surcharge	Per Day	\$	195.00
Boring Layout - Two-man crew (2 hour minimum)	Per Hour	\$	166.00
Soil Sampling using split-barrel sampler (ASTM D-1586) 2.5-foot intervals to 15 feet and 5-foot intervals thereafter, 3-1/4" E.D. HAS:			

Depth Range	Easy Drilling*	Hard Drilling**
Feet		
0 - 25	\$24.50	\$27.00
25 - 50	\$26.50	\$29.00
50 - 72	\$30.50	\$31.00
75 - 100	\$32.00	\$33.50

* Less than 50 blows per foot or a Qp of 4 tsf

** 50 blows or more per foot, Qp more than 4 tsf, or strata containing coarse gravel or cobbles

Hourly Rate Drilling (difficult or unusual conditions, hard material, boulders, rubble, etc.)	Per Hour	\$	275.00
Thin Wall Tubes (ASTM D-1587)	Each	\$	50.00

LABORATORY TESTING

Moisture Content Test / Visual Classification	Each	\$	7.00
Atterberg Limits Determination (LL, PL)	Each	\$	65.00
Combined Hydrometer & Sieve Analysis	Each	\$	130.00
Sieve Analysis (washed)	Each	\$	85.00
Unconfined Compression Test, Tube Sample	Each	\$	35.00
Unconfined Compression Test, with Stress-Strain Curve	Each	\$	85.00
Density Determination	Each	\$	15.00
Specific Gravity Determination	Each	\$	65.00
Organic Content Determination Test (loss on ignition)	Each	\$	25.00
ASTM D698 - AASHTO T99 (Standard Proctor)	Each	\$	225.00
ASTM D1557 - AASHTO T180 (Modified Proctor)	Each	\$	275.00
One-Dimensional Consolidation Test (ASTM D-2435)	Each	\$	750.00
pH Testing	Each	\$	15.00
Triaxial Testing (TXC-CIU) 3-Point Envelope	Each	\$	1,300.00

FEE REMARKS

- 1) All fees and services are provided in accordance with the attached Rubino General Conditions.
- 2) Unit prices/rates are in effect for 12 months from the date of this proposal and are subject to change without notice thereafter. Overtime rates are applicable for services performed in excess of 8 hours per day Monday through Friday, before 8:00 AM or after 5:00 PM, and for all hours worked on Saturdays, Sundays and holidays. The overtime rate is 1.5 times the applicable hourly rate.
- 3) All rates are billed on a portal-to-portal basis.
- 4) Standby time due to delays beyond Rubino's control will be charged at the applicable hourly rate.
- 5) Transportation and per diem are charged at the applicable rates.
- 6) Rates involving mileage (including transportation, mobilization, vehicle and trip charges) are subject to change based upon increases in the national average gasoline price.
- 7) A minimum charge of 4 hours applies to field testing and observation services.
- 8) Scheduling or cancellation of field testing and observation services is required no less than the working day prior to the date the services are to be performed. Services cancelled without advance and/or inadequate notice will be assessed a minimum charge of 4 hours.
- 9) For all Rubino services, a project management/engineering review charge will be billed for all reports issued for the scheduling/supervision of personnel and the evaluation/review of data and reports.
- 10) The minimum billing increment for time is a half hour.
- 11) A project set-up charge of a minimum of two hours applies to all projects.
- 12) Professional services rates are exclusive of expert deposition or testimony time.
- 13) Drilling and field service rates are based on OSHA Level D personnel protection.
- 14) For sites where drilling is to occur that are not readily accessible to a truck mounted drill rig, rates for rig mobility, site clearing, crew stand-by time, etc. will be charged as applicable.
- 15) If applicable the prevailing wage fees charged under this agreement will be adjusted if there is any change in the applicable prevailing wage rate established by the Illinois Department of Labor.
- 16) Services and fees not listed on this schedule may be quoted on request.
- 17)

COMPANY NAME: Rubino Engineering, Inc
 PTB NUMBER: **Rubino proposal # Q20.286g_REV3 IL 137 Wall**
 TODAY'S DATE: **7/13/2021**

ITEM	ALLOWABLE	UTILIZE W.O. ONLY	QUANTITY J.S. ONLY	CONTRACT RATE	TOTAL
Per Diem (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			\$0.00	\$0.00
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost (Up to state rate maximum)			\$0.00	\$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			\$0.00	\$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			\$0.00	\$0.00
Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day		7	\$65.00	\$455.00
Vehicle Rental	Actual cost (Up to \$55/day)			\$0.00	\$0.00
Tolls	Actual cost			\$0.00	\$0.00
Parking	Actual cost			\$0.00	\$0.00
Overtime	Premium portion (Submit supporting documentation)			\$0.00	\$0.00
Shift Differential	Actual cost (Based on firm's policy)			\$0.00	\$0.00
Overnight Delivery/Postage/Courier Service	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Copies of Deliverables/Mylars (In-house)	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Copies of Deliverables/Mylars (Outside)	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Project Specific Insurance	Actual cost			\$0.00	\$0.00
Monuments (Permanent)	Actual cost			\$0.00	\$0.00
Photo Processing	Actual cost			\$0.00	\$0.00
2-Way Radio (Survey or Phase III Only)	Actual cost			\$0.00	\$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual cost			\$0.00	\$0.00
CADD	Actual cost (Max \$15/hour)			\$0.00	\$0.00
Web Site	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Advertisements	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Public Meeting Facility Rental	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Recording Fees	Actual cost			\$0.00	\$0.00
Transcriptions (specific to project)	Actual cost			\$0.00	\$0.00
Courthouse Fees	Actual cost			\$0.00	\$0.00
Storm Sewer Cleaning and Televising	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Traffic Control and Protection	Actual cost (Requires 2-3 quotes with IDOT approval)			\$ 2,300.00	\$0.00
Aerial Photography and Mapping	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Utility Exploratory Trenching	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Testing of Soil Samples*	Actual cost			\$0.00	\$0.00
Lab Services*	Actual cost (Provide breakdown of each cost)			\$0.00	\$0.00
Equipment and/or Specialized Equipment Rental*	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Atterberg Limits	In house direct cost		10	\$ 70.00	\$700.00
Hydrometer	In house direct cost		2	\$ 140.00	\$280.00
Natural Moisture Content	In house direct cost		120	\$ 7.00	\$840.00
Organic Content	In house direct cost		5	\$ 23.33	\$116.65
Drill Rig Mobilization	In house direct cost		5	\$ 657.95	\$3,289.75
Asbestos Testing	Outside Direct Cost			\$250.00	\$0.00
CCDD Analytical Testing	Outside Direct Cost		15	\$ 600.00	\$9,000.00
pH Testing	In house direct cost			\$15.00	\$0.00
Triaxial Compression Testing	In house direct cost		1	\$1,000.00	\$1,000.00
				\$0.00	\$0.00
TOTAL DIRECT COST					\$15,681.40

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

LEGEND

W.O. = Work Order

J.S. = Job Specific