

AGREEMENT TO FURNISH PROFESSIONAL ENGINEERING SERVICES

BLADEN COUNTY, NORTH CAROLINA

COMPREHENSIVE STORMWATER DRAINAGE ASSESSMENT

CDBG-DR Project No. CRI-017-0001

This AGREEMENT made this 3rd day of May, 2021, by and between BLADEN COUNTY, NORTH CAROLINA, hereinafter called the COUNTY, and LKC ENGINEERING, PLLC, hereinafter called LKC.

WHEREAS, the County wishes to develop a comprehensive study of the existing stormwater infrastructure components that are included as part of, or create influence on, the stormwater drainage systems within the municipal limits of the six participating towns within Bladen County. These participating towns include Bladenboro, Clarkton, Dublin, Elizabethtown, Tar Heel, and White Lake.

WHEREAS, the County has received support and funding from the North Carolina Office of Recovery and Resiliency (NCORR) through the Community Development Block Grant – Disaster Recovery (CDBG-DR) program for the subject stormwater drainage assessment (CDBG-DR Project No. CRI-017-0001).

NOW, THEREFORE, the COUNTY and LKC, for the consideration hereinafter named, agree as follows:

I. ENGINEERING SERVICES – PROJECT COORDINATION & ADMINISTRATION

- i. Engineer will provide project coordination between Bladen County and other project stakeholders to ensure a clear understanding of expected outcomes, project schedule, and responsibilities. The project stakeholders include representatives from Bladen County, Bladenboro, Clarkton, Dublin, Elizabethtown, Tar Heel, and White Lake.
- ii. Facilitate regular meetings with Bladen County and other project stakeholders to maintain an orderly project that meets all expected outcomes.
- iii. Assist Bladen County with providing progress reports and associated documents as required by the funding agency.

Payment for the PROJECT COORDINATION & ADMINISTRATION described above shall be provided on a lump sum, not to exceed basis. The fee for the proposed work is **SIXTY THOUSAND DOLLARS (\$60,000.00)**.

II. ENGINEERING SERVICES – ASSESSMENT OF CURRENT DATA / INFORMATION

- i. Obtain and review all existing stream, flood, and other general hydrologic and topology data from available resources for use as background system data for stormwater analysis.
- ii. Meet with project stakeholders to gather local knowledge of stormwater systems and flooding history.
- iii. Conduct initial project area assessments and field walks of the existing drainage basins.
- iv. Assimilate available data of existing utilities to determine potential conflicts for storm drainage.
- v. Compile the data obtained from available resources and observed during initial site assessments to develop the base system map and strategic plan to begin field surveys and asset inspections.

Payment for the ASSESSMENT OF CURRENT DATA / INFORMATION described above shall be provided on a lump sum, not to exceed basis. The fee for the proposed work is **SIXTY THOUSAND DOLLARS (\$60,000.00)**.

III. ENGINEERING SERVICES – FIELD SURVEYS AND ASSET INSPECTIONS

- i. Project leadership team will develop a strategic plan to analyze each drainage basin and manage field crews.
- ii. Conduct detailed evaluation and field surveys of existing drainage basins and stormwater infrastructure within the project area. Field surveys will include asset inventory and assessment of all relative, feasible components within the project area, documenting key information such as type, size, material and condition.
- iii. The condition of the assets will be documented within the report and utilized during the development for a capital improvement plan. Also, critical assets will be identified, likelihood of failure established and repercussions of failure clearly delineated.

Payment for the FIELD SURVEYS AND ASSET INSPECTIONS described above shall be provided on a lump sum, not to exceed basis. The fee for the proposed work is **THREE HUNDRED NINETY THOUSAND DOLLARS (\$390,000.00)**.

IV. ENGINEERING SERVICES – STORMWATER MAPPING

- i. Compile new information obtained from field surveys and assessments to develop detailed drainage basin maps in electronic format and later used as inputs to hydrologic modeling software.
- ii. Drainage basin maps will show complete drainage systems within the project area including receiving waters.

- iii. Final drainage basin maps will be provided in both digital format and hard copy format for use of the system owners. Digital mapping shall include attribute data collected, which will allow for the information database to be updated over time.

Payment for the STORMWATER MAPPING described above shall be provided on a lump sum, not to exceed basis. The fee for the proposed work is **ONE HUNDRED AND TWENTY THOUSAND DOLLARS (\$120,000.00)**.

V. ENGINEERING SERVICES – ANALYSIS OF EXISTING STORMWATER DRAINAGE SYSTEM

- i. Hydrologic and Hydraulic modeling software(s) will be used to analyze existing storm drainage systems within project area, including both closed conduit and open channel systems.
- ii. Field survey data and drainage basin maps will be used to develop the hydrologic models. Connectivity will be verified, and model calibrated through additional field work and engineering analysis.
- iii. Utilize hydrologic models to verify infrastructure capacities, flood prone areas, and identify system deficiencies and critical assets.
- iv. Recommended capital improvements will be modeled to demonstrate future hydrologic scenarios and stormwater conditions.

Payment for the ANALYSIS OF EXISTING STORMWATER DRAINAGE SYSTEM described above shall be provided on a lump sum, not to exceed basis. The fee for the proposed work is **ONE HUNDRED SIXTY THOUSAND DOLLARS (\$160,000.00)**.

VI. ENGINEERING SERVICES – PRELIMINARY PLANS AND ALTERNATIVES

- i. Preparation of conceptual / preliminary plans for additional stormwater conveyance infrastructure, or improvements to existing infrastructure, to alleviate or mitigate against future flooding in those areas with consistent flooding problems.
- ii. Plans will show locations, type, sizes, and preliminary elevation information for proposed drainage infrastructure.
- iii. Review and consider alternatives and “what-if” scenarios to identify the most critical improvements and their sensitivity to changes in flooding conditions.

Payment for the PRELIMINARY PLANS AND ALTERNATIVES described above shall be provided on a lump sum, not to exceed basis. The fee for the proposed work is **ONE HUNDRED FIFTY THOUSAND DOLLARS (\$150,000.00)**.

VII. ENGINEERING SERVICES – CAPITAL IMPROVEMENT PLAN WITH COST ESTIMATES

- i. Provide a detailed cost estimates for all identified stormwater improvements within the project area.

- ii. Develop a Capital Improvement Plan (CIP) showing the estimated project costs and priorities for all identified improvements within the project area.
- iii. Capital Improvement Plan will include cost estimates and priorities to replace existing assets based on findings during inventory and condition assessments.
- iv. Document projects within each drainage basins for financial planning purposes for each project stakeholder or system owner.
- v. Assist with reviewing and considering funding opportunities for the identified infrastructure improvements items.

Payment for the CAPITAL IMPROVEMENT PLAN WITH COST ESTIMATES described above shall be provided on a lump sum, not to exceed basis. The fee for the proposed work is **NINETY THOUSAND DOLLARS (\$90,000.00)**.

VIII. ENGINEERING SERVICES – STORMWATER ASSESSMENT REPORT

- i. Provide a comprehensive inventory of all system components, document the condition of all assets, and develop a system for future management of the assets.
- ii. Develop a preliminary or draft version of the report based on initial findings and review with project stakeholder staff.
- iii. Coordinate group meetings with Bladen County and project stakeholders to share and discuss draft report.
- iv. Prepare final report based on feedback and revisions discussed on the draft review.
- v. Present the final report and findings to Bladen County and other project stakeholders and assist with providing all final project information as required by funding agency.

Payment for the STORMWATER ASSESSMENT REPORT described above shall be provided on a lump sum, not to exceed basis. The fee for the proposed work is **SIXTY-FIVE THOUSAND DOLLARS (\$65,000.00)**.

LKC's services under this AGREEMENT shall not include (1) preparation of detailed biological survey or assessment, (2) preparation of an environmental assessment or environmental impact statement, (3) negotiations with property owners for real property or easement acquisition that would require a real estate license, (4) wetlands delineation or wetlands permitting, (5) preparation of a geotechnical report of subsurface exploration, (6) payment of permit fees. These services, if required, may be arranged for and furnished by LKC and separately paid for by the COUNTY for a fee to be subsequently agreed upon if the need for these services arises.

IX. PAYMENT TERMS

Partial payment of the above amounts shall be made to LKC on a monthly basis at a percentage of completion agreed upon by both the County and the Engineer. LKC shall submit invoices in said amount to the County on a monthly basis and payment shall be made within 30 days of the County's receipt of the invoice.

It is agreed by the parties hereto that the appropriate adjustments in any fixed and/or lump sum payments shall be made if the physical scope of the project, time for completion, or services required are materially increased or decreased beyond that considered at the time of execution of this Agreement.

Should LKC be required to render additional services in connection with related work upon which the work scope does not apply, or if the scope of the project is modified by the County, LKC shall receive additional compensation for such additional services at the hourly rates as specified on the fee schedule attached hereto as Exhibit A for the hours actually worked by the appropriate classification of employee or for a lump sum fee agreed upon by the County and LKC.

X. TERM OF SERVICE

The Term of Service shall be defined as the length of time elapsed between the execution of this Agreement by all parties and the final deliverable of the proposed project. LKC anticipates that the term of service for the Professional Engineering Services shall be **720 days** from the date of this Agreement.

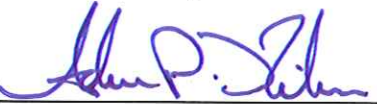
XI. TERMINATION

This Agreement may be terminated by either party based on performance or for convenience. The terminating party shall notify the terminated party in writing a minimum of 30 days before the date of termination. Upon being fairly compensated for services provided prior to termination, LKC shall turn over all records, files, and other pertinent information to the County.

The County and LKC hereby agree to the full performance of the covenants contained within pages 1 through 6 of this Agreement with **Exhibits A** herein.

IN WITNESS HEREOF, they have executed this Agreement, the day and the year first above written, which is the effective date of this Agreement.

LKC ENGINEERING, PLLC

By: 
Adam P. Kiker, P.E.
Member/Manager

Date: 5/3/2021

Attest: 
Bill Lester Jr., P.E., Member/Manager

BLADEN COUNTY, NC

By: 
Charles R. Peterson, Chairman
Bladen County Board of Commissioners

Date: May 3, 2021

Attest: 
Maria C. Edwards, Clerk to the Board

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


 5-3-21
Finance Officer Date



EXHIBIT A

HOURLY RATE STRUCTURE

LKC ENGINEERING offers a competitive rate structure to provide the highest quality of services with controlled overhead. The rates below cover all expenses including travel time.

MANAGING PARTNER	\$160.00/HOUR
LICENSED SURVEYOR	\$120.00/HOUR
PROJECT MANAGER	\$110.00/HOUR
SURVEY CREW	\$100.00/HOUR
PROJECT ENGINEER	\$ 80.00/HOUR
DESIGNER	\$ 80.00/HOUR
CONSTRUCTION MANAGER	\$ 80.00/HOUR
ADMINISTRATOR	\$ 60.00/HOUR

Note: Hourly rates listed above use the Safe Harbor Indirect Cost Rate Application Form, approved by NCDOT