

**EXHIBIT B**

Scope of Services

**EXHIBIT B**  
**PROGRESSIVE DESIGN BUILD SCOPE OF SERVICES**  
**PHASE 1 SERVICES**

**Durham County**  
**Page Park Lift Station Upgrade**

**PROJECT DESCRIPTION**

The Page Park LS is a triplex, vacuum-primed, suction-lift station. Built in 1997, it is located at 200 Wind River Parkway, Morrisville, NC. DCo wishes to convert this LS to a submersible-pump station and upgrade it as needed to meet buildout conditions.

A recent PER by Kimley Horn projects the buildout, peak-hourly flow to be 680 gpm and the current firm capacity of roughly 650 gpm. As best as possible, the upgraded LS shall meet the DCo 2023 lift station standards. Findings of the PER also require confirmation.

This project includes design, permit and construct an upgraded Page Park Lift Station. Durham County has contracted with Crowder Construction Company (Design-Builder) in partnership with Kimley-Horn (Design Consultant) to advance the project design to the 100% level and provide a final GMP at the 50% completion level. The scope contained in this document is for Phase 1 (preconstruction services).

**PROJECT TASKS**

The following tasks are included in Design-Build Team's scope of work to meet the requirements of 2.2.1 of the Agreement. Only the effort required to complete Phase 1 (preconstruction services) have been included.

**Task 1 – General Services**

Design-Builder will provide project management services including and not limited to oversight of the design, specifications, drawings, value engineering, constructability reviews, work analysis, permitting, scheduling, cost estimating, cost accounting and progress reporting throughout the Phase 1 duration.

Design-Builder will develop a project management plan including permitting matrix, risk register, decision-making logs, and other project management activities needed to execute Phase 1. The register and decision-making logs will be updated at design milestones and discussed at the associated workshop.

Meetings and workshops will be held at the Owner's offices (5926 NC Highway 55 East Durham, North Carolina 27713) or virtually with representatives from Owner's staff and Design-Build Team. The Design-Build Team will lead workshops and project review meetings, prepare agendas for each meeting, record and distribute meeting minutes, along with maintaining critical action items and decision lists for each meeting. The Owner will provide "over the shoulder" review comments to the Design Build Team at the workshops and meetings. Review and comments will be performed utilize Bluebeam Studio session or similar along with verbal comments received during workshops and meetings. The Design-Build team will generate an excel list of comments and responses from the review sessions and incorporate any additional comments provided by the Owner.

In addition to the meetings and workshops identified in other specific tasks, the following meetings and workshops are anticipated:

- Kickoff Meeting: Design-Builder will coordinate a meeting to review the goals and scope of the project, review the schedule and identify critical path issues, and establish project communications and protocols to follow. Design-Builder will memorialize these protocols in memorandum format. As part of the kick-off meeting, the Design-Builder and Owner will discuss the preliminary design to date and discuss the status of ongoing work including, but not limited to, associated projects by others and permitting.
- Monthly Progress Meetings: Participate in monthly progress meetings to review completed work, coordinate the schedule for the upcoming month and discuss any outstanding items.
- Site Logistics, Access, & Site Layout Workshop: Workshop will be conducted to review the site layout and discuss site logistics and access, including temporary and permanent.
- Start-up and commissioning workshop to develop Acceptance Testing Plan and Transition Plan for seamless turn-over to DCo.

Design-Builder will develop a CPM schedule that will include all phases of the project including the detailed design, permitting, GMP development and approval, construction, and commissioning efforts. The schedule will show major activities with anticipated milestones and float. Design-Builder will work with the Owner to identify these activities and milestones. Schedule updates will occur monthly. Phase 2 services will be based on the initial Design-Builder proposal schedule and will be updated at each major design milestone and opinion of probable cost deliverable. Scheduling software utilized will be Primavera P6 and deliverables will be provided in pdf format.

## **Task 2 – Design Services**

See Attachment B-2 for Design Scope

## **Task 3 – Conceptual Design Construction Cost Estimate Development**

The Design Builder shall prepare a conceptual construction cost estimate utilizing area, volume, or similar conceptual estimating techniques. The level of detail for the estimate shall reflect the Designer's conceptual sketches and layouts and any additional available information.

Value engineering and constructability reviews will be ongoing throughout the design identifying efficiencies and cost saving measures which will get implemented into the design as it advances.

## **Task 4 – 50% Design Construction Cost Estimate Development & Phase 2 50% GMP Contract Package**

The Design Builder shall prepare a 50% construction cost estimate utilizing area, volume, or similar conceptual estimating techniques. The level of detail for the estimate shall reflect the Designer's 50% design and any additional available information such as quotes from vendors and suppliers where possible.

Design-Builder will develop a detailed plan for construction bid packages that leverages and optimizes the best mix of self-performance of work by Design-Builder and involvement of subcontractors for specialized work. This plan will include dividing the work into multiple bid packages as deemed appropriate. After bid packages are developed, Design-Builder will solicit bids from qualified local subcontractors to contribute to the development of the GMP. The Design-Builder will utilize a process for prequalification that ensures competency and ability to perform the tasks for each prospective bidder and conforms with the QA/QC policies and any requirements that may be established as a condition of financing or funding obtained by Owner.

During this GMP phase, a detailed cost estimate will be developed, bringing into account the decisions made during the earlier estimates including design up to 50%, risk register and contingency, schedule and preliminary pricing from subcontractors and vendors that have been received. This detailed estimate will allow the Design-Builder to lock into a GMP that will be presented to the Owner. The GMP and 50% design documents, once reviewed and accepted by the Owner, will become the basis of the Phase 2 Design-Build Services Agreement. The GMP pricing will be open book and transparent so that the Owner has visibility into how costs are developed.

### **Task 5 – IFC Construction Cost Estimate Development and Reconciliation of GMP Allowances**

Design-Builder will incorporate feedback from the Owner on the 50% design and further develop the design to 90%. Following the submittal of the 90% design, Design-Builder will receive feedback from the Owner, update the documents, and provide a final IFC set of documents.

After the IFC documents are issued, a final detailed cost estimate will be developed and used to reconcile the allowances included in the Phase 2 Design-Build Services Agreement.

### **ASSUMPTIONS**

The project scope and costs are contingent upon both the Slater Road Lift Station, Forcemain and Outfall Project and the Page Park Lift Station Upgrade Project to be executed concurrently and that both projects will share the same specifications and plans.

**Attachment B-1  
PROGRESSIVE DESIGN BUILD SCHEDULE  
PHASE 1 SERVICES  
Durham County  
Page Park Lift Station Upgrade**

The table below will be utilized to develop the schedule for Phase 1 utilizing calendar days from NTP. The dates for workshops and deliverables are based on the Design-Build Team's understanding of the project scope at time of execution of this Agreement.

***PHASE 1 SCHEDULE***

<b><i>Workshop or Deliverable</i></b>	<b><i>Calendar Days from NTP</i></b>
Kickoff Meeting	0
Conceptual Design & Cost Package Submittal	74
50% Design Package Submittal	116
50% Design Workshop	123
50% Cost Package & GMP/Phase 2 Contract to Owner	144
50% Cost Package & GMP/Phase 2 Contract Review Period	151
Finalize GMP/Phase 2 Contract Documents	158
90% Design Package Submittal	165
90% Design Workshop	179
Obligate ARPA Funds (Commission Approval)	182
IFC Design Document Submittal	186
IFC Cost Package to Owner	193
Reconcile GMP Allowances	207

**EXHIBIT B-2**

Design Scope of Services

Kimley-Horn and Associates, Inc. (“Kimley-Horn” or “Engineer”) is pleased to submit this draft scope (the “Scope”) to Crowder Construction Company (“Client”) for providing Phase 1 progressive design build services for the Page Park Apartments Lift Station and Force Main Project with the (“Owner”) Durham County.

## Project Understanding

Client wishes to construct the below items as part of a progressive design build project. The project generally consists of the following:

1. Page Park Pump Station – An existing triplex vacuum prime pump station to be converted to a duplex submersible sewage pump station and approximately 100 LF of force main replacement.

## Scope of Services

KHA will provide the services specifically set forth below. Services not specifically stated in this exhibit can be provided as additional services. Services include design of upgrade design of Page Park Pump Station. This scope of services assumes a single construction contract, workshops, meetings, coordination, project management, permitting, plans, specifications and that all work is completed on a parallel schedule as the Slater Road Lift Station, Force Main, and Outfalls Project.

## Task 1 –Lift Station, Force Main, and Sanitary Sewer Design (Lump Sum)

1. Kickoff Meeting - Schedule and conduct one (1) project kickoff meeting with Client and Owner upon receipt of Notice to Proceed. The meeting shall include the following items:
  - A. Review of key project objectives, overall work plan, project deliverables, and anticipated project schedules.
  - B. Set dates for progress meetings and workshops.
  - C. Identify known stakeholders.
  - D. Develop and distribute meeting minutes.
2. Miscellaneous Administrative – Ongoing project management including subconsultant coordination, subconsultant QA/QC, schedule updates, accounting, communication, and resource allocation.
3. Survey Notification Letters - Creation and distribution of 1 set of design notification letters for the project corridor are to be completed prior to exploratory work. Notices will be mailed via standard mail soon after NTP and will instruct property owners that entry may be necessary for the next 12 months without further notification. It is anticipated that a letter will be required for approximately 1 parcels. Construction notifications are to be completed by others.
4. Public Outreach – No effort is anticipated for public outreach and is to be completed by others.
5. Survey Review – Perform up to 1 site visits to review survey CAD files. Provide comments to the Surveyor for any noticeable variances or comments.

6. Construction Contract Document Development

- A. Detailed Design – Based on the Initial Design, provide design engineering services for the project components. Provide mechanical, electrical, and civil engineering services including calculations, drawings (see below), equipment selections and other tasks as determined reasonably necessary to design the proposed improvements. Submit design plans at the following design development review stages.
1. Conceptual Design – For the purposes of review, provide conceptual design sketches on 11x17 size documents for key components to aid in decision making. No technical specifications will be provided.
  2. 50% Submittal - For the purposes of review, provide preliminary drawings depicting the final intent of the scope of work for the majority of construction items. Include preliminary mechanical, electrical, and structural, plans and section views as appropriate. Incorporate any comments from the previous review. Provide preliminary technical specifications without front end documents. Provide approximate quantities of proposed design components for purposes of GMP generation by others.
  3. 90% Submittal – For the purposes of Client and GMP generation, regulatory review, and permitting, provide construction drawings and technical specifications. Incorporate any comments from the previous review. Provide technical specifications with front end documents. Provide approximate quantities of proposed design components for purposes of GMP generation by others.
  4. 100% Submittal – For the purposes of Client and GMP generation, regulatory review, and permitting, provide construction drawings and technical specifications. Incorporate any comments from the previous review. Provide technical specifications with front end documents.
- B. Client Progress Meetings - Conduct regularly scheduled design progress and coordination meetings with the Client. These meetings will keep the Client informed of design progress, address questions or areas of concern, and minimize the potential for delays from subsequent changes. Meetings will be conducted with the design development submittals. Design development submittals will be provided approximately 1 week prior to scheduled meetings.
- C. Owner Workshops – Participate in up to 5 workshops and provide review materials as necessary for the following workshops: Site logistics & access, site layout, schedule & cost, value engineering, electrical, 50 and 90% design review and GMP. Progress plans and technical specifications will be provided in electronic format for workshops.
- D. Construction Drawings - Prepare detailed construction drawings for the project components including all necessary structural design and associated site/civil design. All drawings will be prepared in AutoCAD Civil 3D software. Plan and profile drawings will be prepared at a 1:40 horizontal scale and 1:4 vertical scale for force main and gravity sewer plans. Site plans for pump stations will be prepared at 1:5 horizontal scale. Design plans will include plan and profile for force main and gravity sewer replacements, appropriate details, structural, civil, mechanical, and electrical drawings for pump stations, valve vault details and drawings depicting other appurtenances as necessary. Traffic control plans are assumed to not be necessary for this project.



- E. Specifications - Prepare Technical specifications. Specifications will be provided to the Client and 90% design development progress interval for review. Geotechnical and SUE information will be included as an appendix to the specifications for Contractor's information.
- F. Contract Documents - Furnish sets of Contract Documents (Drawings and Specifications) in such quantities as may be required for submission to permitting agencies, other reviewing authorities, and for the Client's use. For the purposes of this scope, we have assumed a maximum of 6-full size Drawings and specifications will be required for one (1) construction contract. Assist with the development of all "Front End" documents provided by the Client. Consultant will provide information as necessary for the Client to develop the front-end documents. Electronic submittals of Contract Documents are preferred.

## Task 2 – Permitting (Lump Sum)

1. NCDEQ Sedimentation and Erosion Control - For this scope it is anticipated that one (1) permit will be required.
2. Durham County Authorization to Construct - Submit plans for County's review and approval. This scope includes One (1) resubmittal and one (1) iteration of the following steps.
  - A. Pre-Submittal Meeting – Conduct a pre-submittal meeting with the County to verify the project approval process. This meeting is intended to discuss the submittal process and identify regulations with significant bearing on the project.
  - B. Calculation Review Package – This package includes calculations for hydraulics, flow, buoyancy, force main velocity, NPSH, operating points, runtimes, cycle times, etc. This submittal also includes a site plan drawing, narrative, and a list of any variances being requested.
  - C. Construction Drawing Approval – A submittal of the construction drawings and review by the various County departments including site plan review and inspections department.
3. NCDEQ Sewer Permit – The County does not have delegated authority for the permitting of pump stations, so NCDEQ sewer permitting will be required. Prepare and submit two (2) sewer permit application to the NCDEQ. Address reasonable comments from the reviewing parties and revise plans as necessary.

## Task 3 – Subconsultant Services (Lump Sum)

The Consultant's role in coordinating the subconsultant tasks is strictly limited to facilitating communication and collaboration between the parties involved. The Consultant and subconsultants shall work together in good faith to establish reasonable deadlines and milestones for the completion of the subconsultant tasks. However, the Consultant shall not be liable for any delays or deviations from the agreed-upon schedule caused by the subconsultants. The Consultant reserves the right to substitute or replace subconsultants at its sole discretion, provided that any such substitution or replacement shall not cause additional cost or delay to the project. The Consultant and subconsultants shall maintain open lines of communication and promptly notify each other of any changes, issues, or concerns that may impact the project schedule or deliverables.

1. Site Survey - (Stewart Engineering) Provide a detailed location/planimetric/topographic field survey as required for the project areas. The surveys will include locations of existing utilities and setting of temporary benchmarks (TBMs). Perform basic deed research in accordance with the requirements of the county as required to establish existing property lines and right-of-ways located immediately adjacent to the project corridor. Perform sufficient field surveys to delineate existing property lines and right-of-ways within the project limits. Existing property lines will be mapped based on existing property monuments and recorded deeds and plats. GIS information will be used to determine the location of corners outside of the project areas. No tree, record drawing, or other activities mentioned above are included. Includes up 0.25 acres of site and driveway survey.
2. Subsurface Utility Engineering – (Stewart Engineering) Provide up to 0.15 acres of Level B subsurface utility exploration (SUE) in the survey areas by (Stewart Engineering (M/UBE)). It is assumed that the Owner will locate the existing Slater Road Force Main. Provide Level A SUE in

select locations where more precise horizontal and vertical locations of utilities is required (1 total). Where vacuum excavation is required in asphalt pavement, the pavement will be restored using cold patch asphalt or as required by NCDOT. A report for each vacuum excavation location will be created and supplied to the Client. Each excavation report will be sealed by a licensed land surveyor. Subconsultant will provide their own traffic control for SUE activities as necessary. Additional Level A SUE (test holes) can be provided as an additional service. Level A SUE locations will be determined based on a preliminary assessment of the existing utilities, site conditions, and proposed force main alignment.

## Additional Services

Any services not specifically provided for in the above scope will be authorized by the Client in advance, billed as additional services, and performed at our then-current hourly rates. Additional services we can provide include, but are not limited to, the following:

- A. Public Outreach
- B. Stream Bank Restoration
- C. Construction Administration and Construction Observation services for the project areas.
- D. Additional Level A SUE (test hole) and geotechnical investigation services beyond services described above.
- E. Exploratory work inside buildings.
- F. City/County Planning or Board of Adjustment (BOA) submittals, reviews, correspondence, etc.
- G. ADA/PROWAG design, submittals, reviews, and correspondence.
- H. Surveying services required for Record Drawings (if provided by Kimley-Horn in lieu of the Contractor).
- I. Surveying services required for the delineation of species trees.
- J. Environmental or arborist services required for the identification and delineation of species trees.
- K. Wetland/stream mitigation site selection and design (if necessary).
- L. SEPA Environmental Assessment (EA) or Categorical Exclusion.
- M. Cultural resources surveys (historical/archaeological).
- N. Protected or endangered species surveys.
- O. Quantitative analysis of indirect and cumulative impacts.
- P. Attendance at additional public meetings such as public workshops and public hearings not specifically outlined.
- Q. Attendance at or preparation for additional public presentations to select board.
- R. Environmental Impact Statements (EIS).
- S. HEC-Studies.
- T. Redesigns of facilities after approval of the 90% review submittal.
- U. Court appearances or preparation for litigation.
- V. All services associated with preparing landscaping plans.
- W. All services associated with pedestrian access ramps beyond the assessments and replacements listed above.
- X. Additional services not included in the above.

## Schedule

A schedule will be developed by the Consultant to meet the Owner's needs.

Due to the tight schedule timeline of the project, the design tasks are being performed in reasonable detail to ensure progress towards the construction phase. However, it is important to note that the level of detail may be adjusted to meet the project's time constraints. While every effort is made to provide accurate and comprehensive designs, the fast-paced nature of the project may result in certain aspects being addressed in a more concise manner. We strive to balance efficiency with quality and will ensure that all necessary elements are included to facilitate successful construction. Please feel free to reach out to us if you have any specific concerns or questions regarding the level of detail in the design tasks.

## Client Responsibilities

1. Provide reviews on design plans and specification submittals at intervals mutually agreed upon in the overall schedule.
2. Provide constructability feedback and guidance for design options throughout design process including TMPs.
3. Attend all meetings
4. Develop costs for each design interval and provide feedback to Consultant during design process on relative costs for design alternatives.