ORLAND PARK

SCOPE OF WORK AND FEE

TINLEY CREEK
STREAMBANK STABILIZATION

RFP #21-015 | April 6, 2021

Submitted to:
Village of Orland Park, Illinois
Office of the Village Clerk
14700 South Ravinia Avenue, Orland Park, Illinois 60462

Submitted by:
Michael Baker
INTERNATIONAL

PROJECT UNDERSTANDING AND APPROACH

The Village of Orland Park is requesting proposals from qualified firms for the development of final plans, specifications, and estimates (PS&E) for Tinley Creek Streambank Stabilization Project. The project will address significant bank erosion at Tinley Creek caused by urbanization, loss of riparian vegetation, and watershed hydrology changes that have occurred over time.

Michael Baker is very familiar with Tinley Creek, in particular the segments within the Village of Orland Park. We have studied this stream since 2009 when we conducted a feasibility analysis to determine if Tinley Creek should be recommended for detailed design and construction under MWRD's Capital Improvement Program. For this stream, we looked at potential streambank stabilization and flood risk reduction solutions identified in the detailed watershed plan (DWP) for Calumet-Sag Channel, conducted a geotechnical investigation and collected sediment from stream bars and banks to evaluate bank stability design. Based on that analysis, natural channel design was the method recommended for stabilization and flood protection at Tinley Creek. In 2011, Michael Baker started working on the preliminary and final design for the stream stabilization of two segments with a total length of 0.8 miles. The final design, completed in 2014 included bioengineering solutions (soil lifts and rock toe) as well as in-stream structures (rock vanes, rock cross vanes, J-hook vanes) and retaining walls.

We understand the Village is increasing the total length of stream to be stabilized by 0.75 miles within the Village's boundaries, which includes the creek from 151st at the north end of the stream to 162th Street and Laurel Drive at the south end of the stream. Based on our site visit, the new stream segments that are being added to this project have similar erosion issues than the two segments previously designed by us. Our familiarity with the stream and understanding of the erosion issues at hand, give us an edge to get started on the design from the very beginning.

In addition, we know how important it is for the Village to obtain concurrence on the design from MWRD. Michael Baker and our Project Manager, Tatiana Papakos have worked with MWRD on multiple streambank stabilization projects and understand their policies and requirements. We also understand that the success of this project depends on getting the property owners to understand the benefits and impacts of the project on their own property. That is why we have assembled a team of experts that will cover all angles from public and stakeholder outreach, to UAS (unmanned aerial system) with a true imagery and video record of existing conditions, to GIS exhibits of proposed improvements, to easement plats and documents from a professional land surveyor. We have developed a project approach that addresses in detail these critical issues and will provide the Village of Orland Park with construction documents of high quality to successfully build the project. Our approach is described below.

Task 1 | Project Management & Coordination

Tatiana Papakos will be the project manager and single point of contact. Tatiana's philosophy for managing successful projects starts with establishing a project management plan (PMP) at the project onset. The PMP is a project specific document will define the communication, risk factors, contract requirements, quality assurance and quality control guidelines.

Beginning with a complete and thorough understanding of the project and the Village's goals, her management approach focuses on establishing communication/ coordination, scope, schedule, budget, invoicing, and quality control protocols specific to the project. Tatiana will proactively monitor project scope, schedule, and budget and will communicate any identified potential changes with the Village Project Manager. Effective project management is Tatiana's top priority to ensure the Village of Orland Park's overall satisfaction with the project.

Michael Baker proposes to have a kickoff meeting at the onset of the project to layout the project schedule, budget and invoicing requirements, communication strategy, quality assurance and quality control process, and gather available data.

A monthly project management meeting with the Village will be held to report on project progress. In addition, internal meetings will also be held among the different disciplines to coordinate project activities. Tatiana will coordinate throughout the duration of the project with the Village and MWRD, as needed. Michael Baker's project delivery process is shown below.

Task 2 | Data Review & Collection

Our team will review the previous design and available reports. We have access not only to the reports but also background information for the geotechnical, structural, waste characterization, utility conflicts, sediment analysis, bank stabilization analysis, and hydrologic and hydraulic analyses we conducted during the original design. In addition, we will collect any recent information available for Tinley Creek.

Michael Baker will conduct field visits to confirm existing conditions and/or update them based on changes that have occurred since 2014. Prior to any field visit, we will coordinate with the Village and obtain authorization from the residents for site access. Our team will walk the stream to assess the development of the creek over time. This site assessment information will be used to calculate the size, shape, and frequency of instream structures and bank stabilization measures using sound engineering principles that have been exhaustively tested and detailed in the federal government's USDA NRCS National Engineering Handbook Part 654. Streams are dynamic and respond to changes throughout their watershed. So, it's important to understand their stability given current and potential future changes.

The site assessment and topographic data will also help update the bankfull widths of the original segments and determine bankfull widths for the new segments. There are indicators where benches have formed that tell us what the bankfull width is trying to be. We'll use bankfull and channel width to verify/determine spacing of in-stream structures.

Michael Baker's surveyor for this project, DB Sterlin, will update and collect new topographic survey. DB Sterlin conducted the original survey in 2012 and have the base files to easily and cost-effectively revise the survey data for the stream segments in the original design and survey the new stream segments. The topographic will include establishing horizontal and vertical controls, performing roadway and utility surveys, locating flagged utilities, flagged wetlands, and marked geotechnical borings.

Collection of cross-section data is necessary to accurately model the new stream segments for Tinley Creek. A detailed hydraulic survey of the channel is critical to include the channel thalweg, shape, bank elevations, and channel bed material. DB Sterlin will provide the hydraulic survey assuming cross section taken every 200 feet on the new stream segments. This data has already been collected for the original stream segments and will be verified or revised based on changed conditions once the topographic survey has been updated.

DB Sterlin will also perform a property survey for the properties to be impacted by the project. It is anticipated that approximately 50 residential properties and 2 commercial properties will be impacted by the project. This survey will be based on a boundary analysis and contain required information to determine and obtain permanent and temporary easements. It is assumed that title commitments for the 52 properties will be provided by the Village.

To assist the team in creating a photographic record of current conditions, Michael Baker proposes to utilize unmanned aerial systems (UAS) to collect photos and video of the stream and document each property location. This method will efficiently capture the existing condition of the stream while informing the design team of problematic areas along the creek banks.

Michael Baker has been implementing UAS into engineering applications since 2015 and has learned the value that UAS can add to small footprint projects like this one. Michael Baker's UAS capabilities range from technical applications like surveying and mapping, volumetric calculations, bridge and tower inspections, and digital surface creation to interactive 360-degree panoramic photos, marketing videos, and strategic progress photos to capture the lifecycle of a construction project or similar activity. The value of this wide range of experience is evident in the products we are able to provide to our clients that are a tailored solution to their needs. UAS provides unparalleled access and versatility in difficult access locations while collecting more relevant project data than most traditional methods.

An example of the data that UAS provides is shown in the figure above. The UAS's GPS location is recorded and displayed in a map view (right) alongside the video of the creek (left).

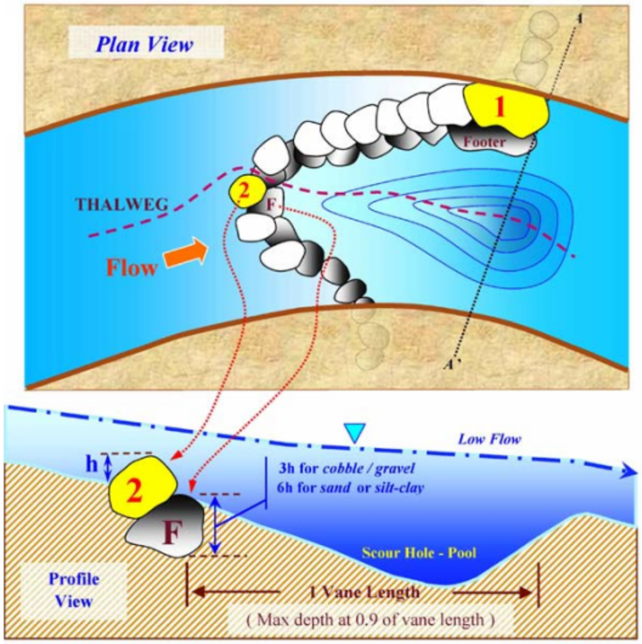
The UAS work can only be completed with permission of the property owners, which will be coordinated as part of Michael Baker and the Village's correspondence to them about the project.

Our subconsultant Wang will perform a geotechnical analysis for the new stream segments that where not part of Michael Baker's original design and may need a retention wall. We have assumed that approximately 8 borings up to a depth of 20 feet below existing grade will be needed. Soil testing will include natural moisture content, Atterberg limits, and particle size distribution. In addition, Wang will analyze soil samples for chemical testing for clean construction or demolition debris (CCDD) to characterize the soil for proper disposal. A geophysical survey using GPR will also be conducted to located utilities.

Task 3 | Streambank Stabilization, 30% Design

Our subconsultant Aqua Vitae (Gary Paradoski), will work closely with our streambank stabilization staff on the natural channel design. Gary is extremely familiar with Tinley Creek as he led the original streambank stabilization design while he was working at Michael Baker and directed all the site investigations and design elements.

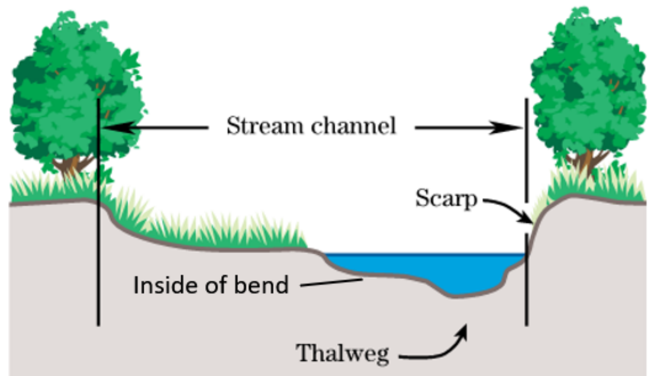
Michael Baker's original design addressed all streambank erosion concerns that were underway in 2014 through a combination of practices that work in conjunction with each other. The in-stream structures used in the original design (rock vanes, rock cross vanes, j-hook vanes) are used to divert stream flow away from the eroded slope and towards the center of the stream. The figure on the next page illustrates a typical cross vane with redirected flow path to the center of the stream.



This allows sediment from upstream to deposit and shifts the thalweg away from the banks. Correct spacing of vanes will maintain or flatten the creek bed slope and reduce velocities. Soil lifts and rock toe are used to stabilize steep slopes. These natural channel design techniques will be re-evaluated to determine if they still apply under the current bank conditions.

Additional streambank treatments such as bank grading focused on addressing erosion are included in the original design. Bank grading is the optimal stream bank stabilization solution for many reasons. First, it reduces high flow velocities and helps maintain or reduce the flood elevation. Second, it allows the residents to engage and enjoy their creek by creating safe conditions for access. Third, bank grading allows vegetation to grow, which improves habitat and meets the USACE permit conditions. Bank grading occurs above the normal water level where velocities are significantly lower and seed/plugs can quickly become established. This is done successfully and routinely on many IDOT and Tollway stream crossings throughout the entire region and is widely accepted and encouraged by the USACE. Furthermore, the use of native vegetation for bank cover has a high tolerance for road salts and captures pollutants to help improve the water quality of the creek.

CBBEL's Tinley Creek Memo dated July 30, 2020 recommends adding toe scour protection such as riprap or coir logs to all areas where stabilization is being proposed. Rock Toe is used only on the outside of bends, which is where velocities are higher and erosion occurs along stream banks. Erosion does not happen along the inside of bends since velocities are significantly lower there and benches or bars form there (as shown in the figure below). Rock toe on the inside of a bend exacerbates the erosion problem since it speeds up and pushes higher velocities toward the outside.



Coir Logs and Staking are insufficient for toe stabilization since they cannot withstand scour velocities and quickly break down from exposure to creek flows. Coir logs are routinely used within ditches since they can be shaped to function like cross-vanes within the ditch "channel"; however, coir logs fail when used longitudinally as stream bank toe stabilization.

Based on our site visit, portions of the new stream segments will require retention walls, which could be gabion walls, sheet pile walls, or soldier pile walls. Our multi-disciplinary team has geotechnical and structural engineering experts that will design the most appropriate wall type for each application. Retaining Walls were used in the original design to meet the MWRD criteria for protecting infrastructure within a certain distance from the stream banks. Walls speed up stream velocities and deflect energy onto the adjacent properties and downstream, which is why the USACE limits the length of walls allowed for a permit. Retaining walls are very costly too and were limited in the original design to maintain construction budget.

Michael Baker will perform a structural evaluation of current conditions including field review, review of surveyed conditions, constructability evaluation of previously designed walls for any changed conditions, and coordination with hydraulic and civil engineers to determine the required plan locations and top and bottom retaining wall profiles based on current conditions.

It is assumed that the current conditions within the limits of the previously designed retaining walls have not changed significantly and the existing designs and dimensions are still valid. The 2014 Structural Plans were designed in accordance with 2012 AASHTO LRFD Bridge Design Specifications. Designs will be verified and updated against the current 2020 AASHTO LRFD Bridge Design Specifications. Reinforcement detailing and retaining wall quantities will be updated and incorporated into the plans.

CBBEL's Tinley Creek Memo indicates that additional retaining walls are required within the original stream segments and new retaining walls will be required within the new stream segments as well, based on a Tinley Creek field evaluation performed by CBBEL. A total of 2 new retaining walls and 4 new gabion walls are proposed. Structural Design, plans and details for the 6 new walls will be performed by Michael Baker.

Deliverables under this task include 30% design plans. The 30% design plans for the project will include: general sheets, civil plans, and structural plans.

Task 4 | Streambank Stabilization, 60% Design

Michael Baker will address comments provided on the 30% design submittal and will prepare 60% design plans, specification, and construction cost. The 60% design plans for the project will include: general sheets, civil plans, landscaping plans, and structural plans.

Easement documents will be prepared by our subconsultant and professional land surveyor DB Sterlin. It is assumed that approximately 52 properties will be impacted by the project. Drawings will be prepared for each of the 52 properties depicting standard legal property survey information and showing the permanent, temporary, and construction easement boundaries required for the project. The information will be included in a basic exhibit, unstamped drawings (one per property) which indicate limits and bearings of the easements, property lines, and related information to be shared with the property owners. In addition, plats of easements that can be used to execute easement agreements will be produced for each property. The easement agreements will be produced and executed by the village of Orland Park.

Michael Baker will identify properties that are not critical to the success of the project and will work with the Village to obtain agreement from the property owners that have properties critical to the project.

Task 5 | Streambank Stabilization, 90% Design

Michael Baker will address comments provided on the 60% design submittal and will prepare 90% design plans, specification, construction cost, and construction schedule. The 90% design plans for the project will include: general sheets, civil plans, landscaping plans, and structural plans, and details.

Michael Baker will prepare an annual operation and maintenance cost of the stream improvements over a 20-year period.

Task 6 | Stakeholder and Public Outreach

Public involvement and outreach are key elements in understanding how the project will impact the community directly and what is their response. Michael Baker will prepare for and attend a public meeting hosted by the Village. We will prepare and mail meeting invitation letters, prepare a power point presentation, and prepare the exhibits for each property showing the project impacts and easements. We will prepare for and attend up to 5 meetings with the property owners and/or homeowner associations to explain the project impacts and discuss the temporary and permanent easements that affect their property. Our subconsultant DB Sterlin will prepare the required easement documents (under Task 2 and 4). We will work closely with the Village to make sure the residents' concerns are addressed, and they clearly understand the changes to their property as a result of the project.

Task 7 | Permitting

Michael Baker worked with MWRD during the original design and secured the required permits for the project including USACE 404 joint permit, IEPA 401 certification, IDNR, and MWRD WMO permit. Most of these permits have expired and/or will need to be modified to include design updates and proposed work on new stream segments. Michael Baker and its subconsultant WBK will review the original plans and permits and work together to prepare the required permit applications and secure the permits. Each site will be assessed to ensure that the proposed solution does not adversely affect wetlands, threatened or endangered species (TES). The National Wetlands Inventory and TES data obtained from the USFWS will be used as a preliminary assessment. In addition, we'll use supplemental data with more detail from MWRD for wetlands and TES obtained during the original design. Any permits required for implementation will be determined during the 30% design phase and Illinois DNR and USACE will be contacted to ensure that the sites are permitted properly.

Michael Baker and our team partner, WBK, will perform the wetland delineation, TES determination, EcoCAT, USFWS Section 7 consultation, permit requirement assessment, IHPA cultural review, Will South Cook Soil and Water Conservation District (SWCD) soil erosion and sediment control (SESC), prepare maintenance and monitoring plan per permit requirements for wetlands and buffer restoration, provide mitigation bank assistance if needed, prepare the MWRD WMO permit application, and attend up to four meetings with the regulatory agencies.

We have assumed the project can be permitted under the USACE Regional Permit 10 for Bank Stabilization with less than 500-feet of structural stabilization (no limit on biotechnical stabilization). If the Regional Permit Program expires before the permit is received (April 2022), then we anticipate the project can be permitted under a Letter of Permission (LOP) with less than 1 acre of wetland and waters impacts. Both the Regional Permit and LOP have no limits on biotechnical stabilization, but impacts will need to be under 1-acre of wetland or waters of the US.

The following permitting fee estimates are included in our proposal: $125 for the IDNR EcoCAT $5,000 for the SWCD SESC review and inspection fees, and $4,350 for the MWRD permit.

The Michael Baker team prepared an environmental analysis to determine soil contamination as part of the original design. The results of the analytical sampling determined that no contamination was encountered. For the new stream segments, Michael Baker will conduct analytical sampling to characterize the soil for proper disposal. This will be performed at the same time as the geotechnical analysis.

Task 8 | Bidding Support

Michael Baker will prepare a final plan, specifications, and construction cost estimate (PS&E) package that will be used by the Village to solicit bids for construction of the project. We will provide bidding support by preparing the invitation for bids, reviewing the bids, responding to bidder questions, and providing addendum support.

Task 9 | Construction Engineering & Observation Services

Michael Baker will prepare a scope of work for providing construction engineering support and observation services.

PROJECT SCHEDULE

We understand the importance of meeting the deliverable deadlines, and our reputable team is dedicated to meeting each task milestone for all assignments. Our full-service team of experts has the ability to be flexible and available so that we can deliver the project within the Village of Orland Park's timeline. Michael Baker has prepared the project schedule shown below. The schedule is based on the scope of work provided in the RFP and in this proposal. Keeping track of the schedule will allow us to update and regularly monitor project progress, costs, labor, and define critical path tasks. As the project progresses, if any schedule changes are anticipated, we will promptly notify the Village and submit an updated detailed Project Schedule.

NUMBER	TASK	START	END	DAYS
1	Task 1: Project Management and Coordination			
1.1	Notice to Proceed	Mon 5/3/21	Mon 5/3/21	1
1.2	Kick-off Meeting	Mon 5/10/21	Mon 5/10/21	1
1.3	Progress/Coordination Meetings	Mon 6/1/21	Sun 11/30/22	540
2	Task 2: Data Review and Collection			
2.1	Review existing design	Tue 5/11/21	Tue 5/25/21	10
2.2	Data collection	Tue 5/11/21	Fri 6/18/21	30
2.3	Field visits	Mon 5/24/21	Fri 5/28/21	2
2.4	Topographic survey	Tue 6/1/21	Fri 6/4/21	4
2.5	Photographic/video record - UAS	Mon 11/22/21	Fri 11/26/21	5
2.6	Geotechnical investigation	Mon 6/7/21	Fri 6/11/21	5
2.7	Utility locations	Mon 6/7/21	Fri 6/11/21	5
3	Task 3: Streambank Stabilization 30% Design			
3.1	H&H Modeling	Mon 6/21/21	Fri 7/16/21	20
3.2	Natural Channel Design	Thu 7/1/21	Fri 9/17/21	60
3.3	Structural Design	Mon 6/21/21	Fri 7/30/21	30
3.4	30% design deliverable	Mon 8/2/21	Fri 10/22/21	60
4	Task 4: Streambank Stabilization 60% Design			
4.1	Easement Documents	Mon 9/20/21	Fri 12/31/21	70
4.2	Construction Cost	Mon 10/25/21	Thu 11/25/21	20
4.3	60% design deliverable	Mon 10/25/21	Fri 12/31/21	50
5	Task 5: Streambank Stabilization 90% Design			
5.1	Construction Cost	Mon 1/3/22	Fri 1/28/22	20
5.2	90% design deliverable	Mon 1/3/22	Fri 1/28/22	20
6	Task 6: Stakeholder and Public Outreach			
6.1	Public Meeting	Mon 1/3/22	Fri 1/7/22	5
6.2	Public Outreach with Individual Owners	Mon 1/10/22	Fri 2/25/22	35
7	Task 7: Permitting			
7.1	Permitting	Mon 1/3/22	Mon 3/28/22	90
8	Task 8: Bidding Support			
8.1	Final PS&E package	Mon 2/28/22	Fri 3/18/22	15
8.2	Bidding Process (Review Bids, Questions, Addendums)	Mon 3/21/22	Fri 4/15/22	20
9	Task 9: Construction Engineering & Observation Support			
9.1	Scope for construction engineering & observation services	Mon 2/28/22	Fri 3/18/22	15

PROFESSIONAL FEE

Project Name: **Tinley Creek Streambank Stabilization** | **Total Project (With ODCs) =** **$ 649,460.20**

Client: **Village of Orland Park** | **Total Project Hours =** **3,247**

Task #	Description	Principal		PM/QA-QC		Sr. PM		PE/Designer		GIS/Env		EIT/H&H/CAD		Sub/ODCs		Total
		$338 /hr		$162 /hr		$176 /hr		$122 /hr		$95 /hr		$100 /hr				
		Time	Cost		Cost	Time	Cost	Time	Cost	Time	Cost	Time	Cost	Sub	Cost	
1	**Project Management and Coordination**															
1	kickoff meeting			2	$324	2	$351					2	$200			$875
2	PMP and subconsultant agreements	1	$338	24	$3,888											$4,226
3	invoicing and project schedule and budget	2	$675	26	$4,212											$4,887
4	Internal meetings/coordination	3	$1,013	36	$5,832			4	$486	2	$189	4	$400			$7,919
5	Monthly project progress meetings			36	$5,832					4	$378					$6,210
6	Coordination with Village & MWRD			18	$2,916											$2,916
	Subtotal =	6	$2,025	142	$23,004	2	$351	4	$486	6	$567	6	$599			$27,032
2	**Data Review and Collection**															
1	Review existing design			8	$1,296	12	$2,106					12	$1,199	Aqua Vitae	$1,200	$5,801
2	Field visits (2)			8	$1,296			8	$972			8	$799	Aqua Vitae	$1,200	$4,267
3	Topographic Survey													DB Sterlin	$55,628	$55,628
4	Hydraulic survey													DB Sterlin	$7,337	$7,337
5	Photographic/video record - UAS					49	$8,600					16	$1,598			$10,198
6	Geotechnical investigation													Wang	$45,700	$45,700
7	Utility locations													Wang	$10,000	$10,000
	Subtotal =			16	$2,592	61	$10,706	8	$972			36	$3,596		$121,065	$138,931
3	**Streambank Stabilization 30% Design**															
1	H&H Modeling			12	$1,944					8	$756	40	$3,996			$6,696
2	Natural Channel Design			24	$3,888	24	$4,212			8	$756	8	$799	Aqua Vitae	$6,000	$15,655
3	Structural Design and 30% plans					149	$26,150	477	$57,956							$84,105
4	30% plans (all, except structural & SESC)							92	$11,178			536	$53,546			$64,724
5	QC Reviews			76	$12,312											$12,312
	Subtotal =			112	$18,144	173	$30,362	569	$69,134	16	$1,512	584	$58,342		$6,000	$183,493
4	**Streambank Stabilization 60% Design**															
1	Easement Documents													DB Sterlin	$57,278	$57,278
2	60% Construction Cost							12	$1,458			24	$2,398			$3,856
3	60% plans (all, except structural & SESC)							46	$5,589			268	$26,773			$32,362
4	60% Specifications							12	$1,458							$1,458
5	Structural Design and 60% plans					75	$13,163	238	$28,917							$42,080
6	Planting Design									18	$1,701			WBK	$21,816	$23,517
7	Erosion and Sediment Control and plans											40	$3,996			$3,996
8	Identification of Critical Properties					2	$351					12	$1,199			$1,550
9	QC Reviews			32	$5,184											$5,184
	Subtotal =			32	$5,184	77	$13,514	308	$37,422	18	$1,701	344	$34,366		$79,094	$171,280
5	**Streambank Stabilization 90% Design**															
1	90% Construction Cost							4	$486			12	$1,199			$1,685
2	90% Plans							12	$1,458			80	$7,992			$9,450
3	90% Specifications							40	$4,860							$4,860
4	Annual O&M Cost							8	$972			24	$2,398			$3,370
5	Construction Schedule			8	$1,296											$1,296
6	QC Reviews			12	$1,944											$1,944
	Subtotal =			20	$3,240			64	$7,776			116	$11,588			$22,604
6	**Stakeholder and Public Outreach**															
1	Public Meeting (Materials, Preparation and Attendance)			32	$5,184	24	$4,212			24	$2,268			WBK	$5,788	$17,452
2	Public Outreach with Individual Owners (5 meetings)			5	$810	20	$3,510									$4,320
3	Individual Property Owners Exhibits							16	$1,944	156	$14,742					$16,686
4	Meeting with Village Board of Trustees			8	$1,296	10	$1,755									$3,051
	Subtotal =			45	$7,290	54	$9,477	16	$1,944	180	$17,010				$5,788	$41,509
7	**Permitting**															
1	Wetland Assessment and Delineation									24	$2,268			WBK	$10,224	$12,492
2	Environmental Permit Applications and Fees (USACE, EcoCAT, USFWS, IHPA, SWCD)													WBK	$18,173	$18,173
3	MWRD Permit Application			8	$1,296							24	$2,398			$3,694
4	IDNR-OWR Permit Application			8	$1,296					16	$1,512	32	$3,197			$6,005
5	QC Reviews			16	$2,592											$2,592
	Subtotal =			32	$5,184					40	$3,780	56	$5,594		$28,397	$42,955
8	**Bidding Support**															
1	Final PS&E package			8	$1,296			20	$2,430			24	$2,398			$6,124
2	Review Bids					16	$2,808									$2,808
3	Respond to Bidder Questions					4	$702									$702
4	Revisions to Plan and Specs for Adendum											12	$1,199			$1,199
	Subtotal =			8	$1,296	20	$3,510	20	$2,430			36	$3,596			$10,832
9	**Construction Engineering Support**															
1	Scope of Work for Construction Engineering			2	$324	18	$3,159									$3,483
	Subtotal =			2	$324	18	$3,159									$3,483
ODCs																
	Field visit expenses (2 visits - 4 people)														$800	$800
	Field visit expenses (UAS)														$1,990	$1,990
	MWRD Permit fees														$4,350	$4,350
	Reproduction (b&w and color copies)														$200	$200
	Subtotal =														$7,340	$7,340
	Total without ODC =	6	$2,025	409	$66,258	405	$71,078	989	$120,164	260	$24,570	1,178	$117,682		$240,344	$642,120
															Total With ODCs	$649,460

Notes:

Per meeting cost with individual property owners is $864