

ILLINOIS DEPARTMENT OF TRANSPORTATION

Request for Approval
of Change in Consultant Contract

Date: 8/22/2018

Local Agency: LAKE COUNTY

Request: No. 1

Name: Wadsworth Road Intersection
Improvements - Phase I

To: Lake County Division of Transportation

Section: 13-00999-47-ES

Consultant: Christopher B. Burke Engineering, Ltd.

I recommend that an addition be made to the above consultant contract.

The estimated work is listed below

Original contract amount
for services described: \$1,472,132.74Sum of all previous contract
change orders: \$0.00

Task #	Description	Additions	Deductions
Phase I	Additions: Data Collection, Topographic Survey, Traffic Analysis, Roadway Drainage, Alternate Geometric Studies, Maint. of Traffic, Enviro. Surveys, PDR, Public Involvement, Project Administration	\$511,360.70	
Phase I	Deductions: Geotech & Pavement, Bridge TSL, Plats and Legals		\$111,359.85
Phase II	Interim Improvement Additions: Pick-up survey, Geotech, Drainage Studies, Coordination, Maint. Of Traffic, Plan Preparation (Prelim, Pre-Final, Final), Wetland Permitting, Stormwater Permitting, Utility Coordination, Phase III Support, QA/QC, Project Administration	\$112,004.10	
TOTALS		\$623,364.80	\$111,359.85
NET CHANGE		\$512,004.95	\$0.00

Net ADDITION change to date \$512,004.95 which is 34.78 % of the original contract amount for services described

State fully the nature and reason for change:

Revised contract amount
for services described: \$1,984,137.69

Please see attached.

When the net increase or decrease in the cost of the contract is \$10,000 or more, or the time of completion is increased or decreased by 30 days or more, one of the following statements shall be checked.

☒ The undersigned determined that the circumstances which necessitated this change were not reasonably foreseeable at the time the contract was signed.☐ The undersigned determined that the circumstances which necessitated this change were not within the contemplation of the contract as signed.☐ The undersigned determined that this change is in the best interest of the local agency and is authorized by law.Project Manager/Engineer  Date 8/22/18Department Head  Date 8/22/18

Chief Accounting Specialist _____ Date _____

Approved _____ Date _____

County Engineer

Wadsworth Road (CH 17) at US-41

Lake County, Illinois Section 13-00999-47-ES

Change Order #1

Scope of Work

August 2018

Change Order #1 addresses additional level of effort that is required to complete Phase I Engineering and Environmental Studies for the Wadsworth Road (CH 17) and US-41 intersection improvement, and for additional level of effort that was required for completing Phase I Engineering at the Wadsworth Road (CH 17) and Dilleys Road (CH 15) intersection. Change Order #1 also includes Phase II Engineering services for a safety improvement of Wadsworth Road east of US 41, which has been identified as a State 5% crash severity location and has accumulated over 80 crashes in a 5-year period.

The US-41 intersection was separated into its own independent Phase I Study from the Dilleys Road and Kilbourne Road Phase I Study, which was supported by Illinois Department of Transportation (IDOT) Bureau of Local Roads and Federal Highway Administration (FHWA) for project development reasons. Phase I Engineering was completed for the Dilleys Road and Kilbourne Road intersections as one Project Development Report, and are both currently in Phase II Engineering.

The US-41 and Wadsworth Road intersection improvement is continuing to proceed through the federal project development process to be eligible for future federal funding opportunities, and is anticipated to be processed as a Federal Approved Categorical Exclusion (CE). As such, the project must meet all current IDOT and Federal Phase I Engineering guidelines and procedures, some of which have changed since the initial Phase I Engineering Study was initiated.

An extensive alternative development and evaluation process ensued for the US-41 intersection. The intersection of US-41 and Wadsworth Road is the only east/west crossing of the Des Plaines River for 5.5 miles and is utilized by the Village of Wadsworth, Beach Park, and Zion to access US-41, IL 132, and I-94. 2040 projected ADT on Wadsworth Road east of US-41 is 17,000 vehicles per day and 40,000 on US-41. The intersection experiences heavy westbound/southbound traffic in the morning and heavy northbound/eastbound traffic in the PM. A range of 17 initial concept alternatives were developed and evaluated, including at-grade and grade separated concepts. Several FHWA recommended innovative intersection treatments were also included in the initial concept alternative evaluation, such as displaced left turn, median u-turn, and quadrant roadway intersections. Four initial concept alternatives were originally scoped out. After evaluation of the initial concept alternatives, eight alternatives were carried forward for further traffic analysis, geometric design, impact analysis, cost analysis and comparative evaluation.

The initial alternatives step of the alternative development and evaluation process was not anticipated but was necessary to select the finalist alternatives. A series of Workshops with

County staff and the project team were held during the alternatives development process to seek comment, input, and direction. Public input on the alternatives development and evaluation was gathered from the Stakeholder Involvement Group at the second and third meetings. Two finalist alternatives were presented at the second Public Meeting. A preferred intersection alternative has been identified by LCDOT, and is supported by IDOT and project stakeholders, include the Village of Wadsworth and the Lake County Forest Preserve District (LCFPD).

The preferred intersection alternative identified for the US-41 and Wadsworth Road intersection (Alternative 1A2) includes an alignment shift of US-41 to the west and the addition a third through lane in each direction with exclusive single left and right turn lanes in each direction; the improvements to Wadsworth Road consist of a second through lane in each direction with dual left turn lanes and exclusive right turn lanes. The addition of the third northbound/southbound through lanes on US 41 require a 4,900-foot length of improvement on US 41 to properly extend the additional through lane across the intersection and drop them back to the existing roadway. The preferred alternative has been reviewed by IDOT and their review comments have been incorporated into the design. The original scope of work included 3,000 feet of improvements on US 41 and the current length of improvement is 4,900 feet, an increase of 1,900 feet. All proposed improvements on state jurisdiction roadways require existing/proposed drainage investigations, documented in the Location Drainage Study. Therefore, the limits of the drainage study are increased.

Along Wadsworth Road, the BP Gas Station/McDonald's entrance and the LCFPD Sedge Meadow parking lot entrance will be relocated further east 600 feet and 300 feet respectively. An off-road multi-use path will be included on the south side of Wadsworth Road from Dilleys Road to the Des Plaines River Trail and a sidewalk will be provided between the BP and Des Plaines River Trail. On-road bicycle accommodations will be provided from the Des Plaines River Trail to the LCFPD Canoe Launch east of the Des Plaines River, which was not included in the original scope of work. This improvement was desired by the LCFPD and Village of Wadsworth. The project team evaluated their request and concluded that an on-road bike lane could be provided without additional roadway widening or widening of the existing Des Plaines River bridge structure. The existing scope of work included improvements on Wadsworth Road to the west Des Plaines River bridge abutment. To incorporate the extension of the on-road bike accommodations from the Des Plaines River Trail to the LCFPD Canoe Launch, the improvements along Wadsworth Road are extended 450 feet to the east. All increases in the project study limits along Wadsworth Road and US-41 require topographic survey to be picked-up.

As part of Changer Order #1, CBBEL will perform Phase II Engineering Services for an interim safety improvement in advance of the overall intersection improvement associated with the ongoing Phase I Study. The east leg of the intersection of Wadsworth Road at US 41 is a 5% crash location for crash severity and will be improved to provide safer access to adjacent properties. The interim safety improvements will consider the following:

- Widen the east leg of Wadsworth Road to a 3-lane section through a new access intersection approximately 800 feet east of US 41.
- Taper to a 2-lane roadway section east of the westbound left-turn lane at the new access intersection.

- Resurface Wadsworth Road from Dilleys Road roundabout improvement to US 41 and from US 41 to the west Des Plaines River bridge approach.
- Flush center lane remains until ultimate Phase I intersection improvements are implemented.
- Existing access to and from northeast quadrant commercial property along Wadsworth Road will be closed and the access road from the Phase I Study will be built. If this cannot be worked out between the property owner, Village of Wadsworth, and the Forest Preserve, converting to a restricted access or simply closing the access will be considered.
- Pave the full width of the existing shoulder to the Des Plaines River bridge while minimizing floodplain/wetland impacts (longer post guardrail and/or 6-foot wide shoulders may be needed).
- Improvements to the at-grade crossing of Wadsworth Road for the Des Plaines River Trail including consideration of a push-button activated rectangular rapid flashing beacon warning device, pedestrian hybrid beacon or similar.

Work in IDOT right-of-way is not anticipated and as such, a permit from IDOT will not be needed. Anticipated land acquisition includes proposed right-of-way from Forest Preserve for the access road, a temporary construction easement from the Forest Preserve for the revised access to parking lot, and a temporary construction easement from the northeast quadrant commercial property to connect the access road to the parking lot. An Army Corp of Engineers Regional Permit will likely be needed for Corp jurisdictional wetlands. A Watershed Development Permit will be needed from the Lake County Stormwater Management Commission which potentially could include compensatory storage for fill in the floodplain.

A construction letting is anticipated during the fall of 2019 with construction starting in 2020, provided that all permits are acquired, and land acquisition is complete. CBBEL will provide services for all permitting required for these improvements.

The following describes the individual work tasks included in the scope of work for this change order.

Phase I Engineering Service

Task 1 - Data Collection, Compilation, Review and Evaluation

An extra level of effort was required for this task regarding the data collection, review and evaluation for:

- The northwest quadrant of the US-41 intersection as it related to the initial and final range of alternatives. The property owner of the northwest quadrant had ongoing site development improvement project(s), which required additional review of site plans and its impact to various alternatives being considered. The result of this analysis and additional coordination, required adjustment to some of the initial alternatives.
- The southeast quadrant of the US-41 intersection related to the ongoing site development improvement of the Shanty/Captain Porky site and how that project interfaced with the intersection improvement. Detailed investigation and analysis of their site plan and effects to the proposed improvement were required. The County considered access modifications as part of the permit application and were evaluated in relation to the proposed intersection improvement. CBBEL provided supporting exhibits for the proposed site development and proposed intersection improvement, which helped facilitate the right-of-way and temporary easement dedication. A Municipal Acceptance Exhibit was prepared related to the sanitary sewer in the future dedicated right-of-way.

Task 2 - Topographic Survey

This task includes full topographic survey for areas needed to adequately cover the US-41 preferred alternative and associated drainage components. This includes an additional 1,100 feet to the south and 1,000 feet to the north along US-41. For the area east of US-41, south of the commercial developments, the survey will extend 80 feet beyond the existing right-of-way to cover the existing LCFPD access roadway and 6'x6' culvert. Four hydraulic cross sections will be taken for the 6'x6' culvert adjacent to US-41. Additional survey is needed from the LCFPD holding south of Wadsworth Road, including the parking lot to design for the possible relocated driveway. The Wadsworth Road topographic survey was extended 450 feet to the east across the Des Plaines River to the LCFPD canoe launch driveway, which is needed to design for improved pedestrian connectivity.

The survey will be prepared to be used for both Phase I and Phase II Engineering Services. The topographic survey will extend 20 feet beyond the existing right-of-way line, beyond which the Lake County LiDAR mapping (1-foot contours) will be used. Supplemental field survey will be obtained beyond the existing right-of-way line as necessary to resolve LiDAR mapping voids or to resolve other topographic uncertainties.

Task 3 - Traffic Counts, Projections and Analysis

An additional level of effort was required for DHV assignment and associated exhibits/diagrams related to the US-41 initial concept alternatives for the initial intersection feasibility study. A total of seventeen (17) initial concept alternatives were evaluated for AM and PM peak hours; four (4) alternatives were included in the original scope of work.

Task 5 - Roadway Drainage

This task includes preparing a new Base Flood Elevation (BFE) study in accordance with LCSMC guidelines for depressional areas near the intersection of Wadsworth Road with Dilleys Road. It also includes extending the limits of the Existing Drainage Plan (EDP) and Proposed Drainage Plan (PDP), and preparing a major culvert study and a full Hydraulic Report for two crossings in support of the Location Drainage Study (LDS) for improvements associated with the US-41 intersection. LCSMC BFE submittals are not required for the two culvert crossings under US-41 as they are “riverine flood-prone areas” with less than 100 acres of tributary area. The proposed US-41 improvement will encroach upon the Mill Creek floodplain, so floodplain encroachment analysis will be necessary. As the limits of the encroachment will be only to a backwater floodplain area and the proposed work will not affect the roadway profile or waterway opening, no hydraulic analysis will be necessary.

A. Dilleys Road Intersection

Base Flood Elevation Determination: As part of the original Scope, BFE determination studies were anticipated at two locations near Kilbourne Road. As the design progressed, it became apparent that a new BFE study was necessary for a depressional area located in the northeast quadrant of the intersection of Wadsworth Road with Dilleys Road.

CBBEL coordinated with the Village of Wadsworth, Newport Township, LCDOT, and LCSMC regarding drainage patterns and concerns, and sensitive drainage areas and/or outfalls, and prepared and submitted a BFE study.

Specific work tasks associated with development of the new BFE study included the following:

- Identify the tributary drainage areas beyond intersection limits.
- Identify existing drainage outfalls beyond intersection limits.
- Evaluate outfall sensitivity and suitability for continued use.
- Determine BFE using XP-SWMMM for hydrologic and hydraulic modeling.
- Prepare BFE exhibits.
- Determine compensatory storage volumes and preliminary grading based on proposed conditions in accordance with the Lake County Watershed Development Ordinance.
- Evaluate the needs for additional rights-of-way and drainage easements for compensatory storage grading.

B. US-41 Intersection

IDOT requires a complete LDS for the US-41 intersection in compliance with the IDOT Drainage Manual and ACEC – Illinois/IDOT 2014 Drainage Seminar as described in the original Scope. For purposes of this extra scope, the LDS limits have been expanded from the original 1,500 feet along all four legs of the intersection to 2,500 feet south of the intersection and 2,400 feet north of the intersection, an added length of 1,900 feet. The added length requires extension of the EDP and PDP limits. Additionally, a major culvert crossing study is required for the 3' x 3' reinforced concrete box culvert (RCBC) located north of the intersection, and a full IDOT Hydraulic Report is required for the 6' x 6' RCBC located south of the intersection.

- Existing Drainage System
 - Existing Drainage Plan - Review and investigate existing drainage systems through plans, maps, reports and field reconnaissance trips. Delineate off-site and on-site drainage areas and existing drainage systems for the extended limits on the one-foot contour project mapping to be provided by LCDOT.
 - Drainage Investigation – Identify drainage problems by researching IDOT flooding and maintenance records, particularly along US-41 extended, and coordinating with local agencies and conducting site investigations.
 - Base Floodplains – Identify and document existing floodplains and floodways that potentially cross the project, which for this extra adds the Des Plaines River floodplain and floodway to the south of the intersection.
 - Major Drainage Features – There are two major waterway crossings within the new limits of improvement for which hydrologic and hydraulic analysis is required. A major culvert crossing study is required for the 3' x 3' RCBC located north of the intersection, and a full IDOT Hydraulic Report is required for the 6' x 6' RCBC located south of the intersection. Both studies will require new hydrologic analyses to determine peak flow rates to the culverts, and new hydraulic analyses to determine existing and natural conditions peak water surface elevations and roadway freeboard.
- Proposed Drainage System
 - Outlet Evaluation – Evaluate additional existing outlets north and south along US-41 to determine their suitability for continued use and sensitivity to an increase in rate and volume of stormwater runoff.
 - Right-of-Way Analysis – Evaluate the needs for additional rights-of-way and drainage easements for drainage purposes on the extended improvements.
 - Stormwater Detention Evaluation – Evaluate the stormwater detention requirements for the extended project limits based on IDOT criteria, but with consideration for the Lake County Watershed Management Ordinance.
 - Local & Other Agency Coordination - Coordinate drainage related issues with IDOT, LCDOT, LCSMC, the Village of Wadsworth, Newport Township, and other agencies as appropriate.
 - Proposed Drainage Plan – Prepare a Proposed Drainage Plan for the extended limits to fully describe the proposed drainage concept and reflect drainage calculations for drainage system size, type and location.

- Major Drainage Features – For the 3' x 3' RCBC located north of the intersection, and the 6' x 6' RCBC located south of the intersection, the existing conditions analyses will be the basis of design for extended or replacement culverts based on peak water surface elevations and roadway freeboard. Waterway Information Tables will be completed for both crossings, and a full Hydraulic Report will be prepared for the southern 6' x 6' RCBC in accordance with the IDOT Drainage Manual and ACEC – Illinois/IDOT 2014 Drainage Seminar.
- Floodplain Evaluation - Evaluate compensatory storage requirements for any proposed fill in the Des Plaines River/Mill Creek floodway and floodplain located south of the intersection according to IDNR floodway construction requirements and the spirit of the Lake County Watershed Management Ordinance.

Prepare LDS Text and Exhibits – Complete all drainage tasks, compile all data and exhibits and prepare a completed Location Drainage Study for the extended work, including incorporating the major drainage feature studies in compliance with requirements listed in ACEC-Illinois / IDOT 2014 Drainage Seminar handouts. LCSMC BFE submittals are not required for the two culvert crossings under US-41 as they are “riverine flood-prone areas” with less than 100 acres of tributary area. The proposed US-41 improvement will encroach upon the Mill Creek floodplain, so floodplain encroachment analysis will be necessary. As the limits of the encroachment will be only to a backwater floodplain area and the proposed work will not affect the roadway profile or waterway opening, no hydraulic analysis will be necessary.

Task 6 - Alternate Geometric Studies

An extra level of effort was required for this task regarding the US-41 intersection initial intersection feasibility study and preliminary alternatives development. Once the preferred alternative was identified, the project limits extended on US-41 (1,900') and Wadsworth Road (450') beyond the original project study limits. Curb ramp details will be provided for the US-41 intersection, which is a new requirement by IDOT as part of Phase I Engineering. Additional geometric studies are anticipated to minimize impacts to the LCFPD holdings as part of the Section 4(f) coordination and documentation. Evaluation of possible stage implementation of the US 41 intersection improvement, with Stage 1 including additional lanes only on Wadsworth Road and Stage 2 including additional lanes on US 41.

Initial Intersection Feasibility Study

An initial feasibility study was prepared for the US-41 intersections and was originally scoped to evaluate four (4) initial concept alternatives. Based on alternatives workshop meetings that were held with the County and IDOT, the range of the initial concept alternatives was increased to seventeen (17) which were evaluated for transportation performance, safety, and qualitative relative comparison for wayfinding, non-motorized accommodations, socio economic impacts, environmental impacts, constructability and cost. This included traffic modeling using Synchro and Arcady (roundabouts) for the peak AM and PM periods for all alternatives. Summary transportation performance exhibits were compiled for each concept alternative. An overall transportation performance summary evaluation table was prepared for relative comparison purposes. The feasibility study included the findings of all

alternatives evaluated. Formal approval was granted on exceeding the scoped amount of initial concept alternatives. The feasibility study technical memorandum resulted in nine (9) alternatives being dismissed and eight (8) alternatives carried forward for further analysis. The findings of the Feasibility Study were presented and discussed at a workshop with County staff.

Preliminary Alternatives Development

The prior scope of work planned for four (4) initial concept alternatives to be evaluated and three (3) finalist alternatives to be advanced for preliminary geometry, profile evaluation, critical cross sections (where needed), safety, environmental impact assessment, socio-economic impact assessment, preliminary cost estimates, and stakeholder involvement group (SIG) coordination (SIG #3). With the larger range of seventeen (17) initial concept alternatives being considered and evaluated for the US-41 intersection, the alternative development and evaluation process was modified from what was initially scoped for this intersection. An intermediary step was needed prior to selection of the finalist alternatives, initial alternatives, which evaluated the eight (8) initial concept alternatives from the feasibility study. This task included transportation analysis modification and refinement from what was developed during the initial intersection feasibility study for AM and PM peak periods. For several alternatives, sub alternatives were evaluated to optimize intersection performance and overall network transportation performance. The same level of analysis anticipated for the finalist alternatives was applied to the initial alternatives. Two finalist alternatives were selected from the initial range of alternatives and presented at the second public meeting for public input.

A total of four workshops with County staff were held throughout the alternatives development process, two of which were initially scoped. Additional design submittal iterations were required to properly obtain County comment during the alternative development and evaluation process. The amount of information prepared for public input via the SIG and/or public meeting was increased. Additional coordination with IDOT and FHWA was also required as a wider range of alternatives was considered and evaluated at the US-41 intersection.

During the finalist alternative evaluation, an additional level of effort was required to evaluate access alternatives for properties east of US-41, which was also a designated IDOT 5% crash severity location. A total of four (4) alternatives were developed, evaluated, and submitted for County review and input. Additionally, the east project limit was extended to the LCFPD canoe launch driveway based on input provided by LCFPD and the Village of Wadsworth to connect the Des Plaines River Trail to the canoe launch. A concept alternative was developed for adding bicycle connectivity without replacement or modification of the existing Des Plaines River bridge structure.

Preferred Alternative

A preferred alternative was selected for the intersection which includes an at-grade intersection improvement of US-41 and Wadsworth Road. Additional through lanes on US-41 are proposed, which increases then length of improvement on US-41 by 1,900 feet from initial estimation. The eastern project limit was extended 450 feet to the LCFPD canoe launch. IDOT requirements for Phase I Engineering now require ADA curb ramp details to be provided for all marked cross walks. Cross walks are planned on all legs of the intersection. Evaluation of staged implementation of the US-41 intersection improvement will

be performed, with Stage 1 consisting of additional lanes only on Wadsworth Road and Stage 2 consisting of additional lanes on US-41. An additional IDOT/FHWA coordination meeting is anticipated because of the US-41 intersection being separated as an independent Phase I Study.

Additional coordination has been required with the LCFPD throughout the alternative development and additional meetings are anticipated to finalize access to Sedge Meadow Forest Preserve and the northern commercial access also other impacts to their holdings. All necessary coordination will occur with the LCFPD in order to gain the support for the proposed improvement, as required to obtain a negative declaration for the 4(f) impacts. It is anticipated that additional geometric studies are needed as part of the Section 4(f) documentation and evaluation associated with the impacts to LCFPD holdings along Wadsworth Road and US-41. Additional coordination meetings are anticipated with Village of Wadsworth, LCSMC, IDOT, and business owners.

Task 7 - Traffic Maintenance Analysis

An additional level of effort was required for the Dilleys Road intersection as a full closure was proposed for this intersection and required additional coordination with the fire protection district and IDOT. One IDOT Detour Meeting was attended as the proposed detour route for Dilleys Road utilized US-41 and IL 173.

Task 9 - Environmental Surveys, Analysis and Coordination

An additional level of effort was required for environmental surveys, analysis and coordination regarding the US-41 intersection as described below.

Environmental Field Survey and Technical Memorandum

Additional wetland surveys were required at the US-41 intersection to cover the preferred alternative study area, which coincides with the addendum Environmental Survey Request (ESR) area. The results of the Wetlands/Waters of the U.S. pickup field survey will be added to the prior Technical Memorandum Wetland Delineation Report and updates to associated exhibits depicting the delineated Wetlands/Waters of the U.S. boundaries, National Wetland Inventory sites, Lake County Wetland Inventory sites, Soil Survey information, floodplains, US Geological Survey topography, and supporting site photographs. A Boundary Verification/Jurisdictional Determination has been requested for the additional wetlands picked up. Wetland impact evaluation forms will be filled out for any impacted wetlands for new wetlands.

AESR Submittal to IDOT

Two ESR addendums (AESR) were submitted, one to split the US-41 intersection from the Dilleys Road and Kilbourne Road intersections (as directed by IDOT), and the other related to the selected preferred alternative to cover areas outside the original ESR boundary. Extensive coordination with IDOT occurred regarding the unique situation of this project, and modifications to the AESR submitted were required.

Tree Tabulation and Evaluation

An additional level of effort is required to pick up additional trees along the US-41 intersection as a result of the selected preferred alternative. The survey of all trees greater than or equal to 6" diameter at breast height (dbh) will be completed as part of Task 2 to include location and size. As part of this task, CBBEL will also tabulate all surveyed trees and

evaluate them with respect to species and health. Each evaluated tree will be assigned a number rating from 1 – 5 based on general observations at the time of the inventory. A rating of 1 (excellent) has the highest value in terms of protection or preservation. A rating of 5 (poor) has the lowest value and represents lower quality individuals. The tree inventory will be included in the Project Development Report.

Section 4(f)

The original scope anticipated *de minimis* findings related to the LCFPD property impacts and acquisition. A *de minimis* finding was granted for the Kilbourne Road acquisition. For the US-41 intersection, approximately 1.6 acres of right-of-way are anticipated with possible permanent easements for detention/compensatory storage. Additionally, the access drive to the LCFPD parking lot south of Wadsworth Road may be relocated to provide full access. While there have been four meetings with the LCFPD regarding the alternatives development and they have given their support for the selected preferred alternative, IDOT and FHWA may require a full Section 4(f). An additional level of effort would be required to process a full Section 4(f) impact evaluation and documentation and is included in this change order.

Preliminary Environmental Site Assessment (PESA)

CBBEL will re-validate the PESA conducted in August 2015 for the non-IDOT right-of-way. IDOT will update the PESA for state right-of-way for the addendum ESR area related to the extended limits on US-41.

Traffic Noise Analysis and Technical Memorandum

A traffic noise analysis is required for the US-41 preferred alternative as confirmed with IDOT and FHWA. Per the Highway Traffic Noise Assessment Manual 2017 Edition, the preferred alternative for US-41 is considered a Type 1 project and requires a noise analysis. The FHWA Traffic Noise Model (TNM) will be utilized to perform the traffic noise analysis. Data collection for the noise analysis includes information on land uses, traffic volume data, existing roadway design features (i.e. speed limits, roadway elevation, and ROW limits), and sensitive receptor locations. Sensitive receptor locations will be identified within adjacent residential areas, based on the 2040 peak hour traffic projection data and the horizontal and vertical roadway alignment information. Noise measurements will be obtained at the identified sensitive noise receptors in order to calibrate the noise modeling effort. Data inputs for the model will include a CADD file of topographical information and geometry as well as traffic characteristics.

A separate Traffic Noise Report will be prepared which summarizes the above traffic noise analysis. Specific work tasks include the following:

- Identification of sensitive receptors for the traffic noise analysis and base exhibit preparation
- Noise monitoring for calibration of the TNM
- TNM model setup and existing conditions (existing traffic) noise prediction using TNM
- 2040 No-Build conditions (2040 traffic with no roadway improvements) noise prediction using TNM
- 2040 Build conditions (2040 traffic with proposed roadway improvements) noise prediction using TNM
- Coordination, documentation and preparation of exhibits

- Prepare Traffic Noise Report Technical Memorandum for inclusion in the Project Development Report (PDR)
- Coordination meetings with benefitted receptors (i.e.; property owners) in areas where noise abatement is determined to be feasible and the cost is reasonable. One separate noise forum for “viewpoint solicitation” is required per Federal project development procedures, and one round of follow-up correspondence.

Task 10 - Project Development Report

An extra level of effort is required for this task. Per IDOT’s directive, the project was separated into two independent Phase I Studies. As such, two separate Phase I reports are required for the project. It is anticipated that the US-41 intersection will be processed as a Federal Approved CE (BLR Form 22210). This task includes addressing one LCDOT and IDOT review of the Draft PDR. A Final PDR will be prepared and submitted for final review by LCDOT and IDOT.

Task 11 - Public Involvement

An additional level of effort was required for public involvement activities related to the US-41 intersection. With a larger scope of initial alternatives being considered and with concern regarding the consideration of grade separated alternatives, a more extensive public outreach approach was necessary to gather input needed to evaluate and develop the initial alternatives. An extra level of effort was required for Stakeholder Group Meetings #2 and #3 from CBBEL staff, where the concept and initial alternatives were presented. The level of complexity for communicating the range of concept alternatives and initial alternatives was higher for the US-41 intersection. A comparison alternatives evaluation table was composed to communicate the results of the alternatives evaluation. CBBEL involvement included PowerPoint preparation, exhibit preparation, and workshop materials to help facilitate the alternatives development and evaluation discussion.

Individual coordination meetings were held with stakeholders as well as a large group US-41 business owner meeting. In total there have been 19 stakeholder meetings regarding the US-41 intersection and several additional meetings are anticipated to complete Phase I Engineering. Meeting minutes were prepared for each meeting and stakeholder follow-up was conducted when required. With the various access alternatives to the east leg of the US-41 intersection, additional coordination was required with the LCFPD, Shanty/Captain Porkys, and BP. Additional meetings with the US-41 stakeholders is anticipated during final Phase I Engineering and the LCFPD regarding revised access driveway and possible detention/compensatory storage on their property. Images, Inc. will be used for the Public Hearing and website management with oversight and key support from CBBEL.

Public Hearing:

One additional Public Hearing is required for the US-41 intersection being separated out as an independent Phase I Study. The Public Hearing will present the preferred alternative for the US-41 intersection along with the factors considered in this determination, for public review and comments. Any further analysis of the preferred alternatives will also be presented, such as the Noise Analysis and Section 4(f). Images Incorporated will be leading the Public Hearing coordination and material preparation, with CBBEL reviewing. Refer to separately attached scope of work for Images, Inc.

Specific work tasks for both the Public Hearing include the following:

- Mailing list updates and postcard invite.
- Preparation Public Hearing Brochures/Handouts.
- Preparation of Public Hearing Display Exhibits (Aerial Displays with Alternatives, Cross Sections, Traffic Data, Crash Data, Environmental Data, and other displays as appropriate).
- Preparation of Public Hearing Powerpoint Presentations (Including Script and Storyboard).
- Attendance at Public Hearing “Dry Runs” with LCDOT.
- Secure location and venue coordination for Public Hearing Site.
- Preparation of Public Hearing Newspaper Display Ads and Press Releases.
- Staff attendance at Public Hearing.
- Preparation of record summaries of the Public Hearing which will include copies of all notices, presentation material, attendance lists, comments, and responses.
- Preparation of post Public Hearing project updates for posting on the project website that will summarize the proceedings, general comments received and responses, and an overview of the next steps in project development.
- Prepare individual response letters to uncommon comments received, or requests for information received at the Public Hearing.

Project Website:

Website content will be developed and maintained throughout the completion of the US-41 Phase I (anticipated to be 12 months) by the consultant. All website content will be reviewed and approved by LCDOT before posting. The website will include at least the following information/capabilities for the project team and stakeholders:

- Provide a list of Frequently Asked Questions and response.
- Notifications for Public Hearing and SIG meetings.
- Posting project updates and uploading/updating pertinent documents/materials.

At the conclusion of the Phase I project development process, the website and domain ownership will be assumed by LCDOT unless otherwise specified.

Task 12 - Geotechnical and Pavement Analysis

Geotechnical investigations were included in the original scope of work, but have not taken place for Dilleys Road, US-41 and Kilbourne Road intersections. Testing Service Corporation (TSC) is being utilized for this work. An updated proposal was obtained from TSC based on the preferred alternatives for each intersection with current labor/direct cost rates. There is reduction in this outside direct cost and which will be reallocated to other direct costs related to this change order.

Task 13 – Bridge Type, Size and Location Drawings

This task will be eliminated from the scope of work. The budget for this task is being reallocated to cover a portion of Change Order #1.

Task 14 – Plat and Legal Preparation

Plat and Legal Preparation related to the US-41 intersection will be removed from the scope of work and remaining budget reallocated to cover a portion of Change Order #1.

Task 15 - Project Administration and Quality Assurance/Quality Control

Due to the duration of the project an extra level of effort is required for this task related to managing the day to day work effort on the project to ensure an efficient project development process including work force allocations, budget oversight, monthly progress reviews to ensure project milestones are being met to the extent possible, and periodic progress coordination meetings. With the separation of the project into two separate Phase I Studies, the project development process was complicated with processing through IDOT.

Specific work tasks will include:

- General project management/administration including staff resource allocation, task/schedule oversight, quality reviews, etc.
- Prepare monthly progress reports including a copy of the overall project schedule.
- Attend project status/coordination meetings with LCDOT as determined to be necessary. For purposes of this change order, two separate project status/coordination meetings with LCDOT are anticipated to occur, and would be attended by up to three members of the consultant team.

Phase II Engineering Services

Task 1 – Pick-Up Survey

CBBEL will supplement the Phase I topographic survey with additional pick-up topographic survey. The anticipated pick-up survey is for the connection of the access road to the parking lot in the northeast quadrant and for the relocation of the bicycle path connection from the parking lot to the main path.

Once land acquisition has been completed for the project, CBBEL will set 5\8 x 24-inch iron rods (with survey caps) at all the corners of the right-of-way takes and permanent easements acquired and shown on the plat of highway.

Task 2 – Geotechnical Investigation and Analysis

Testing Service Corporation (TSC) will also perform a Potentially Impacted Property evaluation and if required, an environmental soil analysis. TSC will complete LPC-662 Form or LPC-663 Form as required for determination and documentation of the disposal of soil from the project site. CBBEL will review this information and incorporate design recommendations into the proposed plans.

Soil borings will be provided as part of the overall Phase I Study.

Field Investigations, Laboratory Testing, and Engineering Report will be completed as outlined in TSC's attached Proposal.

Task 3 – Drainage Studies

The drainage work will include:

- Review work previously completed by CBBEL in Phase I including a field review.
- Verify floodplain fill and design the compensatory storage area.
- Update hydrologic and hydraulic modeling final compensatory area grading.

- Verify capacity of proposed ditch conveyance system carrying offsite flow and check cross sections.

All drainage items to be included in the plan preparation such as existing drainage removals, temporary drainage, proposed storm sewers, ditches, structures, and details are included within the plan preparation task. It is assumed that no detention design will be required, as the added impervious area is below the County Ordinance threshold for detention.

Task 4 – Coordination

Coordination with the Village of Wadsworth, adjacent property owners, and the Lake County Forest Preserve District will be required to coordinate this project as an interim safety improvement prior to the improvements identified in the Phase I Study are implemented. Design elements that will impact the local agencies will be sent at appropriate design stages for coordination. We anticipate that eight coordination meetings will be required for the interim safety improvements.

It is anticipated that one coordination meeting with IDOT will be required to coordinate the project due to the proximity to US Route 41.

Coordination will occur to satisfy Lake County Stormwater Management Commission (LCSMC) and the COE requirements for water quality. We anticipate that one coordination meeting will be required for stormwater and one coordination meeting for Corp jurisdictional wetlands.

CBBEL will meet with representatives from LCDOT to review the proposed scope of services and to determine specific design criteria required by LCDOT for the proposed project. In addition, the consultant will review with LCDOT comments and project letting requirements.

The consultant will meet with LCDOT to advise as to the status of the project and concerns regarding specific design elements. The meetings will also serve to clarify specific design requirements that LCDOT and other local agencies may want incorporated into the plans.

CBBEL will prepare for and attend a pre-construction Public Meeting. This meeting will be to describe the project to the public and to present the anticipated construction staging, maintenance of traffic, and project schedule.

Task 5 – Traffic Maintenance Analysis

CBBEL will develop a preliminary maintenance of traffic staging concept that minimizes disruption to the traveling public while maintaining a satisfactory work zone for the contractor. Once the preliminary maintenance of traffic staging plan has been agreed to by LCDOT, it will serve as the basis for the development of detailed Maintenance of Traffic plans.

Task 6 – Preliminary Plans and Cost Estimate (60%)

Based on the approved Phase I Preliminary Geometric Plans, CBBEL will prepare preliminary plans and an estimate of construction cost. The Plans and Specifications shall be prepared according to the Lake County Plan Preparation Guidelines.

The following drawings will be provided for preliminary review:

1 Sheet	Cover Sheet <ul style="list-style-type: none">• LCDOT format• List of applicable LCDOT and State Highway Standards• Project location map
1 Sheet	General Notes <ul style="list-style-type: none">• Include notes needed to clarify project's intent• Index of sheets• Commitments• Utility Company and Village points of contact
2 Sheets	Summary of Quantities
12 Sheets	Schedules of Quantities (Submitted during Pre-Final) <ul style="list-style-type: none">• Schedules for all pay items will be included except lump sum and contingency items• Schedules for traffic signal plans will follow standard LCDOT sheet layout
2 Sheets	Typical Sections <ul style="list-style-type: none">• Covers main line and cross roads• Extend from ROW to ROW line
2 Sheets	Alignment, Ties and Benchmarks <ul style="list-style-type: none">• Provides centerline alignment, horizontal and vertical control for the project• Provides ties for the centerline alignment and control points.
4 Sheets	Maintenance of Traffic (1"=20' plan sheets) 2 stages <ul style="list-style-type: none">• General Notes• Will show the traffic control and staging of the work that minimizes the disturbance to existing traffic patterns• Temporary drainage• Cross-sections at critical area will be provided to determine limits of construction and staging constructability• LCDOT TCP sheet with notes, speed limit, RWA locations, etc.
3 Sheets	Existing Conditions and Removal Plans (1"=20' plan sheets) <ul style="list-style-type: none">• Will show property lines, PIN, property owners, commercial and private entrances
4 Sheets	Roadway Plan and Profile Sheets (1"=20' horizontal, 1"=5' vertical) <ul style="list-style-type: none">• Existing and proposed plan view top, profile view bottom.• Horizontal and vertical alignments• Existing edges of pavement, medians, C&G, shoulders, driveways, lighting, signing, signals, guardrails, structures, etc.

	<ul style="list-style-type: none"> • All existing and proposed storm sewers, cross road culverts, manholes, catch basins, inlets, headwalls, ditches, pump stations, etc. • Station, offset, and elevation callouts to proposed elements. • All known utilities plotted as accurately as possible including horizontal and vertical locations • Identification, sizes and appurtenances on existing topography, proposed geometry, existing drainage, proposed drainage • Edges of pavement, C&G, medians, driveways, sidewalks, retaining walls, structure locations, and identifications, etc.
3 Sheets	Resurfacing Plans (Wadsworth Road – Dilley Road to US 41) (1"=20')
2 Sheets	Pavement Marking and Landscaping Plans (1"=50')
1 Sheet	Loop Detector Replacement Plan (1"=20')
1 Sheet	Des Plaines River Trail Crossing Warning Device (1"=20')
6 Sheets	Erosion and Sediment Control Plans and Details (1"=50') 2 stages <ul style="list-style-type: none"> • Will show erosion and sediment control for the main construction stages • LCDOT ECP sheet with disturbed area, drainage basin map, notes, quantities, etc.
1 Sheets	Compensatory Storage Grading Plans <ul style="list-style-type: none"> • Existing and proposed contours
1 Sheet	ADA ramp Details (1"=10')
2 Sheets	Construction Details (project specific)
8 Sheets	Cross-Sections <ul style="list-style-type: none"> • At a scale of 1" = 5'-0" horizontal and vertical • At 50' intervals • At all entrances to verify easement need and constructability (satisfactory grades) • At all proposed drainage structures • All known utilities plotted and proposed ditching sufficiently complete to allow identification of utility conflicts • Existing topography including drainage within the ROW shown on the nearest cross section
6 Sheets	IDOT D1 Standards
10 Sheets	LCDOT Standards
<u>10 Sheets</u>	IDOT Standards
82	Total Estimated Sheets

An estimate of construction cost will be submitted along with the preliminary plans to LCDOT for review. The cost estimate will have costs broken out for items that will have cost sharing with the local municipalities as appropriate.

Task 7 – Wetland Permitting

Permit Application Preparation and Submittals – The required exhibits, specifications, data and project information will be compiled and assembled in a permit application package to LCSMC and the U.S. Army Corps of Engineers (COE). Runoff reduction goal requirements of the COE will also be address in this submittal. Coordination for any identified threatened & endangered species will be coordinated as required. We will coordinate development of documents with the project team. This task may require meetings with LCSMC, COE, IEPA, USFWS, IDNR and other agencies to coordinate permitting activities.

Agency Coordination – During the permit Review process, follow-up meetings with the project team and regulatory agencies may be necessary to finalize the required information, submittals and documentation.

Task 8 – LCSMC Stormwater Calculations and Permit

A Watershed Development Permit (WDP) will be required from the LCSMC. CBBEL will review and compile as necessary the stormwater management calculations associated with the existing conditions Base Flood Elevation (BFE) Determination, compensatory storage, stormwater conveyance, water quality requirements, and culvert sizing. Detention storage is not anticipated to be needed based on the added impervious areas at each intersection, which fall below the requirement threshold. CBBEL will schedule a pre-application meeting with LCSMC prior to permit submittals. Time for the meeting is covered under Task 4 – Coordination. Permit submittal support documentation included in this task includes:

- Review and coordinate detention and runoff volume reduction requirements.
- Prepare wetland hydrology analysis for isolated wetlands of Lake County (IWLC).
- Incorporate Best Management Practices with the project to satisfy water quality requirements for both the WDP and the COE wetland permit.
- Complete LCSMC application forms and compile supporting documentation.

Task 9 – Utility Coordination

Once the utilities have verified the location of their facilities, CBBEL will identify potential conflicts, and will set up meetings to discuss necessary utility relocations or plan adjustments. The scheduling of the necessary utility relocation work will also be reviewed in the coordination meetings. We anticipate three group meetings with utility companies will be required.

Proposed utility relocations determined through coordination will be shown in plan view, profile view, and on cross sections. CBBEL will coordinate the design with utility companies and provide CADD files to utility companies when requested. CBBEL will assist LCDOT with review utility relocation plan permit submissions.

Task 10 – Pre-Final Plans and Cost Estimate (90%)

Based on comments provided by LCDOT, the permitting agencies, and coordination with utility companies, CBBEL will submit pre-final construction documents for review. CBBEL will write a separate disposition of comments to address each reviewing agency's preliminary comments. The cost estimate will breakout costs for local participation as necessary.

Task 11 – Final Plans, Specifications and Cost Estimate (100%)

CBBEL will finalize the contract documents based on the pre-final review and current standards and pay items. The requested number of copies of plans and specifications will be submitted to LCDOT. A final estimate of construction cost and estimate of required working days will also be submitted.

Task 12 – Phase III Support

CBBEL will aid LCDOT during the bid process. CBBEL will assist LCDOT to address questions from bidders and, if necessary, will compile an addendum to be issued to bidders. In addition, CBBEL will provide shop drawing review for LCDOT during construction and will clarify design intent to the RE if questions arise.

CBBEL will prepare exhibits for and attend the Phase III Kickoff Public Meeting as discussed under Task 4 - Coordination.

Once the project reaches substantial completion, CBBEL will verify the iron rods at all the corners of the right-of-way takes and permanent easements previously set under Task 1 and reset 5\8 x 24-inch iron rods (with survey caps) as necessary. CBBEL will also verify and reset as necessary, any existing property irons that may have been disturbed during construction.

Task 13 – QA/QC

The CBBEL QC/QA plan emphasizes an integrated project development process, with a guiding principal to ensure cost effective and practical infrastructure management that advocates a safe, constructible and cost-effective design solution that minimizes change orders and schedule delays.

The QC/QA Manager, will perform a comprehensive evaluation of the following items throughout the design process.

- Scoping/field checks
- Submittals
- Design calculations
- Computer inputs/outputs
- Documentation of decisions and directives
- Pay items and quantity calculations
- Project records
- Compliance statements
- Pre-Final and Final Plan format and content

The Project Manager manages the overall project quality control's process and, through the QC/QA Manager, assigns qualified senior quality reviewers for pending deliverables as required.

Task 14 – Administration

This task will include overall project administration and work force planning/allocation.

This task also includes development of monthly progress reports which will be submitted to LCDOT each month in conjunction with submittal of project invoices.

PAYROLL ESCALATION TABLE FIXED RAISES

FIRM NAME Christopher B. Burke Engineering, Ltd.
PRIME/SUPPLEMENT _____

DATE 08/21/18
PTB NO. _____

CONTRACT TERM 18 MONTHS
START DATE 9/1/2018
RAISE DATE 1/1/2019

OVERHEAD RATE 129.74%
COMPLEXITY FACTOR 0
% OF RAISE 3.00%

ESCALATION PER YEAR

9/1/2018 - 1/1/2019	1/2/2019 - 1/1/2020	1/2/2020 - 3/1/2020		
4	12	2		
18	18	18		
= 22.22%	68.67%	11.79%		
= 1.0268				
The total escalation for this project would be:		2.68%		

PAYROLL RATES

FIRM NAME
PRIME/SUPPLEMENT

Christopher B. Burke Engineering, Ltd.

DATE

08/21/18

ESCALATION FACTOR

2.68%

CLASSIFICATION	CURRENT RATE	PROPOSED RATE	CALCULATED RATE
PRINCIPAL	\$70.00		\$70.00
ENGINEER VI	\$69.50		\$70.00
ENGINEER V	\$64.09		\$65.81
ENGINEER IV	\$52.10		\$53.49
ENGINEER III	\$45.95		\$47.18
ENGINEER I/II	\$32.44		\$33.31
SURVEY V	\$70.00		\$70.00
SURVEY IV	\$63.50		\$65.20
SURVEY III	\$58.00		\$59.55
SURVEY II*	\$42.00		\$43.12
SURVEY I*	\$33.50		\$34.40
ENGINEERING TECHNICIAN V	\$63.00		\$64.69
ENGINEERING TECHNICIAN IV	\$46.75		\$48.00
ENGINEERING TECHNICIAN III	\$48.25		\$49.54
ENGINEERING TECHNICIAN I/II*	\$34.63		\$35.56
CAD MANAGER	\$60.17		\$61.78
ASST. CAD MANAGER	\$51.33		\$52.70
CAD II *	\$44.50		\$45.69
GIS SPECIALIST III	\$47.60		\$48.87
GIS SPECIALIST I/II*	\$30.25		\$31.06
LANDSCAPE ARCHITECT	\$54.00		\$55.45
ENVIRONMENTAL RESOURCE SPECIALIST V	\$66.25		\$68.02
ENVIRONMENTAL RESOURCE SPECIALIST IV	\$51.44		\$52.82
ENVIRONMENTAL RESOURCE SPECIALIST III	\$40.18		\$41.26
ENVIRONMENTAL RESOURCE SPECIALIST I/II	\$31.13		\$31.96
ENVIRONMENTAL RESOURCE TECHNICIAN*	\$38.50		\$39.53
ADMINISTRATIVE*	\$34.98		\$35.92
ENGINEERING INTERN	\$15.75		\$16.17

COST PLUS FIXED FEE COST ESTIMATE OF CONSULTANT SERVICES

FIRM
Local Agency
Section
Project
Job No:

Christopher B. Burke Engineering, Ltd.
Lake County Division of Transportation
13-00999-47-ES
US 41 at Wadsworth Road

OVERHEAD RATE
COMPLEXITY FACTOR

129.74%
0

DATE 08/21/18

Cost Plus Fixed Fee 2 14.50% [DL+R(DL) +1.4(DL)+IHDC]

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	Phase I Engineering Services										
	1. Data Collection, Compilation, Review and Evaluation	80	3,167.37	4,109.35		1,102.24				8,378.96	1.64%
	2. Topographic Survey	68	3,284.05	4,260.72	405.00	1,201.57	4.00			9,155.34	1.79%
	3. Traffic Counts, Projections, Analysis	40	1,626.58	2,110.33		566.05				4,302.96	0.84%
	4. Crash Analysis	-64	-2,589.59	-3,359.73		-901.18				-6,850.50	-1.34%
	5. Roadway Drainage	640	29,353.72	38,083.52	40.50	10,220.97	206.20			77,904.90	15.22%
	6. Alternate Geometric Studies	1652	74,375.60	96,494.91	324.00	25,929.69	129.00			197,253.20	38.53%
	7. Traffic Maintenance Analysis	28	1,085.13	1,407.85		377.62				2,870.60	0.56%
	8. Intersection Design Studies	-260	-11,554.85	-14,991.27		-4,021.09				-30,567.21	-5.97%
	9. Environmental Surveys and Coordination	582	24,186.70	31,379.83	162.00	8,440.46	146.80			64,315.79	12.56%
	10. Project Development Report	228	9,403.53	12,200.14		3,272.43	500.00			25,376.10	4.96%
	11. Public Involvement	616	26,834.80	34,815.48	324.00	9,385.49	596.00	39,939.88		111,895.65	21.85%
	12. Geotechnical and Pavement Analysis	2	106.99	138.81		37.23	1,200.00			1,483.03	0.29%
	13. Bridge TSL	-258	-14,763.02	-19,153.55		-5,137.53	-144.00			-39,198.10	-7.66%
	14. Plats and Legals	-216	-9,920.63	-12,871.03		-3,452.38	-8,500.00			-34,744.04	-6.79%
	15. Project Administration	58	3,168.71	4,111.08	36.40	1,107.99				8,424.17	1.65%
	Phase II Engineering Services										
	1. Pick-Up Survey	33	1,584.34	2,055.52	129.60	570.14	2.40			4,342.00	0.85%
	2. Geotechnical Investigation and Analysis	4	225.97	293.17		78.64	8,410.00			9,007.78	1.76%
	3. Drainage Studies	72	4,149.62	5,383.71	43.20	1,450.33	48.40			11,075.26	2.16%
	4. Coordination	88	4,734.79	6,142.92	172.80	1,672.76	415.60			13,138.87	2.57%
	5. Traffic Maintenance Analysis	26	1,124.45	1,458.87		391.31	2.40			2,977.03	0.58%
	6. Preliminary Plans and Cost Estimate (60%)	180	7,856.22	10,192.66		2,733.97	111.40			20,894.25	4.08%
	7. Wetland Permitting	92	4,668.91	6,057.45	43.20	1,631.05	82.00			12,482.61	2.44%
	8. LCSMC Stormwater Calculations and Permit	84	4,352.38	5,646.78		1,514.63	82.00			11,595.79	2.26%
	9. Utility Coordination	22	937.17	1,215.89		326.14	8.80			2,487.99	0.49%
	10. Pre-Final Plans and Cost Estimate (90%)	78	3,734.05	4,844.56		1,299.45	111.40			9,989.46	1.95%
	11. Final Plans, Specifications and Cost Estimate (100%)	30	1,441.12	1,869.71		501.51	367.40			4,179.73	0.82%
	12. Phase III Support	43	2,170.74	2,816.32	32.40	760.12	144.00			5,923.58	1.16%
	13. QA/QC	16	937.53	1,216.35		326.26	156.80			2,636.94	0.52%
	14. Administration	8	477.20	619.12		166.07	10.40			1,272.79	0.25%
	Subconsultant DL									0.00	
	TOTALS	3972	176,159.59	228,549.45	1,713.10	61,551.94	4,091.00	39,939.88	0.00	512,004.95	100.00%

AVERAGE HOURLY PROJECT RATES

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Job No:

Christopher B. Burke Engineering, Ltd.
Lake County Division of Transportation
13-00999-47-ES
US 41 at Wadsworth Road
0

DATE 08/21/18

SHEET 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			1. Data Collection, Compila			2. Topographic Survey			3. Traffic Counts, Projecti			4. Crash Analysis			5. Roadway Drainage		
		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	70.00	0																	
ENGINEER VI	70.00	-10	-0.25%	-0.18													4	0.63%	0.44
ENGINEER V	65.81	115	2.90%	1.91													28	4.38%	2.88
ENGINEER IV	53.49	974	24.52%	13.12	20	25.00%	13.37	3	4.41%	2.36	8	20.00%	10.70	-4	6.25%	3.34	150	23.44%	12.54
ENGINEER III	47.18	936	23.56%	11.12							6	15.00%	7.08	-16	25.00%	11.79	210	32.81%	15.48
ENGINEER I/II	33.31	996	25.08%	8.35	32	40.00%	13.32				22	55.00%	18.32	-36	56.25%	18.74	156	24.38%	8.12
SURVEY V	70.00	-3	-0.08%	-0.05				1	1.47%	1.03									
SURVEY IV	65.20	-11	-0.28%	-0.18				8	11.76%	7.67									
SURVEY III	59.55	-1	-0.03%	-0.01				8	11.76%	7.01									
SURVEY II*	43.12	-32	-0.81%	-0.35				16	23.53%	10.15									
SURVEY I*	34.40	-32	-0.81%	-0.28				16	23.53%	8.09									
ENGINEERING TECHNICIAN V	64.69	0																	
ENGINEERING TECHNICIAN IV	48.00	0																	
ENGINEERING TECHNICIAN III	49.54	0																	
ENGINEERING TECHNICIAN I/II*	35.56	20	0.50%	0.18															
CAD MANAGER	61.78	59	1.49%	0.92													8	1.25%	0.77
ASST. CAD MANAGER	52.70	92	2.32%	1.22				12	17.65%	9.30				-8	12.50%	6.59	4	0.63%	0.33
CAD II *	45.69	298	7.50%	3.43				4	5.88%	2.69	4	10.00%	4.57				56	8.75%	4.00
GIS SPECIALIST III	48.87	32	0.81%	0.39	8	10.00%	4.89										2	0.31%	0.15
GIS SPECIALIST I/II*	31.06	284	7.15%	2.22	16	20.00%	6.21										10	1.56%	0.49
LANDSCAPE ARCHITECT	55.45	0																	
ENVIRONMENTAL RESOURCE SPECIALIST V	68.02	8	0.20%	0.14															
ENVIRONMENTAL RESOURCE SPECIALIST IV	52.82	56	1.41%	0.74															
ENVIRONMENTAL RESOURCE SPECIALIST III	41.26	72	1.81%	0.75															
ENVIRONMENTAL RESOURCE SPECIALIST I/II	31.96	40	1.01%	0.32															
ENVIRONMENTAL RESOURCE TECHNICIAN*	39.53	0																	
ADMINISTRATIVE*	35.92	55	1.38%	0.50	4	5.00%	1.80										12	1.88%	0.67
ENGINEERING INTERN	16.17	24	0.60%	0.10															
TOTALS		3972.00	100%	\$44.35	80	100.00%	\$39.59	68	100%	\$48.29	40	100%	\$40.66	-64	100%	\$40.46	640	100%	\$45.87

AVERAGE HOURLY PROJECT RATES

FIRM

Local Agency

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Project

Job No:

Christopher B. Burke Engineering, Ltd.

Lake County Division of Transportation

13-00999-47-ES

US 41 at Wadsworth Road

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DATE 08/21/18

SHEET 2 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	6. Alternate Geometric Studies			7. Traffic Maintenance Analysis			8. Intersection Design Studies			9. Environmental Surveys and			10. Project Development Reports			11. Public Involvement		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
PRINCIPAL	70.00																		
ENGINEER VI	70.00	14	0.85%	0.59				-6	2.31%	1.62	12	2.06%	1.44	2	0.88%	0.61	6	0.97%	0.68
ENGINEER V	65.81	56	3.39%	2.23				-12	4.62%	3.04									
ENGINEER IV	53.49	322	19.49%	10.43	8	28.57%	15.28	-40	15.38%	8.23	72	12.37%	6.62	48	21.05%	11.26	242	39.29%	21.02
ENGINEER III	47.18	370	22.40%	10.57				-54	20.77%	9.80	80	13.75%	6.49	56	24.56%	11.59	104	16.88%	7.97
ENGINEER I/II	33.31	466	28.21%	9.40	16	57.14%	19.03	-96	36.92%	12.30	168	28.87%	9.61	96	42.11%	14.02	144	23.38%	7.79
SURVEY V	70.00																		
SURVEY IV	65.20																		
SURVEY III	59.55																		
SURVEY II*	43.12																		
SURVEY I*	34.40																		
ENGINEERING TECHNICIAN V	64.69																		
ENGINEERING TECHNICIAN IV	48.00																		
ENGINEERING TECHNICIAN III	49.54																		
ENGINEERING TECHNICIAN I/II*	35.56																		
CAD MANAGER	61.78	44	2.66%	1.65															
ASST. CAD MANAGER	52.70	82	4.96%	2.62				-12	4.62%	2.43									
CAD II *	45.69	198	11.99%	5.48				-40	15.38%	7.03									
GIS SPECIALIST III	48.87	10	0.61%	0.30							12	2.06%	1.01						
GIS SPECIALIST I/II*	31.06	62	3.75%	1.17	4	14.29%	4.44				64	11.00%	3.42	16	7.02%	2.18	112	18.18%	5.65
LANDSCAPE ARCHITECT	55.45																		
ENVIRONMENTAL RESOURCE SPECIALIST V	68.02										4	0.69%	0.47						
ENVIRONMENTAL RESOURCE SPECIALIST IV	52.82										56	9.62%	5.08						
ENVIRONMENTAL RESOURCE SPECIALIST III	41.26										72	12.37%	5.10						
ENVIRONMENTAL RESOURCE SPECIALIST I/II	31.96										40	6.87%	2.20						
ENVIRONMENTAL RESOURCE TECHNICIAN*	39.53																		
ADMINISTRATIVE*	35.92	28	1.69%	0.61							2	0.34%	0.12	10	4.39%	1.58	8	1.30%	0.47
ENGINEERING INTERN	16.17																		
TOTALS		1652	100%	\$45.02	28	100%	\$38.75	-260	100%	\$44.44	582	100%	\$41.56	228	100%	\$41.24	616	100%	\$43.56

AVERAGE HOURLY PROJECT RATES

FIRM

Local Agency

Section

Project

Job No:

Christopher B. Burke Engineering, Ltd.

Lake County Division of Transportation

13-00999-47-ES

US 41 at Wadsworth Road

0

DATE 08/21/18

SHEET 3 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	12. Geotechnical and Pavement			13. Bridge TSL			14. Plats and Legals			15. Project Administration			1. Pick-Up Survey			2. Geotechnical Investigation and		
		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	70.00																		
ENGINEER VI	70.00				-48	18.60%	13.02				4	6.90%	4.83						
ENGINEER V	65.81				-68	26.36%	17.34										2	50.00%	32.90
ENGINEER IV	53.49	2	100.00%	53.49	-104	40.31%	21.56				54	93.10%	49.81	2	6.06%	3.24			
ENGINEER III	47.18																2	50.00%	23.59
ENGINEER I/II	33.31																		
SURVEY V	70.00							-6	2.78%	1.94				1	3.03%	2.12			
SURVEY IV	65.20							-24	11.11%	7.24				4	12.12%	7.90			
SURVEY III	59.55							-14	6.48%	3.86				4	12.12%	7.22			
SURVEY II*	43.12							-64	29.63%	12.78				8	24.24%	10.45			
SURVEY I*	34.40							-64	29.63%	10.19				8	24.24%	8.34			
ENGINEERING TECHNICIAN V	64.69																		
ENGINEERING TECHNICIAN IV	48.00																		
ENGINEERING TECHNICIAN III	49.54																		
ENGINEERING TECHNICIAN I/II*	35.56																		
CAD MANAGER	61.78							-2	0.93%	0.57									
ASST. CAD MANAGER	52.70							-14	6.48%	3.42				2	6.06%	3.19			
CAD II *	45.69							-28	12.96%	5.92				4	12.12%	5.54			
GIS SPECIALIST III	48.87																		
GIS SPECIALIST I/II*	31.06																		
LANDSCAPE ARCHITECT	55.45																		
ENVIRONMENTAL RESOURCE SPECIALIST V	68.02																		
ENVIRONMENTAL RESOURCE SPECIALIST IV	52.82																		
ENVIRONMENTAL RESOURCE SPECIALIST III	41.26																		
ENVIRONMENTAL RESOURCE SPECIALIST I/II	31.96																		
ENVIRONMENTAL RESOURCE TECHNICIAN*	39.53																		
ADMINISTRATIVE*	35.92				-38	14.73%	5.29												
ENGINEERING INTERN	16.17																		
TOTALS		2	100%	\$53.49	-258	100%	\$57.22	-216	100%	\$45.93	58	100%	\$54.63	33	100%	\$48.01	4	100%	\$56.49

AVERAGE HOURLY PROJECT RATES

FIRM Christopher B. Burke Engineering, Ltd.
Local Agency Lake County Division of Transportation
Section 13-00999-47-ES
Project US 41 at Wadsworth Road
Job No: 0

DATE 08/21/18

SHEET 4 **OF** 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	3. Drainage Studies			4. Coordination			5. Traffic Maintenance Analysis			6. Preliminary Plans and Cost			7. Wetland Permitting			8. LCSMC Stormwater Calculations		
		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	70.00																		
ENGINEER VI	70.00																		
ENGINEER V	65.81	20	27.78%	18.28	28	31.82%	20.94	2	7.69%	5.06	20	11.11%	7.31				2	2.38%	1.57
ENGINEER IV	53.49	40	55.56%	29.72	24	27.27%	14.59				16	8.89%	4.76	52	56.52%	30.24	40	47.62%	25.47
ENGINEER III	47.18				28	31.82%	15.01	12	46.15%	21.78	30	16.67%	7.86	40	43.48%	20.51	24	28.57%	13.48
ENGINEER I/II	33.31										16	8.89%	2.96						
SURVEY V	70.00																		
SURVEY IV	65.20																		
SURVEY III	59.55																		
SURVEY II*	43.12																		
SURVEY I*	34.40																		
ENGINEERING TECHNICIAN V	64.69																		
ENGINEERING TECHNICIAN IV	48.00																		
ENGINEERING TECHNICIAN III	49.54																		
ENGINEERING TECHNICIAN I/II*	35.56							12	46.15%	16.41									
CAD MANAGER	61.78										4	2.22%	1.37						
ASST. CAD MANAGER	52.70	8	11.11%	5.86													18	21.43%	11.29
CAD II *	45.69										60	33.33%	15.23						
GIS SPECIALIST III	48.87																		
GIS SPECIALIST I/II*	31.06																		
LANDSCAPE ARCHITECT	55.45																		
ENVIRONMENTAL RESOURCE SPECIALIST V	68.02	4	5.56%	3.78															
ENVIRONMENTAL RESOURCE SPECIALIST IV	52.82																		
ENVIRONMENTAL RESOURCE SPECIALIST III	41.26																		
ENVIRONMENTAL RESOURCE SPECIALIST I/II	31.96																		
ENVIRONMENTAL RESOURCE TECHNICIAN*	39.53																		
ADMINISTRATIVE*	35.92				8	9.09%	3.27				10	5.56%	2.00						
ENGINEERING INTERN	16.17										24	13.33%	2.16						
TOTALS		72	100%	\$57.63	88	100%	\$53.80	26	100%	\$43.25	180	100%	\$43.65	92	100%	\$50.75	84	100%	\$51.81

AVERAGE HOURLY PROJECT RATES

FIRM Christopher B. Burke Engineering, Ltd.
Local Agency Lake County Division of Transportation
Section 13-00999-47-ES
Project US 41 at Wadsworth Road
Job No: 0

DATE 08/21/18

SHEET 5 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	9. Utility Coordination			10. Pre-Final Plans and Cost Est			11. Final Plans, Specifications			12. Phase III Support			13. QA/QC			14. 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
PRINCIPAL	70.00																		
ENGINEER VI	70.00													2	12.50%	8.75			
ENGINEER V	65.81	2	9.09%	5.98	10	12.82%	8.44	3	10.00%	6.58	12	27.91%	18.36	6	37.50%	24.68	4	50.00%	32.90
ENGINEER IV	53.49				8	10.26%	5.49	3	10.00%	5.35				4	25.00%	13.37	4	50.00%	26.75
ENGINEER III	47.18	8	36.36%	17.16	15	19.23%	9.07	5	16.67%	7.86	12	27.91%	13.17	4	25.00%	11.79			
ENGINEER I/II	33.31				8	10.26%	3.42	4	13.33%	4.44									
SURVEY V	70.00										1	2.33%	1.63						
SURVEY IV	65.20										1	2.33%	1.52						
SURVEY III	59.55										1	2.33%	1.38						
SURVEY II*	43.12										8	18.60%	8.02						
SURVEY I*	34.40										8	18.60%	6.40						
ENGINEERING TECHNICIAN V	64.69																		
ENGINEERING TECHNICIAN IV	48.00																		
ENGINEERING TECHNICIAN III	49.54																		
ENGINEERING TECHNICIAN I/II*	35.56	8	36.36%	12.93															
CAD MANAGER	61.78				2	2.56%	1.58	3	10.00%	6.18									
ASST. CAD MANAGER	52.70																		
CAD II *	45.69				30	38.46%	17.57	10	33.33%	15.23									
GIS SPECIALIST III	48.87																		
GIS SPECIALIST I/II*	31.06																		
LANDSCAPE ARCHITECT	55.45																		
ENVIRONMENTAL RESOURCE SPECIALIST V	68.02																		
ENVIRONMENTAL RESOURCE SPECIALIST IV	52.82																		
ENVIRONMENTAL RESOURCE SPECIALIST III	41.26																		
ENVIRONMENTAL RESOURCE SPECIALIST I/II	31.96																		
ENVIRONMENTAL RESOURCE TECHNICIAN*	39.53																		
ADMINISTRATIVE*	35.92	4	18.18%	6.53	5	6.41%	2.30	2	6.67%	2.39									
ENGINEERING INTERN	16.17																		
TOTALS		22	100%	\$42.60	78	100%	\$47.87	30	100%	\$48.04	43	100%	\$50.48	16	100%	\$58.60	8	100%	\$59.65

Direct Cost Estimate

US 41 at Wadsworth Road Change Order #1 - Phase I Engineering Lake County

Task	In-House						Outside											
	Mileage		Pakring		Tolls		Messenger/Fed Ex		8 1/2 x 11 B/W Copies		8 1/2 x 11 Color Stock		8 1/2 x 11 Card Stock		8 1/2 x 11 Color Laser		11x17 B/W copies	
	Miles @0.54	Cost	\$25 Each	Cost	\$0.80 Each	Cost	Each @ \$25	Cost	Pages @ 0.08	Cost	Pages @ 0.10	Cost	Pages @ 0.12	Cost	Pages @ 0.90	Cost	Pages @ 0.12	Cost
1. Data Collection, Compilation, Review and Evaluation	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2. Topographic Survey	750	405.0	0.0	0.0	0	0.0	0	0.0	0	0.0	40	4.0	0	0.0	0	0.0	0	0.0
3. Traffic Counts, Projections, Analysis	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5. Roadway Drainage	75	40.5	0.0	0.0	0	0.0	3	75.0	0	0.0	80	8.0	40	4.8	40	36.0	80	9.6
6. Alternate Geometric Studies	600	324.0	0.0	0.0	0	0.0	3	75.0	0	0.0	80	8.0	0	0.0	0	0.0	80	9.6
7. Traffic Maintenance Analysis	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
9. Environmental Surveys and Coordination	300	162.0	0.0	0.0	0	0.0	4	100.0	0	0.0	40	4.0	0	0.0	0	0.0	80	9.6
10. Project Development Report	0	0.0	0.0	0.0	0	0.0	4	100.0	0	0.0	0	0.0	0	0.0	80	72.0	0	0.0
11. Public Involvement	600	324.0	0.0	0.0	0	0.0	0	0.0	0	0.0	40	4.0	40	4.8	0	0.0	40	4.8
12. Geotechnical and Pavement Analysis	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
13. Bridge TSL	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
14. Plat and Legal Preparation	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15. Project Administration	65	36.4	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
TOTALS:	2390	1291.90	0.00	0.00	0	0.00	14	350.00	0	0.00	280	28.00	80	9.60	120	108.00	280	33.60

Task	Outside															In-House Totals	Outside Totals	Total Direct Costs	
	11x17 Colored Paper		11x17 Card Stock		11x17 Color Laser		Digital Bond Prints		Color Inkjet Plots		Plastic Report Jackets		Plan Sheet B/W Copies		Misc Direct Costs (See Below Notes)				
	Pages @ 0.16	Cost	Pages at \$0.19	Cost	Pages @ 1.5	Cost	Sq Ft @ 0.135	Cost	Sq Ft @ 2.40	Cost	Ea @ 1.25	Cost	Ea @ 0.80	Cost					
1. Data Collection, Compilation, Review and Evaluation	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.00	0.00
2. Topographic Survey	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	405.00	4.00	409.00
3. Traffic Counts, Projections, Analysis	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.00	0.00
5. Roadway Drainage	80	12.8	0.0	0.0	80	60.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	40.50	206.20	246.70
6. Alternate Geometric Studies	40	6.4	0.0	0.0	20	30.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	324.00	129.00	453.00
7. Traffic Maintenance Analysis	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.00	0.00
9. Environmental Surveys and Coordination	20	3.2	0.0	0.0	20	30.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	162.00	146.80	308.80
10. Project Development Report	80	12.8	80.0	15.2	200	300.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.00	500.00	500.00
11. Public Involvement	40	6.4	0.0	0.0	0	0.0	0	0.0	240	576.0	0	0.0	0	0.0	0	0.0	324.00	596.00	920.00
12. Geotechnical and Pavement Analysis	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1,200	0.00	1,200.00
13. Bridge TSL	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	-144	0.00	-144.00
14. Plat and Legal Preparation	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	-8,500	0.00	-8,500.00
15. Project Administration	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	36.40	0.00	36.40
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	0.00	0.00	0.00
TOTALS:	260	41.60	80.00	15.20	320	420	0	0	240	576	0	0	0	0	0	0	-7444.00	1,291.90	-5,862.00

Notes
Additional Geotech Costs for Revised Scope

Direct Cost Estimate

US 41 at Wadsworth Road Change Order #1 - Phase II Engineering Lake County

Task	In-House						Outside											
	Mileage		Pakring		Tolls		Messenger/Fed Ex		8 1/2 x 11 B/W Copies		8 1/2 x 11 Color Stock		8 1/2 x 11 Card Stock		8 1/2 x 11 Color Laser		11x17 B/W copies	
	Miles @0.54	Cost	\$25 Each	Cost	\$0.80 Each	Cost	Each @ \$25	Cost	Pages @ 0.08	Cost	Pages @ 0.10	Cost	Pages @ 0.12	Cost	Pages @ 0.90	Cost	Pages @ 0.12	Cost
1. Pick-Up Survey	240	129.6	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	20	2.4
2. Geotechnical Investigation and Analysis		0.0	0.0	0.0	0	0.0	0	0.0	20	1.6	0	0.0	0	0.0	0	0.0	20	2.4
3. Drainage Studies	80	43.2	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	20	2.4
4. Coordination	320	172.8	0.0	0.0	0	0.0	0	0.0	40	3.2	0	0.0	0	0.0	0	0.0	20	2.4
5. Traffic Maintenance Analysis		0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	20	2.4
6. Preliminary Plans and Cost Estimate (60%)		0.0	0.0	0.0	0	0.0	1	25.0	40	3.2	0	0.0	0	0.0	0	0.0	160	19.2
7. Wetland Permitting	80	43.2	0.0	0.0	0	0.0	2	50.0	20	1.6	0	0.0	0	0.0	0	0.0	120	14.4
8. LCSMC Stormwater Calculations and Permit		0.0	0.0	0.0	0	0.0	2	50.0	20	1.6	0	0.0	0	0.0	0	0.0	120	14.4
9. Utility Coordination		0.0	0.0	0.0	0	0.0	0	0.0	20	1.6	0	0.0	0	0.0	0	0.0	60	7.2
10. Pre-Final Plans and Cost Estimate (90%)		0.0	0.0	0.0	0	0.0	1	25.0	40	3.2	0	0.0	0	0.0	0	0.0	160	19.2
11. Final Plans, Specifications and Cost Estimate (100%)		0.0	0.0	0.0	0	0.0	1	25.0	40	3.2	0	0.0	0	0.0	0	0.0	160	19.2
12. Phase III Support	60	32.4	0.0	0.0	0	0.0	0	0.0	20	0.0	0	0.0	0	0.0	0	0.0	60	0.0
13. QA/QC		0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	240	28.8
14. Administration		0.0	0.0	0.0	0	0.0	0	0.0	40	3.2	0	0.0	0	0.0	0	0.0	60	7.2
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
TOTALS:	780	421.20	0.00	0.00	0	0.00	7	175.00	300	22.40	0	0.00	0	0.00	0	0.00	1240	141.60

Task	Outside														In-House Totals	Outside Totals	Total Direct Costs	
	11x17 Colored Paper		11x17 Card Stock		11x17 Color Laser		Digital Bond Prints		Color Inkjet Plots		Plastic Report Jackets		Plan Sheet B/W Copies					Misc Direct Costs (See Below Notes)
	Pages @ 0.16	Cost	Pages at \$0.19	Cost	Pages @ 1.5	Cost	Sq Ft @ 0.135	Cost	Sq Ft @ 2.40	Cost	Ea @ 1.25	Cost	Ea @ 0.80	Cost				
1. Pick-Up Survey	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		129.60	2.40	132.00
2. Geotechnical Investigation and Analysis	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8406.0	0.00	8,410.00	8,410.00
3. Drainage Studies	0	0.0	0.0	0.0	20	30.0	0	0.0	0	0.0	0	0.0	20	16.0		43.20	48.40	91.60
4. Coordination	0	0.0	0.0	0.0	60	90.0	0	0.0	120	288.0	0	0.0	40	32.0		172.80	415.60	588.40
5. Traffic Maintenance Analysis	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		0.00	2.40	2.40
6. Preliminary Plans and Cost Estimate (60%)	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	80	64.0		0.00	111.40	111.40
7. Wetland Permitting	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	20	16.0		43.20	82.00	125.20
8. LCSMC Stormwater Calculations and Permit	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	20	16.0		0.00	82.00	82.00
9. Utility Coordination	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		0.00	8.80	8.80
10. Pre-Final Plans and Cost Estimate (90%)	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	80	64.0		0.00	111.40	111.40
11. Final Plans, Specifications and Cost Estimate (100%)	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	400	320.0		0.00	367.40	367.40
12. Phase III Support	0	0.0	0.0	0.0	0	0.0	0	0.0	60	144.0	0	0.0	0	0.0		32.40	144.00	176.40
13. QA/QC	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	160	128.0		0.00	156.80	156.80
14. Administration	0	0.0	0.0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		0.00	10.40	10.40
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.00	0.00	0.00
		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.00	0.00	0.00
TOTALS:	0	0.00	0.00	0.00	80	120	0	0	180	432	0	0	820	656	8406.00	421.20	9,953.00	10,374.20

Notes
\$8,406 for TSC Outside Direct Cost for PIP Evaluation and LPC 662/663

Images Inc.

(Phase I Engineering - Subconsultant)

	Wadsworth Road- Phase I - Change Order	Images, Inc.
	Project total Hours	285
	CATEGORY AS % OF TOTAL	
11	Public Involvement	
1	Public Outreach Documentation and Branding	
	Project Strategy	0
	Public involvement plan and updates	4
	Public Involvement documentation	0
	Project Branding/logo	0
	QA/QC	0
	Administration (6 mos.)	12
	Sub total	16
2	Project Mailing List	0
	ID/Compare Initial Stakeholders	0
	Update and Maintain mailing list (6 mos.) Post PH, provide LCDOT a spreadsheet of those that want to be added to LCDOT electronic mail list	20
	Sub total	20
	Stakeholder Involvement Group (4) (WE HAVE HOURS LEFT FOR COMMUNICATING TO THE SIG - THEY WILL BE USED)	0
	Identify and reserve location and needed equipment	0
	Prepare and send/email invitations, manage RSVPs (4)	0
	Prepare and Attend Pre-Dry Run (4)	0
	Prepare and Attend Dry Run (4)	0
	Draft and Design graphics/maps (4 per meeting)	0
	Prepare handouts- badges, sign-in sheets	0
	Prepare and design PowerPoints (4)	0
	Review exhibits	0
	Attend meetings (4)	0
	Prepare meeting summaries and transcriptions (4)	0
	Sub total	0
4	Newsletter/Postcard Invitation (1 each)	
	Postcard Invite (Use previous template)	13
	Prepare content and graphics, edit, and design newsletters-6 pages	25
	Sub total	38
5	Website	0
	Website content and graphics updates (1)	8
	Build, host, domain, and provide technical maintenance- direct cost	0
	Sub total	8
6	Media Relations and Social Media	
	Media Kits	0
	Sub total	0
7	Public Information Meeting (2 meetings scooped - held 3)	
	Draft & finalize letters to elected officials	0
	Prepare and send invitation e-blast	0
	Identify, reserve, and set up meeting sites and dates; public meeting planning; equipment rental	0
	Meeting materials- sign-in sheets, badges & other meeting supplies	0
	Secure and place ad placements	0

	Wadsworth Road- Phase I - Change Order	Images, Inc.
	Project total Hours	285
	CATEGORY AS % OF TOTAL	
	3rd Party Outreach	0
	Develop, design, edit and review powerpoint and script (voice over)-4 rounds-dry run and final	0
	Develop, design,review, and edit of exhibit boards (up to 15 boards)- 4 rounds (dry run and final)	0
	Prepare and Attend Pre-dry run	0
	Prepare and Attend dry Run	0
	Attend and facilitate Public Meetings- (includes Spanish translator)	0
	Prepare short and detailed summary and workshop/mtg transcriptions	0
	Sub total	0
	9 Public Hearing (1)	
	Update elected officials letter mailing list and provide to LCDOT	4
	Identify, reserve, and set up meeting site and date; public meeting planning; equipment rental	2
	Prepare and send invitation e-blast	9
	Meeting materials- sign-in sheets, badges, room layout, comment forms way finding signs & other meeting supplies	5
	Secure and place ad placements	5
	3rd Party Outreach - Per DK none needed	0
	Develop, design, and review PowerPoint and script (voice over)	50
	Develop, design, and review of exhibit boards (10 boards)	45
	Prepare and Attend Pre-Dry Run	16
	Prepare and Attend Dry Run	16
	Attend, facilitate Public Hearing	24
	Prepare short and detailed summary and workshop/mtg transcriptions	11
	Sub total	187
	10 LCDOT and Consultant Coordination	
	Quarterly Status Meetings (2)	0
	PI Strategy Meetings (2)	0
	LCDOT /Consultant Coordination (6 months)	8
	Sub total	8
	11 Comment Management/Response	
	Monitor and document comments (25) CBBEL to mail out common themed FAQ to those that provided comments	8
	Initial draft and edit comment responses	0
	Mail/Email Responses	0
	Sub total	8
	Total	285

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME	Images, Inc.	DATE	05/30/18
PRIME/SUPPLEMENT	Change Order	PTB NO.	
CONTRACT TERM	6 MONTHS	OVERHEAD RATE	150.78%
START DATE	6/1/2018	COMPLEXITY FACTOR	0.035
RAISE DATE	7/1/2018	% OF RAISE	3.00%

ESCALATION PER YEAR

6/1/2018 - 7/1/2018	7/2/2018 - 12/1/2018			
<div>1</div> <div>6</div>	<div>5</div> <div>6</div>			
= 16.67%	85.83%			
= 1.0250				
The total escalation for this project would be:		2.50%		

PAYROLL RATES

FIRM NAME
PRIME/SUPPLEMENT
PSB NO.

Images, Inc. **DATE**
Change Order

DATE _____

05/30/18

ESCALATION FACTOR **2.50%**

[illegible]



COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

FIRM	<u>Images, Inc.</u>
PSB	<u>Change Order</u>
PRIME/SUPPLEMENT	

OVERHEAD RATE	1.5078
COMPLEXITY FACTOR	0.035

DATE 05/30/18[illegible]

DBE 100.00%

DBE

AVERAGE HOURLY PROJECT RATES

FIRM	<u>Images, Inc.</u>
PSB	<u></u>
PRIME/SUPPLEMENT	<u>Change Order</u>

DATE 05/30/18

SHEET 1 **OF** 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			11. Public Involvement														
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Project Manager II	66.52	107	37.54%	24.98	107	37.54%	24.98												
Project Principal	70.00	6	2.11%	1.47	6	2.11%	1.47												
Project Manager IV	39.39	68	23.86%	9.40	68	23.86%	9.40												
Marketing & Media Spec.	23.17	34	11.93%	2.76	34	11.93%	2.76												
Graphic Designer II	37.68	64	22.46%	8.46	64	22.46%	8.46												
Project Administrator	49.38	6	2.11%	1.04	6	2.11%	1.04												
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TOTALS		285	100%	\$48.11	285	100.00%	\$48.11	0	0%	\$0.00	0	0%	\$0.00	0	0%	\$0.00	0	0%	\$0.00

Testing Services Corporation, Inc.

(Phase I Engineering - Outside Direct Cost)

July 30, 2018



TESTING SERVICE CORPORATION

Corporate Office

360 South Main Place, Carol Stream, IL 60188-2404
630.462.2600 • Fax 630.653.2988

Mr. Martin C. Worman, PE
Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road Suite 600
Rosemont, IL 60018-4920

RE: P.N. 51,977 Revised
Geotechnical Exploration
Roadway Improvements
US 41, Wadsworth, Dilleys and Kilbourne Roads
Lake County, IL

Dear Mr. Worman:

Testing Service Corporation (TSC) is pleased to submit this revised proposal to provide Geotechnical Engineering Services for the above captioned project. It responds to your most recent email dated October 18, 2017. The objectives of the Geotechnical Study are to explore soil conditions and provide recommendations for pavement design in connection with the proposed roadway improvements. TSC is of the understanding that the scope of work developed for this project is preliminary.

It is TSC's understanding that a county permit will not be required as the work is part of a County project. An IDOT Permit will be required for the project.

Project Description:

Our understanding of limits of the project are as follow:

- Wadsworth Road, I-94 to Des Plaines River, \pm 4,900 lineal feet.
- Dilleys Road, North and South of Wadsworth Road, \pm 1,200 lineal feet.
- Kilbourne Road, North of Wadsworth Road, \pm 500 lineal feet.
- US-41/Skokie Highway, \pm 5,000 lineal feet.

If the location or type of the proposed structure(s) are changed, TSC should be promptly contacted to determine the relevance of our proposed boring program to the new project configuration.

Boring Program:

We are proposing to drill fifty-three (53) soil borings and seventeen (17) pavement cores as part of our Geotechnical Exploration. Site Features , number of boring and cores, and boring depths are presented in the table below.

Site Feature	Number of Borings	Depth of Boring (Feet)	Total Footage	Frequency of Borings	Number of Cores	Frequency of Cores
Wadsworth Road, I-94 to Des Plaines River	20	10	200	\pm 300'	6	\pm 900'
Dilleys Road, North and South of Wadsworth Road	5	10	50	\pm 300'	3	\pm 300'

Site Feature	Number of Borings	Depth of Boring (Feet)	Total Footage	Frequency of Borings	Number of Cores	Frequency of Cores
Kilbourne Road, North of Wadsworth Road	2	10	30	±300'	2	±900'
US 41/ Skokie Highway * North & South of Wadsworth Road	20	10	200	±300'	6	±900'
US 41/ Skokie Highway Retaining Walls*	6	15	90	±75'	0	0
TOTALS	53		570		17	

* Requires IDOT(Illinois Department of Transportation) Permit

TSC is assuming that a two person flagging crew will be required for a portion of this work.

The pavement cores will be taken using a 4-inch diameter core barrel. Auger samples will also be obtained of underlying base course/subbase materials. A macro-core sample will then be taken of the upper subgrade to a depth of approximately 4 feet below the top of pavement. The core holes will be patched upon completion using a cold mix asphalt or non-shrink concrete grout.

For the purposes of this proposal we have assumed that the boring locations will be accessible to conventional drilling equipment. In this regard, they should not be located in standing water, within wooded or landscaped areas, or on steeply sloping ground. No provisions have been made for tree/brush clearing or other obstruction removal should borehole access be impeded. Landscape restoration or crop damage (if required) is also not included in the project budget.

TSC will utilize personnel who are trained in layout procedures to stake the borings in the field. Ground surface elevations for each borehole will be determined by GPS using a Trimble G8 GNSS receiver. Utility clearance for the borings will be obtained by contacting JULIE (Joint Utility Locating Information for Excavators). Secondary and /or private underground utility lines will have to be marked by the property owner or their agents; a private locator can be hired (at an added cost) if necessary.

Soil samples will be obtained by standard split-spoon (ASTM D 1586) methods at each boring location in accordance with IDOT procedures. Special circumstances (trees, slopes, power lines, etc.) may dictate use of a small drill rig where soil samples will be obtained by geo-probe methods. Subgrade borings will be sampled continuously in the upper 5 feet and not exceed 2½-foot intervals below this level, unless unforeseen circumstances present themselves. A representative portion of the split-spoon samples will be placed in a glass jar with screw-type lid for transportation to our laboratory. Groundwater observations will also be made during and following completion of drilling operations, with any boreholes in pavement areas to be backfilled immediately and patched at the surface.

Assumptions for Permits:

US 41/ Skokie Highway is under IDOT jurisdiction and will require an IDOT permit to perform the field work. It has been our experience that it may take at least 6 to 8 weeks or more to get a permit from IDOT. Wadsworth, Kilbourne and Dilley Roads are to be located outside of any IDOT right-of-ways so an IDOT permit is not required for them. A Lake County permit will not be required as the work is part of a County project.

Traffic Control:

The borings and cores located along US 41/ Skokie Highway and Wadsworth Road will most likely require lane closures. This proposal includes a provision for lane closures by a professional traffic control firm. Please note that our cost estimate for this project is based on the assumption that TSC will be able to perform all borings and cores during weekdays (Monday through Friday) beginning no later than 9:00 AM and ending no sooner than 3:00 PM. A cost supplement to this proposal may be required if the LCDOT or IDOT imposes restricted hours (nights or weekends) to complete any of this work.

Professional traffic control is not anticipated for the borings located along Kilbourne and Dilley Roads. However, cones, signs and/or an arrowboard may be required.

Laboratory Testing:

Samples obtained from the borings will be examined by experienced laboratory personnel in order to verify field descriptions as well as to visually classify in accordance with the Unified Soil Classification System. Laboratory testing will include moisture content and dry unit weight determinations as well as measurements of unconfined compressive strength by direct or indirect methods, as appropriate. Other tests deemed to be necessary by TSC's Project Engineer may also be recommended for your approval.

Engineering Report:

Upon completion of drilling and testing, you will receive an engineering report summarizing field and laboratory test data, including a boring location plan and computer generated boring logs. The report will address anticipated soil and groundwater conditions impacting site development, based upon the information obtained from the borings. It will also provide recommendations to guide design and specification preparation pertaining to geotechnical issues relevant to the structure or purpose described in this proposal. These may include the following:

- Roadway and retaining wall earthwork and construction considerations.
- Remedial work and/or treatment of unstable or unsuitable soil types.
- Fill placement and compaction for pavements.
- Foundation type, capacity and depth/elevation.
- Pavement Core Photos will be included in the report.

The following are **not** a part of or scope of work:

- Illinois Bearing Ratio (IBR).
- Soil profile sheets.

Fees and Scope:

In accordance with the Cost Estimate attached, TSC is proposing a not-to-exceed budget amount of **Sixty-Three Thousand Three Hundred and Fifty Dollars (\$63,350.00)** to provide the Geotechnical Exploration outlined above. Our proposal is based on the understanding that: the boring locations are accessible to a conventional truck or All-Terrain Vehicle (ATV) mounted drill; none of the borings will be located in standing water; and that the work can be performed during standard business hours. Our fee is further subject to this proposal being accepted by you on or before December 31, 2018.

The Illinois Department of Labor (IDOL) has taken the position that Soil Testing is a covered activity under the Illinois Prevailing Wage Act (IPWA). TSC has been notified this project is to be funded in part or total by state or local government sources, for which it would be subject to IPWA requirements. The unit prices provided in the attached fee schedule are meant to comply with the IPWA.

Should the study reveal unexpected subsurface conditions requiring a change in the scope of work, you will be contacted before we proceed with additional work. Our invoice would then be based on the unit rates given in the attached Cost Estimate or as otherwise agreed upon. While our quoted fee does not include excavation, fill, earthwork, footing or foundation observations during the construction phase, the project budget should include a provision for these services. This proposal includes time for pre-boring and post borings meetings as required by LCDOT. Additional consulting and/or professional services that are provided subsequent to delivery of TSC's report would be covered by a separate invoice.

TSC's geotechnical investigation does not include services required to evaluate the likelihood of the site being contaminated by hazardous materials or other pollutants. Analytical testing which would be required in connection with IEPA Form LPC-663, Uncontaminated Soil Certification is also not included. Should an environmental and/or analytical testing be desired, please contact the undersigned for additional details and/or associated cost.

Closure:

The geotechnical services being performed are subject to TSC's attached General Conditions. Unless stated otherwise, TSC fees include all state and federal taxes and permits that may be required. However, they do not include any license, permit or bond fees that local governments may impose. The local fees, if any, will be added to the invoice. Unless we receive written instructions to the contrary, invoices will be sent to:

Martin C. Worman, PE
Christopher B. Burke Engineering, Ltd.
9575 W. Higgins Road, Suite 600 Rosemont, IL 60018
Phone: (847) 823-0500
Fax: (847) 823-0520
E-Mail: mworman@cbbel.com

If this proposal meets with your approval, please indicate your acceptance by signing one copy and returning it to our Carol Stream, Illinois office. When also completing the attached Project Data form, kindly indicate who is to receive copies of TSC's report and other related information.

Your consideration of our proposal is appreciated. We look forward to being of service to you on this project.

Respectfully submitted,

TESTING SERVICE CORPORATION



Timothy R. Peceniak, P.E.
Geotechnical Engineer



Kathy Schimick
Customer Relations

TRP:KJS:lm

Enc: Cost Estimate
General Conditions
Project Data Sheet

Approved and accepted for _____ by:

(NAME)

(TITLE)

(DATE)

COST ESTIMATE

Roadway Improvements US 41, Wadsworth, Dilley and Kilbourne Roads Lake County, IL TSC P.N. 51,977 Revised

ITEM		UNITS	QTY	RATE	COST
STAKING AND UTILITY CLEARANCE					
1.1	Layout Person to Mark Boring Locations, Obtain Surface Elevations and/or Arrange for Clearance of Underground Utilities	Hour	19.0	110.00	\$ 2,090.00
1.2	IDOT Permit, Bonds and Other Direct Charges	Lump Sum	1	900.00	\$ 900.00
1.3	Engineer to Prepare and Submit IDOT Permit	Hours	4	120.00	\$ 480.00
DRILLING AND SAMPLING					
	DRILL RIG WITH 2-MAN CREW (Portal to Portal)				
2.1	Regular Time (Up to 8.0 Hours per Day)	Hour	48.0	340.00	\$ 16,320.00
2.1	Over Time (Over 8 Hour Day)	Hour	5.0	390.00	\$ 1,950.00
OBTAIN PAVEMENT CORES					
Includes coring with 4 inch diameter barrel, retrieving all pavement materials to maximum depth of 18 inches, taking auger samples of base course/subbase materials and split-spoons of upper subgrade.					
3.1	Core Van and One-Man Crew (Regular Time Portal to Portal)	Hour	16.0	160.00	\$ 2,560.00
3.2	Core Van and One-Man Crew (Overtime)	Hour	3.0	175.00	\$ 525.00
3.3	Bit Wear - Per Inch of Asphalt Pavement	Inch	68.0	2.50	\$ 170.00
3.4	Bit Wear - Per Inch of PCC Pavement	Inch	0.0	4.00	\$ 0.00
3.5	Patch Holes with Cold Patch Asphalt or Non-Shrink Grout	Each	17	10.00	\$ 170.00
3.6	Materials Technician to Measure and Describe Core Sample in Laboratory	Each	17	15.00	\$ 255.00
TRAFFIC CONTROL					
4.1	Single Flagman, Regular Time (Portal to Portal)	Hour	0.0	105.00	\$ 0.00
4.2	Single Flagman, Overtime	Hour	0.0	135.00	\$ 0.00
4.3	2-Man Flagging Crew, Regular Time (Portal to Portal)	Hour	48.0	300.00	\$ 14,400.00
4.4	2-Man Flagging Crew, Overtime	Hour	10.0	350.00	\$ 3,500.00
4.5	TSC Pickup and Arrowboard	Day	1	125.00	\$ 125.00

ITEM		UNITS	QTY	RATE	COST
LABORATORY TESTING					
5.1	Examine Samples to Describe by Textural System and Classify Using the Unified Soil Classification System	Each	277	4.00	\$ 1,108.00
5.2	Water Content Determination (Includes Pocket Penetrometer Reading on Cohesive Samples)	Each	265	7.00	\$ 1,855.00
5.3	Unconfined Compressive Strength of Cohesive Soils (or Torvane Shear Strength Measurement)	Each	30	14.00	\$ 420.00
5.4	Dry Unit Weight Determination	Each	30	7.00	\$ 210.00
5.5	Atterberg Limit Determinations	Each	9	100.00	\$ 900.00
5.6	Sieve Analysis with #200 Wash	Each	0	90.00	\$ 0.00
5.7	Sieve Analysis with Hydrometer	Each	9	130.00	\$ 1,170.00
5.8	Consolidation Test	Each	0	600.00	\$ 0.00
5.9	Modified Proctor Test	Each	0	190.00	\$ 0.00
5.10	Loss-On-Ignition and Wet Combustion (Organic Content)	Each	8	110.00	\$ 880.00
ENGINEERING SERVICES					
6.1	Prepare Two Separate Geotechnical Reports with Boring Logs, Location Plan and Pavement Analysis Report	Lump Sum	1	10,000.00	\$ 10,000.00
6.2	Geotechnical Engineer to Perform Pavement Inspection	Hour	8.0	140.00	\$ 1,120.00
6.3	Geotechnical Engineer to pre-boring and post borings meetings	Hour	8.0	140.00	\$ 1,120.00
6.4	Geotechnical Engineer to Revise report After Lake County Division of Transportation Makes Comments	Hour	8.0	140.00	\$ 1,120.00
ESTIMATED TOTAL:					\$ 63,348.00
RECOMMENDED BUDGET:					\$ 63,350.00



TESTING SERVICE CORPORATION

GENERAL CONDITIONS

Geotechnical and Construction Services

1. PARTIES AND SCOPE OF WORK: If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Unless otherwise expressly assumed in writing, TSC's services are provided exclusively for client. TSC shall have no duty or obligation other than those duties and obligations expressly set forth in this Agreement. TSC shall have no duty to any third party. Client shall communicate these General Conditions to each and every party to whom the Client transmits any report prepared by TSC. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement. Unless otherwise agreed in writing, TSC's responsibility with respect to underground utility locations is to contact the Illinois Joint Utility Locating Information for Excavators for the location of public, but not private, utilities.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C. § 6901, et seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to

perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

7. DOCUMENTS AND SAMPLES: Client is granted an exclusive license to use findings and reports prepared and issued by TSC and any sub-consultants pursuant to this Agreement for the purpose set forth in TSC's proposal provided that TSC has received payment in full for its services. TSC and, if applicable, its sub-consultant, retain all copyright and ownership interests in the reports, boring logs, maps, field data, field notes, laboratory test data and similar documents, and the ownership and freedom to use all data generated by it for any purpose. Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

8. TERMINATION: TSC's obligation to provide services may be terminated by either party upon (7) seven days prior written notice. In the event of termination of TSC's services, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. The terms and conditions of these General Conditions shall survive the termination of TSC's obligation to provide services.

9. PAYMENT: Client shall be invoiced periodically for services performed. ~~Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs and reasonable attorney's fees.~~

10. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

~~Should TSC or any of its employees be found to have been negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to \$50,000 or the total amount of the fee paid to TSC for its services performed with respect to the project, whichever amount is greater.~~

~~In the event Client is unwilling or unable to limit the damages for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to \$500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award of greater damages.~~

11. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

12. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

13. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence. These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.



TESTING SERVICE CORPORATION

Project Data Sheet

General Information:

Project Name: _____

Project Address: _____

City / State / Zip: _____

Project Manager: _____

E-Mail: _____

Telephone: _____

Fax: _____

Site Contact: _____

E-Mail: _____

Telephone: _____

Fax: _____

Send Invoice To:

Purchase Order Number: _____

Attention: _____

Company: _____

Address: _____

City / State / Zip: _____

E-Mail: _____

Telephone: _____

Fax: _____

Important Notes:

Completed By:

Signature: _____

Name: _____

Date: _____

Distribute Reports as Follows:

Name: _____

Company: _____

Address: _____

City / State / Zip: _____

E-Mail: _____

Telephone: _____

Fax: _____

Name: _____

Company: _____

Address: _____

City / State / Zip: _____

E-Mail: _____

Telephone: _____

Fax: _____

Name: _____

Company: _____

Address: _____

City / State / Zip: _____

E-Mail: _____

Telephone: _____

Fax: _____

Name: _____

Company: _____

Address: _____

City / State / Zip: _____

E-Mail: _____

Telephone: _____

Fax: _____

Testing Services Corporation, Inc.

(Phase II Engineering - Outside Direct Cost)

July 30, 2018



TESTING SERVICE CORPORATION

Corporate Office

Mr. Martin C. Worman, PE
Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road Suite 600
Rosemont, IL 60018-4920

360 South Main Place, Carol Stream, IL 60188-2404
630.462.2600 • Fax 630.653.2988

RE: P.N. 61,267
Potentially Impacted Property Evaluation &
Soil Sampling and Laboratory Analyses for LPC-663 Form
Wadsworth East Leg Safety Improvements
Wadsworth Road, East of Route 41
Lake County, IL

Dear Mr. Worman, PE:

Testing Service Corporation (TSC) is pleased to submit this proposal to perform a "Potentially Impacted Property" (PIP) evaluation and provide sampling and laboratory analyses for completion of the LPC-663 Form at the above captioned project. The proposal was prepared in response to your request for proposal of today.

Uncontaminated soil including uncontaminated soil mixed with clean construction or demolition debris (CCDD) accepted at a CCDD fill operation must be certified to be uncontaminated soil in accordance with Section 22.51(f)(2)(B) of the Environmental Protection Act [415 ILCS 5/22.51(f)(2)(B)]. Uncontaminated soil accepted at an uncontaminated soil fill operation (USFO) must be certified to be uncontaminated soil in accordance with Section 22.51a(d)(2)(B) of the Environmental Protection Act [415 ILCS 5/22.51a(d)(2)(B)]. These certifications must be made by a licensed professional engineer or geologist (PE/PG) using the attached Form LPC-663 when the soil is removed from a site which is determined by the PE/PG to be a "Potentially Impacted Property" (PIP) based on review of readily ascertainable property history, environmental databases and site reconnaissance. Uncontaminated soil from a site which is not identified as a PIP by the PE/PG may be certified by either the source site owner or operator using LPC-662 with pH analysis only.

Project Description:

Our understanding of the existing site conditions and the proposed construction project are as follow:

- Excavation work for the proposed Safety Improvements will be performed north and south of Wadsworth Road and will include the construction of entrance roads north and south of Wadsworth Road.
- Based on preliminary evaluation, an existing Amoco gas station is located at the northeast corner of the intersection and a Mobil gas station is located at the southeast corner of the intersection. The Amoco station was enrolled in the IEPA Site Remediation Program. Based on the presence of the gas stations, the site will be identified as a PIP, necessitating soil sampling and analysis for completion of the LPC-663 Form.

Records Review:

For the PIP evaluation, TSC will evaluate current Federal and State environmental agency records for the source site and vicinity by obtaining a Radius Map Report from Environmental Data Resources, Inc. (EDR). Review of the Radius Map Report assists in identifying potential contamination sources, both the source site and from adjoining properties which may cause the source site to be considered a PIP. Historical aerial photographs and topographic maps will be reviewed to identify the approximate development date and current and previous usage of the source site and adjoining properties. TSC will also perform a site reconnaissance to evaluate the property for evidence of the use or release of hazardous substances or petroleum products.

Based on the results of this review, the TSC Professional Geologist conclude if the source site is a PIP. Based on the presence of the gas stations, the site will be identified as a PIP, necessitating soil sampling and analysis for completion of the LPC-663 Form.

LPC-663 Sampling Program:

In the event that the source site is identified as a PIP, the owner is unwilling to sign the LPC-662 form or the prospective USFO facility selected for disposal of the soil requires analysis for acceptance of the soil, TSC will perform soil sampling and analysis for completion of the LPC-663 form at additional costs outlined in this proposal. JULIE will be contacted to mark the locations of underground utilities. Soil will be sampled by geoprobe methods at approximately 5-8 locations. The borings will be extended to approximately 8 feet and soil samples be screened using a photo-ionization detector (PID). Samples selected for analytical testing based on the PIP evaluation, location and PID readings will be placed in laboratory supplied jars or vials and properly preserved. They will be shipped to an analytical laboratory following standard chain-of-custody procedures. The number of samples and the analysis performed will be based on the information gathered during the records review and observations made during the site reconnaissance. For proposal purposes, it is assumed that five samples will be selected for analysis of volatile organic compounds (VOCs), polynuclear aromatics (PNAs), RCRA metals and pH. If additional samples or analytical parameters are appropriate in the judgement of the PG based on the records review, site reconnaissance or PID screening, analysis of additional samples may be recommended, however the costs of analysis will be discussed with the client prior to analysis. The list of analytical parameters noted are acceptable at the majority of local USFO facilities although analysis of additional parameters may be required by some USFO facilities. Please provide the name and contact at the USFO facility, if known, so that the planned analytical parameters may be discussed with the USFO facility contact to evaluate their sufficiency.

The analytical results will be compared to Maximum Allowable Concentrations of Chemical Constituents in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations (MACs) as presented in 35 IAC 1100.Subpart F.

It should be noted that if one or more total metals concentrations exceed their respective MAC, additional analysis of the TCLP or SPLP extract may be performed for those metals. In accordance with 35IAC1100.610(b)(3)(C), as an alternative to the MAC value, compliance verification may be determined by comparing soil sample extraction results by TCLP or SPLP to the respective TACO Class 1 Soil Component of the Groundwater Ingestion Exposure Route Objective in 35IAC742 Appendix B, Table A. TSC has included a provision for this additional analysis, at additional analytical

cost noted in this cost estimate, if all other parameters with the exception of the metal(s) meet the MACs.

A summary report will be prepared which describes the sampling procedures and results of the analytical laboratory testing. If all analytical results meet their respective MACs, Form LPC-663 will be filled out and signed by a Licensed Professional Geologist. The LPC-663 Form will be included as an attachment to the report.

Please note that our signing of Form LPC-663 is contingent upon all constituents meeting their respective MACs. If any constituent exceeds the MACs, the Licensed Professional Geologist will not be able to certify the soil as uncontaminated. In that event, additional analysis will be required in connection with disposal at a Subtitle D landfill, at additional cost for consulting, analytical testing and completion of the waste profile not included in the cost estimate.

Fees and Turnaround Time:

The estimated costs of the outlined scope of services is presented on Cost Estimate. Completion of the PIP Evaluation, sampling and analysis for completion of the LPC-663 Form can be expected 3½ -4 weeks following collection of samples at standard laboratory turnaround time of 5-7 business days. If expedited turnaround is needed, 2-3 day turnaround may generally be obtained from the laboratory at a surcharge of 100%. Please notify TSC if you authorize this additional charge.

Should the study reveal unexpected subsurface conditions requiring a change in scope, you will be contacted before we proceed with further work. Our invoice would then be based on the unit rates given in the attached Cost Estimate or as otherwise agreed upon. Consultation, meetings or other professional services subsequent to delivery of TSC's report are additional services that will be covered by separate invoice.

Closure:

It should be noted that analysis of additional parameters may be required by some USFO facilities. If additional analysis is required, please notify TSC as quickly as possible and TSC can quote the additional costs. Some organic analytical parameters have a holding time of as little as 14 days, after which the laboratory cannot certify the analysis, and resampling of the soil will be necessary. Metals typically have a holding time of 6 months.

TSC's fees include TSC's services being performed subject to the attached General Conditions which are incorporated herein. Unless we receive written instructions to the contrary, invoices will be sent to:

Mr. Martin C. Worman, PE
Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road Suite 600
Rosemont, IL 60018-4920
Tel: (847) 823-0500
Fax: (847) 823-0520
email: mworman@cbbel.com

If this proposal meets with your approval, please indicate your acceptance by signing one copy and returning it to our Carol Stream, Illinois office. Your consideration of our proposal is appreciated. We look forward to being of service to you on this project.

Respectfully submitted,

TESTING SERVICE CORPORATION


 David L. Hurst
Environmental Department Manager

Prepared By


Brian K. Walker
Manager, Environmental Assessments

DLH:BKW:lm

Enc: Cost Estimate
General Conditions
Project Data Sheet

Approved and accepted for _____ by:

(NAME)

(TITLE)

(DATE)

COST ESTIMATE
P.N. 61,267
Potentially Impacted Property Evaluation
Wadsworth East Leg Safety Improvements
Wadsworth Road, East of Route 41
Lake County, IL

ITEM		UNITS	QTY	RATE	COST
RECORDS REVIEW & SITE RECONNAISSANCE FOR PIP EVALUATION					
1.1	PIP Evaluation	Lump Sum	1	1,200.00	\$ 1,200.00
1.2	Environmental Personnel to Layout Boring Locations, Contact JULIE, Soil Screening & Sample Selection For Analysis	Hour	8.0	130.00	\$ 1,040.00
1.3	Geoprobe with Union Driller	Lump Sum	1	3,000.00	\$ 3,000.00
1.4	Photoionization Detector	Day	0.5	100.00	\$ 50.00
ADDITIONAL COSTS FOR LPC-663 ANALYSIS.					
ANALYTICAL TESTING FOR LPC-663 ANALYSIS					
2.1	VOCs, PNAs, RCRA Metals & pH @ Standard 5 to 7 Business Day Turnaround	Each	5	496.00	\$ 2,480.00
2.2	Surcharge for Expedited 2-3 Business Day Turnaround	Each	0	100%	\$ 0.00
2.3	TCLP/SPLP Analysis of Metals which exceed MACs, if required. (Cost dependent on specific metals analyzed)	Each	1	\$100 Extraction + \$36/metal	\$ 136.00
2.4	Analytical testing for full MAC list, required at some CCDD/USFO facilities @ Standard 5 to 7 Business Day Turnaround	Each	0	1,642.00	\$ 0.00
REPORTING SERVICES					
3.1	Environmental Specialist for Project Management and Prepare Summary Report, with P.G. Signed Form LPC-663, if uncontaminated.	Lump Sum	1	500.00	\$ 500.00
3.2	Additional Analysis For Completion of Waste Profile if Soil is Landfilled	Est.	0.0	800.00	\$ 0.00
ESTIMATED TOTAL COST FOR PIP EVALUATION & ANALYSIS FOR LPC-663 FORM (STANDARD TAT):					\$ 8,406.00



TESTING SERVICE CORPORATION

GENERAL CONDITIONS ENVIRONMENTAL SERVICES

1. PARTIES AND SCOPE OF WORK: "This Agreement" consists of Testing Service Corporation's ("TSC") proposal, TSC's Schedule of Fees and Services, client's written acceptance thereof, if accepted by TSC, and these General Conditions. The terms contained in these General Conditions are intended to prevail over any conflicting terms in this Agreement. "Client" refers to the person or entity ordering the work to be done or professional services to be rendered by TSC (except where distinction is necessary, either work or professional services are referred to as "services" herein). If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for client's intended purpose. *JTM* ~~Client shall communicate these General Conditions to each and every third party to whom the Client transmits any report prepared by TSC.~~ Unless otherwise expressly assumed in writing, TSC shall have no duty to any third party, and in no event shall TSC have any duty or obligation other than those duties and obligations expressly set forth in this Agreement. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. HAZARDOUS SUBSTANCES: TSC's professional services shall include limited visual observation, laboratory analyses or physical testing for the purpose of detection, quantification or identification of the extent, if any, of the presence of hazardous substances, materials or waste, petroleum products, asbestos-containing materials or lead based paint as specifically set forth in TSC's proposal. Hazardous materials, substances or waste (all cumulatively referred to herein as "hazardous substances") include those defined as such in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. § 9601 et seq., ("CERCLA"), the Resource Conservation Recovery Act, 42 U.S.C. § 6901 et seq., as amended, ("RCRA") or by a state or Federal Environmental Protection Agency ("EPA"), including but not limited to §§ 3.14 - 3.15 of the Illinois Environmental Protection Act, 415 ILCS 5/3.14 and 3.15 (West, 1994). "Contaminants" as used herein shall refer to hazardous substances, asbestos-containing materials, petroleum products, lead based paint and the like. "Polluted" as used herein shall mean containing contaminants. Unless specifically set forth in TSC's proposal, nothing contained in this agreement shall, however, be construed or interpreted as requiring TSC to assume the status of a generator, transporter,

treater, storer, as those terms appear within RCRA or within any Federal or state statute or regulation. Client assumes full responsibility of compliance with CERCLA, RCRA and any other Federal or state statute or regulation governing the generation, handling, storage, transportation, treatment and disposal of contaminants or other refuse.

3. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

4. ACCESS TO SITE: Client will arrange and provide access to each site upon which it will be necessary for TSC to perform its services pursuant to this agreement. In the event services are required on any site not owned by Client, Client represents and warrants to TSC that Client has obtained all necessary permissions for TSC to enter upon the site and conduct its services. Client shall, upon request, provide TSC with evidence of such permission, as well as acceptance of the other terms and conditions set forth herein by the owner(s) and tenant(s), if applicable, of such site(s) in form acceptable to TSC. Client acknowledges that it is not TSC's responsibility to notify any such property owner or tenant of the discovery of actual or suspected contaminants. Client further recognizes that knowledge of such suspected or actual condition may result in a reduction in a property's value and may provide incentive to owners of properties affected to initiate legal action against Client and/or others. Any work performed by TSC with respect to obtaining permission to enter upon and perform professional services on the lands of others as well as any work performed by TSC pursuant to this agreement, shall be deemed as being done on behalf of Client, and Client agrees to assume all risks thereof. TSC shall take reasonable measures and precautions to minimize damage to each site and any improvements thereon resulting from its work and the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage that may occur. If Client or the possessor of any interest in any site desires or requires TSC to restore the site to its former condition, upon written request from Client, TSC will perform such additional work as is necessary to do so, and Client agrees to pay TSC the costs thereof plus TSC's normal mark up for overhead and profit.

5. CLIENT'S DUTY TO NOTIFY TSC: *JTM* ~~Client represents and warrants that~~ Client has advised TSC of any known or suspected contaminants, utility lines and underground structures at any site at which TSC is to perform services under this agreement. Client agrees to defend, indemnify and save TSC harmless from all claims, suits, losses, costs and expenses,

including reasonable attorneys' fees as a result of personal injury, death or property damage occurring with respect to TSC's performance of its services and resulting to or caused by contact with sub-surface or latent objects, structures, lines or conduits where the actual or potential presence and location thereof was not revealed to TSC by Client. In the event that TSC's undertaking includes contacting a public utility locating agency, its responsibility shall not extend to warranty the accuracy of the information so obtained.

6. DISCOVERY OF UNANTICIPATED CONTAMINANTS: The discovery of certain contaminants may make it necessary for TSC to take immediate measures to protect health and safety. TSC agrees to notify Client as soon as practically possible should such contaminants be suspected or discovered. Client agrees to reimburse TSC for the reasonable cost of implementing such measures under the circumstances.

7. LIMITATIONS OF PROCEDURES, EQUIPMENT AND TESTS: Information obtained from borings, observations, and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence with respect to the detection, quantification and identification of contaminants, but any inference or conclusion based thereon is, necessarily, an opinion also based on professional judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site. The presence and extent of contaminants as well as the levels of groundwater may fluctuate within the site due to climatic and other variations and, unless thorough sampling and testing are conducted over an extended period of time, contaminants contained within the site may escape detection. A site at which contaminants are not found to exist, or at the time of inspection do not, in fact, exist, may later, due to intervening causes, such as natural groundwater flows or human activities, become polluted. There is a risk that sampling techniques may themselves result in pollution of certain sub-surface areas such as when a probe or boring device moves through an area containing contaminants linking it to an aquifer, underground stream or other hydrous body not previously polluted. Because the risks set forth in this paragraph are unavoidable and because the sampling techniques to be employed are a necessary aspect of TSC's work on client's behalf, Client agrees to assume these risks.

8. SOIL AND SAMPLE DISPOSAL: Unless otherwise agreed in writing, soils known at the time to be polluted will be left on the site for proper disposal by Client; and samples removed by TSC to its laboratory, upon completion of testing, will be disposed by TSC in an approved manner or returned to the site for disposal by others.

9. MONITORING: If TSC is retained by Client to provide a site representative for the purpose of monitoring portions of site cleanup or other field activities, TSC will report its observations and test results as more specifically set forth elsewhere in this agreement. In such cases, TSC's services shall not include (i) determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored; (ii) evaluating, reporting or affecting job conditions concerning health, safety or welfare; (iii) the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to perform same shall not in any way operate to excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and project managers.

10. RECOMMENDATIONS: If TSC's services include making recommendations for further exploration, clean-up or remediation of a site or the improvements thereon, Client shall cause all tests and inspections of the site and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been rigorously followed.

11. CLEAN UP: If TSC is retained by Client to physically perform the work of clean up of a site through its own forces or those of subcontractors, Client shall obtain all necessary permits and generator identification numbers. In such cases Client agrees to defend, indemnify and save TSC harmless from all claims, suits, losses, costs and expenses, including reasonable attorneys' fees as a result of personal injury, death or property damage occurring with respect to TSC's performance of its services and resulting to or caused by the generation, transportation, treatment, storage or disposal of contaminants, except to the extent of the negligent performance by TSC of the duties undertaken by TSC, if any.

12. TERMINATION: This agreement may be terminated by either party upon seven (7) day's prior written notice. In the event of termination, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. In the event that TSC has agreed to provide clean up services pursuant to paragraph 10 of this Agreement, TSC shall be entitled to recover anticipated profits, in the event of termination.

13. PAYMENT: Client shall be invoiced periodically for services performed. ~~Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the~~

~~maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs and reasonable attorney's fees.~~

14. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with this Agreement and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

~~Should TSC or any of its employees be found to have been negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to \$50,000 or the total amount of the fee paid to TSC for its services performed with respect to the project, whichever amount is greater.~~

~~In the event Client is unwilling or unable to limit the damages for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit damages shall be increased to \$500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award of greater damages.~~

15. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found

to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

16. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

17. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement, (ii) wherein TSC waives any rights to a mechanics lien or (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party. These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Should litigation be necessary, the parties consent to jurisdiction and venue in an appropriate Illinois State Court in and for the County of DuPage, Wheaton, Illinois or the Federal District Court for the Northern District of Illinois. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.