

**FORSYTH COUNTY**  
**BOARD OF COMMISSIONERS**

**BRIEFING  
DRAFT**

MEETING DATE: SEPTEMBER 14, 2017

AGENDA ITEM NUMBER: 13

**SUBJECT: RESOLUTION SELECTING A SURVEYING AND CIVIL ENGINEERING FIRM AND  
AUTHORIZING EXECUTION OF A CONTRACT TO PROVIDE DESIGN SERVICES  
FOR TANGLEWOOD PARK MULTI-USE TRAIL ADDITIONS**

**COUNTY MANAGER'S RECOMMENDATION OR COMMENTS:**

**SUMMARY OF INFORMATION:**

ATTACHMENTS:  YES  NO

SIGNATURE: \_\_\_\_\_  
COUNTY MANAGER

DATE: \_\_\_\_\_

**RESOLUTION SELECTING A SURVEYING AND CIVIL ENGINEERING FIRM AND AUTHORIZING EXECUTION OF A CONTRACT TO PROVIDE DESIGN SERVICES FOR TANGLEWOOD PARK MULTI-USE TRAIL ADDITIONS**

**WHEREAS**, Forsyth County staff publicly announced the County's requirements for surveying and civil engineering services for Tanglewood Park Multi-Use Trail Additions pursuant to the provisions of N.C.G.S. 143-64.31; and

**WHEREAS**, Forsyth County staff advertised and submitted a Request For Qualifications in order to identify qualified firms to provide surveying and civil engineering services on the basis of demonstrated competence and qualification to provide these professional services without regard to a fee pursuant to the provisions of N.C.G.S. 143-64.31; and

**WHEREAS**, Forsyth County staff's efforts to identify the best qualified firm included the use of good faith efforts to notify minority firms of the opportunity to submit qualifications for consideration; and

**WHEREAS**, three responses were received in response to the Request For Qualifications; and County staff reviewed and evaluated the proposals; and

**WHEREAS**, Forsyth County staff identified Allied Engineering as the best qualified firm and thereafter negotiated a contract with Allied Engineering for surveying and civil engineering services at a fair and reasonable fee, subject to approval by the Forsyth County Board of Commissioners;

**NOW, THEREFORE, BE IT RESOLVED** that the Forsyth County Board of Commissioners hereby selects Allied Engineering to provide surveying and civil engineering services for the Tanglewood Park Multi-Use Trail Additions.

**BE IT FURTHER RESOLVED** that the Forsyth County Board of Commissioners hereby authorizes the County Manager and the Clerk to the Board to execute a contract for surveying and civil engineering services, on behalf of Forsyth County, with Allied Engineering as provided in the attached fee proposal dated July 25, 2017, at a negotiated amount not to exceed \$70,000, including a design fee of \$49,000 and other services in the amount of \$21,000, subject to a pre-audit certificate thereon by the County Chief Financial Officer, and approval as to form and legality by the County Attorney.

Adopted this 14<sup>th</sup> day of September 2017.

## Tanglewood Park Multi-Use Trail Additions

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Request for qualifications were advertised by WSFC Purchasing in February 2017.

RFQ's were received on April 12, 2017.

Three companies responded to the RFQ,

1. Allied Engineering, Inc. of Winston-Salem
2. Stimmel & Associates of Winston-Salem
3. Stewart Engineering of Raleigh / Charlotte / Durham, NC

Evaluation team unanimously scored Allied Engineering highest

- **Selected Firm – ALLIED ENGINEERING**
- **Location - Forsyth County – Winston-Salem**
- **HUB Certified – NO**
  - **Firm Diversity – 7 total employees**
    - 5 FT male Caucasian employees (2 licensed PE's, 1 engineer in training, 2 AutoCAD Technicians)
    - 1 FT female Caucasian employee (Office Administrator)
    - 1 PT female Caucasian employee (Office Assistant)
- **Total Project Estimate - \$1M (one million dollars)**
- **Design Fee - \$49K (Forty nine thousand dollars)**
- **Design Fee Percentage = 4.90%**
- **Project Elements – services including surveying, bidding assistance, construction observation and support services for the installation of approximately 2 additional miles of 10' wide paved multi-use pathway at Tanglewood Park. This project will provide additional multi-use pathway length into and connectivity within the interior of Tanglewood Park. A design outcome of this project is to provide park customers with additional paved multi-use surfacing for activities such as walking, jogging, and biking that reduces the use of the existing vehicular roadways for those activities while providing connectivity where possible throughout the park.**



**Allied Design, Inc.**  
CIVIL ENGINEERING ❖ LAND SURVEYING  
Firm License No.: C-1891

June 13, 2017

Mr. Chris Weavil  
Assistant Director of Parks Operations  
Forsyth County Parks and Recreation Department  
201 North Chestnut Street  
Winston-Salem, North Carolina 27101

**SUBJECT: SCOPE OF SERVICES/FEE PROPOSAL  
TANGLEWOOD PARK MULTI-USE TRAIL, PHASE 2**

Dear Chris:

Thank you for the opportunity to provide Land Surveying and Civil/Site Engineering Services for this project. We have prepared the following scope of services and fee proposal based on our understanding of the project.

We are providing the enclosed "Scope of Services" as Attachment A for incorporation into our contract for consulting services. We are also providing our fee proposal as the enclosed "Basis of Compensation", Attachment B and a copy of a proposed "Project Schedule", Attachment C.

We look forward to working with you on this project. Should you have any questions or comments or need any additional information, please contact our office.

Sincerely,

Steve M. Causey

**SCOPE OF SERVICES  
EXHIBIT A**

The project limits for our Scope of Services will be generally defined by the park's trail Master Plan. Phase 2 of the trails will include three sections which are approximately defined as:

Trail Section 1 -- Stables to River Birch Circle Intersection

Trail Section 2 – River Birch Circle to Maintenance Center

Trail Section 3 – Maintenance Center to Tanglewood Park Drive

Land surveying and design for Trail Section 1 has been previously completed by our office. Trail Section 1 is approximately 3,100 feet long. This proposal assumes that the Section 1 routing and design will not be revised and that we will only be required to re-issue the plans we have previously prepared to issue them for permitting and bidding.

Trail Section 2 is approximately 5,200 feet long. It will include widening of an existing section of trail along the pool and will generally follow along the road. An alternate may be to construct the trail to the rear of Shelter 4 rather than along the road in front.

Trail Section 3 will be approximately 4,000 feet long and included two options in the Master Plan. One was to utilize the existing one-way road. The second option is for a new trail in the woods along the roadway. Our proposal is based on Option 1 which will utilize the existing street. This will however require widening of the roadway and a satisfactory termination in the vicinity of the entrance of BMX trails.

The County's tentative project schedule anticipates construction of Section 1 in the Spring of 2019. We understand this is based on anticipated funding but that new or revised budgets may allow construction of some sections sooner. Our surveying and design services will be provided for all phases at one time and is expected to begin in the Fall of 2017 and be completed in June of 2018. We understand that the project may be bid and constructed in three different contracts.

**A. Land Surveying**

Allied will perform a location, and topographic survey along the trail corridor. This will be an approximate 30-foot-wide corridor along the proposed alignment. We will provide field location of existing, visible, aboveground, site features within the project limits such as: creeks, ditches, roadways, sidewalks, paving, curbs, buildings/ structures, large trees, fences, water, sewer, visible utilities, etc. We will depict the NCDOT right-of-way along the entrance road but we are not providing boundary survey services. Existing topography will be illustrated at one-foot contour intervals.

We will contact the NC One Call Center to have the existing public utilities designated in the field prior to surveying. We understand that there are also some private utilities that they will not designate. We have included our in-house utility locating services for some field verification of these utilities.

B. Civil Engineering

1. Preliminary Design: We will walk the trail corridor as previously established by the park staff to more specifically define the trail location. We will consider the location relative to park facilities; the utilization of existing cleared corridors to avoid loss of additional vegetation; minimization of impact to creek, streams and wetlands; the economics of construction; etc. We will develop preliminary profiles to ensure the final alignment and design can meet the ADA accessibility guidelines for trails and recreational facilities. We will flag this preliminary alignment for further review by other park staff. We would not begin field surveys until completion of this task and approval of the alignment by your office.

*Upon completion of the preliminary design, we would begin field surveys for preparation of the final design and construction/permitting documents.*

2. Trail Plan and Profile and Construction Drawings: We will provide in a plan/profile drawing format the design of the horizontal and vertical alignments of the proposed trail. We will provide typical trail section(s) on our plans.

Some of the sections of the trail will be new with a preferred width of 10 feet and a minimum width of 6 feet. These sections will require installation of new drainage pipes and associated headwalls or other end treatments. Other sections of the trail will be located along the existing gravel road and will require widening the road approximately 4 to 6 feet on each side. Existing culvert crossings will consequently have to be extended in these sections.

The trail network will include the connector trails from the main multi-use trail to the new parking areas and/or to the future Clemmons sidewalk along Highway 158.

3. Grading, Drainage And Erosion Control Plan: We will provide a grading plan to illustrate the proposed finished grade contours for the new trail and related drainage. The drawing will include design of the necessary erosion control measures such as: check dams, temporary construction entrance, sediments basins/traps, silt fence, temporary stream crossings, diversion berms/swales, erosion control matting, rip-rap outlet stabilization, etc. Design of permanent stormdrainage piping and structures will also be provided. Any additional proposed clearing limits will be illustrated on this plan.

We anticipate that some sections of "low height" retaining wall may be required to minimize grading and/or squeeze-in the trail section along the existing entrance road. We will keep these wall heights to a maximum of 3 feet to avoid engineered design and permitting requirements. We will provide typical details for the wall bidding and construction

4. Stormwater Management: We will provide a stormwater management plan for permitting through the North Carolina Department of Environment and Natural

Resources (NCDENR). The stormwater management plan will be prepared in accordance with NCDENR requirements for linear projects and will be designed in accordance with the NCDOT Best Management Practices Design Manual. We will submit the necessary plans and applications for permit review and will make revisions as required for approval.

5. Permitting: We will complete the required permit applications and provide the necessary plans, calculations, etc. for obtaining the following permits: grading and erosion control through NCDENR; and a Nationwide Permit (NWP) 33 from the US Army Corps of Engineers and a 401 Water Quality Certification from the NCDENR DWQ for the jurisdictional stream impacts. Payment of the permit fees is included in our fee.
6. Signage and Amenities: We will utilize your typical signage details for trail and parking lot signage. For covered informational kiosks we will reference available manufacturers and typical products to be provided. We will provide a plan or map of the new trail to be utilized by your office to prepare trail maps for distribution to the public. We will illustrate proposed plantings or landscaping as may be needed to replace vegetation or to provide decorative plantings around signs, kiosks, etc.

#### C. Subsurface Exploration

We will contract with a geotechnical engineering subconsultant to provide a limited subsurface investigation. The methodology will employ the use of hand augers at various locations to determine soil composition and help predict areas of unsuitable soils. The use of mechanized drill rig machinery will not be employed. The depth of the investigation will be limited to 6 feet max.

#### D. Bidding Services

We will prepare a Project Manual for bidding the proposed work including: a quantity take-off and construction cost opinion; bid form(s); specifications; general conditions; a construction contract and other standard bidding documents as may be supplied by the County. It is our understanding that the County's standard "front end" documents and specifications will be utilized for bidding and construction of the project. We will provide project specific special provisions as needed to supplement the standard specifications and bid documents.

We understand that the project construction scope may have to be tailored to the County's budget based on our cost opinions. We will coordinate preparation of the bid forms to allow flexibility in the bidding process and contract award to meet your budget.

We have included the cost for printing and reproduction of the bidding documents in our fee. We will provide the documents to the purchasing department for distribution to bidders. We will be available during the bidding phase to: attend

and conduct a pre-bid conference; respond to bidder's inquiries and issue addenda; attend the bid opening; and assist with the bid evaluation.

E. Construction Services

1. Construction Administration: We will provide construction administration as requested by you during construction. We anticipate a 3-month construction schedule for each of the sections. These services will include: arrange and conduct a pre-construction conference; attend and conduct bi-weekly progress meetings; perform an additional one to two site visits per week during construction; be available to respond to contractors questions and provide direction as needed; negotiate and approve possible change orders; review and approve applications for payment; perform pre-final and final inspections and prepare punch lists of deficiencies or items that need completion/repair.

2. Construction Testing and Inspecting

Through our geotechnical engineering subconsultant we will provide personnel during construction that are familiar with the soil properties and characteristics to witness and direct the construction techniques and compactive efforts for subgrade preparation. They will be available to witness, direct and verify remediation of unsuitable subgrades. And will be available during paving operations to witness and verify proper paving techniques and compaction efforts are employed.



Mr. Chris Weavil  
Tanglewood Park Multi-Use Trails, Phase 2  
Revised July 25, 2017  
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**BASIS OF COMPENSATION  
EXHIBIT B**

The proposed Fees for the above-described scope of services will be as follows:

<b>FEE PROPOSAL</b>	
<i>Design Services</i>	
Civil Engineering	\$23,000.00
Bidding Services	\$9,000.00
Construction Services	\$17,000.00
<i>Other Services</i>	
Land Surveying	\$14,000.00
Sub-Surface Exploration	\$5,000.00
Reimbursables	\$2,000.00
<b>TOTAL</b>	<b>\$70,000.00</b>

Fees will be billed monthly based on the estimated percentage complete.

Mr. Chris Weavil  
Tanglewood Park Multi-Use Trails, Phase 2  
June 13, 2017  
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**TENTATIVE PROJECT SCHEDULE  
EXHIBIT C**

PROJECT	TANGLEWOOD PARK MULTI-USE TRAIL, PHASE 2
ESTIMATED COST	\$1,000,000.00
CONSULTANT	ALLIED DESIGN, INC.
OWNER PROJECT MANAGER	CHRIS WEAVIL

June 2017 – September 2017 – Design Fee negotiations, contract processing

September 2017 / AIA Architectural Design Contract Executed

October 2017 – June 2018 / Design Development, Phasing Plan, Contract Documents

July-August 2018 / Work put out for bid

October 2018 / Contract Award Construction

January 2019 / Construction Contract Executed

March – September 2019 / Phase I Construction

**HOURLY BILLING RATES  
 EXHIBIT D**

<i>Civil Engineering</i>	
Principal	\$120.00
Project Manager/Senior Project Engineer	90.00
Licensed Project Engineer	80.00
Designer/Engineer In Training	70.00
CAD Technician	60.00
<i>Land Surveying</i>	
1-Man GPS Survey Crew	\$110.00
2-Man Robotic Survey Crew/3-Man Conventional Survey Crew	140.00
1-Man Robotic Survey Crew/2-Man Conventional Survey Crew	110.00
Licensed Professional Land Surveyor	80.00
Field Supervisor	75.00
CAD Technician	60.00
<i>Subsurface Utility Engineering (SUE)</i>	
Two-man SUE Crew	\$150.00
Utility Designator	95.00
Additional Field Personnel	30.00
<i>Administrative/Clerical</i>	
Administrative Assistant/Clerical	50.00



# Allied Design, Inc.

CIVIL ENGINEERING ❖ LAND SURVEYING  
Firm License No.: C-1891

July 20, 2017

Mr. Chris Weavil  
Assistant Director of Operations  
Forsyth County Parks and Recreation  
201 North Chestnut Street  
Winston-Salem, NC 27101

**SUBJECT: ALLIED DESIGN, INC. COMPANY PROFILE**

Chris:

Thanks to you and the interview committee for selecting our firm to provide Land Surveying and Civil/Site Engineering services to Forsyth County Parks and Recreation for Phase 2 of the Tanglewood Park Multi-Use Trails. We are excited to continue our work from Phase 1 of the trails and are looking forward to another successful project with you and your staff.

Allied Design, Inc. is a locally owned, 7 employee Civil Engineering firm. We have been in business for over 18 years and our only office is located here in Winston-Salem. Our staff includes: 2 male, Caucasian Licensed Professional Engineers; 1 male, Caucasian Engineer in Training; 2 male, Caucasian AutoCad Technicians; 1 female, Caucasian; and 1 part-time female, Caucasian.

Thank you again for this opportunity and we look forward to building on our previous relationships. If we can provide any additional information regarding our firm, please let me know.

Sincerely,

Steve M. Causey, P. E.