

CONTRACT ROUTING FORM

1. Complete the information below BEFORE printing and completing items 2 through 7. Items in red are required.

Department: Parks and Recreation

Department contract file name (use effective date): Freese & Nichols_Parks & Rec_20240118

Project Code: Click here to enter text.

Contract type: Agreement

Contracted Services/Goods: Survey work at The Park at Briar Chapel

Contract Component: Other – Task Authorization

Change Order Number/Addendum Number: Click here to enter text.

Vendor Name: Freese & Nichols

Effective Date: 1/18/2024

Approved by: Commissioners

Date approved by the BOC: Click here to enter text. 2.19.24

Ending Date: Click here to enter a date.

Total Amount: \$123,790

Please Return Contract to:

Name: Ben Rippe

Email:

ben.rippe@chathamcountync.gov

Special Instructions for Clerks

Office:

2. Department Head or his/her designee has read the contract in its entirety.

By:  (Department Head signature required)

3. County Attorney has reviewed and approved the contract

County Attorney has reviewed and rejects the contract Reason: _____

This is an automatic renewal and does not require approval from the County Attorney: Yes No



If this box is checked the County Attorney's Office has reviewed the contract but has not made needed changes to protect the County because the contract is a sole source contract and the services required by the County are not available from another vendor.

4. Technical/MIS Advisor has reviewed the contract if applicable. Yes No

5. Vendor has signed the contract. Yes No

6. A budget amendment is necessary before approval. Yes No

If budget amendment is necessary, please attach to this form.

7. Approval

Requires approval by the BOC - contracts over \$100,000.00. Follow Board submission guidelines.

Requires approval by the Manager – contracts \$100,000 or less.

8. Submit to Clerk.

Clerk's Office Only

Finance Officer has signed the contract

The Finance Officer is not required to sign the contract



MASTER PROFESSIONAL SERVICES AGREEMENT
TASK AUTHORIZATION

Chatham County North Carolina
PO Box 1809
Pittsboro, North Carolina 27312

FNI Project: TBD
Client Contract: N/A
Date: 1/18/2024

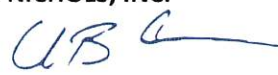
Project Name: The Park at Briar Chapel
Description of Services: See attached proposal.
Deliverables: The deliverables will be as specified in the attached proposal.
Schedule: The schedule will be as specified in the attached proposal.
Compensation Type: Lump Sum Fee
Amount Authorized: \$123,790

The services described above shall proceed upon execution of this Task Authorization. All other provisions, terms, and outlined in the Agreement for Goods and/or Services executed on July 1, 2022 and amended on June 8, 2023.

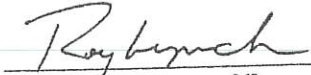
CHATHAM COUNTY, NORTH CAROLINA

FREESE AND NICHOLS, INC.

By: 
Name: Dan J. Montagne, PE
Title: County Manager
Date: 3/26/2024

By: 
Name: Charles B. Archer
Title: Vice President
Date: March 25, 2024

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.


Roy Lynch, Finance Officer



Innovative approaches
Practical results
Outstanding service

1017 Main Campus Drive, Suite 1200 □ Raleigh, North Carolina 27606 □ 919-582-5850

www.freese.com

January 9, 2024

Mr. Ben Rippe
964 East Street, Suite 100
Pittsboro, NC 27312

Re: The Park at Briar Chapel

Dear Mr. Rippe,

Freese and Nichols, Inc. (FNI) is pleased to submit this proposal for providing professional services to Chatham County, NC (CLIENT) for the Park at Briar Chapel.

Project Description: In response to conversations with Mr. Ben Rippe between August 14, 2023 and December 7, 2023, we are pleased to submit this proposal to provide professional services to Chatham County (CLIENT) to perform geotechnical and hydraulic analysis of proposed bridge abutments and boardwalk pilings for a trail project at The Park at Briar Chapel.

FNI understands that Chatham County Parks and Recreation wants to construct a natural surface trail roughly 3,900 ft in length at the Park at Briar Chapel. The proposed trail will cross a deeply scoured stream bed in two locations requiring two pedestrian bridges at these locations. A hydraulic scour analysis will need to be performed at the location of the proposed pedestrian bridge crossings.

Additionally, a boardwalk will be used to cross a 40-foot section of the trail located on a wet valley. Chatham County is proposing to use a precast concrete boardwalk system for this area and will require geotechnical analysis to determine piling location and type.

Scope of Services: Freese and Nichols (FNI) will render the following professional services.

Task 1 – Project Management

FNI will conduct and attend a virtual project kick-off meeting to discuss the scope of work, schedule, and coordination. As part of this subtask, FNI will prepare and distribute meeting agendas and minutes.

Additionally, FNI will prepare and distribute monthly status reports via email. The status report shall summarize work completed, percent completed to date for the schedule and budget, upcoming work, and any outstanding issues or decisions that must be resolved by County staff or the project team.

Task 2 - Topographic Survey

FNI will procure a topographic survey of the existing creek alignment. The survey will extend approximately 1200 feet along the centerline of the creek and 20 feet beyond the top of bank on either side. The purpose of the topographic survey of the creek is to support hydraulic modeling for the bridge scour analysis.

Task 3 – Bridge Scour Analysis

Under this task, FNI will perform a bridge scour analysis to estimate scour at the two locations of proposed bridge crossings. FNI understands that the proposed bridges are intended to be placed at locations in the stream where the straight runs exist to reduce scour potential.

The analysis will be performed using the latest version of the US Army Corps of Engineers (USACE) Hydrologic Engineering Center's River Analysis System (HEC-RAS) software and following procedures outlined in US Department of Transportation Federal Highway Administration Hydraulic Engineering Circular (HEC) No. 18 publication. The 100-year (1 percent chance) event will be used in the analysis to determine scour potential. The results and recommendations of this task will be presented in a technical memorandum.

Task 4 - Preliminary Geotechnical Field Investigation

Under this task, FNI will perform a preliminary field investigation along the proposed trail segments that will be raised with a boardwalk system and at creek crossings. FNI walked the proposed alignment with Mr. Ben Rippe on December 20, 2023, and identified that the alignment is forested with some wetland areas. Based on FNI's site visit, we understand that the stream channel is incised and the existing banks are approximately 5 to 6 ft tall. We understand that the proposed bridge system is intended to be founded approximately 10 to 12 ft from the top of bank to provide a buffer for erosion and slope stability purposes. While tree clearing could be performed to provide access with common track mounted drill rigs, it is unlikely that tree clearing to perform drilling activities would coincide with access points from a potential contractor. As such, the woodland aesthetic may be diminished if trails or paths were developed for access. Instead, FNI proposes a phased approach to investigate subsurface conditions along these trail segments. This phase would provide preliminary information through hand augers which would be confirmed by the contractor during construction activities.

During the preliminary phase, FNI will perform the following tasks:

- Call 8-1-1 call before you dig for the site, as standard practice for subsurface investigation.
- Use handheld GPS to locate 7 hand auger borings along the raised board walk and/or on either side of the existing creek. Borings will be evenly spaced along the boardwalk and approximately 12-ft off the top of bank at stream crossings.
- Advance 7 hand augers to 5 to 6 ft bgs with field soil classifications by the Unified Soil Classification System (USCS) every 1-ft depth interval.
- 1-ft samples will be collected and double bagged for potential laboratory testing.
- Record ancillary observations such as relative effort to advance hand auger, borehole collapse, organics, and groundwater presence.
- If tree roots are encountered, FNI will offset the hand auger boring until the target depth is reached.
- Boreholes will be backfilled with bentonite chips once completed.
- FNI will review the collected samples and will submit representative samples to a local geotechnical laboratory for index testing. FNI proposes to perform the following lab tests as a part of the preliminary investigation to confirm field observations and classify soils.
 - 14 natural moisture content tests;
 - 7 organic content tests;
 - 14 grain size distribution tests; and
 - 7 Atterberg Limit tests.
- Prepare boring logs to document hand auger observations.

Task 5 – Preliminary Foundation Recommendations

Under Task 2, FNI will review the field and laboratory data and select engineering shear strength properties to provide initial recommendations for bearing capacity of anticipated foundations based on soil type and lower bound in-situ densities. It is expected that the pre-fabricated bridge crossings will be supported by shallow foundations while the elevated boardwalks will be supported on small diameter piles. For each condition, FNI will document our assumptions (i.e., blow count, in-situ density, soil type) within a brief memorandum that can be used during construction to confirm field conditions with traditional drilling equipment. FNI notes that small diameter piles or spread footing dimensions may be revised based on loads and/or encountered field conditions.

Task 6 – Geotechnical Construction Support

Under this phase, FNI will observe the contractor's drill rig whilst confirming field conditions through hollow stem auger borings approximately 10-ft deep on either side of each field crossing. We assume that the contractor will furnish a drilling contractor after an access path is cut to the proposed trail location. We also assume the driller will perform borings with standard penetration tests (SPTs) continuously 10-ft. We will observe measured blow counts, groundwater conditions, and field soil classifications. If field conditions do not match our assumptions, we will provide a revised bearing capacity calculation and foundation recommendation to adapt the design in the field. We anticipate that the confirmation drilling may take up to 1.5 days of oversight, but no laboratory work will be performed.

Task 7 – Structural Design and Details

It is understood that each pedestrian bridge will be a single span no longer than 100 ft from support to support. FNI will develop bridge plan, elevation, and typical section details for each of the two proposed prefabricated pedestrian bridges. FNI will also develop general notes and specifications for performance of the prefabricated bridge elements that will be provided by the fabricator's engineer. FNI will provide abutment and approach slab details for each end of each of the two bridges. FNI will detail anticipated anchor locations and details for each bridge that will be coordinated with the bridge fabricator through FNI's shop drawing review of the prefabricated bridge structures. FNI will provide structural details for each of the two proposed preliminary foundation designs (small diameter piles and spread footings) along with anticipated foundation loads that will be coordinated with the bridge fabricator through shop drawing review. The structural details will include quantities for concrete and reinforcing. Design of scour countermeasures is not anticipated for the structural design.

Client Meeting

FNI will participate in a review meeting for the Investigation and Analysis activities with the CLIENT at the Chatham County Parks and Recreation office in Pittsboro, NC. During the meeting, we will discuss the findings and observations from the above scope of services along with recommendations. We will document the discussion within formal meeting minutes, which will be provided within 1 week of the meeting.

Deliverables:

- Design Report detailing findings and recommendations from the tasks listed above.
- Issued For Bid Design Package (Sealed Construction Drawings and Technical Specifications)

PROJECT SCHEDULE

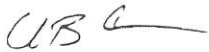
FNI will provide a schedule for each phase within two weeks of notice-to-proceed (NTP).

COMPENSATION

FNI proposes to provide services as described herein for the lump sum one-hundred-twenty-three-thousand-seven-hundred-ninety dollars (\$123,790).

We appreciate this opportunity to submit this proposal. If additional information or clarification is desired, please do not hesitate to contact us. If you agree with the services described above and wish for us to proceed with this assignment, please initiate contract proceedings.

Sincerely,
FRESE AND NICHOLS, INC.



Charles B. Archer
Vice President



Charles E. Crowell, Jr., PE
Project Manager