EXHIBIT A
PROFESSIONAL ENGINEERING SERVICES
for the
CITY OF HENDERSONVILLE
WTF SLUDGE TRANSFER AND BACKWASH PUMP UPGRADE PROJECT

I. PROJECT UNDERSTANDING AND PURPOSE

The following presents the scope of work to provide professional engineering services for the City of Hendersonville Water Treatment Facility (WTF) Sludge Transfer and Backwash Pump Upgrades Project. McKim & Creed, Inc. will provide the following major services for this Project:

- Funding Assistance
- Condition Assessment of Existing Facilities
- Engineering Alternatives Analysis
- Preparation of a Basis of Design Report
- Preliminary Design
- Final Design
- Permitting Assistance
- Prequalification of Bidders Assistance
- Formal Bidding & Award Services
- Construction Administration
- Construction Observation
- Post-Construction Services

The scope of services described herein is based on providing design, permitting, and construction phase services for replacing the existing sludge transfer pump and installing a new redundant backwash pump at the City of Hendersonville WTF. The existing sludge transfer and backwash pump systems are approximately 45 years old, each consist of only one pump, and would result in major operational challenges if either one of these systems were to fail. As a result, the City is in need to new redundant pumps for each system to improve the redundancy, reliability, and energy efficiency of these systems. In addition, the WTF Filter Expansion project is currently underway which will increase the permitted capacity to 15.0 MGD, and future expansions to 18 MGD and ultimately 21 MGD are also planned. The new pump systems shall be designed to accommodate the expanded capacity to 15 MGD and provide accommodations for the future planned expansions to 18 and 21 MGD.

The City intends to replace the existing sludge transfer pump with two new dry pit submersible pumps. This will allow a simplification of the existing sludge transfer pump station arrangement by eliminating the need for elevated motor mounting. The City also intends to replace the existing backwash pump in the existing finished water pump station, and construct a new backwash pump station east of the existing Clearwell to provide a second redundant backwash pump.

Major components of the project are anticipated to include:

- Sludge transfer pump system upgrades
    - Replacement of existing vertical end suction dry pit solids handling pump with two (2) new dry pit submersible solids handling pumps
    - Piping modifications as needed to connect the new pumps
    - Structural Repair and rehabilitation as needed
    - Electrical and I&C modifications to accommodate the replacement of the existing pump, installation of a redundant pump, and installation of variable frequency drives for each pump.
    - Ventilation improvements
    - Lighting improvements
    - Pump station door replacement
- Backwash pump system upgrades
    - Replacement of the existing vertical turbine backwash pump in Finished Water Pump Station with a new backwash pump in like kind.
    - Construction of a new backwash pump station east of the existing Clearwell with connection to the existing finished water piping between the Clearwell and Finished Water Pump Station, to provide a second redundant backwash pump.
    - Piping modifications as needed to connect the new backwash pump station discharge piping to the existing 16" washwater piping.
    - Electrical and I&C modifications to accommodate the replacement of the existing backwash pump, construction of a new backwash pump station, and installation of variable frequency drives for each pump.

The services required to assist the City will generally include funding assistance, preliminary evaluations, surveying, subsurface utility engineering, geotechnical investigations, final design, permitting, bidder prequalification assistance, bidding and award assistance, construction administration, construction observation, and post-construction services. The project is composed of the following phases and tasks:

PHASE 1: PRELIMINARY, DESIGN, AND BID SERVICES

1. Funding Assistance
2. Preliminary Engineering
3. Final Design
4. Permitting
5. Bidder Prequalification Assistance
6. Bidding and Award Phase
7. Unallocated Project Budget (Phase 1)

PHASE 2: CONSTRUCTION SERVICES

8. Construction Phase Services
9. Post-Construction Phase Services
10. Unallocated Project Budget (Phase 2)

This scope of services is to provide Phase 1 professional engineering services only. Phase 2 services are to be provided as a future amendment to this contract. Phase 2 services are estimated and are subject to change depending on project requirements at the time of amendment execution.

II. SCOPE OF SERVICES

PHASE 1 DESIGN AND BID SERVICES

TASK 1: FUNDING ASSISTANCE

McKim & Creed will assist the City in preparing and submitting funding applications through the NCDEQ Division of Water Infrastructure (DWI). The City will provide financial and other supporting information as required by the funding applications. Additional assistance with other funding options may be provided as additional services if requested by the City. The scope of services for the NCDEQ DWI funding applications is detailed further below.

1.1 NCDEQ DWI Funding Application

It is assumed that McKim & Creed will assist the City in preparing and submitting a funding application to NCDEQ DWI during the Fall 2025 funding round. NCDEQ DWI may automatically reconsider the project for funding in subsequent funding rounds using the previously prepared funding application packages without modification. Additional assistance with additional funding round applications may be provided as additional services if requested by the City. Each funding application will consist of the completed application forms and priority rating system forms, engineering calculations, opinions of probable project costs, anticipated schedules, and permit requirements.

TASK 2: PRELIMINARY ENGINEERING

2.1 Design Survey Services

McKim & Creed will provide design survey services as described below. Survey work will be performed to the Standards of Practice for Land Surveying in North Carolina. Horizontal survey control will be referenced to NC Grid NAD 83 or otherwise specified. Vertical control will be referenced to NAVD88 or otherwise specified. The scope of survey shall include:

1. Set horizontal and vertical control at the WTF.
2. Topographic survey of existing grade throughout the existing WTF property to the general extents shown in Figure 1 below.
3. Perform 3D laser scanning of the existing Electrical Building, Finished Water Pump Station, and the existing Sludge Transfer Pump Station to collect existing dimensional data for the existing structures and document as-built conditions for the purposes of design. McKim & Creed will utilize the 3D scans of the existing structures to develop base drawings with sufficient accuracy to allow completion of engineered design drawings for the specific infrastructure designs described by this agreement. The scope of 3D scanning shall include:

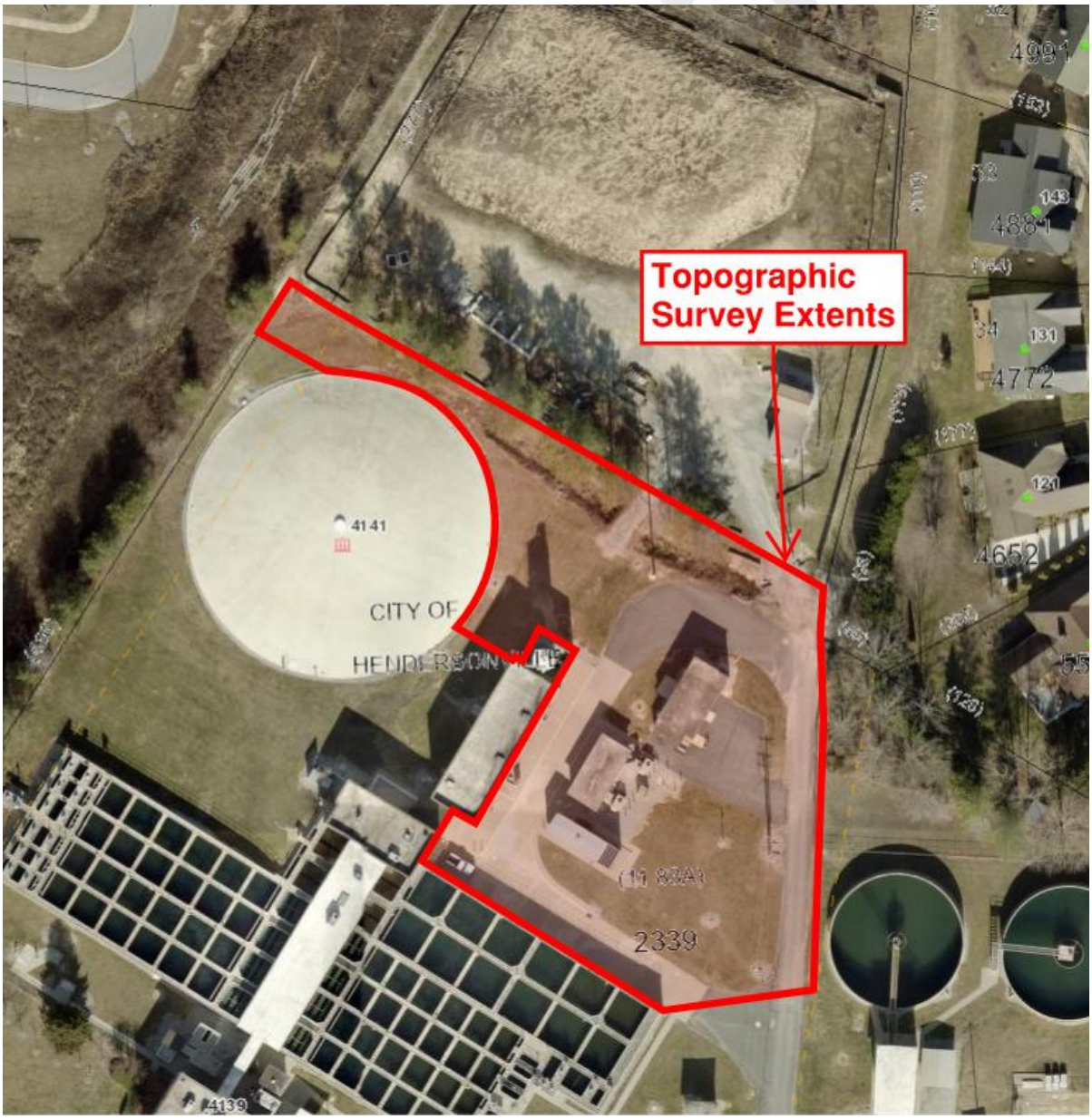
    a. All interior and exterior areas of the Electrical Building to 5-feet outside the building footprint.

b. All interior and exterior areas of the Finished Water Pump Station to 5-feet outside the building footprint, excluding the interior of the existing wet well or vaults.

c. All interior and exterior areas of the Sludge Transfer Pump Station to 5-feet outside the building footprint, excluding the interior of the existing wet well.

d. Deliverables in Autodesk Revit format.

Figure 1 – General Topographic Survey Extents



2.2 Design Subsurface Utility Engineering (SUE) Services

McKim & Creed will coordinate with our SUE subconsultant Stewart to provide SUE services as described below:

1. Provide SUE Level B and A services to determine horizontal and vertical locations of existing utilities throughout the project footprint at the existing WTF as described below.
2. SUE Level A services is based on providing up to ten (10) test holes to locate critical underground infrastructure at the existing WTF site for integration of the new facility design with the existing infrastructure. It is assumed that all Level A test holes will be completed in one (1) trip with a duration of up to three (3) days.
3. The subsurface utilities will be identified with inverted spray paint and flagging using the following color code:

    a. Red = Electric
    b. Blue = Water
    c. Purple = Non-Potable Water
    d. Orange = Telecommunications
    e. Yellow = Natural Gas
    f. Green = Sanitary Sewer
    g. White = Unknown utility

4. SUE services will be performed in accordance with the standards as set forth by the American Society of Civil Engineers in publication CI/ASCE 38-02 – Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data.
5. Collection of horizontal and vertical location of existing utilities located by SUE services generally within the boundary shown in Figures 2 and 3 below, including inverts of gravity utilities, including the following:

    a. Storm Drain:

        i. Drain lines as shown on Figure 2 below.
        ii. MH 1, MH 2, MH 2A, MH 4, MH 5JB #1, CB#1. Note, structure numbering from *Water Treatment Plant Renovation* "Record Drawings" Sheet 13 of 143 prepared by Arcadis, dated 12/7/2006.

    b. Process Water:

        i. Existing 30" and 42" finished water line lines from clearwell to Finished Water Pump Station.
        ii. Existing 16" washwater line from Finished Water Pump Station to blue boundary near the Filter Building as Shown on Figure 2 below.

iii. Existing 24" finished water from Finished Water Pump Station to blue boundary near the Sedimentation Basin 3 as shown on Figure 2 below.

iv. All miscellaneous small diameter lines highlighted in red as shown on Figure 2 below.

c. Power:

i. All power duct banks and conduits highlighted in red within the dashed blue boundary shown on Figure 3.

ii. Electrical manhole EMH 1, handholes HH 1, HH 2, HH 3, and HH 5. Note, structure numbering from *Water Treatment Plant Renovation* "Record Drawings" Sheets E-3 and E-4 of E-58 prepared by Arcadis, dated 12/7/2006.

d. Communications:

i. All communications duct banks and conduits highlighted in red within the dashed blue boundary shown on Figure 3.

e. Other

i. Gas, telecommunications, and other utilities on site as marked by SUE.

6. Horizontal and vertical locations of located utilities will be incorporated into the design drawings.

Figure 2 – Existing Piping to be located within SUE Extents

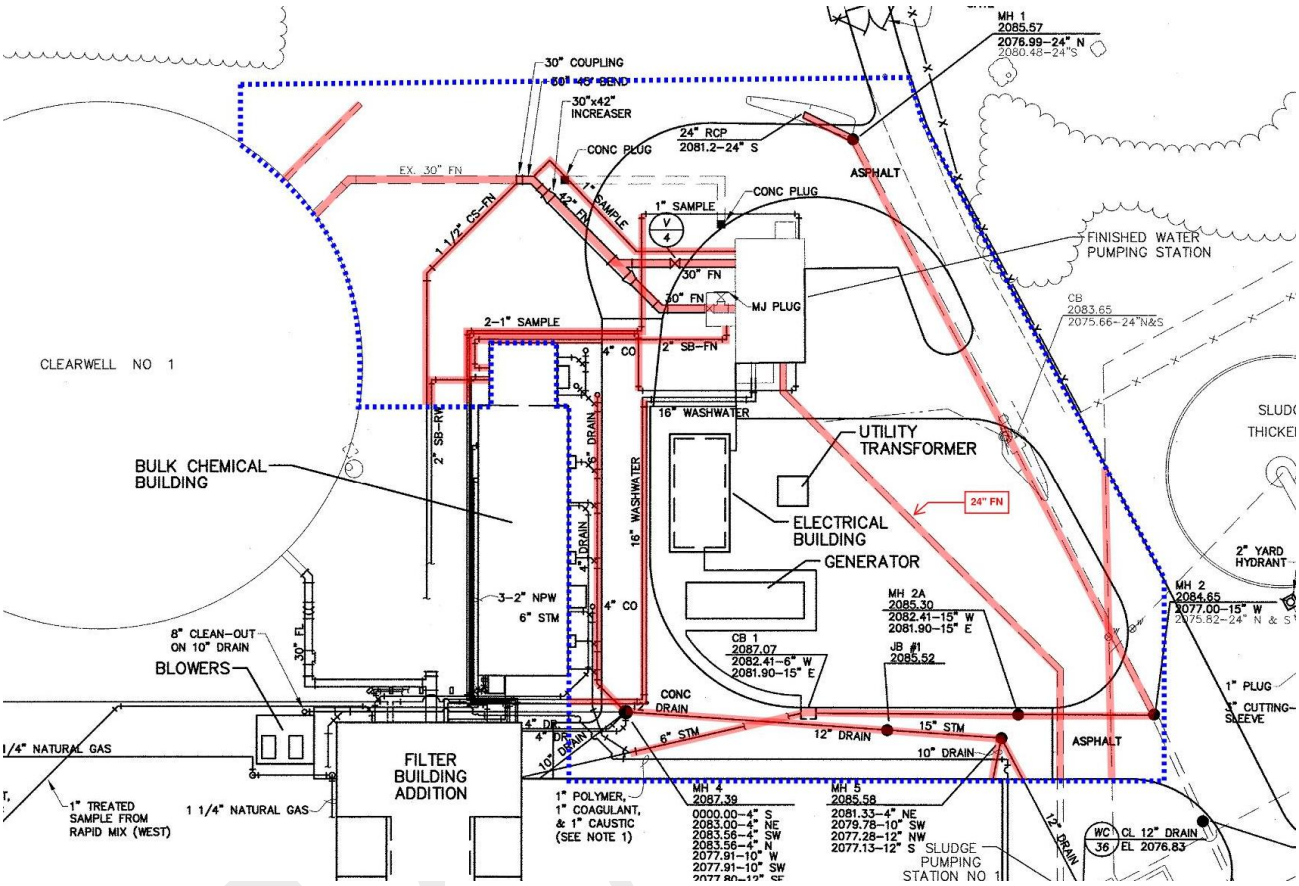
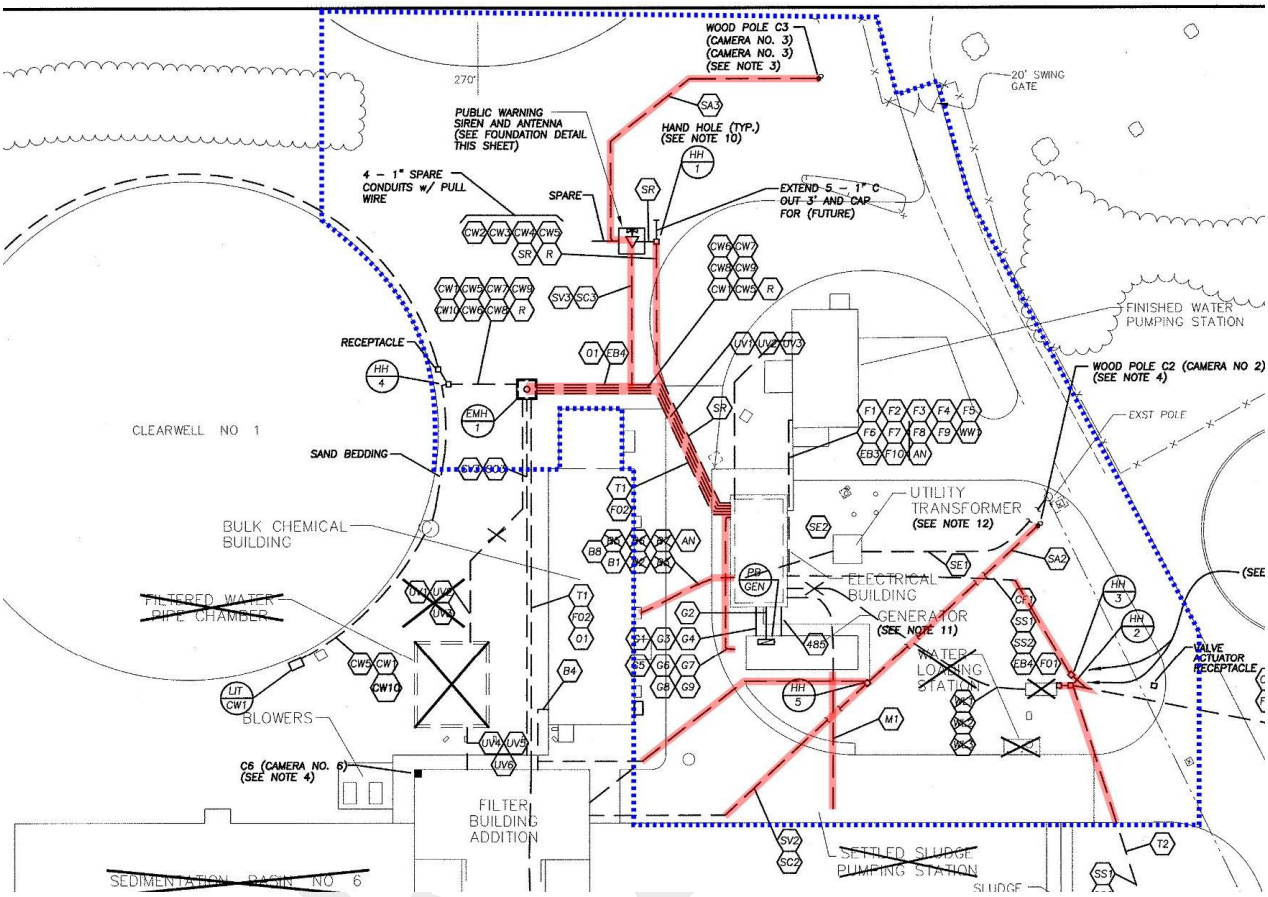


Figure 3 – Existing Electrical utilities to be located within SUE Extents



2.3 Geotechnical Investigations

McKim & Creed will coordinate with our geotechnical subconsultant, S&ME, to provide a limited geotechnical investigation of the subgrade conditions to provide data needed to design structural foundations. The geotechnical investigations will include:

1. Explore subsurface conditions by performing soil test borings:

   a. One (1) soil test boring in the grass area north of the existing Bulk Chemical Building, east of the clearwell, and west of the Finished Water Pump Station to depths of 30 feet, including rock coring if rock is encountered.

   b. One (1) soil test boring to locate the buried abandoned clearwell foundations in the grass area north of the existing Bulk Chemical Building, east of the clearwell, and west of the Finished Water Pump Station to depths of 30 feet, including rock coring if rock is encountered.

c. One (1) soil test boring in the grass area north of existing Sedimentation Basin No. 3 between the basin, generator, and 24" finished water line to a depth of 25 feet.

2. Laboratory testing will be performed to verify soil classification and obtain soil strength parameters for construction and structure foundation design recommendations.
3. A findings report will be prepared which will include the following:

   a. Site and exploration location plan
   b. Soil test boring logs and generalized subsurface profiles
   c. Recommendations for foundation bearing for the structures and equipment
   d. Recommendations for site preparation and construction of structural compacted fills
   e. Recommendations for control of groundwater or drainage systems if necessary

2.4 Basis of Design Report

McKim & Creed will prepare a Basis of Design Report which will include the following tasks:

1. Confirm Design Parameters: Review the City's available record drawings, specifications, historical operational data, and master plan to confirm design and operational parameters and requirements for the backwash and sludge transfer pump systems. This task is assumed to include the following:

   a. Review of the City's record drawings, specifications, and historical operation data to confirm understanding of current operational requirements of both sludge transfer and backwash pump systems.
   b. Confirm future capacity requirements based on the latest draft of the Hendersonville Water System Master Plan Report.
   c. Confirmation of critical design parameters with the City prior to submission of the Draft Basis of Design Report.
   d. The findings of this task will be summarized in the Basis of Design Report.

2. Condition Assessment of Existing Structures and Equipment: Conduct a condition assessment of the existing Sludge Transfer Pump Station, sludge transfer piping, wash water piping, electrical distribution equipment, and instrumentation and controls equipment. It is understood that both the sludge transfer pump and backwash pump are in a deteriorated condition and will be excluded from the condition assessment, which will instead focus on the ancillary systems,

equipment, and structures that support the sludge transfer and backwash pumping systems. The scope of the condition assessments will include:

a. PIPING: Review of existing sludge transfer piping, wash water piping, and associated valves and appurtenances within the Sludge Transfer Pump Station to determine whether existing components can be used or require replacement.
b. STRUCTURAL: Review of associated existing the Sludge Transfer Pump Station structural elements, including cast-in-place reinforced concrete slabs, walls, vertical and horizontal structural members, supporting beams, CMU walls, fascia, pipe supports, and other exposed structural components to identify repairs or modifications needed to ensure adequate support of the new sludge transfer pumps and the existing facilities intended to remain. This scope excludes structural assessment of the Sludge Transfer Pump Station wet well due to access and confined space entry limitations.
c. ELECTRICAL: Review of existing power distribution equipment that serves the sludge transfer and backwash pump systems to identify potential reuse of existing power distribution feeders, duct banks, and equipment, and identify modifications and improvements needed to power the new equipment and systems required for the project. This effort will also include review of existing lighting circuits and fixtures to identify modifications and improvements needed. Emphasis will be placed on the following:

    i. Review of the existing Electrical Building and other potential locations where power distribution equipment may be retrofitted, replaced, or installed new to service the new backwash pumping system. The existing Electrical Building will also be reviewed to identify potential mounting locations for a new variable frequency drive for the replacement of the existing backwash pump.
    ii. Review of the existing Finished Water Pump Station to evaluate the condition and arrangement of power distribution feeders and equipment for the existing backwash pump to identify any potential modifications or improvements necessary to facilitate replacement of the existing backwash pump with a new VFD-driven backwash pump.
    iii. Review of the existing Sludge Pump Station to ensure power distribution feeders and equipment is adequately sized for the replacement of the existing pump with two (2) new pumps, and to determine requirements for modifications.

iv. Review of the existing lighting circuits and fixtures within the Sludge Pump Station to identify necessary modifications and improvements.

d. SCADA: Review of existing controls and SCADA communication systems to identify modifications necessary to accommodate new equipment, including review of the WTF's existing fiber optic (FO) network, controls termination cabinets, instrumentation, and other associated SCADA equipment and hardware.

3. Backwash Pumping System Upgrades Alternatives Evaluation: Perform an evaluation of alternatives for replacement and improvement of the existing backwash pumping system, pump sizing and selection, and site layout alternatives. McKim & Creed will evaluate preliminary design concepts to replace the existing backwash pumping system for the future design capacity. It is assumed that only one (1) filter will be backwashed at a time. The preliminary design concepts will be reviewed with the City to determine the basis of design equipment and site layout selections. The scope of the alternatives evaluation will include:

a. Comparison of location alternatives for the proposed backwash pumping facilities. Siting alternatives will be developed to identify the location that presents minimal impacts to existing utilities and structures, provides space for future expansion, and minimizes constructability issues. It is assumed that a maximum of three (3) siting alternatives will be developed for comparison. Preliminary site layouts will be reviewed with the City for selection of the basis of design site layout.
b. Comparison of vertical turbine pumps located in a cast-in-place concrete wet well versus the installation of canned vertical turbine pumps. This may include computation fluid dynamics (CFD) modeling.
c. Coordination with pump manufacturers to develop preliminary pump selections.
d. Review of potential opportunities to utilize the existing Finished Water Pump Station and 24" finished water line modifications to provide redundant backwashing capacity. This would include evaluating the replacement of the existing backwash pump in place to maintain maximum control of the backwash supply through pumped supply, with the high service backwash supply line as a backup source. This alternative would require the installation of a new tap onto the existing 24" high service main tying into the existing 16" washwater line with dedicated backflow prevention, pressure regulation, and flow regulation. Prevention and mitigation of hydraulic transients in the distribution system that could potentially result from backwashing would be

evaluated. This would include evaluation and preliminary sizing of a surge tank on the backwash water supply.

e. Comparisons of electrical power supply configurations to identify the configuration that presents minimal impacts to existing utilities and structures, provides space for future expansion, and minimizes constructability issues.

f. Rough order-of-magnitude (RoM) conceptual construction cost opinion for the alternatives evaluated.

4. Conduct Process/Equipment Selection Workshops: Meet with the City to review the findings of the alternatives analyses, discuss, and receive owner input on the unit process and equipment selections. It is assumed that two (2) separate process/equipment selection workshops will be attended prior to the submittal of the draft Basis of Design Report.
5. Process Design Computations: Develop process design computations for unit treatment processes. These shall include backwash pumping and sludge transfer pumping system computations.
6. Basis of Design Report Preparation and Submittal: Prepare the Basis of Design Report including the information, findings, and recommendations developed from the tasks described above. The Basis of Design Report will be prepared in accordance with NCDEQ DWI Drinking Water State Revolving Funds (DWSRF) guidelines and requirements for the preparation of an Engineering Report/Environmental Information Document (ER/EID), if applicable subject to project funding requirements. The Basis of Design Report meeting ER/EID requirements will be submitted to NCDEQ DWI for review and comments, if applicable. Comments received from NCDEQ DWI will be incorporated and a final Basis of Design Report will be prepared and submitted.

2.5 30% Preliminary Design

McKim & Creed will develop the 30% Preliminary Design, which will consist of the following tasks:

1. Process Flow Diagram: Prepare a system schematic and flow diagram for the proposed WTF Backwash and Sludge Transfer Pumping System Improvements.
2. Site Plan: Prepare a preliminary site plan showing the location of the proposed pumping systems, piping modifications, associated structures, and yard piping on the site.
3. Electrical: Prepare preliminary sizing, one-line diagrams and/or schematics for electrical design of the proposed equipment.
4. Preliminary Engineer's Opinion of Probable Construction Cost: Prepare a preliminary construction cost opinion for the overall project that incorporates and improves the accuracy of the initial RoM conceptual construction cost opinion for

the backwash pump upgrade alternative recommended in the Basis of Design Report.

5. Submit Preliminary Design Documents for Review: Compile and submit the Basis of Design Report, 30% design drawings, and cost opinion to the City for review and approval as part of the 30% stage of design completion. Technical specifications are not included as part of the 30% preliminary design submittals.
6. Conduct Workshop Meeting to Review 30% Submittal with City: Meet with the City staff to review, discuss, and receive owner input on the 30% preliminary design submittals.
7. Revise & Address City Comments on 30% Submittal: Revise the appropriate preliminary design documents (as necessary within the original scope of the Project) to address the City's 30% design review comments. The Basis of Design Report will be finalized and included as part of the Authorization to Construct (ATC) application package to be submitted at final design.

2.6 Summary of Preliminary Engineering Project Meetings:

1. Project Kickoff Meeting: One (1) virtual workshop with City staff to review the project scope, schedule, critical drivers, and primary objectives.
2. Process/Equipment Selection Workshops: Two (2) virtual workshops with City staff to review process/equipment alternatives to obtain concurrence on basis of design equipment selections and process layouts. Process/equipment alternatives to be reviewed include the backwash pumping system and sludge transfer pumping system. The basis of design selections made during these workshops will be used to identify detailed design criteria, equipment sizing requirements, and site layout requirements.
3. Preliminary Design Review Workshop: One (1) in-person workshop to receive comments from City staff on the BODR and 30% preliminary design submittal.

TASK 3: FINAL DESIGN

Upon receiving authorization from the City, McKim & Creed will proceed with the Final Design Phase, including the following efforts:

3.1 60%, 90%, Final - Issued for Review, and Issued For Bids

1. Prepare 60%, 90%, Final – Issued for Review, and final Issued For Bids design drawings and construction documents based on a single prime construction contract. The final design documents will generally include the following:

    a. General
        i. Cover
        ii. Sheet Index

iii. Legends and Abbreviations
iv. Piping Schedule
v. Process Flow Diagram
vi. Hydraulic Profile

b. Civil
i. Overall Site Layouts and Existing Conditions
ii. Erosion & Sedimentation Control Plans and Details
iii. Grading & Drainage
iv. Yard Piping Plans & Profiles
v. Details

c. Building
i. Code Data Summary
ii. Plans and Elevations

d. Structural
i. General Notes, Design Loads, Design Criteria, and Legends
ii. Plans, Sections, and Details
iii. Demolition/Decommissioning Plans, Sections and Details

e. Process Mechanical
i. Plans, Sections, and Details
ii. Demolition/Decommissioning Plans, Sections, and Details

f. HVAC
i. Schedules, Plans, and Details

g. Electrical
i. General Notes, Legends, Abbreviations, and Symbols
ii. Diagrams and Schedules
iii. Power and Grounding Plans
iv. Site Lighting Plans
v. Building Power, Grounding, and Lightning Protection Plans
vi. Details

h. Instrumentation & Controls
i. General Notes, Symbols, and Abbreviations
ii. Network Architecture
iii. Process & Instrumentation Diagrams
iv. Security Plans and Details

2. 60%, 90%, Final Design – Issued for Review – Not for Construction, and Issued For Bid Design Submittals: Prepare and submit design drawings and construction documents at completion stages for review by the City at 60%, 90%, Final Design – IFR – NFC (permit submittal), and final Issued For Bid design stages.
3. Workshop Review Meetings: McKim & Creed will conduct formal in-person workshop review meetings with the City's staff at the 60% and 90% design stages to provide status updates, review project submittal documents, and receive City comments on project submittal documents.

4. Prepare Opinions of Probable Cost: Updated opinions of probable cost will be prepared for the project to be submitted at the 60%, 90%, Final Design – IFR – NFC, and final Issued for Bid design submittal stages.
5. Prepare Technical Specifications: Technical specifications will be prepared for the construction contract. The documents shall include a comprehensive table of contents followed by technical specifications to be included in the Construction Documents.
6. Bidding & Contract Documents: Prepare appropriate bid and contract documents for the construction contract based on current City of Hendersonville standards and requirements.
7. Final Design – Issued for Review – Not for Construction Submittal: McKim & Creed will prepare and submit signed and sealed Final Design – IFR – NFC documents to permitting agencies based upon City review comments from the 90% design submission. These submittal documents will also be submitted to NCDEQ DWI as the "Bid and Design Package" per project funding requirements, if applicable.
8. Issued For Bid Submittal: Upon completion of the 90% submittal and responses to the City's comments and concerns on the 90% submittal, and following the project permitting process, McKim & Creed will finalize contract documents for procurement. This task will include the following:

    a. Incorporate permit approval conditions in contract documents
    b. Prepare the final Engineer's Opinion of Probable Construction Cost
    c. Prepare recommended schedule for bidding and construction
    d. Submit final Issued For Bid contract documents to the City

3.2 Quality Assurance and Quality Control

The Consultant will include an in-house quality assurance/quality control (QA/QC-Value Engineering Review) review with staff members not involved in the project. The QA/QC review will be entirely separate from the normal in-house reviews conducted by the project team and the City's staff. The QA/QC review will be conducted after the 30%, 60%, and 90% design submittals and its findings presented to the design team along with comments from the City's 30%, 60%, and 90% design review. Prior to bid, a final QA/QC will be conducted for the Contract Documents.

TASK 4: PERMITTING

The Consultant will assist the City with submitting all permit applications required for the project. The Consultant will prepare the applications and following execution by the City of Hendersonville, will submit the applications to the appropriate agency for approval. The Consultant will address comments from the agencies and assist the City with negotiations concerning permitting issues that may arise. The cost of all application fees will be paid for by the

Consultant and will be reimbursed by the City. The permits required for this project are anticipated to include the following:

4.1 PWSS Authorization to Construct

The PWSS Authorization to Construct (ATC) permit will be applied for prior to advertisement for bids. The Final Design – IFR – NFC documents will be submitted to NCDEQ Division of Water Resources PWSS permitting unit for review and approval along with the permit application and all associated documentation required. The current permit application fee is $300.

TASK 5: BIDDER PREQUALIFICATION ASSISTANCE

The Consultant will assist the City in conducting a prequalification process for potential bidders to develop a list of qualified general contractors for the project. The prequalification process will adhere to the City's standard processes. Specific tasks include the following:

1. Assist in the preparation of an Invitation to Prequalify for Bidding advertisement for the project.
2. Provide recommendations to the City to determine criteria for projects to be considered similar in size and nature to the WTF Sludge Transfer And Backwash Pump Upgrade Project.
3. Review the list of prequalification requirements with City staff and incorporate suggested revisions to the list that may be beneficial to the project.
4. Place formal advertisement of the prequalification package in the agreed upon advertisement media. McKim & Creed will pay for all fees associated with advertisement of the prequalification package, which will be reimbursed by the City.
5. Issue electronic prequalification documents to prospective bidders via the City's QuestCDN on-line advertisement and bidding service.
6. Schedule and conduct a virtual pre-submittal meeting, receive questions from prospective attendees, prepare and distribute minutes.
7. Respond to prospective bidder inquiries and prepare Addenda as required.
8. Receive prospective bidder submittals on specified and appropriate closing date.
9. Review prospective bidder documentation and request clarifications to determine if prospective bidder has met the requirements of the prequalification solicitation.
10. Review the list of proposed prequalified bidders with the City and make any final edits and revisions to the list of prequalified bidders. McKim & Creed will work jointly with City staff to assist in developing the prequalified bidders list; however, the City shall be responsible for the final determination of which bidders will be deemed as prequalified. Additional assistance or responses to protests from prospective contractors is not included in this scope of work and is considered an additional service. If required, additional services will be provided utilizing the Unallocated Project Budget phase upon written authorization from the City, or through the execution of an amendment to this Agreement.

11. Notify all prospective bidders of the final approved list of pre-qualified bidders.

TASK 6: BIDDING AND AWARD PHASE

The bid documents will consist of the plans (drawings) and specifications for the WTF Sludge Transfer And Backwash Pump Upgrade Project. The bid documents will be used by contractors to prepare bids for the work detailed on the plans and described in the specifications. The bid documents will include specifications and contractual requirements associated with pre-purchased equipment as applicable. Other tasks to be performed by the Consultant will include preparation of a final opinion of probable construction cost.

Our scope of work for Bid Phase services is premised on our understanding that McKim & Creed will be responsible for managing the bids and contracting process for one (1) single prime construction contract.

Bidding and Award Phase tasks performed by the Consultant will include:

1. Provide necessary information to the City for the preparation of the project bid advertisement.
2. Issue electronic bid documents to plan rooms and the City's QuestCDN on-line advertisement and bidding service.
3. Conduct the pre-bid conference and prepare and issue minutes.
4. Assist in answering bidders' questions concerning elements designed by McKim & Creed and prepare technical information as necessary for inclusion in addenda if required.
5. Prepare addenda as appropriate to interpret, clarify, or further define the Contract Documents. Addenda will be issued by McKim & Creed upon the City's approval.
   a. It is assumed that up to three (3) addenda will be prepared and issued.
6. Consult with and advise the City to determine the acceptability of substitute materials and equipment proposed by bidders when substitution prior to the award of contracts is allowed by the contract documents.
7. Attend and/or conduct the bid opening.
8. Review bid packages and prepare the certified bid tabulations.
9. Provide written letter of recommendation of award to the City.
10. Assist the City in the contract award process.
11. Compile and submit the Project Bid Information package to NCDEQ DWI per project funding requirements, if applicable.
12. Prepare and issue conformed documents to incorporate addenda issued during the bidding process into the contract documents to be used by the contractor for construction.
13. Provide for three (3) sets of conformed documents for execution for the City, Engineer, and Contractor.

The Bidding and Award Phase will conclude upon the City's issuance of a notice of award to the selected construction contractor. If a re-bid is required, this effort shall be considered additional

services. If required, additional services will be provided utilizing the Unallocated Project Budget phase upon written authorization from the City, or through the execution of an amendment to this Agreement.

TASK 7: UNALLOCATED PROJECT BUDGET (PHASE 1)

Task 7 is included as a contingency for unforeseen conditions or changes in the scope of work. McKim & Creed will not utilize or expend effort on Task 7 without prior written authorization from the City of Hendersonville. The City may request McKim & Creed to perform the following services upon written request if deemed necessary. The following list of services is not an all inclusive list of services that may be performed under this task.

PHASE 2 CONSTRUCTION SERVICES

Construction Services are to be provided as a future amendment to this contract. Phase 2 services are briefly summarized below; a detailed scope of services and fee estimate shall be provided upon written request from the City near the completion of final design. Phase 2 Services shall include:

1. Task 8: Construction Phase Services
    a. Construction Administration
    b. Construction Observation
    c. Special Inspections and Construction Materials Testing
2. Task 9: Post-Construction Services
3. Task 10: Unallocated Project Budget

III. COMPENSATION

McKim & Creed will perform the services outlined in this Exhibit A as indicated below. Services will be billed monthly on an hourly time and expense basis in accordance with the hourly rate schedule included as an attachment to this Exhibit A.

Item	Fee	Fee Type
PHASE 1 – Design and Bid Services		
Task 1: Funding Assistance	$12,442	Hourly, NTE
Task 2: Preliminary Engineering	$213,875	Hourly, NTE
Task 3: Final Design	$245,698	Hourly, NTE
Task 4: Permitting	$9,842	Hourly, NTE
Task 5: Bidder Prequalification Assistance	$10,768	Hourly, NTE
Task 6: Bidding and Award Phase	$33,782	Hourly, NTE
Task 7: Unallocated Project Budget (Phase 1)	$40,000	Allowance
Total Estimated Fee (PHASE 1 ONLY)	$566,407	
PHASE 2 – Construction Services		
Task 8: Construction Phase Services	TBD	
Task 9: Post-Construction Services	TBD	
Task 10: Unallocated Project Budget (Phase 2)	TBD	
Total Estimated Fee (PHASE 2 ONLY)	**TBD**	

TBD = To be determined and provided for in a future amendment for Phase 2 services

IV. ANTICIPATED PROJECT SCHEDULE

The following is the estimated schedule for the scope outlined above:

Task	Anticipated Start Date	Anticipated Completion Date	Approximate Duration	Remarks
PHASE 1				
Notice to Proceed	July 2025	N/A		
PER and 30% Design Submittal	July 2025	November 2025	4.5 months	PER and 30% Design Concurrent
Alternatives Evaluation Workshop #1	August 2025	N/A	N/A	
Alternatives Evaluation Workshop #2	September 2025	N/A	N/A	
City Review and 30% Review Workshop	November 2025	November 2025	14 days	
60% Design Submittal	November 2025	January 2026	3 months	
City Review and 60% Review Workshop	January 2026	February 2026	14 days	
90% Design Submittal/Submit Permit Applications	February 2026	April 2026	3 months	
City Review and 90% Review Workshop	April 2026	May 2026	14 days	
Final Design – Issued for Review Submittal	May 2026	June 2026	1 month	Submit ATC, DWI Bid & Design Package (if applicable)
Receive Permits	June 2026	August 2026	2 months	Expected approval timeline, subject to change
Bid Documents Submittal	August 2026	August 2026	1 month	Advertise for bids upon submittal
Advertise/Open Bids	August 2026	September 2026	1 month	
Evaluate Bids, Issue Notice of Award, and Contract Execution	September 2026	November 2026	3 months	Resolution of Tentative Award, DWI Bid Information Submittal (If Applicable), Authority to Award, Notice of Award, and Contract Execution
PHASE 2				
Construction NTP	TBD	TBD	TBD	
Construction Substantially Complete/Equipment Start-up	TBD	TBD	TBD	

Construction Final Completion	TBD	TBD	2 months	
Record Drawings Submittal	TBD	TBD	2 months	
Warranty Period Complete	TBD	TBD	1 year	1 year from Substantial Completion

Note: The schedule provided is approximate and may vary depending on City review, regulatory approval, equipment and material lead times, and unforeseen conditions.

V. ADDITIONAL SERVICES

If authorized in writing by the City, McKim & Creed shall furnish or obtain from others Additional Services of the types listed below. If required, additional services will be provided utilizing the Unallocated Project Budget phase upon written authorization from the City or through the execution of an amendment to this Agreement.

1. Expert witness or technical support concerning property surveying or engineering matters for which the Engineer has no direct liability.
2. Assistance with protests by prospective bidders associated with the City's prequalification process.
3. Easement mapping or easement surveys.
4. Providing for additional soil borings or geotechnical analyses beyond the identified scope of work.
5. Providing for detailed investigations and/or surveys for archeological sites, protected/threatened/endangered species of shellfish, fish, wildlife, and natural vegetation.
6. Providing for determining, evaluating, and assistance with contaminated soils for the project area.
7. Providing assistance for wetland mitigation.
8. Providing for assistance with easement acquisitions.
9. Preparing for, coordinating with, participating in and responding to structured independent review processes for construction management, cost estimating, value engineering and constructability reviews requested by the City and performing or furnishing services required to revise studies, reports, drawings, specifications, or other bidding documents as a result of such review processes.
10. Providing for any re-designs requested by the City after final design drawings have been approved.
11. Boundary or easement surveys for the wastewater treatment facility site.
12. Construction survey and staking.

13. Preparing for multi-prime contracts and bidding.
14. Preparing and submitting funding applications and supporting documents for NCDEQ DWI funding rounds other than Fall 2025.
15. Development of design or bid documents to comply with alternate funding agencies or other funding mechanisms.
16. Engineer-led operator training on equipment, processes, or other miscellaneous training related to the existing or proposed facilities.
17. Assistance in connection with Bid protest, re-bidding, or renegotiating contracts for construction, materials, equipment, or services.
18. Preparing to serve or serving as a consultant or witness for the City in any litigation, arbitration or other dispute resolution process related to the project.
19. Non-destructive testing or concrete coring based on observations made of visible elements and review of structural record drawings.
20. Other services performed or furnished by McKim & Creed not otherwise provided for in this Agreement. These services are to be identified as additional services for City approval prior to McKim & Creed performing the service.

VI. OWNER'S RESPONSIBILITIES

The following items shall be the responsibility of the City:

1. Provide McKim & Creed with all criteria and full information as to the City's requirements for the project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which the City will require to be included in the Drawings and Specifications; and furnish copies of the City's standard forms, conditions and related documents for McKim & Creed to include in the Bidding Documents, when applicable.
2. The timely provision of all available information, data, reports, records, and maps to which the City has access and which are needed by McKim & Creed for the performance of the services provided herein.
3. Providing assistance and cooperation for McKim & Creed in obtaining any other needed material which the City does not have in its possession.
4. Making available the services of the City as may be necessary to obtain information as needed to perform the work program set forth in the Scope of Services.
5. The designation of a single representative who will be authorized to make necessary decisions required on behalf of the City and will serve to provide the necessary direction and coordination for the project.

6. Advise McKim & Creed of the identity and scope of services of any independent consultants employed by the City to perform or furnish services in regard to the project, including, but not limited to, cost estimating, project peer review, value engineering and constructability review.
7. Attend the pre-bid conference, bid opening, pre-construction conferences, construction progress and other job-related meetings and Substantial Completion, final payment, and warranty reviews.

VII. MISCELLANEOUS PROVISIONS

1. Opinion of Probable Construction Costs: Engineer's opinions of probable construction costs are based on assumed labor costs and approximate quantities of material and equipment, and therefore is of a conditional character. The Engineer cannot and does not guarantee the cost of work to be performed by others since market or bidding conditions can change at any time and changes in the scope or quality of the project may affect estimates. The City waives and releases McKim & Creed from any loss, liability, or claim arising out of or in any way related to the Engineer's opinion of probable construction costs.
2. McKim & Creed's current hourly rate schedule is attached. Hourly rates are subject to adjustment on January 1st of each calendar year.

END OF EXHIBIT A