Ulster County Soil and Water Conservation District is seeking proposals for engineering and design services for a stream restoration project in Shandaken, NY.

This project is located on Broadstreet Hollow Creek in the Ashokan Reservoir watershed, within the NYC Water Supply watershed. The project is funded through a cooperative agreement between NYC Department of Environmental Protection and the Ulster County Soil and Water Conservation District as part of the Ashokan Watershed Stream Management Program.

The primary objective of the project is to protect water quality and reduce turbidity caused by stream channel, bank, and hillslope erosion. Restoration design will aim to improve geomorphic stability of approximately 1,300 linear feet of channel and involve stabilization of streambanks, high terraces, hillslope failures along with minor changes to channel alignment and in-stream structures with consideration of protecting or enhancing aquatic and riparian habitat.

A contract will be awarded based on the RFP evaluation criteria including ability to meet stated requirements, client references, solution approach, price and other factors detailed in the RFP.

Interested firms should review the supplied RFP and email any follow up questions to Bobby Taylor, who is the primary point of contact for this RFP. Proposals are due **January 16, 2025**.

Thank you for your interest and we look forward to learning more about your company, team, and services.



STREAM RESTORATION DESIGN, ENGINEERING, AND CONSTRUCTION SUPPORT SERVICES

REQUEST FOR PROPOSALS

BROADSTREET HOLLOW CREEK Town of Shandaken Ulster County, NY

OCTOBER 18, 2024

Proposals must be received by 4:00 pm on January 16, 2024

REQUEST FOR PROPOSALS

Broadstreet Hollow Stream Restoration Project Design, Engineering, and Construction Support Town of Shandaken, Ulster County, New York

PURPOSE

Ulster County Soil and Water Conservation District seeks to secure a qualified firm to provide design and engineering services for a stream restoration project along Broadstreet Hollow Creek in the Town of Shandaken, Ulster County, NY. The project is located within the New York City Water Supply Watershed in the Ashokan Reservoir drainage basin. Project work is anticipated to begin in November 2024 with the project going to construction summer 2026. The project is funded through a cooperative agreement between the NYC Department of Environmental Protection (NYCDEP) and the Ulster County Soil and Water Conservation District (UCSWCD) as part of the Ashokan Watershed Stream Management Program (AWSMP).

BACKGROUND

The Ashokan Watershed Stream Management Program is a partnership between Ulster County Soil and Water Conservation District, Cornell Cooperative Extension of Ulster County, and New York City Department of Environmental Protection. The program aims to maintain and improve the health of streams in the Ashokan Reservoir Watershed through grant programs, community education, assessment and monitoring, and coordinating stream management activities in the watershed. An important focus of the program is protecting and improving water quality through stream restoration, targeting reaches with chronic geomorphic instability and erosion of fine sediment sources producing turbidity. To date, there have been 17 large scale full channel restoration projects within the Ashokan Reservoir Watershed implemented by UCSWCD and AWSMP partners that were largely or fully funded by the NYCDEP.

To identify and prioritize reaches for stream restoration, the AWSMP conducts assessments and Stream Feature Inventories (SFI) of major streams and tributaries supplying the Ashokan Reservoir and summarizes observed conditions and recommendations in Stream Management Plans. In 2001, a stream assessment on Broadstreet Hollow Creek, a major tributary to Esopus Creek, mapped significant erosion and geomorphic instability in Management Units 14 and 15 (MU-14 and MU-15) in the lower reaches of the tributary. This data was reported in the 2003 Broadstreet Hollow Stream Management Plan and several sites of erosion in these management units were identified as some of the leading sources of fine sediment and turbidity in Broadstreet Hollow and were recommended for full channel restoration. In a repeat assessment and SFI completed in 2023, in which NYCDEP contracted with SLR Inc., unstable conditions observed in MU-14 and 15 have persisted and continue to be a major source of turbidity.

The AWSMP is seeking to stabilize and restore a section of Broadstreet Hollow recommended for restoration to reduce turbidity, while utilizing approaches that protect or enhance aquatic and riparian ecosystem functions.

PROJECT DESCRIPTION

The project location is on Broadstreet Hollow Creek, a tributary to the upper Esopus Creek in the Town of Shandaken, Ulster County, NY. The project is located approximately 1500 feet upstream from the confluence with Esopus Creek on private property, involving multiple landowners. The extent of project is anticipated to be approximately 1300 linear feet of channel and involves the stabilization of streambanks, high terraces, and

hillslope failures along with minor changes to channel alignment and instream structures as deemed necessary through engineering assessment.

The primary objective of the project is to protect water quality by preventing erosional contact with lacustrine clay exposed in streambanks and intermittently in the channel bed and address geomorphic instability in the channel and adjacent slopes leading to turbidity production in the reach. The SFI conducted in 2023 recorded 284 ft of erosion into a high terrace where 50% of the bank consisted of lacustrine clay, 344 ft of erosion into an alluvial bank with lacustrine clay exposed in the channel bed and 460 ft of rotation failures with lacustrine clay geology. The Reach is located at a transition zone where the valley widens, and slope decreases from a steep confined valley upstream. This transitional area exhibits increased bar deposition corresponding to lateral erosion, large wood recruitment and accumulation.

The project is included in a joint study with the U.S. Geological Survey and UCSWCD evaluating stream restoration impacts on fish communities and aquatic habitat for projects being implemented within the Ashokan Reservoir Watershed. The study involves annual fish sampling, geomorphic monitoring, and physical habitat assessments pre- and post-construction. The first year of monitoring for this study began in summer 2024 and data can be made available to aid site assessment and inform restoration design. Geomorphic and habitat data collected in this effort includes:

- UAS aerial imagery and LiDAR derived point cloud and 0.2-meter Digital Elevation Model (DEM) data covering 16.6 acres of channel, floodplain, and upland area, supplemented with ground-based survey of underwater channel bed elevation measurements.
- Detailed bank topography produced from pole-mounted camera structure from motion (SfM) photogrammetry.
- Level II and Level III morphological description and geomorphic stability assessments following procedures in Rosgen (2007), *Watershed Assessment of River Stability and Sediment Supply* (WARSSS).
- Physical salmonid habitat assessments using evaluation indices in the unpublished Wildland Hydrology (2022), *Evaluating Salmonid Habitat Quality Using Geomorphic and Ecological Criteria*, 7th *Draft*. Metrics in addition to those used in geomorphic stability evaluation include but are not limited to cover elements, percent fines in riffle and glide substrate, pool quality, and instream wood inventory.

Consideration of trout habitat is a secondary objective for this project, and the design approach should directly address maintenance or improvement of aquatic and riparian habitat. Design approaches should utilize and enhance natural stream processes and function, include a detailed focus on re-establishing dense native vegetation quickly and effectively, and utilize wood and bio-engineering methods where feasible for bank stabilization.

Project site maps and photographs are included in attachment A.

Additional information on the stream and watershed setting can be found on the AWSMP website or Catskillsreams.org:

• Technical Data & Resources:

https://ashokanstreams.org/publications-resources/technical-data-resources/ https://catskillstreams.org/stream-management-program/smp-reports/ https://catskillstreams.org/major-streams/esopus-creek/ https://ulstercountyny.gov/maps/parcel-viewer/ Broadstreet Hollow Stream Management Plan: <u>https://catskillstreams.org/broadstreet-hollow-stream-management-plan/</u>

PROJECT TIMELINE AND SCHEDULE

The anticipated outcome is to have the engineering, design and permitting complete, so that construction bid selection can be completed no later than early 2026, allowing construction to begin in early summer of 2026.

Estimated project timeline:

Distribute RFP	October 18, 2024
Proposals Due	January 16, 2025
Firm Selected	Early February 2025
Executed Contract	February 27, 2025
Engineering and Design Finalized, Permits obtained	February 2026
Construction Bid	March 2026

SUBMISSION REQUIREMENTS

Submission Process and Deadlines:

Proposals are due January 16, 2025, and submitted in email to:

Bobby Taylor Stream Program Manager Ulster Country Soil and Water Conservation District Ashokan Watershed Stream Management Program Bobby.Taylor@ashokanstreams.org

Questions regarding this proposal shall be directed to the Stream Program Manager via email.

Submittal Content and Format:

Firms are requested to submit a proposal to address all requirements of this project. The proposal should be organized in sections containing the following information:

- a. <u>Statement of Qualifications:</u>
 - i. Include description of at least three (3) projects completed that are similar in size and scope to the project described in this RFP with project client references.
 - ii. Identify personnel who will conduct the project and their qualifications relevant to the project. Submittals must identify a proposed project manager, who would be responsible for the dayto-day management of project tasks and would be the primary point of contact with your company.
- b. Proposed Plan: In a narrative format, describe in detail how the project will be structured, explaining how each of the requirements of the Scope of Work and other tasks will be accomplished. Include any other additional services, enhancements and/or options that will be provided to UCSWCD and project partners. Explain what steps will be necessary to implement services. Describe what information will be provided to project partners and on what timeline. Include any additional services or information seen beneficial to this project that UCSWCD and project partners should consider.

c. <u>Project Cost and Schedule:</u> The applicant shall state the full cost of undertaking the proposed services. Include a detailed, itemized cost statement that estimates costs associated with each task. Include the calendar time (schedule) associated with each task. Include expanded detail showing total personnel costs associated with each task and other fees that are anticipated, such as travel and materials costs, etc. in addition to completing the provided task pricing schedule in Attachment C.

PROPOSAL EVALUATION AND SELECTION PROCESS

Proposals must present the firm's qualifications and understanding of the work to be performed. UCSWCD's preferred qualifications for engineering and design services on this project include demonstration of successful techniques and design approaches employed on other projects similar in size and scope of the project in this RFP and what approach would be utilized to achieve specific goals in the Broadstreet Hollow Stream Restoration project design. Proposals should be thorough and detailed so that UCSWCD and project partners may properly evaluate the firm's capabilities to provide the services. Selection will be based upon submission of proposals meeting the selection criteria including the following:

- a. Qualifications of personnel
- b. Demonstrates thorough understanding of project objectives, tasks, and deliverables
- c. Previous project success
- d. Proposed schedule and ability to adhere to deliverable timeline based on reference check(s)
- e. Technical approach
- f. Quality and completeness of proposal
- g. Evidence of sufficient insurance
- h. Cost outlined by Task below

UCSWCD reserves the right to reject any and all proposals and may omit tasks or items in the scope of work in final contracting or include such tasks in a separate contract. Tasks and items associated with construction inspection services may be omitted from final contracting and included in a separate contract.

SCOPE OF WORK AND DELIVERABLES

Task 1.0 – Site Assessment, Survey and Data Collection

- 1.1 Coordinate with the UCSWCD to obtain landowner permissions for consulting/survey firm staff to access lands for survey.
- 1.2 <u>Project area inspection and geomorphic assessment:</u>
 - Conduct field investigation to support evaluation of existing and proposed conditions for ability to convey a variety of flow conditions and sediment at the project site and determine the extent of field survey.
 - Inspect the project area, including key cross sections, channel profile, areas of channel incision or deposition, streambank erosion, mass wasting and slope failures, and conduct a general reconnaissance field review of the waterway, floodplain extents, adjacent upland, nearby buildings and road.
 - Conduct a geomorphic survey through project area to understand the processes driving site geomorphology and bed and bank stability. Survey is expected to include cross-sectional data, longitudinal profile data and channel planform data.

- Compile data to characterize geomorphic conditions within the study area. Geomorphic parameters should include, at minimum: entrenchment ratio, width/depth ratio, sinuosity, particle size distribution, and water surface slope. Classify the stream type in the study area based on the Rosgen Classification of Natural Rivers.
- Conduct sediment data collection and analysis for use in stream competence computations and plot the size class and frequency of particle data to graphically depict distributions.
- Conduct a sediment transport analysis of the site according to the methods outlined in WARSSS (Rosgen 2007) or propose an equivalent method. The analysis should consist of an evaluation of the sediment transport competency and capacity of the site. Provide approaches for estimating bedload sediment transport in the absence of site-specific data.
- 1.3 <u>Geophysical Investigation</u>: Propose methods and conduct investigations to map top of clay throughout the project area such as Ground Penetrating Radar (GPR) or Electrical Resistivity Tomography (ERT) to facilitate restoration design strategy and evaluation.
- 1.4 <u>Geotechnical Investigations</u>: Perform slope stability analysis of rotational failures to determine causes and potential for further instability and impacts on restoration design and project objectives. Propose methods for geotechnical evaluation that will help facilitate stabilization strategy such as soil samples, observation wells, borings or other proposed methods.

Task 2.0 – Feasibility Report and Conceptual Plan

See attached *Design Submittal Content Table* and *Proposed Design Submission Standards* for the full set of Conceptual Plan design milestones and deliverables. Deliverables will include:

- 2.1 <u>Project Feasibility Report and Conceptual Plan</u>: Including components identified in the *Design Submittal Content Table and Proposed Design Submission Standards*. The report should include a summary of the geomorphic assessment and site conditions. At a minimum, the report should include the following:
 - Introduction, site location, description, problem statement, and prioritized objectives
 - Narrative of clear project goals in consultation with UCSWCD
 - Summary of the overall existing conditions and documentation
 - Discussion of potential alternatives, benefits and limitations
 - Site photographs, aerial photographs and relevant remote mapping
 - Assessment and data collection methods and results
 - Preliminary cost opinion
 - Identification of permitting requirements
 - Project timeline
 - Conceptual Plan sketch plan(s) depicting various alternatives for treatment

For the geomorphic assessment, the report should include cross-sectional and longitudinal profile data, geomorphological characteristics, sediment data collection and results, sediment transport calculations and analysis.

2.2 Joint review of the Project Feasibility Report and Conceptual Plan with UCSWCD and NYCDEP.

Task 3.0 – Advanced Engineering Analysis and Design

Review Attachment B: *Design Submittal Content Table* and *Proposed Design Submission Standards* for details of 30%, 60%, 90% and Final Design milestones. Deliverables will include:

- 3.1 <u>Hydrology and Hydrologic Assessment</u>: Evaluate existing models, streamflow and flood recurrence data and develop design reach discharge estimates for bankfull, 5-, 10-, 25-, 50- and 100-year discharge events.
- 3.2 <u>Hydraulic Assessment</u>: Conduct 2D modeling of existing and proposed conditions of the preliminary and advanced design to evaluate water surface elevations, depths, velocity and shear stress through the project reach for design flows developed in Task 3.1. Models will be updated and reported as needed at each design phase.
- 3.3 <u>Preliminary Design (30% Design)</u>:
 - At each stage of design completion including 30%, 60% and 90%, a Design Comment Log will be provided by the UCSWCD. Respond to review comments within the Design Comment Log.
 - Continue developing an Assessment & Design Report that builds upon the Feasibility Report and develop a set of preliminary project drawings and construction cost-estimate for the conceptual alternative selected to move forward.
 - Meet with the NYCDEP and UCSWCD to jointly review the completed assessments, calculations, and 30% design report before progressing to the 60% design phase.

3.4 Advanced Design (60% Design)

- Address comments within the 30% Design Review Comment Log.
- After comments are resolved, build on the 30% Design Report and further develop design drawings.
- Refine the detailed construction cost estimate.
- Develop draft of bid documents and specifications.
- Submit the above materials to the UCSWCD for review.
- Meet with the UCSWCD and NYCDEP to jointly review the 60% Design Report, design drawings, permit package and associated documentation.

3.5 Final Design (90% Design)

- Address comments within the 60% Design Review Comment Log.
- After comments are resolved, develop a Final Design Report, final design drawings, final stormwater and dewatering plan, final bid documents and specifications, final calculations, and final detailed engineer construction cost estimate.
- Submit the final design plans and the dewatering and stormwater management plan to the UCSWCD for review.
- Attend a meeting with the UCSWCD and NYCDEP to jointly review the design report, design drawings, permit package and associated documentation, and any final bid documents before progressing to 100% design.
- Prepare construction documents to include final approved design plans, technical specifications, and supporting information for the front-end specifications (bid forms,

conditions of the contract, and other forms of agreement). Any bid package will include a NYCDEP-approved Safe Work Plan.

- 3.6 Final Construction Bid Package (100% Design)
 - Resolve and incorporate all comments submitted during previous design reviews and finalize the Comment Log.
 - Final signed/stamped bid documents, including drawings, report, specifications and final detailed engineer estimate.
 - Final approved project permits.

Task 4.0 – Regulatory Permitting Assistance

- 4.1 <u>Prepare permit documents:</u> The project may require the following permit filings:
 - Joint Application Complete a joint application to NYCDEC for an Article 15 Protection of Waters permit, 401 Water Quality Certification, and an Army Corps of Engineers Section 404 permit.
 - Stormwater Pollution Prevention Plan (SWPPP) A SWPPP will be developed in accordance with New York State Department of Environmental Conservation (NYSDEC) and NYCDEP requirements. This will include a SWPPP report, completion of the Notice of Intent, and certification of the plan by a professional engineer.
 - Town of Shandaken Floodplain Development Permit_– Include a no-rise certificate memo.
- 4.2 <u>Coordination with permitting agencies and ongoing permit assistance</u>: Respond to comments, assist UCSWCD with resolving permitting issues, coordinate and attend review meetings with permitting agencies as needed

Task 5.0 – Bidding Assistance

- 5.1 Prebid Site Showing and Requests for Information: Attend and assist coordination of a pre-bid site showing for prospective bidders to review the project designs, sequence, methods, and requirements. Prepare and distribute meeting minutes. Respond to questions from potential bidders and issue addenda as necessary. Document questions and responses and include UCSWCD on correspondences.
- 5.2 <u>Bid Tabulation and Review</u>: Assemble summary of bids and review bid submissions for fulfillment of requirements and qualifications.

Task 6.0 – Construction Support

- 6.1 <u>Pre-Construction Meeting</u>: Attend a meeting on project site with project partners and contractor prior to construction to review design, sequencing and requirements. Work with UCSWCD to develop a meeting agenda and provide meeting minutes.
- 6.2 Project engineer will be available to respond to design questions and decisions by phone or emails and will be onsite at different phases of project construction including but not limited to site layout, critical construction stages, final completion inspection or other phases as deemed necessary by UCSWCD.

- 6.3 <u>Construction Inspection</u>: Provide full-time staff on project site during construction activity to observe and document design installation, including inspection and documentation of material deliveries, confirm quality of installation meets specifications, confirm adherence to applicable regulations and permits, and communicate deficiencies with UCSWCD when installation correction is needed or changes to the design or construction scope are proposed. A daily construction log will be maintained that documents construction activities, material deliveries or exports, and important communications/discussions with contractor, project engineer, regulatory staff visits, and other personnel onsite. The construction log will be provided to UCSWCD when construction is completed.
 - Document installation of structures and record changes to the design/specifications made during construction as recorded by the contractor and verified by the construction inspector. Verify critical below surface measurements during structure installation are documented by contractor or construction inspector for later inclusion in as-built record drawings.
- 6.4 <u>Construction Inspection Reports</u>: A weekly report will be produced and shared with UCSWCD and project partners that briefly summarizes work completed or in progress, description of work planned for the following week, and description of plan/specification revisions approved or denied, delays, and actions taken with supporting forms or email memo documentation attached to report. Photos will be taken during key installation activity and of materials inspected and included in the report.
- 6.5 Review material submittals, coordinate with UCSWCD & Project Engineer on change orders, and contractor payment applications and make recommendations to UCSWCD for approval.

Task 7.0 – As-Built Survey and Record Drawings

- 7.1 Conduct a post-construction survey within 30 days of construction completion that includes a full topographic survey of construction areas that is sufficient to show grading of channel, floodplain, and banks. The survey will include cross sections and spot elevations at areas of channel grading, instream structures, and bank stabilization, and areas of vegetation installation that at minimum, includes elements in the vegetation restoration plan.
- 7.2 <u>As-Built Record Drawings</u>: Installation records observed during construction and post-construction survey and measurements will be provided in as-built drawings that include the original design drawings. As-built drawings will red-line areas and elements that deviate from the original design, including on layouts, profiles, cross-sections, and associated tables, specifications, and details in the design planset.
 - Incorporate records obtained by contractor or construction inspector during construction in Task 6.3 into the as-built record drawings.
- 7.3 The as-built drawings will be provided in PDF format along with associated AutoCAD files to the UCSWCD.

Task 8.0 – Project Final Report

8.1 Develop a Project Report that provides a narration of the project background, design, construction, and ongoing monitoring of the site. The following shall be included in the report **within 90 days of project completion**:

- Project background
- Description of project partners, funding sources, design, and construction contractors and inspection
- Cost opinion, bid fee, and total project cost
- Project goals and design objectives
- Design process and development
- Construction process, details, challenges, deviations from original design, and key photos
- Monitoring strategy to evaluate project performance/effectiveness and address maintenance needs
- Appendices: Including but not limited to final design drawings, final design report, weekly construction reports, permits, as-built drawings
- 8.2 Submit draft project report to UCSWCD and NYCDEP for review and comments. Address comments and provide a final draft.

ADMINISTRATIVE AND CONTRACTUAL REQUIREMENTS

In addition to completion of all work tasks and products identified above:

- Monthly and final invoices with required back-up documentation. The project will be reimbursed on a time and materials basis. Back-up documentation is to include (but is not limited to) time accounting for Labor charges, an itemized reconciliation and summation of Labor (with staff, name, title, time, task and rate identified) and non-Labor costs, documentation of Non-Labor charges such as receipts and completed mileage logs. Meals and incidental costs (M&IE) are to be pre-approved and will be reimbursed for eligible overnight travel and at the federal GSA and per diem rates based on locale. Alcohol will not be reimbursed.
- The awarded consultant is required at their own expense to maintain in effect at all times during the performance of the work, the insurance coverage specified in Attachment D to this RFP.
- For applicable tasks and labor, the successful Consultant will be required to pay the Prevailing Wage Rates and the Prevailing Hourly Supplements in accordance with Section 220-A of the NYS Labor Law.
- The consultant awarded this project will be responsible for obtaining necessary approvals to perform work as a Subconsultant to NYCDEP. UCSWCD will be available to assist the Consultant in filing the proper paperwork/online forms. Related requirements are detailed in Attachment E.

LIST OF ATTACHMENTS

- A. Project Site Maps and Photographs
- B. Design Submittal Content Table and Proposed Design Submission Standards
- C. Task Pricing Schedule
- D. Insurance Requirements



ATTACHMENT A – SITE MAPS AND PHOTOGRAPHS





FIGURE 1. 10-FT HIGH TERRACE AT UPSTREAM EXTENT OF PROJECT AREA.



FIGURE 2. EROSION INTO ALLUVIAL BANK WITH LACUSTRINE CLAY EXPOSED IN CHANNEL BED AND LOWER BANK.



FIGURE 3. EROSION INTO ALLUVIAL BANK WITH LACUSTRINE EXPOSED IN TOE.



FIGURE 4. ROTATIONAL FAILURES OF CLAY SLOPES.



FIGURE 5. TOE EROSION, SLUMPING, AND ROTATIONAL FAILURE OF CLAY SLOPE.



FIGURE 6. WOOD ACCUMULATION AT DOWNSTREAM EXTENT OF PROJECT AREA LEADING TO CHANNEL BLOCKAGE AND DEPOSITION.

Attachment B-Design submittal content table and proposed design submission standards



<u>NYCDEP STREAM MANAGEMENT PROGRAM</u> <u>Design Submittal Content Table</u>

	Design Deliverable Milestone					
Description	Conceptual Plan	30% Design	60% Design	90% Design	100% Design	
General Project & Design Information						
Project Objectives & Constraints	Х	Х	Х	Х	X	
Site Location	Х	Х	Х	Х	X	
Aerial Photography Assessments	Х	Х	Х	Х	X	
Hydrologic Assessments		Х	Х	Х	X	
Existing Topography and Mapping		Х	Х	Х	X	
Existing Morphological Conditions		Х	X	Х	X	
Design Approach & Alternatives	X	Х	X	X	X	
Permitting Requirements	Х	Х	Х	Х	X	
Proposed Morphological Conditions		Х	Х	Х	Х	
Design Calculations		Х	Х	Х	Х	
Environmental Surveys/Assessments			Х	Х	Х	
Engineering/Evaluation/Assessment Reports			Х	Х	X	
Hydraulic Modeling/Calculations			Х	Х	X	
Earthwork Analysis & Quantities			X	Х	Х	
Project Permit Package			X	Х	X	
Construction Sequence & Phasing			Х	Х	Х	
Construction Schedule				Х	Х	
Health & Safety				Х	Х	
Engineering & Staffing Estimate	X	Х	X	X	X	
Construction Cost Estimate	X	X	X	X	X	
Project Schedule	Х	Х	Х	Х	Х	



<u>NYCDEP STREAM MANAGEMENT PROGRAM</u> <u>Design Submittal Content Table</u>

	Design Deliverable Milestone						
Description	Conceptual Plan	30% Design	60% Design	90% Design	100% Design		
Drawings							
Title Sheet	Х	Х	X	Х	Х		
Existing Conditions	Х	Х	X	Х	X		
Proposed Site Plan	Х	Х	X	Х	Х		
Grading Plan			X	Х	X		
Cross Sections	Х	Х	Х	Х	Х		
Longitudanal Profile		Х	X	Х	X		
Erosion & Sediment Control Plan			X	Х	X		
Details			Х	Х	Х		
Planting Plan			X	Х	X		
Specifications							
Table of Contents		Х	X	Х	X		
Bid Documents			X	Х	X		
General			X	X	X		
Technical			X	Х	X		



NYCDEP STREAM MANAGEMENT PROGRAM DESIGN SUBMISSION STANDARDS

I. <u>INTRODUCTION</u>

The primary purpose of this document is to establish baseline requirements for design documentation and quality for Soil & Water Conservation Districts, partnering agencies, and respective engineers, consultants, and subcontractors involved in implementing stream restoration and stabilization projects funded (fully or partially) or administered by the NYCDEP Stream Management Program (SMP). The document is intended to:

- Establish specific delivery milestones for project planning and design. This is for the purpose of facilitating project discussions, project management, technical review, and project implementation at key points throughout project planning and design stages.
- Define standard project deliverables and documentation for submission at each delivery milestone.
- Guide consistency in the format and content of project reporting and contract documents (drawings and specifications) at each delivery milestone.

This document in no way is intended to supersede or be a substitution for the internal procedures or professional responsibilities regarding the development of plans, contract documents, and other technical deliverable.

II. <u>OVERVIEW OF DESIGN CONTENT REQUIREMENTS</u>

The NYCDEP Stream Management Program (NYCDEP SMP) has established guidelines defining the basic content of the design deliverables for stream stabilization and restoration projects funded or administered by the NYCDEP SMP. Guidelines have been established for the following milestones.

Project Planning Phase

Conceptual Plan

Detailed Design Phase

- 30% Preliminary Design
- 60% Advanced Design
- 90% Final Design
- 100% Final Design

The objective of standardizing design content and submittals is to:

- Support consistency in the definitions of the Conceptual Plan, 30%, 60%, 90%, and 100% deliverables throughout the Program.
- Establish specific quality reviews at each delivery milestone.
- Provide clear communication between the Project Managers and Design Engineers of the expectations at each deliverable milestone.
- Focus design development on key project scope elements earlier in the design process to gain early endorsement and limit opportunity for scope change at later stages of development when the impact to cost and schedule are often more significant.
- Provide a tool for Project Management to better gauge the status of the design progress and implementation.
- Drive consistency between contract documents (drawings and specifications) and cost-estimating process though all project stages.
- Provide guidelines to establish quality and uniformity in the preparation of design documents.
- Provide project documentation at all phases of project development.

III. <u>CONCEPTUAL PLAN</u>

The Conceptual Plan establishes the project feasibility, major assessment and design criteria and design concepts of the project prior to initiating detailed design and covers all disciplines (e.g. process, hydrology, hydraulics, geomorphology, engineering, etc.). The Conceptual Design is intended to be a concise description of the recommended project elements to move forward into design and to facilitate clear communication between the District, Engineer, SMP and other partners of project objectives and expectations. The Conceptual Plan must provide a concise and definitive description of the project presented in a clear manner to facilitate review, discussion and approval by the partners to the extent possible.

The basic content requirements of the Conceptual Plan submission include a Project Feasibility Report and Conceptual Plan which include:

Project Feasibility Report

- Introduction, site location, description, problem statement, and prioritized objectives
- Discussion of potential alternatives, benefits and limitations
- Property owners, stakeholders, partners

- Site photographs, aerial photographs, relevant remote mapping
- Assessment and data requirements
- Engineering and staffing requirements
- Engineering and construction cost estimates
- Permitting requirements
- Project timeline

Conceptual Plan

• Sketch Plan(s) depicting various alternatives for treatment generally relying on "remote sensed" information and data (e.g. aerial photography, regional information, mapping, and data, flood mapping, previous assessments) with minimal amount of field effort.

At the close of the Conceptual Planning process, the SWCD and SMP will review the project and Conceptual Plan and agree in writing on the proposed procedures and approaches for progressing the project.

IV. <u>DETAILED DESIGN</u>

The Design Submittal Content Table is included to this document and identifies the common deliverable requirements at the 30%, 60%, 90%, and 100% design submittal intervals. The table includes a list of the general engineering information, specifications, calculations and the design drawings that are common in each phase.

The remainder of this section highlights the key progress objectives, deliverables, and coordination at each of these delivery milestones.

A. 30% DESIGN

The 30% Design shall include a set of project drawings accompanied by an Assessment & Design Report that builds upon the Conceptual Plan and provides narrative and calculations to support the key decisions. The 30% Design provides the necessary review, validation, and vetting of the scope items and concepts identified in the Conceptual Plan.

The 30% Design should incorporate preliminary field investigations including site surveys, data collection and assessments as required to progress the project. The 30% Design should present all fundamental design elements to allow discussion, review and agreement by all partners (e.g. existing and proposed morphological conditions, hydrology, etc.). The 30% Design should include an outline of key specifications

required for project bidding that represent all of the major project components. The 30% Design Report should include projected cost estimates for engineering services and construction, as well as a project timeline. Deviations from the previous cost estimates and timelines should be described and documented.

The key deliverables in the 30% Design Package include the following:

- 1. Design Report (building on the Conceptual Plan)
 - Hydrologic Assessments, modeling, calculations, etc.
 - Table of Existing and Proposed Morphological Conditions (e.g. Table 2)
 - Preliminary Engineering/Evaluation Reports (Geotechnical, Wetland, Archeology, etc.)
 - Preliminary Hydraulic Modeling/Calculations
 - List of Required Project Permits
 - Preliminary Construction Sequence
 - Engineer's Construction Cost Estimate
 - Engineering & Consulting Estimate
 - Project Timeline
- 2. Design Drawings (building on the Conceptual Plan)
 - Existing Conditions Site Mapping (topography, planimetrics)
 - Preliminary Design Drawings (title sheet, existing conditions, preliminary proposed conditions plan view alignment, profile, typical cross sections, site access points, disturbance limits, demolition, etc.)
 - Complete list of anticipated drawings (E&S Control, Landscape & Planting, Details, etc.)
- 3. <u>Bid Documents and Specifications</u>
 - Table of Contents

The 30% Design Report should provide narrative documentation of the decisions incorporated into the 30% Design drawings and specifications. The report should generally describe the project, area by area, including discussion of any alternatives analyses made on design elements or describe any additional detailed analyses that were conducted to support design decisions. A report may be limited to an amendment to the Conceptual Plan Report when the project scope has not changed significantly between Planning and 30% Design intervals. The actual report can vary in organization depending on the specific project and required elements. The report should include, as applicable, but not be limited to the following sections:

Project Introduction & Background

- Project Objectives
- Location

Existing Conditions

Aerial Photograph Assessment Hydrologic and Hydraulic Assessment

- Flood Frequency
- Bankfull Discharge
- Existing Hydraulic Analysis

Existing Condition Topography and Mapping Geomorphic Assessment

- Existing Morphological Conditions
- Shear Stress & Sediment Transport

Proposed Design

Project Objectives & Constraints Design Approach & Alternatives

Design Components

- Proposed Morphological Conditions
- Proposed Site Plan
- Excavation and Grading
- Earthwork Analysis
- Proposed Hydraulic Analysis
- Shear Stress & Sediment Transport
- Dewatering, Erosion & Sediment Control
- Re-vegetation/Planting Plan
- Planting Objectives
- Re-vegetation/Planting Plan

Regulatory Permits and Approvals

Permitting Requirements

Project Construction & Implementation

Construction Management Construction Sequence & Phasing Health and Safety & Site Hazards Construction Schedule Engineer's Estimate of Construction Cost

Post-Construction Monitoring

Operation & Maintenance

Attachments:

Cost Estimate (Engineering, Assessment, & Construction) Project Schedule & Staff Resources List of Required Permits & Approvals

The District and NYCDEP SMP will jointly review the completed assessments, calculations and design and reach agreement in writing on the fundamental design elements before progressing to the 60% design. The District and NYCDEP SMP shall solicit stakeholder feedback as required to develop final layouts, design criteria, and further refinement of the project design for progression into the 60% Design.

B. 60% DESIGN

The 60% Design represents a "progress" set of drawings and specifications between the 30% Design and 90% Design. The key deliverables in the 60% Design Package include the following:

- 1. Design Report (building on the 30% Design Report)
 - Final Engineering/Evaluation Reports (Geotechnical, Wetland, Archeology, etc.)
 - Final Hydraulic Modeling/Calculations
 - Final Calculations
 - Earthwork Analysis (cut & fill)
 - Project Permit Package
 - Construction Sequence
 - Updated Engineer's Construction Cost Estimate
 - Updated Engineering Estimate
 - Project Timeline

2. Design Drawings

- Design Drawings (nearly complete) Title sheet, existing conditions, advanced proposed conditions (plan view, detailed profile, detailed cross sections, structure layout), E & S Control Plan (dewatering), Landscape & Planting Plan
- Preliminary detail drawings
- Revised list of anticipated drawings
- 3. Bid Documents and Specifications
 - Draft Bid Documents and Draft Specifications for all Divisions

The District and NYCDEP SMP will jointly review the design report, design drawings, permit package and associated documentation and reach agreement in writing on the fundamental project and design elements before progressing to the 90% design. The District and NYCDEP SMP shall solicit stakeholder feedback as required to prior to progressing the project to the 90% Design.

C. 90% DESIGN

The 90% Design represents the best representation of completed drawings and specifications including resolution and incorporation of all comments submitted during the 60% Design review. The gap between the 90% and 100% submissions should be limited to incorporation of final comments from the DEP and regulatory agencies and should not require any additional design development.

The key deliverables in the 90% Design Package include the following:

- Final Design Report
- Final Design Drawings (all sheets for all disciplines)
- Final Bid Documents and Specifications for all Divisions
- Final Calculations
- Final Detailed Engineer Construction Cost Estimate

The District and NYCDEP SMP will jointly review the design report, design drawings, permit package and associated documentation and reach agreement in writing on the fundamental project and design elements before progressing to the 100% design.

D. 100% Design

The 100% Design represents the completed drawings and specifications including resolution and incorporation of all comments submitted during the 90% Design review.

The key deliverables in the 100% Design Package include the following:

- Final Signed Design Report
- Final Signed Design Drawings
- Final Signed Bid Documents and Specifications
- Final Detailed Engineer Estimate
- Final Approved Project Permits

ATTACHMENT C – TASK PRICING SCHEDULE

TASK	Deliverable	Cost					
Task 1.0 – Site Assessment, Survey, and Data Collection							
1.1	Coordination with UCSWCD on landowner permission						
1.2	Project area inspection and geomorphic assessment						
1.3	Geophysical investigations						
1.4	Geotechnical investigation						
Task 2.0 – Fe	easibility Report and Conceptual Plan						
2.1	Project feasibility report and conceptual plan						
2.2	Review with project partners						
Task 3.0 – A	dvanced Engineering Analysis and Design						
3.1	Hydrology and hydrologic assessment						
3.2	Hydraulic assessment						
3.3	Preliminary Design (30% Design)						
3.4	Advanced Design (60% Design)						
3.5	Final Design (90% Design)						
3.6	Final Construction Bid Package (100% Design)						
Task 4.0 – R	egulatory Permitting Assistance						
4.1	Prepare permit documents						
4.2	Coordinate with permitting agencies and ongoing support						
Task 5.0 – Bidding Assistance							
5.1 Prebid site showing and requests for information							
5.2	Bid tabulation and review						
Task 6.0 – Construction Support							
6.1	Pre-Construction Meeting						
6.2	Project engineer site visits and remote support						
6.3	Construction Inspection						
6.4	Construction Inspection Reports						
6.3	6.3 Review submittals, change orders, and payment applications						
Task 7.0 – As-Built Survey and Record Drawings							
7.1	Post-construction survey						
7.2	As-built record drawings						
7.3	Provide as-built documents and associated files						
Task 8.0 – Project Final Report							
8.1	Develop draft report						
8.2	Address comments and provide final report						
	Total Cost:						

ENGINEERING, DESIGN, AND CONSTRUCTION SUPPORT

ATTACHMENT D – INSURANCE REQUIREMENTS & SPECIFICATIONS

The following terms supplement Section 14 of this Agreement. Defined terms shall take the same meaning as indicated in this Agreement.

Section 1 Agreement to Insure:

UCSWCD shall and shall cause its Subcontractors, to maintain the following types of insurance if and as indicated in Schedule A of this Attachment D (with the minimum limits and special conditions specified in Schedule A) throughout the Program's term. All insurance shall meet the requirements set forth in this Attachment D. Wherever this Attachment D requires that insurance coverage be "at least as broad" as a specified form (including all ISO forms), there is no obligation that the form itself be used, provided that UCSWCD can demonstrate that the alternative form or endorsement contained in its policy provides coverage at least as broad as the specified form.

Section 2 Workers' Compensation, Disability Benefits, and Employers' Liability Insurance:

- A. The contractor shall maintain workers' compensation insurance, employers' liability insurance, and disability benefits insurance, in accordance with applicable law on behalf of, or in regard to, all employees providing services under this Agreement.
- B. Within 10 days of the Effective Date or as otherwise specified by NYCDEP, and as required by N.Y. Workers' Compensation Law §§ 57 and 220(8), the contractor shall submit proof of its workers' compensation insurance and disability benefits insurance (or proof of a legal exemption) to DEP in a form acceptable to the New York State Workers' Compensation Board. ACORD forms are not acceptable proof of such insurance. The following forms, or equivalent, are acceptable:
- 1. Form C-105.2, Certificate of Workers' Compensation Insurance;
- 2. Form U-26.3, State Insurance Fund Certificate of Workers' Compensation Insurance;
- 3. Form SI-12, Certificate of Workers' Compensation Self-Insurance;
- 4. Form GSI-105.2, Certificate of Participation in Worker's Compensation Group Self-Insurance;
- 5. Form DB-120.1, Certificate of Disability Benefits Insurance;
- 6. Form DB-155, Certificate of Disability Benefits Self-Insurance;
- 7. Form CE-200 *Affidavit of Exemption*;
- 8. Other forms approved by the New York State Workers' Compensation Board; or
- 9. Other proof of insurance in a form acceptable to the City.

Section 3 Other Insurance:

- A. <u>Commercial General Liability</u>: The contractor shall maintain commercial general liability insurance in the amount set forth on Schedule A of this Attachment D, covering operations under this Agreement. Coverage must be at least as broad as the coverage provided by the most recently issued ISO Form CG 00 01 primary and non-contributory, and "occurrence" based rather than "claims-made." Such coverage shall list the City and the New York City Water Board, together with their officials and employees, as an additional insured with coverage at least as broad as the most recently issued ISO Form CG 20 10 or CG 20 26, and if construction is performed as part of the Services, ISO Form CG 20 37.
- B. <u>Commercial Automobile Liability Insurance</u>: If vehicles are used in the provision of the Services under this Agreement, the contractor shall maintain commercial automobile liability insurance for liability Contractor will provide the City with evidence of insurance arising out of ownership, maintenance or use of any owned, non-owned or hired vehicles to be used in connection with this Agreement. Coverage shall be at least as broad as the most recently issued ISO Form CA 00 01. If vehicles are used for transporting hazardous materials, the commercial automobile liability insurance shall be endorsed to provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS-90.

C. <u>Professional Liability Insurance</u>

(a) The contractor shall maintain and submit evidence of professional liability insurance or errors and omissions insurance appropriate to the type(s) of such Services to be provided under this Agreement. The policy or policies shall cover the liability assumed by the Contractor under this Agreement arising out of the negligent performance of professional services or caused by an error, omission or negligent act of the Contractor or anyone employed by the contractor.

(b) All Subcontractors providing professional services under this Agreement for which professional liability insurance or errors and omissions is reasonably commercially available shall also maintain such insurance in the amount specified in Schedule A of this Attachment D. At the time of the request for subcontractor approval, the Contractor shall provide to NYCDEP, evidence of such professional liability insurance on a form acceptable to NYCDEP.

(c) Claims-made policies will be accepted for professional liability insurance. All such policies shall have an extended reporting period option or automatic coverage of not less than two (2) years. The Contractor shall purchase extended reporting period coverage effective on cancellation or termination of such insurance unless a new policy is secured with a retroactive date, including at least the last policy year.

Section 4 General Requirements for Insurance Coverage and Policies

- A. Unless otherwise stated, all insurance required by this Attachment D must:
 - 1. be provided by companies that may lawfully issue such policies;
 - 2. have an A.M. Best rating of at least A- / VII, a Standard & Poor's rating of at least A, a Moody's Investors Service rating of at least A3, a Fitch Ratings rating of at least A- or

a similar rating by any other nationally recognized statistical rating organization acceptable to the New York City Law Department unless prior written approval is obtained from the New York City Law Department; and

- 3. be primary (and non-contributing) to any insurance or self-insurance maintained by the City (not applicable to professional liability insurance/errors and omissions insurance) and any other entity listed as an additional insured on Schedule A of this Attachment D.
- B. The limits of coverage for all types of insurance for the City, including its officials and employees, and any other additional insured listed on Schedule A of this Attachment D that must be provided to such additional insured(s) shall be the greater of (i) the minimum limits set forth in Schedule A or (ii) the limits provided to UCSWCD as named insured under all primary, excess, and umbrella policies of that type of coverage.

Section 5 Proof of Insurance:

- A. For each policy required under this Attachment D, UCSWCD shall file proof of insurance and, where applicable, proof that the City, including its officials and employees, is an additional insured with DEP within ten days of the Effective Date. The following proof is acceptable:
 - 1. A certificate of insurance accompanied by a completed certification of insurance broker or agent (included in Schedule A of this Attachment D) and any endorsements by which the City, including its officials and employees, have been made an additional insured; or
 - 2. A copy of the insurance policy, including declarations and endorsements, certified by an authorized representative of the issuing insurance carrier.
- B. Proof of insurance confirming renewals of insurance required under Section 3 of this Attachment D must be submitted to DEP prior to the expiration date of the coverage. Such proof must meet the requirements of Section 5(A) of this Attachment D.
- C. UCSWCD shall provide the City with a copy of any policy required under this Attachment D upon the demand for such policy by the Commissioner or the New York City Law Department.
- D. Acceptance by the Commissioner of a certificate or a policy does not excuse UCSWCD from maintaining policies consistent with all provisions of this Attachment D (and ensuring that subcontractors maintain such policies) or from any liability arising from its failure to do so.
- E. If UCSWCD receives notice, from an insurance company or other person, that any insurance policy required under this Attachment D shall expire or be cancelled or terminated for any reason, UCSWCD shall immediately forward a copy of such notice to both the address referred to in Schedule A of this Attachment D and to the New York City Comptroller, Attn:

Office of Contract Administration, Municipal Building, One Centre Street, Room 1005, New York, New York 10007.

Section 6 Miscellaneous:

- A. Whenever notice of loss, damage, occurrence, accident, claim, or suit is required under a policy required by this Appendix C, UCSWCD shall provide the insurer with timely notice thereof on behalf of the City. Such notice shall be given even where UCSWCD may not be covered under such policy if this Agreement requires that the City be an additional insured. Such notice shall expressly specify that "this notice is being given on behalf of the City of New York, including its officials and employees, as additional insured" (such notice shall also include the name of any other entity listed as an additional insured on Schedule A of this Attachment D) and contain the following information to the extent known: the number of the insurance policy; the name of the named insured; the date and location of the damage, occurrence, or accident; the identity of the persons or things injured, damaged, or lost; and the title of the claim or suit, if applicable. UCSWCD shall simultaneously send a copy of such notice to the City of New York c/o Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, New York 10007. If UCSWCD fails to comply with the requirements of this paragraph, UCSWCD shall indemnify the City and the New York City Water Board, together with each of its officials and employees, and any other entity listed as an additional insured on Schedule A of this Attachment D for all losses, judgments, settlements and expenses, including reasonable attorneys' fees, arising from an insurer's disclaimer of coverage citing late notice by or on behalf of the City together with its officials and employees, and any other entity listed as an additional insured on Schedule A of this Attachment D.
- B. UCSWCD's failure to maintain any of the insurance required by this Attachment D shall constitute a material breach of this Agreement. Such breach shall not be waived or otherwise excused by any action or inaction by the City at any time.
- C. Insurance coverage in the minimum amounts required in this Attachment D shall not relieve UCSWCD or its Subcontractors, of any liability under this Agreement, nor shall it preclude the City from exercising any rights or taking such other actions as are available to it under any other provisions of this Agreement or law.
- D. With respect to insurance required by Section 3 of this Attachment D and Schedule A of this Attachment D (but not including professional liability/errors and omissions insurance), the UCSWCD waives all rights against the City, including its officials and employees, and any other entity listed as an additional insured on Schedule A of this Attachment D for any damages or losses that are covered under any insurance required under this Attachment D (whether or not such insurance is actually procured or claims are paid thereunder) or any other insurance applicable to the operations of UCSWCD and/or its Subcontractors in the performance of this Agreement.
- E. If UCSWCD uses any Subcontractor who will make or participate in any delivery under this Agreement, UCSWCD shall require that those Subcontractors obtain insurance meeting the requirements of this Attachment D. In the event UCSWCD requires any Subcontractor to maintain insurance with regard to any operations under this Agreement and requires such Subcontractor to list UCSWCD as an

additional insured under such insurance, UCSWCD shall ensure that such entity also list the City, including its officials and employees, and any other entity listed as an additional insured on Schedule A of this Appendix C as an additional insured. With respect to commercial general liability insurance, such coverage must be at least as broad as the most recently issued ISO form CG 20 26.

With response to Insurance required by Schedule A of this Agreement, UCSWCD and any Subcontractor ay procure supplemental insurance, including umbrella type policies to meet the requirements of Schedule A.

SCHEDULE A

Types of Insurance	
	Minimum Limits and Special Conditions
■ Workers' Compensation § 2	
Disability Benefits Insurance § 2	Statutory amounts.
Employers' Liability § 2	
Commercial General Liability §3(A)	\$2,000,000.00 per occurrence for contracts equal to or above \$100,000;
	\$1,000,000.00 per occurrence for contracts below \$100,000;
	\$2,000,000.00 personal & advertising injury (unless waived in writing by DEP) for contracts in an amount equal to or above \$100,000;
	\$1,000,000.00 personal & advertising injury (unless waived in writing by DEP) for contracts in an amount less than \$100,000
	\$4,000,000.00 aggregate for contracts equal to or above \$100,000;
	\$2,000,000.00 aggregate for contracts below \$100,000.
	\$ <u>0</u> products/completed operations
	\$25,000 maximum deductible
	City and the New York City Water Board, including each of its officials and employees, shall be named as "loss payee as its interests may appear" and additional insured

Commercial Auto Liability § 3(B)	\$ <u>1,000,000.00</u> per accident combined single
	urnic
	If vehicles are used for transporting hazardous
	materials, the Contractor shall provide pollution
	liability broadened coverage for covered
	proof of MCS 90
Professional Liability/Errors & Omissions	
§ 3(C)	\$ <u>1,000,000.00</u> per claim
Builders' Risk (for construction contracts only)	100% of the value of the contract work
	City and the New York City Water Board,
	including each of its officials and employees,
	shall be named as "loss payee as its interests may appear" and additional insured
Notice	

Department's	Mailing	Address	and	Email	Address	for	DEP
Notices							Office of the ACCO
							ATTN: Contract Management
							Unit (Insurance) 59-17 Junction Blvd., 17th Floor
							Flushing, New York 11373 A copy of each insurance certificate shall also be sent to:
							DEP Bureau of Water Supply ATTN: DEP Project Manager – Ashokan Basin
							669 County Highway 38, Suite 2
							Arkville, NY 12406

CERTIFICATES OF INSURANCE

Instructions to New York City Agencies, Departments, and Offices

All certificates of insurance (except certificates of insurance solely evidencing Workers' Compensation Insurance, Employer's Liability Insurance, and/or Disability Benefits Insurance) must be accompanied by one of the following:

(1) the Certification by Insurance Broker or Agent on the following page setting forth the required information and signatures;

-- OR –

•

(2) copies of all policies as certified by an authorized representative of the issuing insurance carrier that are referenced in such certificate of insurance. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.

CITY OF NEW YORK CERTIFICATION BY INSURANCE BROKER OR AGENT

The undersigned insurance broker or agent represents to the City of New York and the New York City Water Board that the attached Certificate of Insurance is accurate in all material respects.

[Name of broker or agent (typewritten)]

[Address of broker or agent (typewritten)]

[Email address of broker or agent (typewritten)]

[Phone number/Fax number of broker or agent (typewritten)]

[Signature of authorized official, broker, or agent]

[Name and title of authorized official, broker, or agent (typewritten)]

Sworn to before me this

_____ day of ______, 20___

NOTARY PUBLIC FOR THE STATE OF _____