

SCOPE OF SERVICES

Hernando County

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Hunter's Lake Boat Ramp Dredge – Design, Permitting, and Engineering Services during Construction

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Introduction/Overview:

Stantec will provide the Hernando County Aquatic Services and Waterways Department with design, permitting, bidding support, and engineering support during construction services for the dredging of the Hunter's Lake Boat Ramp channel. This scope of work will include anticipated engineering tasks required for the design, permitting, and construction of the boat ramp channel.

Scope Descriptions and Fee Estimates:

This task authorization includes the following tasks/activities:

Task 101 – USACE/FDEP Pre-Application Meetings

Stantec will submit a pre-application meeting request to the Florida Department of Environmental Protection (FDEP) and the United States Army Corps of Engineers (USACE). Stantec will prepare project documentation to facilitate each pre-application meeting, which will be hosted virtually. Stantec will also prepare for the meeting by reviewing past design and permitting documents provided by the County, if available. The purpose of these meetings will be to discuss the proposed project, obtain agency input on the type of data required, and to confirm the type of permit application(s) and associated requirements needed for each agency. Stantec will prepare and distribute meeting notes to County staff and meeting participants following each meeting.

Note: Based on a preliminary review of past issued permits, Stantec anticipates that past data collection efforts can be leveraged for permit applications. Tasks 102 (Hydrographic Survey), 103 (Wetland Delineation), and 104 (Sediment Sampling) are included in this scope of work to provide up-to-date information and analysis for determining dredge volumes, disposal options, and project impacts. If the pre-application meeting discussions provide information that one or some of these field investigations are not needed, Stantec can eliminate the task and associated fees from this scope of work. If the pre-application meeting discussions provide information on additional field investigation or engineering efforts that are required for permits, Stantec can provide a separate scope and fee for those services.

Schedule: Meeting requests will be sent to each agency within 30 days of NTP. Actual meeting dates will be dictated by each agency's schedule and availability – which could potentially be months after the request is submitted (the County will be invited to participate in each meeting).

Deliverables: A PDF of meeting notes following each meeting.

Task 102 – Hydrographic Survey

A hydrographic survey will be completed for the Hunter’s Boat Ramp channel (see Figure 1) using a combination of single beam and hand sounding survey methodology. In areas where the water depth is greater than 2 feet, singlebeam methodology will be used. In areas where the depth is less than 2 feet, hand soundings will be taken, provided that surveyors have access to those areas. The survey will meet the minimum technical standards for hydrographic surveying and be signed and sealed by a Registered Land Surveyor (RLS) or Professional Surveyor & Mapper (PSM) in the State of Florida. The survey services will be performed by Stantec’s hydrographic surveying sub-consultant - Morgan & Eklund Inc (CSA).

The purpose of the survey will be to delineate the existing bottom conditions. Existing published benchmarks will be utilized. The horizontal datum (coordinates) will be referenced to the Florida State Plane 902 West Coordinate System. The vertical datum (elevations) will be referenced to the North American Vertical Datum of 1988 (NAVD88) and will be based on published horizontal and vertical control points. Vegetation or other obstructions in the waterway may limit the horizontal extents of the survey equipment and field staff.

Schedule: TBD, based on a mutually agreed upon schedule – if required for permitting.

Deliverables: PDF figures of the survey results in plan view. Data will be provided in digital format, including DWG and XYZ format, if requested.

Task 103 – Wetland Delineation

Stantec ecologists will conduct a wetland and surface waters delineation at each Project Site to determine if potentially jurisdictional features considered Water of the U.S. (WOTUS) or Waters of the State are present within the Project Sites or within 25 feet of the Project boundaries, where accessible. The delineations will be completed in accordance with the state’s wetland delineation methodology defined in Chapter 62-340, FAC “*Delineation of the Landward Extent of Wetlands and Surface Waters*” and the FDEP *Florida Wetland Delineation Manual*, and the federal wetland delineation methodology defined in the U.S. Army Corps of Engineers (USACE) 1987 *Wetland Delineation Manual* and the 2010 *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region* (Version 2.0).

Stantec will complete USACE wetland verification data forms for all delineated wetlands and their adjacent uplands. Individual wetland and upland assessment locations will be recorded with a submeter accurate GPS. A minimum of one data sheet set will be completed at each unique wetland-upland interface type. Wetland types, vegetative composition, and acreages will be documented and mapped. All community types will be classified utilizing the Florida Department of Transportation (FDOT) Florida Land Use, Cover, Forms, and Classification System (FLUCCS). Wetlands and surface waters will be further characterized utilizing the USFWS *Classification of Wetlands and Deepwater Habitats of the U.S.*

Following the field efforts, Stantec will prepare Environmental Narrative report, to be included with the USACE/FDEP permit applications. The Environmental Narrative will summarize the methods and results of the desktop and field efforts performed by Stantec (including the wetland/surface waters delineation), identify applicable avoidance and minimization measures to reduce potential impacts, and the results of the pre-application meetings and other meetings held with agencies. Attachments to the report will include items such as figures, datasheets, design drawings, and color photographs.

Schedule: TBD, based on a mutually agreed upon schedule – if required for permitting.

Deliverables: PDF of Environmental Narrative report.

Task 104 – Sediment Sampling (Chemical and Physical)

As part of the permitting process, the regulatory agencies may require chemical and physical sediment testing to identify what material is currently present within the proposed dredging footprint. The results of the testing may impact disposal options for the material.

Physical Analysis

Stantec will collect four (4) sediment samples for physical analysis throughout the project area. FDEP Standard Operating Procedures FS 3100 for grab sample collection will be followed during the operation. The intent is to obtain a complete set or representation of the sediments for the entire project area. A description of the testing methodology is provided below.

Sediment samples will be visually inspected and logged in detail in accordance with ASTM Standard D-2487. Textural classification during logging will be prepared in accordance with the Unified Soils Classification System. Color photographs of the samples will be taken to record visual characteristics. Samples will be analyzed for grain size, Munsell color, carbonate content, and percent moisture. Grain size analysis will adhere to ASTM Standard D-422 for mechanical particle size analysis of the soils. Analyses will be performed by mechanical sieving utilizing a set of nested screens dividing sediments at phi intervals from -4 to +3.75 phi. Tabular summaries of each sample will be generated and will report sieve size, phi size, mesh opening size in millimeters, weight of sediment retained in grams, cumulative percent retained, and cumulative percent passing. Sample statistics (e.g., mean, standard deviation, skewness, and kurtosis) will also be displayed in the summary tables. A frequency plot of grain size distribution will be provided for each sample in accordance with USACE Form 2087.

Chemical Analysis

Stantec will collect four (4) sediment samples for chemical testing from the proposed dredge footprint (see Figure 1) utilizing a ponar sampling device. The samples will be collected following regulatory procedures for sample collection during the operation and will comply with Florida Department of Environmental Protection (FDEP) standard operating procedures. The samples will be logged on chain-of-custody form, placed in a cooler and transported by Stantec to Pace Analytical Services, LLC (NELAP Florida Certification #E83079) in Oldsmar to perform the chemical analysis of the samples. Chemical analyses on each sample will be performed according to the following EPA methodology:

- EPA Method 6010B/7471A - Priority Pollutant/Heavy Metals: Antimony (Sb), Arsenic (As), Beryllium (Be), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Nickel (Ni), Selenium (Se), Silver (Ag), Thallium (Tl), and Zinc (Zn).
- EPA Method 8270D - Semi-Volatile Organic Compounds (SVOCs)
- EPA Method 8082 - Polychlorinated Biphenyls (PCBs)
- EPA Method 8270 SIM - Polynuclear Aromatic Hydrocarbons (PAHs)

Schedule: TBD, based on a mutually agreed upon schedule – if required for permitting.

Deliverables: Memo Report identifying and interpreting sampling physical and chemical testing results to be included in the permit application packages.

Task 105 – 60% Permit Drawings

Stantec will develop 60% permit drawings that show the results of the hydrographic survey (Task 102) and wetland delineation (Task 103). A dredge template will be created, outlining the lateral extents of dredging and extending down to -5 ft MLW, as was previously permitted for the boat ramp channel. Stantec will develop plan view drawings and cross sections that will indicate the existing grade and proposed project design. The plan-view figures will present the data as existing bathymetric surface as contours, the proposed dredge template, and the resulting sediment removal thickness. Volumes of material within the proposed dredge template will be calculated in cubic yards. The drawings will also present the location of potential upland dewatering/disposal areas.

Ultimately, if an ideal and permissible disposal location cannot be located, this responsibility may be placed on the contractor and identified during the bidding process at a later time. Construction site access, staging areas, Best Management Practices (BMPs), and turbidity curtain locations will be detailed in the drawings. Stantec will provide a preliminary Engineer's Opinion of Probable Cost (EOPC) to accompany the permit drawings, intended to provide the County with a level of effort understanding of the anticipated budgetary requirements for implementation. A high and low estimate will be provided, and will be based on Stantec's review of past purchase orders, cost estimation tools, construction estimates from other consultants, industry knowledge, recent contractor bids, and historical costs on similar projects.

60% Permitting Plans

Stantec will prepare a permitting plan set that includes:

- Title sheet with location map
- General Project Notes
- Plan view of existing conditions
- Plan view and cross-sections of the project design
- Potential staging area during construction
- Typical erosion control details

Final permit drawings will be signed/sealed by the Engineer of Record, a Professional Engineer licensed in the State of Florida. The drawings will be provided to the County for review and approval by staff prior to permit application submittals.

Schedule: TBD, based on a mutually agreed upon schedule.

Deliverables: PDF of the 60% drawings. CAD drawings (.dwg) of the project and GIS shapefiles (.shp) of the project elements can also be provided upon request. PDF of the preliminary EOPC.

Task 105 – USACE/FDEP Permit Applications

Based on guidance from agencies during the pre-application meeting, Stantec will assemble and submit the permit applications on behalf of the County to the USACE and FDEP for the proposed dredging project using the information gathered/prepared from the field investigations and the 60% permit drawings.

Note: There is no set permit timeline with the USACE, nor with commenting agencies such as USFWS or NMFS relative to review/approval; therefore, Stantec cannot control the timing or responses from the regulatory agencies or guarantee approval. Based on recent Stantec experience, it is understood that due to regulatory staff shortages, permitting could take 24-36 months (or longer) to complete. That said, Stantec has strong relationships with regulatory staff in these agencies and we will work diligently to coordinate with the agencies to limit the amount of time to obtain the project permits.

Permit Type Assumptions:

- USACE – Nationwide Permit #35 – Maintenance Dredging
- FDEP – Individual Environmental Resource Permit or General Permit or Exemption

Schedule: TBD based upon a mutually agreed upon schedule.

Deliverables: Digital PDF copy of completed permit application package submittals.

Task 106 – RAI Permit Responses

Stantec will respond to the first two (2) rounds of comments in response to requests for additional information for each of the permitting agencies (i.e., USACE and FDEP). Information of a technical nature will be provided on submitted applications and plans (i.e., no new elements or “restudies” included). Appropriate changes to the design documents will be made following review and approval from the County. Supporting documentation will also be provided. This scope does not include redesign, modeling, or additional studies not previously conducted by Stantec.

Our experience has shown that comments received from agencies do not always necessitate changes in the documents. Additional RAI responses will be discussed with the County staff and may be completed as an amendment to this task order.

Stantec will submit draft responses to the County for review, approval, and final acceptance prior to submitting to permitting agencies.

Schedule: TBD, based on a mutually agreed upon schedule.

Deliverables: Response to Requests for Additional Information in Email or PDF format.

Task 107 – 90% and 100% Construction Drawings

Stantec will incorporate applicable design updates after the permitting applications are approved. Stantec will advance the dredging design to develop a set of 90% Construction Drawings suitable for bidding. Stantec will send the 90% Construction Drawings to the County for review and feedback before refining the plan set to the 100% Construction Drawings. The 100% Construction Drawings will be signed and sealed by a Professional Engineer registered in the State of Florida.

Stantec will update the Engineer’s Opinion of Probable Cost (EOPC) from Task 105 to reflect changes in quantities and anticipated construction methods. The estimated costs of construction will be based on the project volumes and quantity estimates, recent bids from similar projects, and discussions with local marine contractors. Costs will also consider the type of material to be removed and final placement locations.

100% Construction Drawings

Stantec will prepare a 100% plan set that includes:

- Title sheet with location map
- General Project Notes
- Plan view of existing conditions
- Plan view and cross-sections of the project design
- Site Access and Staging Area(s) during construction
- Typical erosion control details

Schedule: TBD, based on a mutually agreed upon schedule.

Deliverables: PDF of the 90% and 100% drawings. CAD drawings (.dwg) of the project and GIS shapefiles (.shp) of the project elements can also be provided upon request. PDF of the updated EOPC.

Task 108 – Construction Documents and Technical Specifications

Stantec will develop a set of Technical Specifications that describe the work to be constructed. These specifications will provide descriptions of the project as well as guidelines for work standards and compliance with local, state, and federal regulations.

Construction documents will be prepared that will be used by the County during the bidding process. The Final Construction Documents deliverable shall consist of plans, specifications, cost estimate, and appendices to be used in the bid package including:

- 100% Construction Plans
- Technical Specifications
- Engineer’s Opinion of Probable Cost
- Appendix Information (permits, field investigation results, and other relevant information)

Schedule: TBD, based on a mutually agreed upon schedule.

Deliverables: PDF of Technical Specifications. PDF package of the Construction Documents.

Task 109 – Bidding and Contractor Procurement Services

Stantec will support the County during the bidding process by preparing for and attending one (1) virtual pre-bid conference, responding to RFIs from prospective Contractors seeking interpretation of the plans and specs, assisting in preparation of a bid addenda by providing technical response to items, and incorporating changes that may be warranted to the construction drawings, technical and supplemental general conditions, or other construction related issues as appropriate.

Stantec will obtain copies of sealed bids from the County and will review them for accuracy, completeness, and contractor qualifications. Stantec will evaluate and provide a written engineer’s recommendation for award to the County based on a review of the submitted bids. Note: The recommended contractor may not be the lowest bidder, but rather the most qualified and responsive bidder. Final award and recommendation will be the responsibility of the County.

Schedule: TBD, based on a mutually agreed upon schedule.

Deliverables: Pre-Bid meeting notes and responses to questions presented at the pre-bid meeting. PDF with response(s) to Contractor’s written inquiries. PDF memo detailing the engineer’s recommendation of the most qualified bidder.

Task 111 – Presentation to BOCC (2)

Stantec will prepare for, attend, and present project updates at two (2) County Commissioner meetings. The presentations will be given by a Stantec senior dredging lead responsible for the project.

Schedule: TBD, based on a mutually agreed upon schedule – if requested.

Deliverables: PowerPoint of presentation.

Task 112 – Engineer of Record and CEI Services (Full-Time)

During construction, Stantec will provide EOR services for the duration of the construction of the project, which is assumed to be 6 months. The EOR/senior staff and supporting staff will:

1. Attend the pre-construction kickoff meeting (on-site).
2. Set up a project start-up meeting with the Contractor (virtual).
3. Review and monitor the Contractor's overall compliance with the approved plans and specifications.
4. Review and assist in negotiating change orders to the contract as required, as may be initiated or recommended by the County, Engineer, or Contractor.
5. Review the Contractor's applications for payment and accompanying data and schedules based on on-site observations prior to submittal to the County for processing and payment.
6. Attend virtual bi-weekly meetings (2 meetings per month) with the County to provide project updates.
7. Address requests for additional information and construction issues.
8. Perform one site visit per month alongside the on-site engineer to review construction work, and prepare a post-visit report with a description of work, observations, and pictures of the work.
9. Process survey data provided to update design drawings and calculate volumes of material removed and/or remaining.
10. Review the as-built survey to verify completion of the work for interim as-built surveys and at the completion of the project.
11. Prepare final documentation including a certification that, based on the work performed, the project has been constructed as designed and as described in the contract documents.
12. Conduct substantial completion and final completion inspections and assist in the preparation of final punch list and project close-out.

Stantec will provide full-time Construction Engineering and Inspection (CEI) services that will monitor the dredging, permit compliance, and material transport. The on-site engineer will perform visual reviews of work in progress for conformance with the design plans and specifications. This person's responsibilities will consist of:

1. Monitoring and documenting the performance of the Contractor and recommend acceptance, rejection and/or correction of the work, which does or does not conform to the approved plans and specifications. Stantec shall not be responsible for the Contractor's means and methods of construction, nor shall Stantec be responsible for the rate of completion or coordination of the work.
2. Preparing field inspection reports and furnishing photographs documenting the progress of the work. All reports will be submitted to the County, the Contractor, and the EOR on a routine basis or as otherwise directed.
3. Maintaining a complete inspection logbook of each inspection report and supporting documentation.
4. Interpreting the meaning and intent of the Contract Documents. Consulting with the Engineer of Record for their design intent, when necessary. Providing reports of interpretations to the County, the Contractor, and the EOR.
5. Resolving field issues that do not affect the design intent. Consult with the EOR for their input when necessary. Providing field reports to the County, the Contractor, and the EOR.
6. Reviewing requests for payment from the Contractor. Validating the work completed at the time of request for payment. Recommending payment or rejection of payment requests, as deemed appropriate.
7. Scheduling and attending project progress meetings between the County, the Contractor, and the EOR. Meetings may be held bi-weekly or as deemed appropriate. Preparing meeting agendas and distribute minutes of the meetings to the County, the Contractor, and the EOR.

8. Assisting with substantial completion and final completion inspections and the preparation of final punch list and project close-out.
9. Reviewing the Contractor’s “as-constructed” record information for accuracy and later use, as required.
10. Processing survey data provided to update design drawings and calculate volumes of material removed and/or remaining.

Observations will be made by the on-site engineer to ensure that construction is in compliance with the construction plans, contract documents, and permit authorizations for the work. Stantec will serve as liaison between the Contractor and the County during construction. Cost estimates are based on a full-time onsite engineer, 8 hours per day for 5 days per week for 6 months (26 weeks).

Schedule: TBD, based on a mutually agreed upon schedule.

Deliverables: PDF summary of the pre-construction kick off, project start-up meeting, and completion inspections, an email summary of as-build verifications of completed work, and final documentation at the close of the project. PDF summary of each of the bi-weekly virtual meetings and a PDF of each post-visit report from the EOR. PDFs of field inspection reports and a PDF of the complete logbook.

Note: The duration of this task is dependent on contractor’s proposed schedule during the bid process. Stantec will work with the County to refine this task appropriate.

Fee Estimate

The cost for this planning-level investigation will be Lump Sum not to exceed fee of \$467,300 for services. All work will be performed following the provisions of the Contract No. 23-RFQ00422/AP Continuing Professional Engineering Services, between Hernando County and Stantec.

Note: Funds may be moved between tasks during the project lifecycle.

Task	Estimated Fee
Task 101 – USACE/FDEP Pre-Application Meetings	\$3,176
Task 102 – Hydrographic Survey	\$29,264
Task 103 – Wetland Delineation	\$14,664
Task 104 – Sediment Sampling (Chemical and Physical)	\$12,718
Task 105 – 60% Permit Drawings	\$42,640
Task 106 – USACE/FDEP Permit Applications	\$36,924
Task 107 – RAI Permit Responses	\$18,500
Task 108 – 90% and 100% Construction Drawings	\$13,624
Task 109 – Construction Documents and Technical Specifications	\$13,624
Task 110 – Bidding and Contractor Procurement Services	\$8,920
Design and Permitting Subtotal	\$194,054
Task 111 – Presentations to BOCC (2 Meetings)	\$7,496
Presentations to BOCC (2) Subtotal	\$7,496
Task 112 – Engineer of Record and CEI Service (Full Time)	\$265,750
Engineering Services During Construction Subtotal	\$265,750
Project Total Fee	\$467,300

ASSUMPTIONS:

- Only items listed in the scope are included in the associated fee schedule.
- No submerged resource survey information will be collected in this scope of work since this is anticipated to be permitted as maintenance dredging.
- The following items are not included in this scope of work, but can be added in future phases of this project: additional surveying beyond the extents presented herein, rock probing, modeling, or dredge pipeline routing/impact tasks.
- A separate scope/fee for additional services will be provided if requested.
- Stantec will not surpass the authorized costs without written prior approval.
- Stantec does not guarantee the outcome of permit application submittals or other agency decisions regarding the permit applications.
- All permit and severeness fees will be paid directly to the agencies by Hernando County.
- This scope of work does not include the preparation of mitigation plans as a result of any proposed environmental impacts as result of any resources not yet identified. No mitigation design is included.
- No peer review or responses to 3rd party requests are included in these services.
- The County will identify the location for the dredge material disposal site(s) and any other necessary documentation requested by the USACE or FDEP to support the project permitting (e.g., cultural resources information, letter of approval(s) from landowners, etc.).
- This scope and fee assumes that the project will take 6 months to construct.
- Turbidity monitoring is not included.
- Permit compliance is not the responsibility of Stantec.
- Stantec is not responsible for interim or post-construction surveys, nor are they included in this scope.
- Should the County desire EOR or CEI services beyond the 6 months, Stantec can provide a daily, weekly or monthly rate for services.
- Claims will be reviewed, but legal challenges and expert testimony are not included with these services.
- As the Stantec CEI representative is onsite 8 hours per day, 5 days per week, the Contractor may be working at times while Stantec is not onsite. If the County would like to extend working hours or days per week, Stantec can provide an addendum to this task order.



Figure 1 – Project Area and Survey Extents