

**104TH AVENUE MULTI-USE PATH
159TH STREET TO 163RD PLACE**

**PHASE I SCOPE OF SERVICES
AND COST ESTIMATE OF CONSULTANT SERVICES**

VILLAGE OF ORLAND PARK

April, 2015

PREPARED BY:

LOCHNER

**104th AVENUE MULTI-USE PATH
VILLAGE OF ORLAND PARK
PHASE I SERVICES
WORK ITEMS**

SUMMARY OF PHASE I SERVICES

WORK ITEM	ESTIMATED HOURS
I. PUBLIC AND AGENCY COORDINATION	116
II. DATA COLLECTION	24
III. TRAFFIC ANALYSIS	2
IV. MIXED-USE PATH STUDIES	182
V. STRUCTURAL STUDIES	138
VI. ENVIRONMENTAL STUDIES	6
VII. DOCUMENT PREPARATION	72
VIII. PROJECT ADMINISTRATION	54
TOTAL HOURS	830

APPENDIX A – Millennia Professional Services, Surveying

APPENDIX B – Geo Services, Inc., Geotechnical Services

APPENDIX C – Huff and Huff, Wetland and Permitting

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WORK ITEM	ESTIMATED HOURS
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I. PUBLIC AND AGENCY COORDINATION

- | | |
|---|----|
| <p>A. <u>IDOT Kick-off Meeting</u></p> <p>Lochner will prepare for and attend a kick-off meeting with IDOT to introduce the project and to discuss the major project issues and possible processing level. Meeting documentation is also included. Assume two people attending.</p> | 12 |
| <p>B. <u>Cook County Kick-off Meeting</u></p> <p>Lochner will prepare for and attend a kick-off meeting with Cook County to introduce the project and discuss the major project issues. Meeting documentation is also included. Assume two people attending.</p> | 6 |
| <p>C. <u>Village of Orland Park Board Meetings</u></p> <p>Lochner will prepare for and attend one Village of Orland Park Board of Trustees meeting to introduce the project and discuss the major project issues. Meeting documentation is also included. Assume two people attending. This task also includes the preparation of meeting presentation text and graphics, handout materials, etc.</p> | 18 |
| <p>D. <u>Public Informational Mailings</u></p> <p>Lochner will prepare letters to the affected adjacent property owners and stakeholder groups to introduce the project, discuss the major project issues and invite public comment. Compiling responses is also included. A public meeting or individual meetings with stakeholder groups are not included.</p> | 8 |
| <p>E. <u>FHWA/IDOT Coordination Meetings</u></p> <p>Prepare for and attend one FHWA/IDOT Coordination Meetings. Assume two people attending. Meeting documentation is also included.</p> | 12 |
| <p>F. <u>Army Corps of Engineers Meetings</u></p> <p>Prepare for and attend one Army Corps of Engineers Coordination Meeting. Estimate two people will be attending. Meeting documentation is also included.</p> | 12 |
| <p>G. <u>Illinois Department of Natural Resources Office of Water Resources (IDNR-OWR) Meeting</u></p> <p>Prepare for and attend one IDNR-OWR Coordination Meeting to discuss culvert and compensatory storage permitting issues. Estimate two people will be attending the meeting. Meeting documentation is also included.</p> | 12 |
| <p>H. <u>Metropolitan Water Reclamation District (MWRD) Coordination</u></p> <p>Coordination with MWRD (memos, emails, and/or phone calls) for design and permitting requirements regarding work in Flood Protection Areas in accordance with</p> | 4 |

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the MWRD Watershed Management Ordinance (WMO). It is assumed that the amount of new impervious area will be below the threshold (1 acre new impervious) for Right-Of Way development as defined in the WMO. Therefore, it is assumed that rate and volume control of stormwater will not be required by the WMO.

Public and Agency Involvement Subtotal.....84

II. DATA COLLECTION

A. Aerial Photography.....1
Lochner will determine needs and obtain copies of existing aerial photography of project area.

B. Existing Plans.....1
Lochner will collect available existing roadway and bridge plans from the Village of Orland Park and Cook County including right of way maps.

C. Photo Log.....1
Photographs will be taken of the existing bridge structure, roadways and project area. Photos will be indexed, printed and stored for use in design studies.

D. Existing Utilities2
Utility companies will be contacted to obtain locations of existing facilities and information regarding utility work proposed in the near future within the project limits.

E. Drainage.....2
Lochner will obtain FEMA FIS and related drainage reports and studies (including drainage and hydraulic reports used for the US 6 improvements) for the project site and will coordinate with the Village of Orland Park and Cook County to obtain any additional available drainage information and to determine if there are any existing drainage problem areas or required improvements. Lochner will also determine the drainage area at the two culvert locations and will coordinate with the Village of Orland Park, Cook County, IDNR, IDOT, MWRD and any other agency which may have jurisdiction in this area to determine drainage design and permit requirements.

F. Field Reconnaissance.....10
It is estimated there will be one miscellaneous reconnaissance field trip required to collect/supplement various information for the project.

Data Collection Subtotal17

III. TRAFFIC ANALYSIS

A. Roadway Capacity Analysis0

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Since the project is focused on the proposed mixed-use path and not on vehicle traffic along 104th Avenue, a capacity analysis of roadway traffic is not included.

B. Mixed-Use Path Capacity Analysis2
 Projected pedestrian and bicycle traffic will be estimated for the proposed mixed-use path.

Traffic Studies Subtotal2

IV. MIXED-USE PATH STUDIES

A. Cross Section4
 Lochner will develop a mixed-use path cross-section for compatibility with the adjacent existing roadway, proposed curb and gutter concept and the geometric continuity of the existing roadway.

B. Drainage Studies40
 It is anticipated that construction of a mixed-use path on either side of 104th Avenue will require the extension of one pipe culvert and one box culvert. Lochner will study the potential effects of the culvert extensions on any identified wetlands, floodways and floodplains. Lochner will include preliminary culvert improvement details on the plan and profile sheets. It is anticipated that the preferred design will replace the existing roadway shoulder with curb and gutter in order to minimize the impact on the wetlands and floodplain. The drainage studies will also include identification of outfall(s) for the proposed curb and gutter.

C. Hydraulic Studies40
 It is anticipated that construction of a mixed-use path on either side of 104th Street will impact a floodplain and floodway. The hydraulic studies will investigate the effect of the construction on the floodway and floodplain and identify the need and extent of compensatory storage. The hydraulic study does not include a complete Hydraulic Report for the extensions of the pipe and box culvert meeting IDOT requirements as described in Section 2-600 of the IDOT Drainage Manual. An abbreviated study will be provided in order to substantially complete the IDOT Preliminary Bridge Design and Hydraulic Report form as well as the IDOT Permit Summary for Floodway Construction in Northeast Illinois. Lochner will coordinate with IDOT on the potential use of either Regional Permit 1 or 2 (IDOT administers these permits per MOU between IDOT and IDNR) for the culvert improvements within the floodplain. The preliminary hydraulic calculations will be performed using HY-8 or Culvertmaster (HEC-RAS modeling and full creek surveys not included). The study will provide alternatives for providing compensatory storage will be investigated including using the IDOT basin along 159th Street and a second location which would not require IDOT coordination. It is anticipated one meeting with IDOT will be required.

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D. <u>Alternatives Analysis</u>	16
It is assumed that the preferred alternative will be to remove the shoulder along the east side of 104 th Street and replace it with curb and gutter. The multi-use path will be located behind the relocated guardrail. For the preferred alternative Lochner will develop horizontal and vertical geometrics utilizing field survey data, wetland and floodplain restraints and proposed structure concepts in accordance with guidelines published in the IDOT Bureau of Local Roads Manual. Additional alternatives that may need to be studied to satisfy permitting and coordination requirements are not anticipated or included in this scope of services. Plan/Profile sheets will be prepared for the preferred alternative.	
E. <u>Right-of-Way and Easements</u>	1
Preliminary right-of-way and easement requirements will be determined for the proposed improvements. It is assumed that the multi-use path will be located on the east side of 104 th Street within the existing permanent easement. Any plats and legal descriptions for the additional right of way or easements are not included in this project phase but will be completed in Phase II.	
F. <u>Quantity Take-Off and Cost Estimates</u>	4
Lochner will prepare an order of magnitude cost estimate for the mixed-use path and drainage improvements for the preferred design concept.	
G. <u>Construction Staging and Maintenance of Traffic</u>	4
Lochner will develop a Maintenance of Traffic Plan for the preferred build concept, outlining the plan for maintaining 104 th Avenue traffic during construction of the path, curb and gutter and associated improvements.	
H. <u>Pedestrian/ADA</u>	1
Pedestrian and ADA requirements will be evaluated and addressed as part of the design concepts.	
Mixed-Use Path Studies Subtotal	110
V. STRUCTURAL STUDIES	
A. <u>Soils Survey and Structure Borings</u>	4
Lochner will review the geotechnical report and recommendations from the geotechnical subconsultant.	
B. <u>Abbreviated Bridge Condition Report</u>	60
It is anticipated that an Abbreviated Bridge Condition Report (BCR) will be required for the dual box culvert approximately 525' south of the intersection with 159 th Street. Lochner will perform field inspection work as required for the development of the BCR and will prepare the BCR to document the current physical condition and	

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functionality of the existing structure and recommend a scope of work. The BCR will be submitted to IDOT for review and approval.

C. <u>Multi-Use Path Structure Study</u>	0
It is assumed that the preferred alternative will include extensions of the two culverts and structures to carry the multi-use path over those two waterways will not be necessary. To satisfy permitting requirements, alternative locations for the multi-use path may need to be studied. As part of the alternative studies, it is anticipated that a structure designed to carry the mixed-use path over the box culvert may minimize impacts to wetlands, floodplain and floodway. It is assumed that those alternatives will be removed from consideration before any detailed structural studies are required.	
D. <u>General Plan and Elevation Drawing</u>	50
It is anticipated that the preferred alternative will include an extension of the existing box culvert which will be detailed in a "General Plan and Elevation"-type drawing showing the proposed connection to the existing structure. It is anticipated that the foundation will be a continuation of the existing foundation.	
E. <u>Preliminary Bridge Design and Hydraulic Report</u>	8
Lochner will prepare a Preliminary Bridge Design and Hydraulic Report for submittal to the IDOT Bridge Office for their review and comment. The Report will be revised per IDOT comment for approval.	
F. <u>Retaining Wall Study</u>	12
Lochner will investigate the possibility of reducing the impact to wetlands, floodways and floodplains through the use of retaining walls parallel to 104 th Avenue. Due to the poor soils in the area it is anticipated that the proposed wall will be sheeting and there will be some coordination with the geotechnical subconsultant. It is anticipated that the walls will be less than 7' in height and Type, Size and Location drawings will not be required. If retaining walls are included in the preferred alternative they will be shown on the roadway plan and profile drawings.	
Structural Studies Subtotal	134

VI. ENVIRONMENTAL STUDIES

A. <u>Environmental Survey</u>	1
Lochner will coordinate with Huff the IDOT Environmental Survey Request Form to determine the potential for impacting sensitive biological or cultural resources.	

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B. Wetlands 1
Lochner will assist a subconsultant in preparing the wetland investigation and include the limits of any identified wetlands on the appropriate drawings and exhibits.

C. Permitting 4
Lochner will assist with pre-permitting activity to identify permitting requirements for the project.

Environmental Studies Subtotal 6

VII. DOCUMENT PREPARATION

A. Preliminary Project Development Report 24
A preliminary Project Development Report (PDR) will be prepared in accordance with IDOT guidelines. Report exhibits will be developed that will include a location map, typical sections, bridge cross-sections, bridge plans and elevations, proposed plan on aerial, roadway plan/profile, and detour schemes. The preliminary PDR will be submitted to the Village of Orland Park for their review and comment. A written disposition of Village of Orland Park comments will be prepared.

B. Draft Project Development Report 16
A draft PDR will be prepared, incorporating revisions to the text and exhibits of the preliminary PDR, as required. The draft PDR will be submitted to IDOT for review and comment. A written disposition of the Village of Orland Park and IDOT comments on the draft PDR will be prepared.

C. Final Project Development Report 12
A final PDR will be prepared, incorporating revisions to the text and exhibits of the draft PDR, as required. Final copies of the report will be produced and distributed following design approval.

Document Preparation Subtotal 52

VIII. PROJECT ADMINISTRATION

A. Internal Administration Activities 36
Administration and coordination of project design team, including internal analysis meetings, status meetings, staffing, budgets, schedule controls, progress reports, billings and contract administration. Estimate: 2 hours per month for 18 months.

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Project Administration Subtotal36

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DIRECT COSTS

In-House Direct Costs

Report Documents	
Preliminary PDR (6 copies x \$25)	\$150
Draft PDR (6 copies x \$25)	150
Final PDR (12 additional copies x \$25)	<u>300</u>

Total In-House Direct Costs **\$600**

Outside Direct Costs

Travel	
Auto Rental (10 x \$60)	\$600
Printing for Public Meeting	\$1000

Total Outside Direct Costs **\$1,600**

SUMMARY OF SUBCONSULTANT COSTS

Millennia Professional Services, Surveying	\$9,318.67
Geo Services, Inc., Geotechnical Services	\$19,126.73
Huff and Huff, Wetland and Permitting	\$15,130.23
 Total Subconsultant Costs	 <u>\$43,575.63</u>

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COST ESTIMATE OF CONSULTANT SERVICES

**PAYROLL ESCALATION TABLE
FIXED RAISES**

FIRM NAME H. W. Lochner, Inc. DATE 04/06/15
 PRIME/SUPPLEMENT Prime PTB NO. _____
 CONTRACT TERM 18 MONTHS OVERHEAD RATE 171.94%
 START DATE 5/1/2015 COMPLEXITY FACTOR 0
 RAISE DATE 6/1/2015 % OF RAISE 3.00%

ESCALATION PER YEAR

5/1/2015 - 6/1/2015	6/2/2015 - 6/1/2016	6/2/2016 - 11/1/2016	
1	12	5	
18	18	18	
= 5.56%	68.67%	29.47%	
= 1.0369		3.69%	

The total escalation for this project would be:

Subconsultants

FIRM NAME H. W. Lochner, Inc.
PRIME/SUPPLEMENT Prime
PSB NO. _____

DATE 04/06/15

NAME	Direct Labor Total	Contribution to Prime Consultant
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0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00

Total 0.00 0.00

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SUBCONSULTANTS



915 Harger Road, Suite 330
Oak Brook, IL 60523
Phone (630) 684-9100
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Website: <http://huffinhuff.com>

March 5, 2015

Mr. Michael Zorn, P.E., PMP
H. W. Lochner, Inc.
225 West Washington Street, 12th Floor
Chicago, IL 60606

**Re: Environmental Services for
104th Avenue Bike Path from 159th Street to 163rd Place
Village of Orland Park, Cook County, Illinois
Proposal No.: 81.PT00002.16**

Dear Mr. Zorn:

Huff & Huff, Inc., a subsidiary of GZA GeoEnvironmental, Inc. (Consultant) is pleased to submit this proposal to H.W. Lochner, Inc. (Client) to initiate environmental services in conjunction with the proposed 104th Avenue bike path from 159th Street to 163rd Place project in the Village of Orland Park, Cook County, Illinois. This proposal presents our project understanding, the scope of services, and cost for completing the project.

1. PROJECT UNDERSTANDING

The Village of Orland Park is proposing a bike path along 104th Avenue connecting an existing bike path along 104th Avenue, south of 163rd Place, to a bike path along 159th to be constructed in the spring of 2015 in the Village of Orland Park, Cook County, Illinois. Consultant has been requested to provide environmental services. It is anticipated STP funding will be provided for this project and Right-of-Way (ROW) acquisition will occur. The Good Shepherd Cemetery is located adjacent to 104th Avenue; if ROW is acquired from the Good Shepherd Cemetery additional coordination may be required. Costs for additional coordination are not included in this scope. As the project is located within the corporate boundaries of the Village of Orland Park and is anticipated to require less than three acres of agricultural land per mile, coordination with the Illinois Department of Agriculture (IDOA) and the Natural Resource Conservation Service (NCRS) and an AD1006 is not anticipated.

Consultant will complete the Environmental Survey Request Form (ESRF), wetland delineation, Jurisdictional Determination (JD) and pre-application meeting with the U.S. Army Corps of Engineers (USACE), Preliminary Environmental Assessment (PESA), historic structures photo documentation, and Wetland Impact Evaluation (WIE) forms. Permitting is not included in this scope of services.

2. SCOPE OF SERVICES

Task 1 – Environmental Survey Request Form (ESRF)

The ESRF will be submitted to IDOT through the Bureau of Local Roads as 104th Avenue is a County Road. The ESRF triggers various environmental reviews including wetlands, sensitive species, and special waste. As the Illinois State Geological Survey (ISGS) will not complete a Preliminary Environmental Site Assessment (PESA) for local roads, the PESA will be the responsibility of the consultant team.

Coordination: Client will coordinate with IDOT to determine the need for ISGS to conduct a PESA update along 159th Street (a U.S. Route). It is anticipated the ISGS will complete a PESA for the bike path along 159th to be constructed in the spring of 2015.

Note: This work effort is to include completion of the ESRF and exhibits with follow-up. IDOT BDE will provide the appropriate results for inclusion in the project report: archaeological/historical/architectural through the Illinois Historic Preservation Agency (IHPA); prime farmland (USDA/NRCS, IDA); wetlands (IDNR, USACE); stream crossings (IDNR, USACE); biological survey (INHS, IDNR, USDF&W); special waste survey (ISGS).

Task 2 – Wetland Delineation

A. Off-site Record/Document Review

Based on available mapping as well as current aerial photography, it is anticipated there are two wetland/"Waters of the U.S." (WOUS) present within the project limits.

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

- U.S. Geological Survey Topographic Map
- National Wetlands Inventory Map (NWI)
- Cook County Soil Survey
- South Cook/Will County Soil and Water Conservation District Aerial Photography
- FEMA Floodplain Maps
- Hydric Soils of the United States
- Aerial Photographs

B. On-Site Investigation (Field Inventory)

The on-site investigation will be conducted by our environmental staff experienced in Federal methods for conducting wetland delineations. Our staff will classify and define hydric soils,

hydrophytic vegetation, and evidence of hydrology to determine if wetlands are present. The wetland perimeters will be surveyed in the field using Global Positioning System equipment.

A wetland delineation of the project site will be conducted that will meet the requirements of Executive Order 11990, "Protection of Wetlands;" Section 404 of the Federal Water Pollution Control Act as amended by the Clean Water Act (Corps of Engineers, Section 404 Permit) and the Illinois Environmental Protection Agency Section 401 Guidelines regulations. These regulations pertain to the placement of fill or alteration of drainage within wetlands of any type and apply to privately as well as publicly-owned wetlands. The investigation will meet the requirements of these regulations by identifying the type, functions, and boundaries of the involved wetlands.

Wetlands found will be classified according to type using the "Classification of Wetlands and Deep Water Habitats of the United States" by Cowardin. Wetland boundaries will be defined using the Corps of Engineers Regional Supplement to the COE Wetlands Delineation Manual (USACOE, 2010). This includes a soil investigation to determine the presence or absence of hydric soils and an analysis of the dominant plant species. Field observations will be made on any evidence indicating the hydrology of the area and on water sources that are supporting these wetlands. Functions of these wetlands will be evaluated from field observations.

In addition to the wetland/WOUS's identified by aerial photography, the entire project area will be investigated in the event that unmapped wetlands are present. The NWI map for the project area identified two wetland complexes within the project limits.

Task 3 – Wetland Report

Upon completion of the wetland delineations, a wetland delineation report will be prepared summarizing the findings of the formal delineation upon completion. This report will be used for the basis of permitting.

Wetland delineation data sheets will be included in the report, which summarize the findings of the field investigation. A minimum of one wetland and one upland data point is needed for each wetland encountered.

Specific items to be included are as follows:

- a) Map showing the wetland/WOUS boundaries and project boundaries
- b) COE data sheets with color photos
- c) Written description of wetland functional classification
- d) Floristic Quality Index Rating assessment
- e) Mitigation options
- f) Jurisdictional Summary Table
- g) Identification of 303d impaired waterways
- h) Farmed Wetland Determination

A formal delineation of wetlands is required in accordance with the Chicago District Corps of Engineers (COE) regulations, prior to permitting any wetland impacts. In the Chicago District, within Illinois, the wetland delineation report must include a floristic quality assessment. Any impacts to wetlands will require permits. CONSULTANT will provide four bound hard copy of the Wetland and WOUS Investigation Report and one CD containing a PDF of the report and shape files of the wetland and WOUS boundary.

Task 4 – Jurisdictional Determination (JD)/Permitting Assistance

A jurisdictional determination (JD) is required from the COE to determine whether the on-site wetlands are under the jurisdiction of the COE or whether they are considered isolated. JD forms will require signatures from the landowner. Consultant will complete and submit the JD forms to the Chicago District COE. This task includes time for one site visit with the COE to conduct the JD.

This scope of services includes follow-up coordination/pre-application meeting with Client and the COE to discuss alternatives, permitting, and potential conceptual mitigation options. This scope of services does not include mitigation design or permit submittal.

Task 5 – Preliminary Environmental Site Assessment (PESA)

Consultant will prepare a Preliminary Environmental Site Assessment (PESA) for the project corridor. IDOT completes PESAs for state rights of way; however, Consultant will complete the PESA for the local roads portions of projects. The specific methods used to prepare the assessment are contained in the following:

- A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Projects (Erdmann et al., 2012)
- ASTM International (ASTM) standard 1527-13
- The Illinois Department of Transportation's (IDOTs) Bureau of Design and Environment (BDE) Procedure Memorandum Number 10-07, *Special Waste Procedures*. This memo was incorporated into Chapter 27-3 of the IDOT BDE Manual in June 2012.
- IDOT Bureau of Local Roads and Streets (BLRS) Manual, Chapter 20-12, Special Waste, July 2013.
- Public Act 96-1416
- Clean Construction or Demolition Debris Fill Operations (CCDD) and Uncontaminated Soil Fill Operations: Amendments to 35 Illinois Administrative Code 1100. Effective on August 27, 2012.

A. Historical Research

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

B. Site Evaluation

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

C. Records Review

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

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

D. Report Preparation

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

- a) The project location and description
- b) Historical uses of corridor.
- c) The area geology and hydrology.
- d) The environmental status of sites adjacent to the corridor regarding chemical use and storage, underground and aboveground storage tanks, solid waste, special waste, and hazardous waste, wastewater, and PCBs.
- e) An analysis of the site inspection.
- f) A summary of the findings regarding any environmental concerns. This will include IDOT's per Memo 66-10 (still active and reissued as BDE PM 10-07) and identification of Potentially Impacted Properties (PIPs) per Subpart F, Section 1100, 35 IAC, related to Clean Construction Demolition Debris management.

Task 6 – Historic Structures Photo Documentation

As part of the initial data collection, the Consultant will prepare a photo log of all structures within the project limits for submittal to IDOT and for review of cultural resources. Structures that appear to be greater than 50 years old, or having unique design or architecture will be the main concern. Photos of these structures will be submitted to IDOT for in-house cultural review. It is anticipated that no historic structures will be involved in the project area. Furthermore, due to the development and agricultural activities in the area, it is unlikely that an archeological survey will

be required.

Task 7 - Wetland Impact Evaluation (WIE) Form

The Consultant will compile the WIE Forms for each wetland site identified within the project limits. This form will summarize potential impacts to each site as well as the condition and quality of each wetland delineated. The Consultant will prepare wetland impact exhibits utilizing shapefiles developed from the delineation process, and comparing the locations of each site to the proposed engineering improvements.

The Consultant will work with the Village of Orland Park to prepare a mitigation strategy that satisfies the mitigation requirements under Section 404 of the Clean Water Act. It is anticipated that mitigation banking will be the preferred solution for mitigation. The Consultant will identify potential wetland banks within the watershed and determine if sufficient credits are available.

Task 8 – QA/QC and Project Management

Time under this task includes time for project management and QA/QC of the wetland, JD, and PESA reports as well as the ESRF and WIE submittals as described above.

3. COST ESTIMATE

Costs for these services are presented in the Cost Estimate for Consultant Services.

4. SCHEDULE

The wetland delineation will be conducted during the 2015 growing season (April 15 to October 15) in Cook County. If the wetland delineation is conducted outside this time period a follow-up site visit may be required. The wetland delineation will be initiated within four weeks after the start of the growing season or the Notice to Proceed is given, whichever is later.

5. TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

© 2008 by GZA GeoEnvironmental, Inc.

H.W. Lochner, Inc.

Site: 104th Avenue Bike Path

These Terms and Conditions, together with Consultant's Proposal, make up the Agreement between with Consultant, H.W. Lochner, Inc., named above.

1. Services. H&H will perform the services set forth in its Proposal and any amendments or change orders authorized by you. Any request or direction from you that would require extra work or additional time for performance or would result in an increase in H&H's costs will be the subject of a negotiated amendment or change order.

2. Standard of Care. H&H will perform the services with the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services at the same time under similar conditions in

the same or similar locality. **NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTY OF MARKETABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS MADE OR INTENDED BY H&H'S PROPOSAL OR BY ANY OF H&H'S ORAL OR WRITTEN REPORTS.**

3. Payment.

- a. Except as otherwise stated in the Proposal, you will compensate H&H for the services at the rates set forth in the applicable Proposal, amendment or change order; reimburse its expenses, which will include a communication fee calculated as a percentage of labor invoiced; and pay any sales or similar taxes thereon.
- b. Any retainer specified in H&H's Proposal shall be due prior to the start of services and will be applied to the final invoice for services.
- c. H&H will submit invoices periodically, and payment will be due within 20 days from invoice date. Overdue payments will bear interest at 1½ percent per month or, if lower, the maximum lawful rate. H&H may terminate its services upon 10 days' written notice anytime your payment is overdue on this or any other project and you will pay for all services through termination, plus termination costs. You will reimburse H&H's costs of collecting overdue invoices, including reasonable attorneys' fees.

4. Your Responsibilities.

- a. Except as otherwise agreed, you will secure the approvals, permits, licenses and consents necessary for performance of the services. If you are the owner or operator of the Site, you will provide H&H with all documents, plans, information concerning underground structures (including but not limited to utilities, conduits, pipes, and tanks), information related to hazardous materials or other environmental or geotechnical conditions at the site and other information that may be pertinent to the services or, if you are not the owner or operator of the Site, you agree to make reasonable efforts to obtain these same documents and provide them to H&H. Unless otherwise indicated in writing, H&H will be entitled to rely on documents and information you provide.
- b. If you use the services of a construction contractor at the Site, you agree to use best and reasonable efforts to include in your agreement(s) with the construction contractor provisions obligating the latter:
 - (i) to indemnify, defend and hold harmless, to the fullest extent permitted by law, you and H&H, its officers, employees and principals, for or on account of any claims, liabilities, costs and expenses, including attorneys' fees, arising out of or relating to the design or implementation of construction means, methods, procedures, techniques, and sequences of construction, including safety precautions or programs, of the contractor, or any of its subcontractors or any engineer engaged by it;
 - (ii) to name you and H&H as additional insureds under general liability and builder's risk insurance coverages maintained by the contractor, or any of its subcontractors; and
 - (iii) to require that all of its subcontractors agree and be bound to the obligations set forth in (i) and (ii) above.
- c. In the event that you are unable to secure such provisions in the agreement(s) with the construction contractor, you shall promptly notify H&H and H&H shall have the opportunity to negotiate with you reasonable substitute risk allocation and insurance indemnities and protections.

5. Right of Entry. You grant H&H and its subcontractor(s) permission to enter the site to perform the services. If you do not own the site, you represent and warrant that the owner has granted permission for H&H to enter the site and perform the services; you will provide reasonable verification on request; and you will indemnify H&H for any claims by the site owner related to alleged trespass by H&H or its subcontractors.

6. Reliance. The services, information, and other data furnished by you shall be at your expense, and H&H may rely upon all information and data that you furnish, including the accuracy and completeness thereof. You acknowledge that the quality of the services provided by H&H is directly related to the accuracy and completeness of the information and data that you furnish to H&H. **H&H's REPORTS ARE PREPARED FOR AND MADE AVAILABLE FOR YOUR SOLE USE. YOU ACKNOWLEDGE AND AGREE THAT USE OF OR RELIANCE UPON THE REPORT OR THE FINDINGS IN THE REPORT BY ANY OTHER PARTY, OR FOR ANY OTHER PROJECT OR PURPOSE, SHALL BE AT YOUR OR SUCH OTHER PARTY'S SOLE RISK AND WITHOUT ANY LIABILITY TO H&H.**

7. H&H Professionals. H&H employees or consultants may act as licensed, certified or registered professionals (including but not limited to Professional Engineers, Licensed Site or Environmental Professionals, or Certified Industrial Hygienists, collectively referred to in this section as "H&H Professionals") whose duties may include the rendering of independent professional opinions. You acknowledge that a federal, state or local agency or other third party may audit the services of H&H or other contractor/consultant(s), which audit may require additional services, even though H&H and such H&H Professionals have each performed such services in accordance with the standard of care set forth herein. You agree to compensate H&H for all services performed in response to such an audit, or to meet additional requirements resulting from such an audit, at the rates set forth in the applicable Proposal, amendment or change order.

8. Hazardous Materials; H&H "Not a Generator". Before any hazardous or contaminated materials are removed from the site, you will sign manifests naming you as the generator of the waste (or, if you are not the generator, you will arrange for the generator to sign). You will select the treatment or disposal facility to which any waste is taken. H&H will not be the generator or owner of, nor will it possess, take title to, or assume legal liability for any hazardous or contaminated materials at or removed from the site. H&H will not have responsibility for or control of the site or of operations or activities at the site other than its own. H&H will not undertake, arrange for or control the handling, treatment, storage, removal, shipment, transportation or disposal of any hazardous or contaminated materials at or removed from the site, other than any laboratory samples it collects or tests. You agree to defend, indemnify and hold H&H harmless for any costs or liability incurred by H&H in defense of or in payment for any legal actions in which it is alleged that H&H is the owner, generator, treater, storer or disposer of hazardous waste.

9. Limits on H&H's Responsibility. H&H will not be responsible for the acts or omissions of contractors or others at the site, except for its own subcontractors and employees. H&H will not supervise, direct or assume control over or the authority to stop any contractor's work, nor shall H&H's professional activities or the presence of H&H or its employees and subcontractors be construed to imply that H&H has authority over or responsibility for the means, methods, techniques, sequences or procedures of construction, for work site health or safety precautions or programs, or for any failure of contractors to comply with contracts, plans, specifications or laws. Any opinions by H&H of probable costs of labor, materials, equipment or services to be furnished by others are strictly estimates and are not a guarantee that actual costs will be consistent with the estimates.

10. Changed Conditions.

- a. You recognize the uncertainties relating to the furnishing of professional services, which often require a phased or exploratory approach, with the need for additional services becoming apparent during the initial services. You also recognize that actual conditions encountered may vary significantly from those

anticipated, that laws and regulations are subject to change, and that the requirements of regulatory authorities are often unpredictable.

- b. If changed or unanticipated conditions or delays make additional services necessary or result in additional costs or time for performance, H&H will notify you and the parties will negotiate appropriate changes to the scope of services, compensation and schedule.
- c. If no agreement can be reached, H&H will be entitled to terminate its services and to be equitably compensated for the services already performed. H&H will not be responsible for delays or failures to perform due to weather, labor disputes, intervention by or inability to get approvals from public authorities, acts or omissions on your part or any other causes beyond H&H's reasonable control, and you will compensate H&H for any resulting increase in its costs.

11. Documents and Information. All documents, data, calculations and work papers prepared or furnished by H&H are instruments of service and will remain H&H's property. Designs, reports, data and other work product delivered to you are for your use only, for the limited purposes disclosed to H&H. Any delayed use, use at another site, use on another project, or use by a third party will be at the user's sole risk, and without any liability to H&H. Any technology, methodology or technical information learned or developed by H&H will remain its property. Provided H&H is not in default under this Agreement, H&H's designs will not be used to complete this project by others, except by written agreement relating to use, liability and compensation.

12. Electronic Media. In accepting and utilizing any drawings, reports and data on any form of electronic media generated by H&H, you covenant and agree that all such electronic files are instruments of service of H&H, who shall be deemed the author, and shall retain all common law, statutory law and other rights, including copyrights. In the event of a conflict between the signed documents prepared by H&H and electronic files, the signed documents shall govern. You agree not to reuse these electronic files, in whole or in part, for any purpose or project other than the project that is the subject of this Agreement. Any transfer of these electronic files to others or reuse or modifications to such files by you without the prior written consent of H&H will be at the user's sole risk and without any liability to H&H.

13. Confidentiality; Subpoenas. Information about this Agreement and H&H's services and information you provide to H&H regarding your business and the site, other than information available to the public and information acquired from third parties, will be maintained in confidence and will not be disclosed to others without your consent, except as H&H reasonably believes is necessary: (a) to perform its services; (b) to comply with professional standards to protect public health, safety and the environment; and (c) to comply with laws and court orders. H&H will make reasonable efforts to give you prior notice of any disclosure under (b) or (c) above. You will reimburse H&H for responding to any subpoena or governmental inquiry or audit related to the services, at the rates set forth in the applicable Proposal, amendment or change order.

14. Insurance. During performance of the services, H&H will maintain workers compensation, commercial general liability, automobile liability, and professional liability insurance. H&H will furnish you certificates of such insurance on request.

15. Indemnification. You agree to hold harmless, indemnify, and defend H&H and its affiliates and subcontractors and their employees, officers, directors and agents (collectively referred to in this paragraph as "H&H") against all claims, suits, fines and penalties, including mandated cleanup costs and attorneys' fees and other costs of settlement and defense, which claims, suits, fines, penalties or costs arise out of or are related to this Agreement or the services, except to the extent they are caused by H&H's negligence or willful misconduct.

16. Limitation of Remedies.

- a. To the fullest extent permitted by law and notwithstanding anything else in this Agreement to the contrary, the aggregate liability of H&H and its affiliates and subcontractors and their employees, officers, directors and agents (collectively referred to in this paragraph as "H&H") for all claims arising out of this Agreement or the services is limited to \$50,000 or, if greater, 10% of the compensation received by H&H under this Agreement.
- b. You may elect to increase the limit of liability by paying an additional fee, such fee to be negotiated prior to the execution of this Agreement.
- c. Any claim will be deemed waived unless received by H&H within one year of substantial completion of the services.
- d. H&H will not be liable for lost profits, loss of use of property, delays, or other special, indirect, incidental, consequential, punitive, exemplary or multiple damages.
- e. H&H will not be liable to you or the site owner for injuries or deaths suffered by H&H's or its subcontractors' employees.
- f. You will look solely to H&H for your remedy for any claim arising out of or relating to this Agreement, including any claim arising out of or relating to alleged negligence or errors or omissions of any H&H principal, officer, employee or agent.

17. Disputes.

- a. All disputes between you and H&H shall be subject to non-binding mediation.
- b. Either party may demand mediation by serving a written notice stating the essential nature of the dispute, the amount of time or money claimed, and requiring that the matter be mediated within forty-five (45) days of service of notice.
- c. The mediation shall be administered by the American Arbitration Association in accordance with its most recent Construction Mediation Rules, or by such other person or organization as the parties may agree upon.
- d. No action or suit may be commenced unless mediation has occurred but did not resolve the dispute, or unless a statute of limitation period would expire if suit were not filed prior to such forty-five (45) days after service of notice.

18. Miscellaneous.

- a. Massachusetts law shall govern this Agreement.
- b. The above terms and conditions regarding Limitation of Remedies and Indemnification shall survive the completion of the services under this Agreement and the termination of the contract for any cause.
- c. Any amendment to these Terms and Conditions must be in writing and signed by both parties.
- d. Having received these Terms and Conditions, your oral authorization to commence services, your actions, or your use of the Report or Work Product constitutes your acceptance of them.
- e. This Agreement supersedes any contract terms, purchase orders or other documents issued by you.
- f. Neither party may assign or transfer this Agreement or any rights or duties hereunder without the written consent of the other party.
- g. Your failure or the failure of your successors or assigns to receive payment or reimbursement from any other party for any reason whatsoever shall not absolve you, your successors or assigns of any obligation to pay any sum to H&H under this agreement.
- h. These Terms and Conditions shall govern over any inconsistent terms in H&H's Proposal.
- i. The provisions of this Agreement are severable; if any provision is unenforceable it shall be appropriately limited and given effect to the extent it is enforceable.

j. The covenants and agreements contained in this Agreement shall apply to, inure to the benefit of and be binding upon the parties hereto and upon their respective successors and assigns.

BOTH PARTIES HERETO WARRANT AND REPRESENT that they have full right, power, and authority to execute this Contract.

IN WITNESS THEREOF, the parties hereto have executed this Agreement as of the day and year first specified above.

CONSULTANT
HUFF & HUFF, INC.

CLIENT
H. W. LOCHNER, INC.



Signature

Signature

By Linda L. Huff, P.E.
Typed Name

Typed Name

Principal
Officer's Title

Officer's Title

March 5, 2015
Date

Date

**Payroll Escalation Table
Fixed Raises**

FIRM NAME
PRIME/SUPPLEMENT

Huff & Huff, Inc.
H.W.Lochner

DATE 04/02/15
PTB NO. _____

CONTRACT TERM _____
START DATE 04/01/15 **MONTHS** 18
RAISE DATE 01/01/16

OVERHEAD RATE 148.80%
COMPLEXITY FACTOR 0
% OF RAISE 3.00%

ESCALATION PER YEAR

<u>04/01/15</u> - <u>01/01/16</u>	<u>01/02/16</u> - <u>10/01/16</u>		
<u>9</u>	<u>9</u>		
<u>18</u>	<u>18</u>		

= 1.0150
= 50.00%

51.50%

1.50%

The total escalation for this project would be:

Average Hourly Project Rates

Route 104th Avenue
 Section 163rd to 159th Street
 County Cook
 Job No. _____
 PTB/Item _____

Consultant Huff & Huff, Inc.

Date 04/02/15

Sheet 1 OF 1

Payroll Classification	Avg Hourly Rates	Total Project Rates			Environmental Survey Request ESRF			Wetland Delineation			Wetland Report			JD/Permitting Assistance			PESA		
		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	2.5	1.74%	1.22															
Senior Geotechnical Cons.	57.81	0																	
Senior Consultant	53.68	8	5.56%	2.98															
Senior Geologist PM	54.06	0																	
Senior Engineering PM	39.06	0																	
Senior Scientist PM	41.73	0																	
Senior Planning PM	44.16	0																	
Engineering PM	37.58	0																	
Geologist PM	39.05	0																	
Scientist PM II	33.43	72	50.00%	16.72	14	77.78%	26.00	6	100.00%	33.43	28	82.35%	27.53	16	94.12%	31.47			
Scientist PM I	40.27	0																	
Asst. PM Engineer II	37.09	0																	
Asst. PM Engineer I	29.28	0																	
Asst. PM Planning	31.23	0																	
Sr. Technical Specialist	42.46	0																	
Sr. CADD Specialist	30.74	17	11.81%	3.63	4	22.22%	6.83				4	11.76%	3.62				5	11.11%	3.42
Environmental Engineer	32.22	38	26.39%	8.50													38	84.44%	27.20
Environmental Scientist E1	24.40	0																	
Environmental Scientist E2	22.45	0																	
Administrative Managers	37.82	0.5	0.35%	0.13													0.5	1.11%	0.42
Sr. Administrative Asst.	26.39	6	4.17%	1.10							2	5.88%	1.55	1	5.88%	1.55	1	2.22%	0.59
Administrative Assistant	21.48	0																	
Senior PM II	58.56	0																	
Senior PM I	39.28	0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
TOTALS		144	100%	\$34.28	18	100%	\$32.84	6	100%	\$33.43	34	100%	\$32.70	17	100%	\$33.02	45	100%	\$32.41

Average Hourly Project Rates

Route 104th Avenue
 Section 163rd to 159th Street
 County Cook
 Job No. _____
 PT/Item _____

Consultant Huff & Huff, Inc.

Date 04/02/15

Sheet 2 OF 1

Payroll Classification	Avg Hourly Rates	Historic Photo Log			WIE Forms			QA/QC / PM								
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	70.00															
Senior Geotechnical Cons.	57.81															
Senior Consultant	53.68															
Senior Geologist PM	54.06															
Senior Engineering PM	39.06															
Senior Scientist PM	41.73															
Senior Planning PM	44.16															
Engineering PM	37.58															
Geologist PM	39.05															
Scientist PM II	33.43	4	66.67%	22.29	4	50.00%	16.72									
Scientist PM I	40.27															
Asst. PM Engineer II	37.09															
Asst. PM Engineer I	29.28															
Asst. PM Planning	31.23															
Sr. Technical Specialist	42.46															
Sr. CADD Specialist	30.74				4	50.00%	15.37									
Environmental Engineer	32.22															
Environmental Scientist E1	24.40															
Environmental Scientist E2	22.45															
Administrative Managers	37.82															
Sr. Administrative Assi.	26.39	2	33.33%	8.80												
Administrative Assistant	21.48															
Senior PM II	58.56															
Senior PM I	39.28															
TOTALS		6	100%	\$31.09	8	100%	\$32.09	10	100%	\$56.95	0	0%	\$0.00	0	0%	\$0.00

HUFF & HUFF, INC.
SUMMARY OF INHOUSE DIRECT COSTS
Project: H.W. Lochner - 104th Avenue Bike Path

						<u>DIRECT</u>
Task 1 - Environmental Survey Request (ESRF)						
Reproduction	3 sets	x	25	x	\$ 0.03	= \$ 2.25
Color copies	3 sets	x	25	x	\$ 0.11	= \$ 8.25
Task Total						\$ 10.50
Task 2 - Wetland Delineation						
Trips - Company	50 miles	x	1	x	\$ 0.575	= \$ 28.75
Reproduction	3 sets	x	20	x	\$ 0.03	= \$ 1.80
Color copies	3 sets	x	20	x	\$ 0.11	= \$ 6.60
Field Supplies			1	x	\$ 30.00	= \$ 30.00
Task Total						\$ 67.15
Task 3 - Wetland Report						
Reproduction	6 sets	x	50	x	\$ 0.03	= \$ 9.00
Color copies	6 sets	x	20	x	\$ 0.11	= \$ 13.20
Task Total						\$ 22.20
Task 4 - JD/Permitting Assistance						
Trips - Company	50 miles	x	2	x	\$ 0.575	= \$ 57.50
Reproduction	1 sets	x	150	x	\$ 0.03	= \$ 4.50
Color copies	1 sets	x	40	x	\$ 0.11	= \$ 4.40
Task Total						\$ 66.40
Task 5 - PESA						
Trips - Company	50 miles	x	11	x	\$ 0.575	= \$ 316.25
Reproduction	3 sets	x	150	x	\$ 0.03	= \$ 13.50
Color copies	3 sets	x	10	x	\$ 0.11	= \$ 3.30
Photo sheets	3 sets	x	5	x	\$ 0.11	= \$ 1.65
Task Total						\$ 334.70
Task 6 - Historic Log						
Trips - Company	50 miles	x	1	x	\$ 0.575	= \$ 28.75
Color copies	3 sets	x	20	x	\$ 0.11	= \$ 6.60
Task Total						\$ 35.35
Task 07 - WIE Forms						
Reproduction	3 sets	x	50	x	\$ 0.03	= \$ 4.50
Color copies	0 sets	x	0	x	\$ 0.11	= \$ -
Task Total						\$ 4.50
Task 08 - QA/QC PM						
Task Total						\$ -
GRAND TOTAL						\$ 540.80

HUFF & HUFF, INC.
SUMMARY OF OUTSIDE DIRECT COSTS
 Project: H.W. Lochner - 104th Avenue Bike Path

		<u>OUTSIDE</u>
Task 1 - Environmental Survey Request (ESRF)		<hr/>
	Task Total	\$ -
 Task 2 - Wetland Delineation		
Maps/Aerials	1 x \$ 120.00 =	\$ 120.00
	Task Total	\$ 120.00
 Task 3 - Wetland Report		
Federal Express	1 x \$ 20.00 =	\$ 20.00
	Task Total	\$ 20.00
 Task 4 - JD/Permitting Assistance		
Federal Express	2 x \$ 20.00 =	\$ 40.00
	Task Total	\$ 40.00
 Task 5 - PESA		
Federal Express	1 x \$ 20.00 =	\$ 20.00
Records Search	1 x \$ 250.00 =	\$ 250.00
	Task Total	\$ 270.00
 Task 6 - Historic Log		
	<hr/> Task Total	\$ -
 Task 07 - WIE Forms		
	<hr/> Task Total	\$ -
 Task 08 - QA/QC PM		
	<hr/> Task Total	\$ -
<hr/>		
GRAND TOTAL		\$ 450.00

SCOPE OF SERVICES - GEO SERVICES INC.

PHASE 1 RFP Orland Park – Bike Path 104th Avenue from 159th Street to 163rd Place Cook County, Illinois

Geotechnical Services

1. Project Description

The project includes engineering services for the proposed bike path, approximately 3,000 linear feet, along 104th Avenue from 159th Street to 163rd Place. The location of the proposed bike path has not been determined; however, the bike path will be parallel to 104th Avenue. In the northern area closer to 159th, a retaining wall is proposed from 159th to the existing culvert (approximately 500 feet long) in order to lessen impact to surrounding wetland. In addition, 1 existing culvert is intended to be extended and will require a separate SGR. No Roadway cores are requested. This request for proposal (RFP) is prepared for the Village of Orland Park; however, funding from IDOT will be present. This RFP was created using IDOT standards and protocols.

2. General

All of the Geotechnical work will be performed in accordance with the Geotechnical Manual, the IDOT All Geotechnical Manual Users Memorandum 05.2 (AGMU 05.2) dated September 26, 2005. All necessary laboratory tests will be performed in an AMRL certified laboratory. This scope does not include any environmental work.

3. Field Investigations

The proposed drilling scope is summarized on the following table:

Project Element	Drilling Scope
Culvert	NOTE: Existing culvert will be extended on one side only (side of bike path, to be determined later)
Culvert (North Side, closer to 159th)	-1 Structure borings to a depth of 50 feet ATV mounted boring
Bike Path	
Bike Path Approximately 3,000 feet	7 Hand Auger borings to 10 feet (spaced at 500-ft, location of bike path to be determined later)
Retaining Wall	NOTE: No borings are to be performed in Phase 1
Retaining Wall Approximately 500 feet	For Phase 1, information from Wang Engineering Report (2005) will be used for preliminary recommendations. No boring proposed in area of the propose retaining wall.

Based on a preliminary visual site inspection performed by Geo Services, Inc., the following drilling protocols will be needed along the project limits:

- Culvert boring will be performed off the roadway with an ATV mounted truck rig.
- For bike path borings, borings will be performed by hand auger method just off the shoulder behind the guardrail (if present).
- The previous geotechnical data obtained in the Wang Engineering Report (2005) will be used for the preliminary recommendations for the proposed retaining wall. For Phase 2 Design, soil borings will need to be proposed and performed along the proposed wall location based on the recommendations from Phase 1.

Soil samples will be obtained at 2.5-ft sampling intervals to a depth of 30 feet and will be sampled at 5-ft intervals below a depth of 30-ft. Work hours are estimated during day-time hours (9AM to 3PM), Monday through Friday.

4. Laboratory Testing

Moisture content tests will be performed on all samples recovered. Particle size and index property tests will be performed on representative portions of the samples to assist with soil classification and liquefaction analysis. Organic content tests will be performed on representative portions of the organic soils. Special testing will be performed based on conditions encountered and design criteria needs.

5. Geotechnical Report

One geotechnical report for each of the following project elements:

1. Bike Path
2. Culvert SGR
3. Preliminary Retaining Wall Report

Below is the detailed information that will be included but not limited to in the SGR and Bike Path reports.

1. Soil conditions
2. Ground water elevations
3. Site preparation recommendations
4. Pavement construction recommendations
5. Foundation recommendations
6. Lateral earth recommendations
7. Slope Stability Analysis
8. Copies of boring logs, test results and location diagram
9. Recommendations relative to any unusual design or construction techniques which may be required due to subsurface conditions

We estimate the cost for the above scope of services at \$19,126.73. Any additional scope will be charged at the unit rates provided with this proposal, only after written consent from the client is received.

**PAYROLL ESCALATION TABLE
FIXED RAISES**

FIRM NAME PRIME/SUPPLEMENT	<u>Geo Services, Inc.</u> PRIME	DATE PTB NO.	04/06/15 _____
CONTRACT TERM START DATE RAISE DATE	1 MONTHS <u>6/1/2014</u> <u>7/1/2014</u>	OVERHEAD RATE COMPLEXITY FACTOR % OF RAISE	203.48% 0.07 3.00%

ESCALATION PER YEAR

6/1/2014 - 7/1/2014				
1	1	1	1	1

= 100.00%
 = 1.0000
The total escalation for this project would be: 0.00%

Subconsultants

FIRM NAME Geo Services, Inc.
PRIME/SUPPLEMENT PRIME
PSB NO. _____

DATE 04/06/15

NAME	Direct Labor Total	Contribution to Prime Consultant
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0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00

Total 0.00 0.00

AVERAGE HOURLY PROJECT RATES

FIRM Geo Services, Inc.
PSB _____
PRIME/SUPPLEMENT PRIME

DATE 04/06/15

SHEET 1 OF 5

PAYROLL CLASSIFICATION	TOTAL PROJECT RATES			Project Management			Field Work			Boring Logs			Analysis			Engineering/Reports			
	AVG HOURLY RATES	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal Engineer	70.00	4	4.21%	2.95													2	5.56%	3.89
Principal Geotechnical Eng.	70.00	2	2.11%	1.47															
Project Manager	60.50	21	22.11%	13.37	4	100.00%	60.50	1	100.00%	60.50	1	5.88%	3.56	1	4.00%	2.42	10	27.78%	16.81
Senior Geotechnical Eng.	53.25	0																	
CADD Supervisor	41.75	4	4.21%	1.76															
Engineering Geologist	41.75	4	4.21%	1.76															
Senior Project Engineer	36.00	48	50.53%	18.19															
Project/Field Engineer	33.58	4	4.21%	1.41															
Admin. Assistant	25.75	8	8.42%	2.17															
		0																	
		0																	
		0																	
		0																	
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TOTALS		95	100%	\$43.08	4	100.00%	\$60.50	1	100%	\$60.50	17	100%	\$37.17	25	100%	\$36.98	36	100%	\$44.69

SCOPE OF SERVICES

104th Ave from 163rd Place to 159th Street
Multi-use Path
Orland Park, Illinois
Design Survey Services
March 30, 2015

General

The scope of services by the CONSULTANT is to provide the design survey services for the proposed Multi-use Path along 104th Avenue from 100 feet south of 163rd Place to 159th Street. The topographic survey will extend 20 feet beyond the existing Right-of-Way. A boundary survey and preparation of parcel plats is **NOT** within the scope of services. Millennia Professional Services (MPS) will **approximate** the existing right-of-way based on field observation of existing buildings, right of way markers, and fences.

Design Survey

Field survey will include a full topographic survey of 104th Avenue from 100 feet south 163rd Street to the intersection of 159th Street and from 20 feet beyond the existing Right-of-Way. Cross sections will also be performed within these limits.

Alignments & Ties

Alignments will be established by Lochner or MPS (Millennia Professional Services) with direction from Lochner.

Field Survey

Reconnaissance of Existing Control.

Horizontal Control - The Horizontal Control Datum for the project will be NAD 83 (2011). Illinois State Plane Coordinate System, East Zone (1201).

Vertical Control - Locate Bench Marks near the project area. The Vertical Control Datum for the project will be NAVD 88.

Set and Tie Main Traverse Points & Bench Marks

Horizontal Control - set & tie new control points (3) within the project limits.

Vertical Control – set & tie new benches (3) within the project limits. Tie existing benches.

Run Main Bench Circuit and loops to project control points

Use GPS to check existing benchmark elevations. Transfer vertical datum to the project area. Perform differential leveling to establish elevations of bench marks and control points.

Adjust level circuit and establish NGVD 88 elevations to new benches and set control points.

Topography

A full topographic survey will be performed from 100 feet south of 163rd Place to 159th Street. The topographic survey will extend 20 feet beyond the existing Right-of-Way. **Locate 10 foot temporary easement along the east side of 104th Street from 163rd Place to 159th Street.**

Topography Verification

Plot topographic survey and perform a field check of the topographic survey data for completeness.

Cross Sections

Within the project limits cross sections will be performed @ 50 foot intervals and extend east and west 20 feet beyond the existing Right-of-Way line.

Driveway Profiles

MPS Identified 2 driveways that survey data will be required to develop profiles.

Box Culvert Measurements

MPS identified two box culvert located within the survey limits. MPS will measure the dimensions of each structure, and perform a cross section of the stream 100 feet east and west of the face of the structure.

Deliverables

Topographic File – MICROSTATION format
TIN Model File - MICROSTATION format
Coordinate File – Point #, Northing, Easting, Elevations, Pcode
Drawing of box culverts with dimensions

**PAYROLL ESCALATION TABLE
FIXED RAISES**

FIRM NAME Millennia Professional Services DATE 03/05/15
 PRIME/SUPPLEMENT Prime PTB NO. _____
 CONTRACT TERM 6 MONTHS OVERHEAD RATE 136.76%
 START DATE 4/1/2015 COMPLEXITY FACTOR _____
 RAISE DATE 2/1/2016 % OF RAISE 3.00%

ESCALATION PER YEAR

4/1/2015 - 9/30/2015				
6				
6				

= 100.00%
 = 1.0000
 The total escalation for this project would be: 0.00%

PAYROLL RATES

FIRM NAME Millennia Professional S **DATE** 03/05/15
PRIME/SUPPLEMENT Prime
PSB NO. _____

ESCALATION FACTOR

CLASSIFICATION	CURRENT RATE	CALCULATED RATE
President	\$80.00	\$80.00
Vice-President	\$63.00	\$63.00
Senior Project Manager	\$60.46	\$60.46
Project Manager	\$46.02	\$46.02
Resident Engineer	\$53.95	\$53.95
Project Engineer	\$46.50	\$46.50
Engineer III	\$31.00	\$31.00
Engineer II	\$28.28	\$28.28
Engineer I	\$21.73	\$21.73
Technician V	\$43.42	\$43.42
Union Technician V	\$37.28	\$37.28
Technician IV	\$34.70	\$34.70
Technician III	\$29.65	\$29.65
Technician II	\$25.02	\$25.02
Technician I	\$17.70	\$17.70
Administrator	\$24.04	\$24.04
Controller	\$38.50	\$38.50
Intern	\$9.24	\$9.24

AVERAGE HOURLY PROJECT RATES

FIRM Millennia Professional Services
PSB _____
PRIME/SUPPLEMENT Prime

DATE 03/05/15

SHEET 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Field Survey			Office Survey			Administration			QJA/QC		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	3/1/2016 Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
President	80.00															
Vice-President	63.00	4	3.28%	2.07												
Senior Project Manager	60.46															
Project Manager	46.02	10	8.20%	3.77												
Resident Engineer	53.95															
Project Engineer	46.50															
Engineer III	31.00															
Engineer II	28.28															
Engineer I	21.73															
Technician V	43.42															
Union Technician V	37.28															
Technician IV	34.70															
Technician III	29.65	48	39.34%	11.67			14.83									
Technician II	25.02	12	9.84%	2.46												
Technician I	17.70	48	39.34%	6.96			8.85									
Administrator	24.04															
Controller	38.50															
Intern	9.24															
TOTALS		122	100%	\$26.93	96	100.00%	\$23.68	18	100%	\$32.02	4	100%	\$63.00	4	100%	\$46.02

