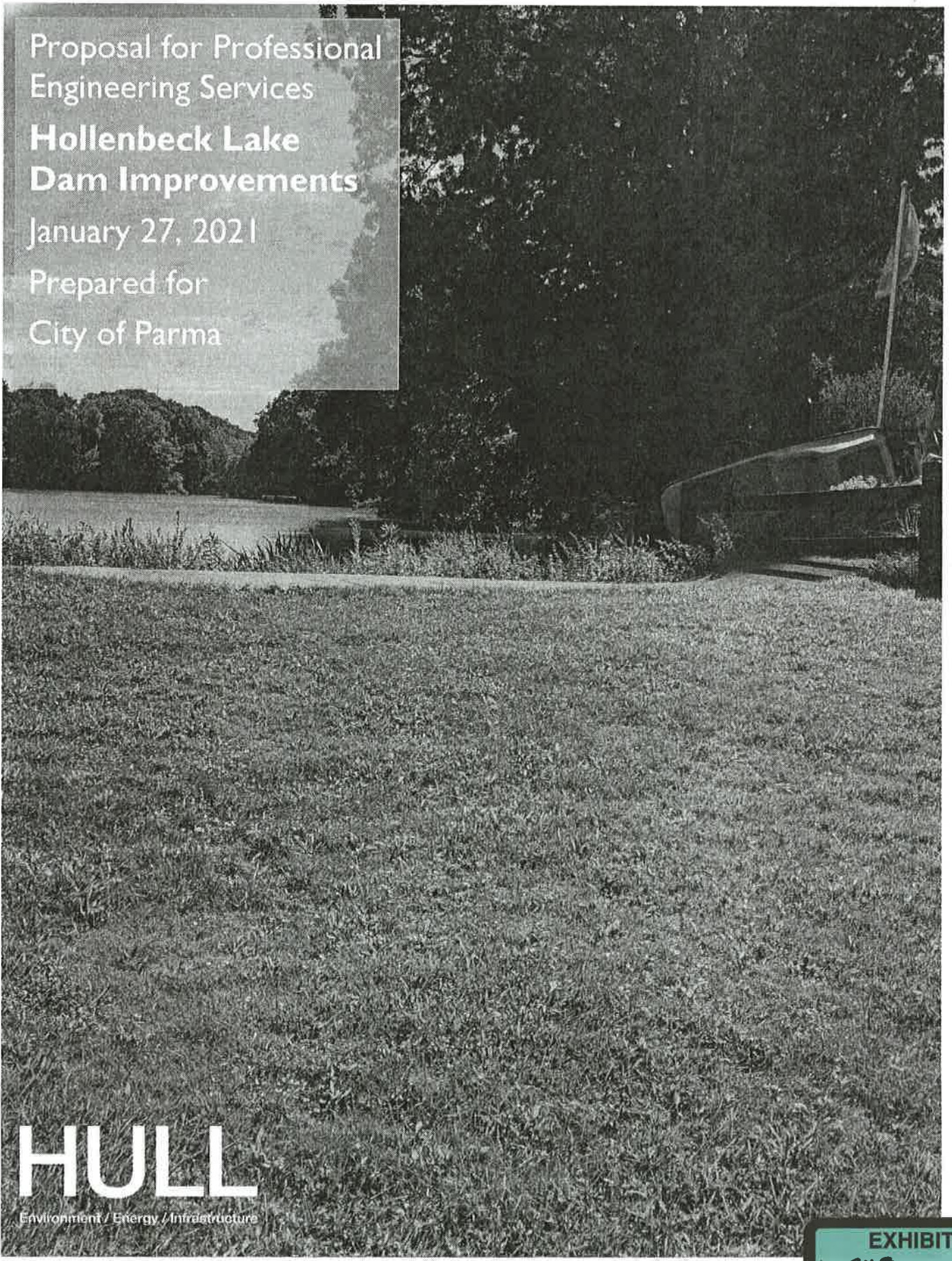


Proposal for Professional
Engineering Services

Hollenbeck Lake Dam Improvements

January 27, 2021

Prepared for
City of Parma



HULL

Environment / Energy / Infrastructure

EXHIBIT B
SUB
L-167-2020

HULL

Environment / Energy / Infrastructure

January 27, 2021

Mr. Patel Hasmukh
Assistant City Engineer, City of Parma
6611 Ridge Road
Parma, Ohio 44129

RE: PROPOSAL – Engineering Services – Hollenbeck Lake Dam Improvements

Dear Mr. Hasmukh:

Thank you for the opportunity to submit this proposal to the City of Parma to provide professional engineering and surveying services for the planning, surveying, and design activities related to the Hollenbeck Lake Dam located in Parma, Cuyahoga County, Ohio. This proposal outlines Hull's approach to help bring the dam into compliance with Ohio Code by addressing noted deficiencies from the Ohio Department of Natural Resources (ODNR) Order dated January 2, 2020.

Hull is a strong fit to complete the scope of work requested by the Client, as we have led dam design, construction, and assessment activities throughout Ohio, and have a strong track record with helping our clients pursue funding opportunities. More specifically, we offer the following reasons why Hull is extraordinarily qualified to be your partner with these efforts:

1. **Relevant, Local and Successful Experience on Dam Improvement Projects:** Hull has been involved with dam and water impoundment improvement projects in Ohio since the mid-1980s and we remain very active in this area. Currently, we are drafting an EAP and OMI for the Loecy Pond Dam in Chardon, OH and exploring alternatives to bring the dam into compliance. In 2018 we completed an EAP, OMI, Inundation Mapping and an alternatives study for the Belmont Hills Country Club Dam and completed engineering certification for the new Shugert Lane Dam construction in Guernsey County.
2. **Local Ohio-Based Experts:** Led by Professional Engineers registered in Ohio and contiguous states, our team provides highly experienced dam engineering and surveying professionals with significant knowledge of dam construction and ODNR regulations. Our Bedford Office will provide the engineering design support for the project and the Dublin Office, St. Clairsville Office and Newark Office will provide engineering and surveying support for this project. Our physical Bedford office is located just 13 miles from the dam.

We fully understand the scope of services required for this project and we are committed to perform this work in a timely and cost-effective manner. We look forward to talking with you soon.

Sincerely,



Matt Marquis, P.E., CFM
Project Manager



AJ Smith, P.E.
Senior Project Manager

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- A. Contract for Engineering Services
- B. 2021 Standard Billing Rate Schedule

Section I | Description of Work to be Performed

Project Understanding

The Hollenbeck Lake Dam (Dam Inventory #I215-001) is located at Lat: 41°22'16.22" Long: -81°44'37.88", approximately 450 feet east of the intersection of Lakeview Court and Arcadia Drive. The Ohio Department of Natural Resources (ODNR) classifies the dam as a Class I (high hazard) structure due to downstream hazard. According to the latest ODNR Division of Water Resources, Dam Safety Division Inspection Report, dated August 28, 2014, it appears that the dam is 23.5 feet tall (Class IV), impounds approximately 95 Ac-ft (Class III) and the downstream hazards identified by ODNR include high value properties or structures, local roadways and the potential for loss of life (Class I).

A Class I dam is required to pass 100% of the Probable Maximum Flood (PMF) or the critical flood as described in OAC Rule 1501:21-13-02(A)(1). Every dam is required to have a spillway system that can safely operate during the design storm as described in OAC Rule 1501:21-13-03(A). Each spillway needs energy dissipation to prevent endangering the safety of the dam as described in OAC Rule 1501:21-13-03(B). For dams with pipe spillways, the dam must have an emergency spillway as described in OAC Rule 1501:21-13-04(F). Finally, all regulated dams must have a device to permit drainage the reservoir within a reasonable period as described in OAC Rule 1501:21-13-06(A).

The principal spillway is located along the upstream slope near the west end of the dam. The principal spillway inlets through an 8-foot x 8-foot vertical concrete riser weir and discharges from the base of the structure via a 5-foot diameter concrete pipe. The lake drain is a 12-inch diameter valve within the concrete riser. The emergency spillway consists of a 20-foot wide concrete control section with 4.5H:1V side slope that discharges to a grass-lined swale along the left abutment of the dam. The significant characteristics of the lake and dam are summarized in Table I below.

Table I – Selected Dam Characteristics (1)

Dam	Classification (Ht-Vol)	Class I (IV-III)
	Crest Elevation	929
	Maximum Height	23.5 feet
	Crest Width	15 feet
	Length	400 feet
Principal Spillway	Spillway Type	8'x8' Conc. Riser to 5' Conc. Pipe
	Spillway Elevation	925.75
Emergency Spillway	Spillway Type	20-foot wide open channel
	Spillway Elevation	927.5
Lake Drain	Drain Dimensions	12-inch diameter valve
Lake	Normal Pool Elevation	927.5
	Normal Pool Area	7.5 Acres
	Estimated Normal Pool Storage Volume	55 acre-feet
	Estimated Top of Dam Storage Volume	95 acre-feet
Capacity	Estimated Spillway Discharge Capacity	15% PMF

(1) Data in the above table, unless otherwise noted, obtained from the ODNR Dam Inventory Sheet updated on April 24, 2015. Elevations are given in feet above mean sea level (msl).

Project Objectives

Hull was provided with Order 2020-101, dated January 2, 2020, written by the Chief of the Division of Water Resources. The following key findings were described in the Order:

- The dam was constructed in 1953
- The original dam spillway failed on or around March 20, 1987.
- On September 19, 1988, ODNR received plans for a two-phase dam repair.
 - Phase I included clearing trees and brush from the embankment, replacing the principal spillway riser and outlet pipe, installing a 20-foot wide emergency spillway, and installing a 20-foot wide cutoff wall at the upstream end of the new emergency spillway. Phase I was completed in August 1989.
 - Phase II included further excavating the emergency spillway to a 60-foot wide channel, replacing the emergency spillway cutoff wall with a new 100-foot-wide cutoff wall, and raising the dam crest by 6 feet. Phase II was never completed.
 -
- On March 29, 2018 the Division sent the dam owners a letter requiring submission of a schedule within 60 days to prepare and submit an Emergency Action Plan (EAP) within 1 year of the date of the letter. A schedule was not submitted. On October 24, 2018 the Division issued a Notice of Violation for failure to submit the schedule.
- On January 22, 2019 the owners submitted a letter outlining the remedial measures that had been addressed.
- On October 3, 2019 the Division performed an inspection of the dam and found the condition to be similar to that of previous inspections.
- The Order requires that the dam owners address the following remedial measures within the following time frames:
 - To Repair the dam:
 - February 15, 2020 – Submit a detailed schedule for full remediation of the dam including finalizing the EAP.
 - April 30, 2020 – Submit the EAP for review.
 - August 30, 2020 – Submit final engineering plans for remediation of the dam.
 - November 1, 2021 – Complete construction of dam remediation.
 - To breach or modify the dam:
 - February 15, 2020 – Submit a detailed schedule for permanent breach or modification of the dam.
 - August 30, 2020 – Submit final engineering plans for permanent breach or modification of the dam.
 - November 1, 2021 – Complete construction of dam breach or modification.

Based on our understanding of the project from review of the 2014 ODNR Inspection Report, the 2020 Order and our recent site visit we have identified the following objectives of the overall project:

1. Submit a new schedule to ODNR. The schedule submission will communicate to ODNR that the dam owners have an engineering consultant on-board to perform the work and provide an updated timeline to complete the EAP and prepare engineering plans and specifications for a repair, modification or breach.
2. Prepare an Emergency Action Plan (EAP) and Operation, Maintenance, and Inspection Manual (OMI).
3. Evaluate alternatives to bring the dam into compliance with ODNR regulations or breach the dam.
4. Prepare a Preliminary Design to submit to ODNR.
5. Complete Final Design and obtain necessary permits.
6. Construct the repair, modification or breach.
7. Certify the construction work.

Project Approach

We have outlined specific tasks to plan, design and implement the project and split these tasks into multiple phases of work.

- Phase I includes submission of a new schedule to ODNR, ground survey at the dam and bathymetric survey within the lake, limited field survey to provide detail on downstream crossings necessary to perform dam breach analysis and inundation mapping for the EAP, and preparation of a hydrologic and hydraulic (H&H) study to support development of an EAP and OMI.
- Phase II includes an alternatives analysis to outline multiple conceptual options including cost comparisons. Phase II will culminate with development of a preliminary design report to submit to ODNR for “buy-in” to the chosen alternative.
- Phase III will cover final design of the chosen alternative. Phase III includes final design and preparation of construction plans and specifications, assistance with bidding and contractor procurement, construction observation and oversight, and engineering certification.

The following Project Scope is our understanding of the necessary tasks to successfully complete the Project. We have provided engineering costs for Phases I and II, but the cost for Phase III will need to be determined at the conclusion of Phase II. We will provide a separate proposal for Phase III services once an alternative is selected.

Scope of Work

The following Scope of Work is based on our understanding of the project, the information shared by the Client, our experience with ODNR and our experience on similar projects. The tasks are split between multiple phases but we have assumed that Phase I and Phase II services will be authorized at the same time.

PHASE I SERVICES

Task IA - Project Planning and Health and Safety

Hull will provide engineering management support in the form of client, design team and regulatory agency coordination, allocation and balancing of resources for the project, participation in conference calls and meetings, Health and Safety Planning, and regular correspondence with the Client through Phases I and II. A site-specific health and safety plan will be developed prior to any field work and signed by all onsite

personnel prior to beginning work in the field. This task assumes the following correspondence type and frequency:

- Kickoff conference call to discuss the Phase I project plan and set expectations for project milestones
- Bi-weekly conference calls (up to 4 calls) to discuss project progress throughout phase I and to address any questions or concerns that may arise during our work
- Kickoff conference call to discuss the Phase II project plan and set expectations for project milestones
- Bi-weekly conference calls (up to 4 calls) to discuss project progress throughout Phase II and to address any questions or concerns that may arise during our work
- Face to face meeting with ODNR at the Morse Road complex in Columbus to discuss the findings of our hydrologic and hydraulic study (Phase I) and Alternatives Analysis (Phase II) and to discuss and resolve any outstanding comments on our project deliverables. This may end up being a virtual meeting.

Task 1B - Site Reconnaissance

Hull will perform a site reconnaissance of critical downstream features (i.e. bridge and culvert crossings). Survey of downstream features will assist with the development of a dam breach study and downstream inundation mapping. This task includes the following scope:

- Survey information at each downstream crossing to the estimated inundation mapping study limits including photographs of each crossing, measurements of bridge openings or culvert sizes, materials, invert elevations of structures, and a limited number of ground shots to establish stream centerline invert elevations and top of roadway elevations
- All survey will be recorded in NAD83 Ohio State Plane Coordinates, with elevations recorded in NAVD88 Vertical Datum

Hull plans to send an engineer to the ODNR Morse Road campus to review the publicly available dam files. Hull will use publicly available LiDAR data from the Ohio Geographically Referenced Information Program (OGRIP) to supplement areas outside the limits of our ground survey and for downstream inundation mapping.

Additionally, Hull will perform a bathymetric survey within the lake to develop an up-to-date stage-storage curve. The ground survey and bathymetric survey within the lake will provide the basis for development of an existing base map to be used in the hydrologic and hydraulic study and as a basis for the development of rehabilitation or repair alternatives in Phase II. This task includes the following scope:

- Ground survey around the perimeter of the lake, along the dam embankment, each principal spillway structure and each auxiliary structure
- Bathymetric survey within the lake
- Survey information at each downstream crossing to the estimated inundation mapping study limits including photographs of each crossing, measurements of bridge openings or culvert sizes, materials, invert elevations of structures, and a limited number of ground shots to establish stream centerline invert elevations and top of roadway elevations

All survey will be recorded in NAD83 Ohio State Plane Coordinates, with elevations recorded in NAVD88 Vertical Datum

Task IC – Hydrologic and Hydraulic Study and Inundation Study

Hull will use the information gathered in Task IB to prepare a hydrologic and hydraulic (H&H) study. The study will consist of hydrologic watershed analysis using publicly available LIDAR, The National Land Classification Dataset (NLCD) for land cover estimates within the watershed, the SSURGO data set to estimate soil types and properties, applicable time of concentration methods to characterize the watershed, and estimation of the probable maximum flood using current probable maximum precipitation values and accepted routing methodologies established by ODNR. The hydraulic analysis of the system of dams will consider the capacity of each dam's spillway system and will include a routing analysis using accepted flood routing software such as the USACE Hydrologic Engineering Center Hydrologic Modeling System (HEC-HMS). Surveyed dimensions and elevations of dam spillways and surveyed bathymetric data will be used in the hydrologic routing analysis.

An EAP for a Class I dam is required to include an inundation map. The inundation mapping is prepared by performing a dam break analysis. The inundation maps will be used by emergency responders to determine which critical downstream structures and/or infrastructure (i.e. homes and businesses or major highways) may be affected in the event of a dam breach. Hull will prepare the inundation mapping for the Hollenbeck Lake Dam using The Hydrologic Engineering Center River Analysis System (HECRAS) developed by the Army Corps of Engineers. The methods and models analyzed will be to the standards acceptable by the ODNR Dam Safety. Hull will use publicly available information, such as ODNR Dam Inventory Sheets, aerial mapping and USGS StreamStats to estimate the hydrologic parameters. This study will consist of a dam break analysis, including 3 assumed dam failure scenarios, and downstream flood routing to ascertain the impact of a dam failure to residential and/or commercial structures. Hull will coordinate with ODNR prior to performing this work to verify the requirements of the study. Inundation maps will be prepared showing the extents of downstream flooding in the event of a dam failure under all three scenarios.

Hull will prepare a summary report that will include a narrative that describes the methods and calculations performed for the Study as well as plan exhibits showing the mapped inundation limits (calculated from Task 4) superimposed on topographic contours and aerial imagery. A draft of the Report will be provided to the Client in electronic format for review and comment. Hull will send the final Report to ODNR once all comments are addressed to the satisfaction of the Client. This task assumes that Hull will address one round of comments from ODNR.

Task ID - Emergency Action Plan

Hull will prepare an EAP that reflects the current conditions of the dam. The EAP will be prepared in an accepted format based on requirements set forth by the ODNR, Division of Water Resources - Dam Safety Section. Hull will provide a draft EAP with inundation mapping to the Client to review prior to submitting a copy to ODNR. This task includes one round of comments from the Client and one round of comments from ODNR. Once the EAP is approved by ODNR, three (3) hardcopies will be submitted to ODNR on behalf of the Client.

Task IE - Operation, Maintenance and Inspection Manual

Hull will prepare an OMI that reflects the current conditions of the dam. The OMI will be prepared in an accepted format based on requirements set forth by ODNR. Hull will provide a draft to the client to review prior to submitting a copy to ODNR. Once the OMI is approved by ODNR, three (3) hardcopies will be submitted to ODNR on behalf of the Client.

PHASE II SERVICES

Task 2A – Alternatives Analysis and Report

Hull plans to use the results from Phase I to develop up to three alternatives to address deficiencies identified by ODNR. On similar projects these alternatives can include lowering the normal pool of the lake, widening the principal and/or emergency spillways, raising the dam crest or in some cases where any one alternative does not achieve the desired a combination of these options may be considered. In rare cases where the required alternatives are not feasible for cost reasons and/or because of site constraints, overtopping protection to armor the dam during a potential overtopping event is another acceptable option by ODNR. The Dam Improvement Alternatives Report will include up to three alternatives for each dam to attempt to address these deficiencies.

The Report includes a narrative portion that briefly describes each alternative and the advantages or disadvantages to the other presented alternatives. A single IIX17 exhibit will be included for each alternative to provide at least a plan and section/profile and any pertinent notes about each alternative. The Report will be presented in electronic format for the Client to review and comment. Once the Client has selected a preferred alternative, Hull will revise the report to present the chosen alternative to ODNR in a face-to-face meeting with ODNR and the Client. All meetings related to review of the Alternatives Analysis and Report and meetings with ODNR is included under Task 1A.

Task 2B – Preliminary Design Report

After meeting with the Client to discuss and select an alternative, Hull plans to revise the Alternatives Report to reflect the chosen alternative to present to ODNR. The preliminary design submittal, in accordance with OAC 1501:21-5-02, will include the supporting H&H analysis, a conceptual site plan and layout, and a brief summary of the proposed improvements and/or justification of the dam classification. This task assumes one round of comments from the Client. All meetings related to review of the Preliminary Design Report and meetings with ODNR is included under Task 1A.

PHASE III SERVICES (future work)

Final Engineering Design

The final design phase will include preparation of drawings and reports for review by ODNR and other stakeholders prior to advancing to the preparation of the final design. The Final Design Report will provide engineering calculations and discussion to support the proposed project improvements. A final estimate of project quantities and construction cost will be included as an appendix to the Report.

Geotechnical Exploration (if required)

Geotechnical exploration including soil borings and lab testing maybe required to support the final design, depending on the chosen alternative. This task would include the site work, lab testing, and summary report.

Permitting Services

The scope of required permitting services will depend on the chosen alternative but may include environmental permitting through the Ohio EPA and US Army Corps of Engineers, ODNR Division of Water Resources, Dam Safety Permit, and the Ohio EPA Construction General Permit.

Bidding Support and Contractor Procurement

Hull will participate in the bidding and award stage as described in Exhibit B A/E scope of services and Exhibit C Minimum Stage Submission Requirements. This includes preparation of appropriate sections of the bid document and attending a pre-bid meeting. Hull will respond to bidder questions and prepare bid

addendum, as needed. Hull will review submitted proposals with ODNR and support ODNR with the selection of the best contractor following ODNR's standard procurement protocols.

Construction Oversight, Testing and Documentation

Hull will complete appropriate construction oversight and administrative support during the construction phase of the project under the leadership of our construction project manager. Hull will assign a field technician to be on-site while the Contractors are performing Work.

Engineering Certification

Hull will prepare as-built drawings and an engineering certification report for submittal to ODNR for construction approval in accordance with OAC Rule 1501:21-15-05. The engineering certification Report will include a summary of the work performed, a hard copy of as-built construction documents, daily field reports from construction observation and a letter statement of certification that the work was completed in accordance with the approved plans and specifications.

Additional Work

Additional work beyond the Scope of Work defined herein shall not be performed until such time as an amendment to this proposal, including the scope of the Additional Work and associated costs, or a new Task Order, has been prepared in writing to address the Additional Work and approved by The Client.

Specific items not within the costs for this proposal include, but are not limited to, the following:

1. Additional meetings beyond those described in this proposal;
2. Dam Inspection;
3. Construction Drawings, specifications and cost estimate for proposed repairs or replacement to existing dam appurtenances (future work);
4. Geotechnical Exploration;
5. Construction Permitting Services (future work);
6. Bidding Services (future work);
7. Construction Contract Administration (future work);
8. Construction Inspections, Materials Engineering and Testing (future work); and,
9. Engineering Certification.

Although these services are excluded from our scope and costs, they can be provided for an additional fee upon request and approval by the Client.

Schedule and Milestones

Hull is available to begin work on this project immediately upon authorization to proceed. A summary of milestones is included in Table 2 and 3 below. Some tasks can be performed concurrently, and we can reduce the overall length of both Phases if they are authorized at the same time.

Table 2 – Phase I Milestones

Milestone	Task Duration	Milestone Date
Authorization to Proceed	1 day	February 8, 2021
Site Reconnaissance and data Compilation Completed	3 weeks	February 26, 2021
Flood Study, EAP and OMI Drafts Submitted to Client	8 weeks (after receipt of ground survey data)	April 23, 2021
Client Meeting to Review Flood Study, EAP and OMI Documents	1 day	TBD
Flood Study, EAP and OMI Submitted to ODNR	1 day	TBD

Table 3 – Phase II Milestones (Assumes Phase II is authorized with Phase I)

Milestone	Task Duration	Milestone Date
Alternatives Report Submitted to Client	8 weeks after receipt of ground survey data)	April 23, 2021
Client Meeting to Review Alternatives Report	1 day	TBD
Preliminary Design Report Submitted to Client	2 weeks (after selection of chosen alternative by Client)	TBD
Client Meeting to Review Alternatives Report	1 day	TBD
Preliminary Design Submitted to ODNR		TBD

Section 2 | Cost of Services

A summary of the costs for each Task proposed is included in the cost tables below. The fees have been developed based on our estimate of hours for each labor category expected to be involved in the project. Actual rates and hours expended for each category may vary based on project personnel used. Additionally, personnel in labor categories not included in the cost tables may be used. It is intended that the Client will be billed for actual labor hours and other project costs with the total project cost not to exceed that shown in the cost summary table, unless additional work is required and approved by the Client. If subcontractor's fees are included, they will be billed to the Client at a rate equal to the subcontractor fee multiplied by 1.15 to recover Hull's contractual liability risk and associated operational expense.

Table 4 – Phase I Cost of Services

Task	Description	Fees
Task 1A	Project Planning and Health and Safety (Phases I and II)	\$ 4,200
Task 1B	Site Reconnaissance	\$ 7,800
Task 1C	Hydrologic and Hydraulic Study and Inundation Mapping	\$ 10,000
Task 1D	Emergency Action Plan (EAP)	\$ 2,500
Task 1E	Operation, Maintenance and Inspection Manual (OMI)	\$ 2,500
Phase I Total		\$ 27,000

Table 5 – Phase II Cost of Services (assumes Phase II is authorized with Phase I)

Task	Description	Fees
Task 2A	Alternative Analysis and Report	\$ 8,000
Task 2B	Preliminary Design Report	\$ 3,000
Phase II Total		\$ 11,000

Total Cost for Phase I and Phase II \$ 38,000

Section 3 | Technical Qualifications

HULL

Environment / Energy / Infrastructure

and initially focused the firm's efforts toward environmental engineering. As the scope of the environmental field expanded in Ohio and across the nation, so did the firm's technical expertise. In 1987, Hull Consulting became Hull & Associates, Inc., and employed a broad range of professionals providing services in virtually all areas of environmental management. In 2015, Hull acquired Jobs Henderson & Associates, Inc. (JHA), a civil engineering and surveying firm in Newark, Ohio providing services to state, municipal, federal and private sector clients. In 2020, Round Table Capital Partners (RTC), a New York based private equity firm, completed an investment in Hull. RTC's partnership in Hull as a platform will allow inorganic and organic growth to serve our clients on a national stage.

Today, Hull is a full-service engineering firm, providing civil, geotechnical, environmental, and surveying services to both private and public-sector clients throughout the State of Ohio and the Midwest. Hull leverages its expertise in infrastructure, property redevelopment, waste management, energy, and environmental engineering to design solutions that meet the client's needs. Hull currently has approximately 150 professionals in eight offices including Columbus (Dublin), Cincinnati (Mason), Newark, Cleveland (Bedford), Toledo, and St. Clairsville, Ohio; Pittsburgh, Pennsylvania; and Austin, Texas.

Dams

Hull has been working on water control and shoreline projects for over thirty years from conception through construction, ranging from dams for municipal water-supply reservoirs to smaller levees, lagoons or dams for settling ponds at industrial processing systems and private recreational lakes. We provide a full range of dam engineering services including design and permitting, subsurface (geotechnical) explorations, siting studies, wetland delineations, surface water permitting, inundation mapping and dam breach studies, construction services, instrumentation monitoring, and emergency action and safety inspections; and are familiar with state design and safety requirements.

Hull & Associates, LLC (Hull) was founded in 1980 as a project development and engineering company that helps business and government solve complex challenges related to land, energy, and the environment – transforming undervalued resources into viable community assets. John Hull, P.E., established Hull Consulting in 1980

Infrastructure

- We focus on providing personal, high quality civil engineering design and land surveying services to all our clients.
- Hull's experience is deeply rooted in transportation, utility design, construction oversight, and facility management, including water distribution, wastewater and stormwater systems.

Environment

- Hull designs innovative strategies to help clients reduce environmental impact and cost.
- Hull has over 25 years of experience in brownfield redevelopment. We are experts in securing funding & implementing assessment, cleanup and redevelopment projects.
- Hull provides environmental assessments and permitting strategies for projects that may affect regulated surface waters, threatened & endangered species and natural resources.
- We have nationally-renowned Professional Wetland Scientists and a team of top-notch ecologists, hydrogeologists, engineers, and other highly technical staff with the ability to assess and restore ecological systems.

Energy

- Hull provides engineering and environmental support services to this industry.
- Hull develops alternative energy projects using diverse technologies. We are uniquely qualified to manage alternative energy project from concept through operation.

Project Team Organization

MATT MARQUIS, P.E., CFM | Project Lead and H&H Modeling Lead, Dublin, OH



Matt will manage all aspects of this project, will assign tasks to team members, and will be the primary point of contact to ODNR. With 10 years of experience, Matt has managed or held critical design team positions on civil engineering, ecological restoration and land development projects where an emphasis is placed on providing creative strategies; meeting regulatory requirements; and streamlining the design, permitting and construction phases of projects. Matt has engineering experience in the design of large earthwork and water resource projects including public and private dams of all sizes. He spent more than two years working on behalf of the Division of Engineering to manage the update of 54 state-owned Class I dam Emergency Action Plans (EAPs) and Operation Maintenance and Inspection Manuals (OMIs). Matt is a Construction Engineering Technology Graduate from the University of Toledo with a Master's Degree in Civil Engineering, with a focus on geotechnical Engineering from Norwich University. Matt is a Certified Floodplain Manager, an active Board Member of the Ohio Dam Safety Organization and a Registered Professional Engineer in Ohio and Pennsylvania.

A.J. SMITH, P.E., CPESC, CESSWI | Civil Engineering Lead and Technical Advisor, St. Clairsville, OH
AJ has engineering experience in the design of geotechnical and water resource projects, including earthen dams. His areas of expertise include hydraulics and hydrology (H&H), geotechnical engineering, and erosion and sediment control. AJ manages design projects and the preparation of construction plans and specifications. He has prepared bid documents and oversees construction QA/QC projects. He has worked with ODNR on the investigation and rehabilitation of multiple state-owned dams.

BRYAN BUTLER | Surveying Lead, St. Clairsville, OH
is the Survey Project Manager at Hull's St. Clairsville office. In this role, he manages the daily activity of the survey crews. Bryan joined Hull in 2017. He attended Ohio Northern University and Oklahoma State University. Bryan manages two survey crews and one survey drone crew and completes drawings for all the surveying performed by his crews. Bryan has worked on all types of surveys and is, therefore, well rounded and understands how to be efficient and accurate while keeping things moving toward the project goal.

■ Grubb Lake Dam | Eden Creek Trust | Licking County, Ohio

CLIENT

Eden Creek Trust
Sarah E. Lynn, Esq.
614-286-8755
Lynnlaw360@gmail.com

KEY TEAM MEMBERS

- Matt Marquis
- AJ Smith

COMPLETION DATE

2017-2018

PROJECT COST

\$37,000

SERVICES PROVIDED

- Class I Dam Regulatory Conformance
- Construction Oversight

Lake Grubb Dam is a Class III dam in Licking County, Ohio. Hull was retained to evaluate the condition of the dam and help the owner address the remedial items in the ODNR Dam Safety inspection report.

Hull performed a hydrologic and hydraulic (H&H) analysis of the lake and spillway system.

Field survey information was gathered to verify elevations and collect data to incorporate into the analysis. Based on the collected information and analysis, Hull designed a repair for the principal spillway to meet all of ODNR Dam Safety's requirements. Below is a summary of the work:

- Submitted results of H&H analysis to ODNR justifying spillway capacity of existing system.
- Designed a slip-line repair to the principal spillway pipe to maintain spillway capacity and minimize repair costs.
- Sized a portable pump capable of acting as the required lake drain and drawing down lake level for repairs.
- Coordinated with contractor to secure bid and schedule work.
- Provided field repair oversight of pipe video inspection and repair.
- Prepared daily field reports documenting work activities.
- Prepared an Emergency Action Plan (EAP) and Operation, Maintenance, and Inspection Manual (OMI).
- Coordinated and provide ODNR with weekly project construction status reports.

Hull prepared a certification report and as-built drawings for submittal to ODNR documenting that the dam has been repaired in conformance with the plans, specifications, and changes approved by Dam Safety. The report included copies of the DFRs and construction photographs to document select construction steps and processes, and a summary of the work activities. Upon completion, the spillway riser was repaired and the normal pool level restored with no excavation or major construction needed on the dam.



■ Shugert Lane Dam | Design & Permitting | Belmont and Guernsey Counties, Ohio

CLIENT

Robert Shugert
Confidential

KEY TEAM MEMBERS

- Aj Smith, Project Manager
- Matt Marquis, H&H
- Jeremy Van Ostran, Survey
- Hugh Crowell, Permitting
- John Hull, QA/QC
- Chris Goddard, Engineer

INVOLVED AGENCIES

- Ohio Department of Natural Resources
- Ohio EPA
- USACE

SUBCONSULTANTS

- Resource International

COST

\$120,000

COMPLETION DATE

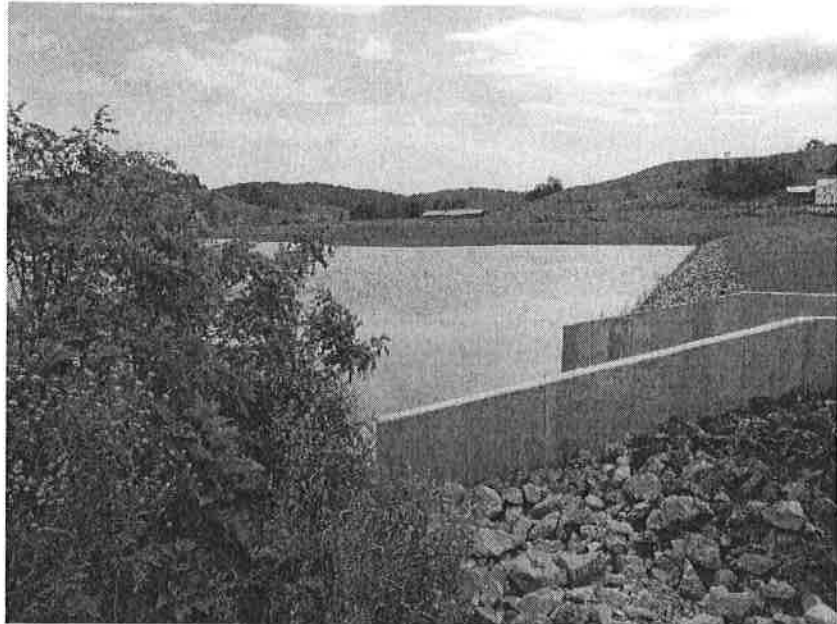
Design: 2015
Construction: 2019

SERVICES PROVIDED

- Civil Engineering
- H&H Studies
- Emergency Action Plan
- Operation, Maintenance & Inspection Manual
- Construction Drawings
- Construction QA/QC

Hull prepared the construction plans and dam permit documents for three proposed in-stream earthen dams in Belmont and Guernsey Counties, Ohio. The proposed dams ranged in height from 25 to 60 feet tall. Hull performed the preliminary layout, geotechnical investigation, hydrologic & hydraulic analyses and final design for the dam structures and spillway systems. The dams incorporated internal drainage features, seepage cutoff trenches, and lake drains.

Hull prepared Emergency Action Plans (EAPs), including inundation mapping based on a dam breach analysis, and Operation Maintenance and Inspection manuals (OMIs). Hull worked closely with the state agency to obtain concurrence of design parameters and work through the review and approval process. Where applicable, design options were considered to lower the proposed classification of the dams and reduce size requirements. During construction of the Shugert Land Dam, Hull proposed and field coordinated a solution involving Aquablok® to reduce the potential for seepage where the lake levels introduced concerns with the designed underdrain system. The Shugert Lane Dam, which is a 25' tall Class II dam, completed construction in 2019 and has been certified by ODNR.



Section 5 | Experience of Key Staff Personnel

■ MATT MARQUIS, P.E. | Project Lead and H&H Modeling Lead, Dublin, OH

HULL

Environment / Energy / Infrastructure

EDUCATION:

- Master of Science, Civil Engineering specializing in Geotechnical Engineering, Norwich University, 2014
- Bachelor of Science, Construction Engineering Technology, University of Toledo, 2011

TRAINING:

- OSHA 40-Hour HAZWOPER
- OSHA 10-Hour Construction Safety
- Dam Breach Analysis and 2-D Floodplain Modeling Using HECRAS, 2018
- Use of River 2D Modeling for Stream Restoration Design, 2016

CERTIFICATIONS:

- Professional Engineer, Ohio (2015, #80696)
- Certified Floodplain manager (2017, #17-10098)

AFFILIATIONS:

- American Society of Civil Engineers (ASCE): Vice President, Central Ohio Section Younger Members Group (2013)
- Association of State Dam Safety Officials (ASDSO)
- Association of State Floodplain Managers, Inc. (ASFPM)
- Water Management Association of Ohio (WMAO)
- Board member for Ohio Dam Safety Organization (ODSO) 2020-21

Years with Hull: 3.5

Other: 6.5

Matt has engineering experience in the design of large earthwork and water resource projects, including earthen dams, landfills, and ash ponds. His areas of expertise include hydraulics and hydrology (H&H) and erosion and sediment control (E&SC). Matt is responsible for managing and assisting with the design and drafting of heavy civil design projects and assists with the preparation of construction plans and specifications. He has worked closely with ODNR on the investigation and rehabilitation of multiple state-owned dams. He spent more than two years managing the update of 54 state-owned Class I dam Emergency Action Plans (EAPs) and Operation Maintenance and Inspection Manuals (OMIs) on behalf of the Division of Engineering.

Matt's expertise includes:

H&H Experience

- Performs watershed analysis using TR-55, TR-20 and rational method.
- Performs dam break studies for traditional valley-fill and upground reservoir style dams using 1-D and 2-D modeling techniques.
- Performs standard H&H calculations including culvert design, channel armoring, riprap sizing techniques, pipe pressure, weir and orifice flow, and design and evaluation of complex outlet structures.

Dam Investigation and Design

- Prepares reservoir routing models to evaluate storage and discharge capacity of dams based on design storm events.
- Performs condition surveys and core sampling of concrete structures.
- Designs abandonment and decommissioning of dams no longer in use.
- Performs dam breach analyses using HEC-RAS and prepares Emergency Action Plans (EAPs) and inundation mapping exhibits.
- Performs hydrologic analyses to design dam spillway channels and pipes, lake drains, drainage ditches, and impoundment closures.
- Oversees soil embankment construction and the testing of cohesive fill.
- Performs periodic dam and levee inspections.
- Prepares erosion & sediment control plans and Storm Water Pollution Prevention Plans for construction sites and performs inspections during construction.
- Prepares construction level drawings including estimation of quantities and construction cost for various design and rehabilitation projects.
- Participates in Probable Failure Mode Analysis exercises.
- Participates in high hazard Dam EAP tabletop exercises.

Selected project experience:

- Bowling Green UG Reservoirs EAP and OMI | Wood County, Ohio
- Belmont Hills Country Club Dam Multiple Design Services | Belmont County, Ohio
- Brightwood Lake dam Multiple Engineering Services | Lake County, Ohio
- Pikewood National Golf Club Dam Inspections | Monongalia County, WV
- Lake Henry Dam Repairs | Belmont County, Ohio
- Naco Lake Dam EAP and OMI | Belmont County, Ohio
- City of Piqua Dam Rehabilitation Study | Various Counties, Ohio
- Shugert Lane Farm Dam EAP and OMI | Guernsey County, Ohio
- McClain Lake Dam EAP and OMI | Licking County, Ohio
- Howard Farms Dam EAP and OMI | Sandusky County, Ohio

■ **A.J. SMITH, P.E.** | Civil Engineering Lead and Technical Advisor, St. Clairsville, OH



EDUCATION:

- Master of Science, Civil Engineering specializing in Geotechnical Engineering, The Ohio State University, 2009
- Bachelor of Science, Civil Engineering, Ohio Northern University, 2002

TRAINING:

- OSHA 40-Hour Health and Safety Training, (2013)
- Erosion and Sediment Control in ODOT Environment, (2012)
- Construction BMP Workshop, (2012)
- Pump Training for Engineers, (2010)
- Storm water Regulation, (2008)
- ASDSO Regional Dam Safety Workshop, (2002, 2003)

CERTIFICATIONS:

- Professional Engineer, Ohio (2007, #71835)
- Professional Engineer, Kentucky, West Virginia, Pennsylvania
- Certified Professional In Erosion and Sediment Control (CPESC), 2007, #3685
- Certified Erosion, Sediment and Storm Water Inspector (CESSWI), 2010, #1199

AFFILIATIONS:

- American Society of Civil Engineers (ASCE): Past President, Central Ohio
- Association of State Dam Safety Officials (ASDSO)
- Ohio Valley Oil & Gas Association (OVOGA) President
- Rotary Club of St. Clairsville

Years with Hull: 8
Other: 11

Aj has engineering experience in the design of geotechnical and water resource projects, including earthen dams. His areas of expertise include hydraulics and hydrology (H&H), geotechnical engineering, and erosion and sediment control. Aj manages design projects and the preparation of construction plans and specifications. He has prepared bid documents and oversees construction QA/QC projects. He has worked with ODNR on the investigation and rehabilitation of multiple state-owned dams.

Aj's expertise includes:

Dam Investigation and Design

- Directs geotechnical subsurface investigations for dam and reservoir design projects.
- Prepares reservoir routing models to evaluate storage and discharge capacity of dams based on storm events.
- Performs condition surveys and core sampling of concrete spillway structures.
- Performs slope stability analyses of earthen embankments for dams and up-ground reservoirs.
- Designs abandonment and decommissioning of dams no longer in use.
- Performs dam breach analyses using HEC-RAS and prepares Emergency Action Plans (EAPs) and inundation maps.
- Performs hydrologic analyses to design dam spillway channels and pipes, lake drains, drainage ditches, and impoundment closures.
- Oversees soil embankment construction and the testing of cohesive fill.
- Performs periodic dam and levee inspections.
- Prepares erosion & sediment control plans and SWPPPs for construction sites and performs inspections during construction.

Selected project experience:

- ODNR Statewide Dam Safety Design Services | Various Counties, Ohio
- Belmont Hills Country Club Dam Analysis | Belmont County, Ohio
- Shugert Lane Dam Design and Certification | Guernsey County, Ohio
- Faith Ranch Dam Inspection | Harrison County, Ohio
- Pine Valley Lake Dam No. 3 & 4 H&H Analyses | Jefferson County, Ohio
- Mingo Sportsman Club Lake Dams | Jefferson County, Ohio
- Lake Choctaw Dam Investigation & Modification | Madison County, Ohio
- Tanglewood Lake Dam Improvements | Geauga County, Ohio
- Lake Lucerne Dam Investigation and EAP | Geauga County, Ohio
- Stroman Lake Dam Improvements | Champaign County, Ohio
- Glass Rock Plant Dam Abandonment | Perry County, Ohio
- Millwood Plant Dams Inspections & Decommissioning | Knox County, Ohio
- Stormwater Pollution Prevention Plans | Various Counties, Ohio
- Jefferson Lake Dam Improvements | Jefferson County, Ohio
- Mills Pride Floodwall and Levee Inspections | Pike County, Ohio
- City of Wellington Upground Reservoir EAP | Lorain County, Ohio
- City of Columbus 9.3 bgal Upground Reservoir | Delaware Co., Ohio
- City of Lima Upground Reservoirs EAPs | Lima, Ohio

■ BRYAN BUTLER | Survey Project Manager, St. Clairsville, OH



EDUCATION:

- Associate in Applied Science, Surveying Technology, Oklahoma State University, 2016
- Bachelor of Science in Technology, Option in Advanced Manufacturing, Ohio Northern University, 2003

SOFTWARE EXPERIENCE:

- Microsoft Office
- Microsoft Windows
- Arc Explorer 2
- Microsoft (Word, Excel, Access, Power Point)
- SurvCAD 2017 Edition (Civil)
- Corel WordPerfect 8
- COGO-PC Plus
- Corpscon for Windows
- Autocad Civil 3D

Years with Hull: 3

Other: 15

Bryan is the Survey Project Manager at Hull's St. Clairsville office. In this role, he manages the daily activity of the survey crews. Bryan joined Hull in 2017. He attended Ohio Northern University and Oklahoma State University. Bryan manages two survey crews and one survey drone crew and completes drawings for all the surveying performed by his crews. Bryan has worked on all types of surveys and is, therefore, well rounded and understands how to be efficient and accurate while keeping things moving toward the project goal.

Bryan's expertise includes:

Oil & Gas Unit Surveying

- Work on numerous permits for oil & gas drilling. Worked with ODNR on many new methods to help producers achieve better lateral results.

Oil & Gas Potential Well pad surveying

- Topography of large land acreage that is used to design well pad and to support other facilities.

Construction Layout

- Layout of hundreds of anchor bolts per job on large building/structure layouts.

Selected project experience:

Oil and Gas Industry

- Stephens Well Pad | Barnesville, Ohio
- McMahon to Shimble Water Transfer Route | St. Clairsville, Ohio
- Porterfield Well Pad | St. Clairsville, Ohio
- Carpenter Impoundment | Barnesville, Ohio
- Dragons Breath Well pad | Centerville, Ohio
- Project Title F | City and/or County, State

Construction Layout

- First Energy Sammis Plant | Stratton, Ohio
- Sams Club | St. Clairsville, Ohio
- Crosby Gas Station | St. Clairsville, Ohio
- Meadowbrook Church | Rayland, Ohio
- Millers AM-PM Gas Station | Caldwell, Ohio
- Pilot/Flying J Station | Steubenville, Ohio

Coal Industry

- West Virginia Resources Bathymetry Survey | Athens, Ohio
- Murray Energy Stock Pile Surveys | Alledonia, Ohio
- Ohio Valley Coal Dam Survey | Alledonia, Ohio
- Rhino Energy Dam Survey | Hopedale, Ohio

Steel Industry

- Wheeling Pittsburgh Steel Blast Furnace | Mingo Junction, Ohio
- Severstal ALTA Survey and Joint Venture | Steubenville, Ohio
- Timet | Toronto, Ohio

Section 6 | References

Hull has successfully completed hundreds of projects. Three references from projects similar to work requested by the Client are listed below. Please let us know if we can provide any more information on the work completed for these clients or whether we can provide additional testimonials or references.

Christopher Cheraso | Landscape Architect | Cleveland Metroparks

(216) 635-3238 | cwcl@clevelandmetroparks.com

Hull is currently working on the Bonnie Park Restoration and Site Improvement project with the Cleveland Metroparks. Mr. Cheraso is the Metroparks' project manager for the project and can attest to the work Hull is performing. Hull designed a low-head dam removal and river restoration along 1300 linear feet of the East Branch of the Rocky River.

Don Freisthler | Water Superintendent | City of Piqua

(937) 778-2090 | dfreisthler@piquaoh.org

Mr. Freisthler is the Superintendent of Water, in charge of water treatment and distribution, as well as source water quality. Their source water is supplied from several small lakes impounded by dams that are interconnected with a canal. Hull provided water quality assessment for the source water system in 2010 and since that time has provided consultation for best management practices to improve surface water quality, including design and implementation of stream restoration of a portion of the canal along the Echo Golf Course. In 2016-2019, Hull provided hydrologic and hydraulic analysis and developed multiple alternatives to bring each of their dams into compliance with ODNR regulations.

Tim Schetter | Director of Natural Resources | Metroparks Toledo

(419) 407-9847 | tim.schetter@metroparkstoledo.com

Tim Schetter is the Director of Natural Resources at Metroparks Toledo. Hull has worked on multiple projects for Metroparks Toledo including ASTM Phase I ESA, Air Permitting Services, Environmental Regulatory Compliance, Manhattan Marsh, and Howard Farms Metroparks.

Attachment A | Contract for Engineering Services

CONTRACT # CNTRCT.300.4233
MASTER AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES

Consultant: Hull & Associates, LLC
6397 Emerald Parkway, Suite 200
Dublin, OH 43016

Client: City of Parma
6611 Ridge Road
Parma, OH 44129

Whereas (Client Name), hereafter referred to as the Client, wishes to retain Hull & Associates, LLC, hereafter referred to as the Consultant, to provide professional services as an independent contractor, and as outlined in Section II of this document, the Client and the Consultant have agreed to the conditions under which such services shall be provided as follows:

I. GENERAL CONDITIONS

1.0 The Consultant shall:

- 1.1 When requested by the Client, select its subcontractors and material vendors as necessary to conduct the project as outlined in the Scope of Work.
- 1.2 Review project-related costs incurred for services performed by project contractors, subcontractors, and material vendors as provided for in the Scope of Work.
- 1.3 Notify the Client in writing and execute a Task Order as described in Section II regarding the specifics and estimated costs of any additional work that is identified during the course of the project and is deemed necessary to meet project goals. This includes any additional work that will be performed by the Consultant or its subcontractors.

No written agreement shall be required for the performance of field investigation activities where additional work may be necessary to complete previously identified tasks as a result of unanticipated or unidentified conditions including, but not limited to, the presence of unidentified or mislocated buried utilities, structures, or objects, and unanticipated hazardous materials. The Consultant shall notify the Client as soon as possible when additional work is required as a result of such circumstances. The Consultant shall be compensated for this additional work in accordance with Section III of this document.

- 1.4 Coordinate project activities with the Client and/or any other specifically identified representative of the Client.
- 1.5 Provide the Client with copies of relevant correspondence, plans, drawings, reports, etc., pertaining to the completion of this project, as requested. Consultant shall retain a copy of project files for its records. This provision shall survive suspension or termination of this Agreement.
- 1.6 Consultant agrees to treat all maps, data, reports, documents, and other information, either generated by Consultant or provided to Consultant by Client, as confidential. The Consultant shall immediately notify Client of any request by any third party for information regarding the Client or the project. The Consultant shall not be liable for disclosure of such confidential information if required by law, pursuant to a legally binding court order or subpoena duly issued by a court of competent jurisdiction, or already available in the public domain. This term shall survive any suspension or termination of this Agreement.

1.7 When included in the scope of work for a specific project, Consultant will provide an opinion of the probable construction cost to implement the work recommended by the Consultant. Consultant is not a professional cost estimator or construction or remediation contractor, nor should Consultant's rendering an opinion of probable construction cost be considered equivalent to the nature and extent of service a professional cost estimator or construction or remediation contractor would provide. Consultant's opinion will be based solely upon its experience or knowledge of similar work and will rely upon a number of assumptions regarding site conditions, methods of construction, and a number of other factors over which Consultant has no control.

2.0 The Client agrees:

2.1 To place at the Consultant's disposal available information within the reasonable knowledge of the Client which is pertinent to the project described under Section II, including previous reports and related documentation, information regarding past operating practices, and any other data relevant to design or construction activities at the project location.

2.2 To arrange for the right of entry by the Consultant upon the site as reasonably required for the Consultant to perform services necessary to complete the project.

2.3 To furnish the Consultant, prior to implementing subsurface investigations, information, in the possession of or known by the Client, identifying the location of buried utilities, structures, or other objects. In addition, the Consultant or its subcontractor, if applicable, will contact the appropriate utility location services to verify these locations and possibly identify other buried utilities that may exist at the site. Based on this information, the Consultant will take precautions in locating surface penetrations to avoid damaging said buried objects. The Consultant is not responsible for damage of buried utilities, structures, or other objects that were known to exist by the Client but not called to the Consultant's attention, were inaccurately located on the plans furnished to the Consultant, or were inaccurately located in the field by others not under contract with the Consultant.

2.4 To compensate the Consultant as stipulated under Section III of this document.

2.5 That no provisions of this Agreement or future amendments thereto, shall prevent the Consultant from practicing within the ethical and professional standards of the Consultant's profession.

II. SCOPE OF WORK

The Consultant shall prepare a Scope of Work and cost estimate (Proposal) for each project governed by this Agreement. A Task Order form (Attachment A) shall be completed for each project, which references the Proposal and this Agreement, and shall be signed by the Client to acknowledge acceptance prior to proceeding with the project. The Scope of Work for specific projects may be amended as agreed upon by the Client and Consultant, in which case a new Task Order form defining the scope and cost of additional work shall be completed and signed by the Client.

III. COMPENSATION

The Consultant agrees to perform the work based on the fee schedule included in the Proposal for each task order or as agreed upon by the Client and Consultant in the case of additional work as outlined in Section I, 1.3. Invoices will be issued monthly throughout the duration of the project, payable within thirty days of the invoice date. For payables delinquent over thirty days, Client shall pay Consultant for costs of collecting payment including interest, collection fees and other reasonable expenses. Consultant retains the right to suspend work on a project in case of non-payment by Client in accordance with Section VI.

IV. RISK ALLOCATION

1.0 Indemnification

- 1.1 Except as provided herein, the Client agrees to indemnify, defend, protect and hold the Consultant harmless from and against any and all losses, costs, damages, expenses (including reasonable attorney's fees and/or costs of defense and/or settlement) or liabilities which the Consultant may suffer or sustain or be liable for and from and against any and all claims, demands and suits for injury or death to any person, including employees of the Consultant, and the Client, and for damage to and destruction of property, including property of the Client, and the Consultant, to the extent caused by the willful misconduct or negligent acts or omissions of the Client or their employees arising out of or in connection with the work performed hereunder and/or due to existing site conditions, except to the extent related to or arising out of the negligent acts or omissions or willful misconduct of the Consultant.
- 1.2 Except as provided herein, the Consultant agrees to indemnify, defend, protect and hold the Client harmless from and against any and all losses, costs, damages, expenses (including reasonable attorney's fees and/or costs of defense and/or settlement) or liabilities which the Client may suffer or sustain or be liable for, and from and against any and all claims, demands, and suits for injury or death to any person, including employees of the Client and the Consultant, and for damage to and destruction of property, including property of the Client and the Consultant, to the extent caused by the willful misconduct or negligent acts or omissions of the Consultant, its employees or its subcontractors, arising out of or connected with the work performed hereunder.
- 1.3 The Client and the Consultant agree that where negligent acts or omissions of the Consultant and the Client are jointly responsible for any liability under the foregoing indemnities, each will indemnify the other on a comparative responsibility basis under comparative negligence principles.
- 1.4 In no event shall either the Client or the Consultant be liable for consequential damages, including, without limitation, loss of use or loss of profits, incurred by one another or their subsidiaries or successors, regardless of whether such damages are caused by a breach of contract, willful misconduct, negligent act or omission, or other wrongful act, whether professional or non-professional, of either of them or their employees.

2.0 Limitation of Liability

- 2.1 The Consultant shall undertake and perform the work in accordance with the standard of care and limitations described in Section VIII. Consultant's liability to Client for any negligent acts or omissions in relation to performing the services as outlined in the Scope of Work or any additional work shall be limited to the insurance limits described in Attachment B.

3.0 Claims

- 3.1 Should Client make a claim against Consultant for any reason relating to the services performed under this Agreement, Client agrees that such claim shall be made within two years after the substantial completion of work, or the Consultant shall have no liability to the Client regarding such claim. If Client makes a claim against Consultant, which is ultimately settled in favor of the Consultant, the Client shall reimburse Consultant for all reasonable legal defense costs incurred as a result of the claim.

- 3.2 Should Consultant make a claim against Client for any reason relating to the services performed under this Agreement, Consultant agrees that such claim shall be made within two years after the substantial completion of work, or the Client shall have no liability to the Consultant regarding such claim. If Consultant makes a claim against Client, which is ultimately settled in favor of the Client, the Consultant shall reimburse Client for all reasonable legal defense costs incurred as a result of the claim.

V. ELECTRONIC DATA

- 1.1 Electronic data transferred to the Consultant from the Client or to the Client from the Consultant, including their independent contractors or agents, is transmitted solely as a convenience to the recipient and shall not be considered "Record Documents". All documents considered "Record Documents" shall be in printed form ("hard copies") and shall be referred to and shall govern in the event of any inconsistency between the hard copy and the electronic data.
- 1.2 In the event the electronic data provided for a specific project is altered in any way, in whole or in part, whether intentionally or unintentionally, or the data is used as part of a future project, the Client agrees to indemnify, defend, protect and hold harmless the Consultant from and against any and all losses, costs, damages, expenses (including reasonable attorney's fees and/or costs of defense and/or settlement) or liabilities which the Client may suffer or sustain or be liable for, and from and against any and all claims, demands, and suits for injury or death to any person, including employees of the Client and the Consultant, and for damage to and destruction of property, including property of the Client and the Consultant.
- 1.3 The Consultant makes no warranty as to the compatibility of the electronic data for any operating system, software, or software version other than that stated in a specific project Scope of Work agreed to by the Client and Consultant.
- 1.4 Electronic files are subject to deterioration due to circumstances including, but not limited to, age, magnetic fields, extreme temperatures, erasure, and alteration whether inadvertent or otherwise. In addition, software and hardware systems can become obsolete. By accepting electronic data, the Client acknowledges these risks and agrees to waive any and all claims against the Consultant in the event such deterioration or alteration occurs.

VI. SUSPENSION/TERMINATION

The Client shall retain the privilege of suspending work or terminating this Agreement at any point during the completion of the project; however, it is agreed that if the project is suspended or terminated, the Client shall give Consultant ten days written notice and shall pay the Consultant for all work completed to the effective date of suspension or termination, whether billed or unbilled, including all costs incurred from subcontractor efforts and other direct costs, prior to the effective date of termination, whether billed or unbilled.

The Consultant shall retain the privilege of suspending work or terminating this Agreement at any point during the completion of the project in the event that unanticipated hazardous substances are discovered on the property during the performance of the work, or if Client is in breach of contract, including non-payment of fees or failure to cooperate in providing Consultant information or access to property as outlined in Section I of this Agreement. Consultant shall notify Client in writing regarding suspension or termination of this Agreement, provided, however, that such notification does not relieve the obligation of the Client to pay for services completed by the Consultant up to the date notice of suspension or termination is given.

VII. AMENDMENT

Any changes to this Agreement shall be in writing and identified as amendments to this Agreement. Such amendments shall be executed by both parties.

VIII. STANDARD OF CARE AND LIMITATIONS

The Consultant shall perform its services using that degree of care and skill ordinarily exercised under similar conditions by reputable members of Consultant's profession practicing in the same or similar locality at the time of service. No other warranty, expressed or implied, is made or intended by our proposal or by our oral or written reports. Conclusions presented by the Consultant regarding the site to be investigated shall be consistent with the Scope of Work, level of effort specified and investigative techniques employed. Reports, opinions, letters, and other documents will not evaluate the presence or absence of any compound or parameter not specifically analyzed and reported. The Consultant makes no guarantees regarding the completeness or accuracy of any information obtained from public or private files or information provided by subcontractors.

IX. ASSIGNMENT

Neither party to this Agreement shall assign its duties and obligations hereunder without the prior written consent of the other party, except that the Consultant may use the services of persons and entities not in its employ, when it is appropriate and customary to do so. Such persons and entities include, but are not limited to, surveyors, specialized consultants, drilling contractors, and testing laboratories.

X. DISPUTE RESOLUTION

If a dispute between parties shall occur, either party shall first notify the other party in writing of the dispute and both parties shall attempt to resolve the dispute through direct correspondence. If the dispute remains unresolved after reasonable attempts to reach an agreement, the parties shall submit the issue to alternative dispute resolution in Columbus, Ohio, in accordance with the then-most current rules of the American Arbitration Association, unless parties mutually agree otherwise.

XI. GOVERNING LAW

This Agreement is to be governed by laws of the State of Ohio.

XII. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement and understanding between the parties and supersedes any prior agreement and understanding, whether written or oral, relating to the subject matter of this Agreement.

XIII. SEVERABILITY

If any provision of this Agreement is found to be invalid or unenforceable, such provision shall be stricken from the Agreement, and all remaining provisions shall remain in full force and effect as if the stricken provision had never been part of this Agreement.

The parties have read the foregoing, understand completely the terms and conditions, and willingly enter into this Agreement.

Hull & Associates, LLC
6397 Emerald Parkway, Suite 200
Dublin, OH 43016
614-362-7000

City of Parma
6611 Ridge Road
Parma, OH 44129
440-885-8110

by: _____

by: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

**ATTACHMENT A
FOR
MASTER SERVICES AGREEMENT FOR PROFESSIONAL SERVICES**

HULL & ASSOCIATES, LLC

**TASK ORDER NO: 001
HULL PROJECT CODE: CTP001
CONTRACT NUMBER: CNTRCT.300.4233**

Subject to the terms and conditions of the above referenced Contract, the Consultant agrees to perform the following Scope of Work as described in the proposal for Engineering Services dated January 27, 2021.

Table I – Phase I Cost of Services

Task	Description	Fees
Task IA	Project Planning and Health and Safety (Phases I and II)	\$ 4,200
Task IB	Site Reconnaissance	\$ 7,800
Task IC	Hydrologic and Hydraulic Study and Inundation Mapping	\$ 10,000
Task ID	Emergency Action Plan	\$ 2,500
Task IE	Operation, Maintenance and Inspection Manual	\$ 2,500
Phase I Total		\$ 27,000

Table 2 – Phase II Cost of Services (assumes Phase II will be authorized at same time as Phase I)

Task	Description	Fees
Task 2A	Alternative Analysis and Report	\$ 8,000
Task 2B	Preliminary Design Report	\$ 3,000
Phase II Total		\$ 11,000

Total Cost for Phase I and Phase II..... \$ 38,000

HULL & ASSOCIATES, LLC PROJECT CONTACT: Matt Marquis, P.E., CFM

CLIENT PROJECT CONTACT: Patel Hasmukh, Assistant City Engineer, City of Parma

CLIENT AUTHORIZATION: _____ DATE: _____

(Please return one signed original to Hull & Associates, LLC's Project Contact and retain one signed original for Client's records)

**ATTACHMENT B
CERTIFICATE OF INSURANCE**



HULL&AS-01

KGODWIN

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

8/10/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Ames & Gough 8300 Greensboro Drive Suite 980 McLean, VA 22102		CONTACT NAME: PHONE (A/C, No, Ext): (703) 827-2277 FAX (A/C, No): (703) 827-2279 E-MAIL ADDRESS: admin@amesgough.com															
INSURED Hull & Associates, LLC 8397 Emerald Parkway, Ste. 200 Dublin, OH 43016		<table border="1"> <thead> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: Axis Surplus Insurance Company, A+ XV</td> <td>26620</td> </tr> <tr> <td>INSURER B: National Fire Insurance Company of Hartford A(XV)</td> <td>20478</td> </tr> <tr> <td>INSURER C: Transportation Insurance Company A(XV)</td> <td>20494</td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </tbody> </table>		INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Axis Surplus Insurance Company, A+ XV	26620	INSURER B: National Fire Insurance Company of Hartford A(XV)	20478	INSURER C: Transportation Insurance Company A(XV)	20494	INSURER D:		INSURER E:		INSURER F:	
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INSURER E:																	
INSURER F:																	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSTR. LTR.	TYPE OF INSURANCE	ADD'L SUBR. INSD. WVD.	POLICY NUMBER	POLICY EFF. (MM/DD/YYYY)	POLICY EXP. (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liab. GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO. <input type="checkbox"/> LOC OTHER:		SP002591-04-2020	6/30/2020	6/30/2021	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 25,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/PROP AGG \$ 2,000,000
B	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY		6080642405	6/30/2020	6/30/2021	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
A	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input checked="" type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 0		SX002592-04-2020	6/30/2020	6/30/2021	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/OWNER EXCLUDED? (Mandatory in WV) If yes, describe under DESCRIPTION OF OPERATIONS below:	Y/N N/A	6080642422	6/30/2020	6/30/2021	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OT14 ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	Professional		SP002591-04-2020	6/30/2020	6/30/2021	Per Claim \$ 1,000,000
A	Liability		SP002591-04-2020	6/30/2020	6/30/2021	Aggregate \$ 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 Cyber Liability Policy #652250617 (insurer: Continental Casualty Company (CNA), NAIC #20443) - Eff. 8/08/2020 Exp. 8/08/2021 - \$1,000,000 Aggregate
 Drone Liability Policy #SIHL 1-E642 - Policy Eff. 11/28/2019 Policy Exp. 11/26/2020 - \$10,000,000 Per Claim

CERTIFICATE HOLDER EVIDENCE OF COVERAGE FOR INFORMATION ONLY	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
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Attachment B | 2021 Standard Billing Rate Schedule

HULL

Environment / Energy / Infrastructure

2021

STANDARD BILLING RATE SCHEDULE

MANAGEMENT STAFF

Senior Principal	\$280
Principal	\$200
Senior Project Manager	\$170
Project Manager	\$145
Government & Community Relations	\$160

ENGINEERS

Principal Engineer	\$200
Senior Engineer	\$170
Project Engineer	\$130
Engineer II	\$115
Engineer I	\$105
Senior Designer	\$120
Designer II	\$105
Designer I	\$90

HYDROGEOLOGISTS

Principal Hydrogeologist	\$200
Senior Hydrogeologist	\$170
Project Hydrogeologist	\$130
Hydrogeologist II	\$115
Hydrogeologist I	\$105

SCIENTISTS

Principal Scientist	\$200
Senior Scientist	\$170
Project Scientist	\$130
Scientist II	\$115
Scientist I	\$105
Project Data Specialist	\$90

SURVEY STAFF

Principal Surveyor	\$170
Project Surveyor	\$130
Surveyor II	\$115
Surveyor I	\$95
Survey Crew Chief	\$90
Survey Crew Member	\$70
Survey Crew	\$160

SUPPORT STAFF

Senior GIS Specialist	\$125
GIS Specialist	\$95
Senior Technician	\$90
Technician II	\$80
Technician I	\$70
Project Management Assistant	\$65

NOTES:

1. Overtime for time worked on a project in excess of 8 hours/day is billed at 1.5 times the standard rate.
2. Higher hourly billing rates may apply for certain services such as rapid response consulting, Ohio Certified Professional, expert witness services, etc. as agreed on a project-specific basis.
3. Standard billing rates are reviewed no less than annually and may be adjusted at those times.
4. Subcontractors and other project expenses are billed in accordance with the specific project agreement.



Hull & Associates, LLC

4 Hemisphere Way | Bedford, Ohio 44146

6397 Emerald Parkway, Suite 200 | Dublin, Ohio 43016

156 Woodrow Avenue, Suite 3 | St. Clairsville, Ohio 43950

59 Grant Street | Newark, Ohio 43055

4770 Duke Drive, Suite 207 | Mason, Ohio 45040

219 South Erie Street | Toledo, Ohio 43604

300 Merchant Lane, Suite 307 | Pittsburgh, Pennsylvania 15205

126 Margaret Circle | Austin, Texas 78737