Revised November 21st, 2019

County of Durham
Engineering and Environmental Services Department
Utilities Division
5926 NC-55
Durham, NC 27713

Attn: Mr. Vincent Chirichella, PE, Senior Project Manager

Re: County of Durham – Utility Administration II Facility Design Fee

Dear Mr. Chirichella:

We are pleased to submit this fee proposal for Architectural and Engineering design services for the proposed Utility Administration II Facility. We have outlined the basic design scope below. Further clarification of design services is included in each sub consultant proposal which are attached for your review. Also attached is a breakdown of architectural services that are part of the base architectural design fee.

Design Scope:

- Full architectural and PME design of a 39,000 square foot administration building with a training room and warehouse.
- Full architectural and PME design of a 2,400 square foot truck wash building.
- Full architectural and PME design of a fleet fueling station to include handling of unleaded fuel, diesel fuel and propane fuel.
- Full site design for the above facilities including a service yard, parking, utilities, stormwater and associated roads.

Item #1 **Basic Design Services:**

• DTW Architects & Planners, Ltd.:	$ 400,000.00
• Ross Linden (Structural):	$ 28,500.00
• CLH Design PA (Civil Engineers/Landscape Architects):	
◦ Site Design and Permitting	$ 127,000.00
◦ Land Use Plan Change	$ 6,500.00
◦ Rezoning	$ 6,500.00
• Edmondson Engineers (Building PME):	$ 198,800.00
• AEI Affiliated Engineers (Fueling Station PME):	$ 74,000.00
• J&A Engineering, LLC (AV design):	$ 24,680.00
Total Item #1:	$ 865,980.00

Item #2 **Construction Administration:**

• DTW Architects & Planners, Ltd.:	$ 110,000.00
• CLH Design PA (Civil Engineers/Landscape Architects):	$ 11,000.00

- Ross Linden (Structural): $ 9,000.00
- Edmondson Engineers (Building PME) $ 85,200.00
- AEI Affiliated Engineers (Fueling Station PME): $ 20,000.00
- J&A Engineering, LLC (AV design): $ 3,400.00

Total Item #2: $ 238,600.00

Total Items #1 & 2: $1,104,580.00

Item #3 **Additional Design Services Requested by County:**

- CLH Design PA (Civil Engineers/Landscape Architects):
  - Reclaimed Water Line Connection: $ 6,500.00
- Edmondson Engineers (Site Lighting): $ 3,500.00

Total Item #3 $ 10,000.00

Item #4 **Printing costs (allowance):** $ 4,000.00

- This cost is to cover the printing of the site plan submittals and design document submittals.

M/WUB Participation:

	Amount	M/WBE%
Original Contract	$20,000	90%
This amendment	$698,500	63%
Total	$718,500	63%

If you have any questions regarding this proposal, please don't hesitate to call.

Sincerely,

J. Paul Young, AIA
Project Architect

CLH design, p.a.

400 Regency Forest Drive, Suite 120
Cary, North Carolina 27518
P: 919.319.6716
www.clhdesignpa.com

Letter of Proposal

Date: November 18, 2019

To: Paul Young, AIA – DTW Architects

From: Alice M. Reese, PLA – CLH Design, PA

Re: **PROPOSAL FOR PROFESSIONAL DESIGN SERVICES**
DURHAM COUNTY UTILITIES DIVISION ADMINISTRATION BUILDING PHASE I
DURHAM, NC

Dear Paul:

We are pleased to provide you with this proposal for site/civil project site design and construction drawing services associated with the proposed Durham County Utilities Division Administration Building on TW Alexander Drive in Durham, NC.

We understand that the scope of services at this time will include assistance with rezoning required for the industrial use and changing the Land Use Plan to enable the waste treatment use on the property. Although listed as separate line items in this fee proposal, the rezoning and Land Use Plan changes will take place concurrently meaning that the site plan development will occur while the Land Use Plan change and Rezoning process take place vs. waiting to develop the site plan after the Land Use Plan change and Rezoning and have been approved. Development of the site plan will not be considered an "at risk" process. Concept Plan approved by the Owner in the Study Phase and identified in the narrative summary dated September 6, 2019 will be basis for Site Plan development of this phase. At the time of concept plan selection the future "treatment" processes were unidentified and not included in phase I site plan. Site programming associated with Phase I concept were limited to the Administration building housing the Emergency Operations Center (EOC) and Information Technology (IT) office needs, required parking for the building, a warehouse. Also included are a separate fueling station and truck wash. All other uses of the site are not included in Phase I development. Regarding the fuel station and truck wash design, CLH will assist with the placement of the fueling station and truck wash complying with setbacks, turning movement requirements and fence locations, however, CLH does not design the tanks, pumps or electrical systems required for fueling operations. Likewise, CLH's scope of work for the truck wash includes connections for utilities and the oil separator but the plumbing design including the oil separator will be by others. This fee proposal includes extension of reclaimed water to the truck wash across NC55 and onto the site only as a separate line item.

Based on our understanding of the current project scope as stated above, we propose the scope of services and fees outlined below.

Scope of Services

1. Land Use Plan Change

Note: All Quasi-Judicial Public Hearings require Owner to obtain Legal representation. CLH Design can assist and provide professional witness, however, all applications, findings of fact and justification statements shall be by DTW Architects and Planners.

- Participate in 3-4 meetings with the Architect, Owner, Owner's Attorney and Durham City and County development authorities to finalize Map Change Requirements.
- Develop up to 3 exhibits depicting change requested
- Attendance at Public Hearing

2. Rezoning

Note: All Quasi-Judicial Public Hearings require Owner to obtain Legal representation. CLH Design can assist and provide professional witness, however, all applications, findings of fact and justification statements shall be by DTW Architects and Planners.

- Participate in 3-4 meetings with the Architect, Owner, Owner's Attorney and Durham City and County development authorities to finalize Zoning Change Request.
- Develop up to 3 exhibits depicting change requested
- Attendance at Public Hearing

3. Survey Conversion

- Convert boundary and topographic survey provided by the owner into useable base information for design. (AutoCAD format)

4. Design Development

- Attend project kick-off meeting with Owner and Architect
- Apply conceptual site plan approved in Study Phase to base map and update as required to meet zoning and programmatic requirements.
- Attend up to two meetings with Owner and Architect to present Design Development and review comments

5. Civil/Site/Landscaping Design - Perform site design and develop construction plans and specifications for site improvements based on the Owner Approved DD site plan. Our deliverables will consist generally of the following:

- Existing Conditions and Demolition Plan
- Staking Plan
- Grading and Drainage Plan
- Sediment and Erosion Control Plan
- Stormwater Management Plan
- Planting Plan
- Site and Planting Construction Details
- On-Site Utility Plans (Water & Sewer)

  Note: It is assumed that domestic water and sewer will be extended from adjacent pubic water and gravity sewer mains. Assumptions include an 8" water line will be extended from Highway 55 across TW Alexander and sewer will be extended across 55 as well. Design and permitting of off-site utility main extensions from further down Highway 55 are not included in this proposal.

- Division 31-33 Technical Specifications.

6. Design Permitting - Process, submit and track required site development permits and approvals consisting of the following and make revisions as required by reviewing authorities:

   - Zoning/Site Plan/Construction Plan review by Durham City County Planning
   - Stormwater Management Permit by Durham City County Planning and NC Division of Environmental Quality
   - Erosion Control Permit by NCDEQ Land Quality Section
   - Driveway Permit and Utility Encroachment Agreements by NCDOT for immediate crossings and connections to water and sewer available in Highway 55

   The following permits are not expected and are therefore excluded from this proposal:
   - *Long distance Water System Extension Permit*
   - *Long distance Sewer System Extension Permit*
   - *Floodplain Permit*
   - *Wetland or Steam Impact Approvals*

7. Construction Observation and Administration consisting generally of the following:

   - Review the Contractor's product submittals and shop drawings for compliance with the Construction Documents.
   - Based on a 14-month construction schedule, visit the site on a maximum of sixteen (16) occasions to attend pre-construction or construction related meetings; to observe construction activities during site work operations; and to perform punch list inspections. (We will not charge for any meetings resulting from errors or omissions on our part).
   - Review Contractor payment requests and provide recommendations.
   - Issue Record drawings based on as-built surveys provided by the Contractor.
   - Utility permit certifications
   - Assist owner with DENR erosion control project close-out documents

8. LEED Submittals (Minimum LEED Silver required)
   - Assist in reviewing and developing a LEED checklist for the proposed project only for credits in the categories of Sustainable Sites (SS) and Water Efficiency (WE) as it relates to site design.
   - Prepare appropriate documentation (calculations, narratives, site plan exhibits) for the selected LEED credits.
   - Process, submit and track assigned LEED credits on LEED Online and make revisions as required to receive approval.

9. Civil/Site Design and Permitting- Reclaimed water line extension for truck wash: Perform site design and develop construction plans and specifications for off-site utility connection based on the Owner Approved DD site plan. Our deliverables will consist generally of the following:
   - Existing Conditions and Demolition Plan
   - Staking/Stationing Plan
   - Traffic Control Plans
   - Grading and Drainage Plan
   - Sediment and Erosion Control Plan
   - Stormwater Management Plan

- Planting Construction Details
- Utility Plans (Reclaimed Water only)
  - Plan and Profiles
- NC DOT Two-Party Encroachment Permit

Professional Services in addition to those listed above may be provide at a negotiated lump sum additional fee.

Fees

Lump Sum Services & Fees		
Service	**Ref. Scope No.**	**Fee**
Land Use Plan Change	1	$6,500.00
Rezoning	2	$6,500.00
Civil/Site/Landscape Architect Services	3-6	$122,000.00
Construction Phase Services	7	$11,000.00
LEED Silver	8	$5,000.00
Reclaimed Water Line connection	9	$4,500.00
Total		$155,500.00

Standard Hourly Rates	
Principal Engineer / Landscape Architect	$175.00
Project Engineer / Landscape Architect	$150.00
Project Manager	$150.00
Project Designer	$100.00
Construction Administration	$100.00
Administrative	$65.00
Intern	$65.00
Additional Construction Phase Site Visits (each)	TBD

The following expenses are considered reimbursable and are <u>not</u> included in the above fees.

Estimated Reimbursable Expenses	
Mileage	$650.00
Outside Consultants/Service - not required	N/A
Permits, Application fees, etc. – By Owner	N/A
Printing Costs	N/A

Existing Site Information

It is our understanding that a more detailed report of subsurface conditions and a complete boundary, topographic and wetland delineation survey (required by municipality to verify new driveway location does not impact the wetlands shown on GIS) will be provided by the owner. The soil report will include site grading, compaction, and pavement design recommendations along with seasonal high water table elevations in the general location of the proposed stormwater SCMs. The survey will be provided

in AutoCAD format for use as a base map for design. In addition to all surface features, the site survey shall include the locations of all underground utilities.

Excluded Services

The following services, in addition to others indicated above, are excluded from the proposed Scope of Services:

- Easement Negotiations
- Envir. Assessments or Impact Statements
- Flood Studies
- Lighting Plans
- Construction Materials and Compaction Testing
- Architectural and operational Gas / Fuel Facility Design
- Rendered Images
- Monument Sign Design
- Geotechnical Analysis
- Site Lighting Plans
- Retaining Wall/Structural Design
- Rezoning, Special Use or Variance Applications
- Surveying/Easement Mapping & Exhibits
- Traffic Studies
- Wetland and Stream Buffer Delineation
- Stream Buffer/Impact Permitting
- All other services not specifically included or reasonably inferred from this proposal

Payment

CLH design, p.a. will submit invoices on a monthly basis and a final invoice upon completion of Services. Past due amounts will be subject to service charges of 1% per month, beginning on the past due date.

In the event of any cancellation or delay of the project by the owner or architect, CLH design, p.a. will be entitled to invoice for all acceptable services performed or furnished and all Reimbursable Expenses incurred through the effective date of the cancellation or delay.

Acceptance

If you find the scope and fee set forth in this proposal acceptable, please sign one copy and return it to us. This will then serve as a basis of our understanding, and shall be included as part of the contract.

Letter of Agreement Accepted for:

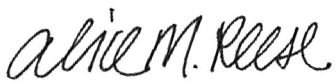
For: DTW Architects

Signed: _____

Name: _____

Date: _____

Best regards,
for CLH design, p.a.



Alice M. Reese, PLA
Partner

ROSS LINDEN

ENGINEERS PC

12 September 2019

Mr. J. Paul Young, AIA
DTW Architects & Planners Ltd
229 North Gregson Street
Durham, NC 27701

Re: Durham County Utilities Administration II
Proposal for structural engineering services

Dear Mr. Young –

Thank you for inquiring about the structural engineering services of Ross Linden Engineers PC for the above referenced project. Per our recent correspondence, we are pleased to submit this proposal for structural design services for this project

Our proposal is based on the preliminary building plan, site plan, and project schedule received on 3 September 2019. It is our understanding that the proposed project is to include a 40,000 sf building that is to be classified as a Risk Level IV structure (essential facility). The building is to be framed with conventional steel and shall have CMU block walls with brick veneer. A canopy shall be provided at a fueling station on the site, and a backup generator will also be included. The building will include a gantry crane for lifting heavy equipment. A separate wash building is also to be included in the project, consisting of CMU walls and an equipment trench.

Based on a review of the proposed project scope, the structural design for the project will include the following:

- Building design, including foundation, walls, and roof framing
- Design of fuel island canopy and generator foundation
- Design of wash building
- DD and CD submittals
- Written specifications
- Statement of Special Inspections (note that this is the preparation of the Statement only – Special Inspections are assumed to be provided by others)
- Construction Phase services shall include the review of shop drawing submittals, response to contractor RFIs, and project site visits

Ross Linden Engineers PC will provide sealed construction drawings to DTW Architects to be included in the overall project set. The structural design fee for the scope of services through the preparation of Construction Documents is proposed to be $28,000. The design fee for the preparation of the Statement of Special Inspections is proposed to be $500. The structural design fee for the Construction Administration Phase of this project is proposed to be $9,000 (including site visits). The total structural design fee for this project is therefore proposed to be **$37,500**. Additional services, if requested by the owner beyond the original scope of services, are proposed to be billed at our hourly rate, which is currently $125 per hour.

ROSS LINDEN

ENGINEERS PC

We appreciate the opportunity to provide this proposal for structural design services. Please feel free to contact me if you have any questions or if you need any additional information. We look forward to working with you on this project soon.

Sincerely,

Brian M. Ross, PE
Vice President

709 W. Jones Street Raleigh, NC 27603 tel 919.832.5680 fax 919.832.5675 www.rosslinden.com

EDMONDSON ENGINEERS

September 12, 2019

Paul Young, AIA
DTW Architects and Planners
229 North Gregson Street
Durham, NC 27701

Subject: **MEP-FP Engineering Fee Proposal**
New Administration Building – Triangle Waste Water Treatment Facility
Engineering and Environmental Services – Utilities Division
Durham County, Durham, North Carolina

Dear Paul:

We are pleased to offer this fee proposal for engineering services to design mechanical, electrical, plumbing and fire protection systems for this new Administration Building. This proposal for will describe our understanding of the project scope, our proposed engineering services, deliverables, design schedule and fee.

Project Scope

Our understanding of the project scope is based on your email message, dated 09/03/2019 and the accompanying attachments of the proposed facility plan, site and schedule. The proposed new facility will be a standalone 40,000 SF, two-story building to be situated east of the existing site at near the intersection of Highway 55 and TW Alexander Drive. The facility will be constructed in one phase. The preliminary design and construction schedule is described in the information provided in your letter. The project will seek LEED Silver certification.

The new facility will include administrative Offices, Training Rooms, a Laboratory, a future Data Center, an attached Warehouse, a Workout Room, Lockers, Toilets, etc. The building will operate as a Level 4 emergency operations facility as a back-up to the County's Emergency Operations Center. A generator will provide emergency power for the whole building.

The new facility will include a truck-wash, and vehicle fueling station. The fueling station will store and dispense gasoline, diesel, and natural gas.

Engineering Scope of Work

Edmondson Engineers proposes to provide engineering services for design of Plumbing, Fire Protection, HVAC and Electrical systems. Site utilities work is limited to connecting building to local water, sewer, electric and gas connections approximately five feet from each building utility entrance. Building exterior and Site lighting will be included. In addition to engineering design during Design Development and Construction Document Phases, we assume that some collaboration with other team members and Durham County will be necessary during the Schematic Design Phase.

The engineering scope includes the building HVAC energy modeling, specifications, and documentation necessary for the MEP portions of the LEED certification submittals.

Commissioning will be performed by others. All work will comply with applicable 2018 NC State Building Codes, local codes and regulations, and include any Durham County published design standards.

A Scope

Our proposed scope of services includes complete design, specifications and bid documents, and construction administration for:

1. Plumbing that includes:
    a. Waste and vent piping.
    b. Hot and cold water piping.
    c. Tepid water system for emergency showers and eyewashes.
    d. Natural gas piping for boilers, water heaters, and laboratory uses.
    e. Compressed air systems for use in laboratory and Warehouse.
    f. Plumbing fixtures and floor drains.
    g. Domestic water heaters.
    h. Pressure booster pumps, as necessary.
    i. RPZ Backflow preventers.
    j. Elevator sump pump.
    k. Oil-Water Separator for Truck Wash.
    l. Water heater and storage for Truck Wash.
    m. Exterior hose bids.
    n. Roof drain leaders.
    o. Connections to water and sewer on site (within 5'-0" of building).

2. Fire Protection that includes:
    a. Fire Sprinkler Systems per NFPA Standard 13.
    b. Client Agent Fire Suppression Systems (FM-200, etc.) where water sprinklers are not appropriate –such as in the File Storage or Data Center.
    c. RPZ Backflow preventers.
    d. No requirement for Fire Standpipe and Hose System or for a Fire Pump is anticipated.

3. HVAC that includes:
    a. Chilled water system, either air- or water-cooled. Variable volume pumping.
    b. Heating hot water system including modular, high efficiency condensing boilers. Variable speed hot water pumps.
    c. Variable Air Volume (VAV) Air handling systems as required for air distribution.
    d. Building toilet exhaust air systems.
    e. Laboratory exhaust to any fume hoods or other equipment requiring exhaust.
    f. Building Automation System.
    g. Dedicated air conditioning for any elevator machine rooms or IT closets. Air conditioning or exhaust for AV closets.
    h. Special cooling for be planned for Data Center.

4. Electrical that includes:

    a. Interior lighting.
    b. Exterior building lighting.
    c. Electrical distribution system.
    d. Telecom/data system (raceway only, others to provide cabling and equipment).
    e. Fire Alarm System.
    f. Special Systems such as AV (building infrastructure / County provides cabling and equipment). Coordinate with the County's AV vendor for provisions connections for power and data.
    g. Generator for total building emergency power back-up.
    h. Exterior lighting and power for Vehicle Fuel Service Station.
    i. Electrical service entrance.
    j. Connections to Utility transformer and coordination with Duke Energy (Primary circuits and transformer by Duke Energy).
    k. Exterior site lighting. *See separate line item under Compensation.*

5. Site Utilities includes beyond 5'-0" from the building includes:

    a. Underground HVAC chilled water/cooling water piping.
    b. Electrical entrance and connection to Duke Power transformer.
    c. Electrical power for exterior building lighting.
    d. Site storm water, surface drainage, and sanitary lift pumps are not included.

6. LEED Silver Certification.

    a. Building will be designed to meet LEED (version 4) Silver Certification.
    b. Attend three sustainable design meetings. Two lead design team members (mechanical and electrical engineers) will attend each of these meetings.
    c. Research and study various options for sustainable design, including life cycle cost assessments where necessary. Investigate products and system approaches.
    d. Complete LEED documentation for Water Efficiency, Energy & Atmosphere, and Indoor Environment credits.
    e. Prepare detailed energy study necessary for LEED Energy Compliance. This is a whole building analysis model that is started during the early stages of the project and updated throughout the design process.
    f. Attend monthly LEED meetings during building construction.
    g. A detailed energy model based on ASHRAE 90.1 Appendix G required for LEED is assumed.

7. Commissioning is typically performed by a commissioning agent hired directly by the County. Our scope will be to work with commissioning agent by addressing their design comments, reviewing the commissioning reports, and attending meetings.

B Phases

1. Schematic Design:

    a. Discussions with Architect & Owner to determine major system types and space requirements.
    b. Narrative of systems approach – "Basis of Design".
    c. Preliminary calculations for determining approximate equipment sizes.
    d. Attend design meetings and owner presentation / review meeting as required.

2. Design Development:

    a. Develop design, including single line diagrams for Plumbing, Fire Protection, HVAC, and Electrical, systems. Note space requirements for major HVAC and Electrical equipment, etc. Include lighting fixture layout.
    b. Furnish outline specifications.
    c. Furnish catalog cut sheets for visible items.
    d. Revise schemes as required by Architect to meet Owner requirements and/or coordinate the projects.
    e. Attend design presentation and review meeting.

3. Construction Documents:

    a. Prepare final drawings for Plumbing, Fire Protection, HVAC, Electrical building systems and site utilities connections. Revise as required to coordinate the project with architect, owner and AHJ.
    b. Identify any substantial high cost items and assist DTW to develop alternates for bid price reduction. Provide complete description of Plumbing, Fire Protection, HVAC and Electrical alternates for inclusion into Division One of the Specifications.
    c. Provide final CAD drawings and specifications.
    d. Confirm anticipated bid range for HVAC, Electrical, Plumbing and Fire Protection bids.
    e. Attend design presentation and review meeting.

4. Bidding:

    a. Prepare addendum items as necessary.
    b. Respond to contractor's written questions.
    c. Assist in evaluating Fire Protection, Plumbing, HVAC, and Electrical systems cost breakdown.
    d. Assist the County in evaluating "Value Engineering" proposals from contractors.

5. Construction Administration:

    a. Review shop drawings and substitution requests.

b. Address contractor questions and assist architect in reviewing change orders.
c. Review construction in progress and attend job meetings weekly.
d. Conduct pre-final "above ceiling" inspection prior to ceiling being installed.
e. Conduct final inspection, prepare punch lists.
f. Review O&M manuals and Warranties.
g. Attend meetings with building commissioning agent.
h. Assist Durham County with guarantee year issues relating to MEP disciplines. Attend eleven month warranty walk-through.

C Format

1. All drawings to be in current release of Autodesk AutoCad.
2. At end of project provide Architect with on (1) set of reproducible drawings and electronic drawing files incorporating all Change Orders, supplementary drawings, etc., and "as-built" information as provided by the contractors.
3. Specifications will be in CSI MasterFormat.

D Schedule

As described in the Gantt schedule provided us, but with an adjusted anticipated start date of Site Work of October 2019.

E Form of Contract

1. Standard Form of Agreement between Architect and Consultant (AIA Document C401-2007) as modified in accordance with the Scope of Work and architects contract with Owner, AIA Document B101-2007.
2. Edmondson Engineers carries professional liability insurance in the amount of $2,000,000.

F Compensation

1. Billing may be on a monthly basis.
2. Maximum percent of total fee to be billed at following stages:
   a. Schematic Design (15%)
   b. Design Development (35%)
   c. Construction Drawings (65%)
   d. After bidding and negotiation (70%)
   e. Construction phase - MEP work completed prorated on a monthly basis (95%)
   f. Job completion and close out (100%)
3. Reimbursable Expenses:
   a. Travel, approved fees, and reproduction of contract documents only, except for extraordinary expenses.
4. Additional Services:
   a. All costs for additional services (billings) must be approved in writing by the Project Manager of the project prior to the work being performed.

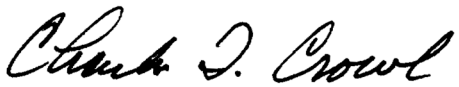
b. Significant changes in the Project that completely alter work already completed by Edmondson Engineers will entitle Edmondson Engineers to an appropriate adjustment in schedule and compensation.

Edmondson Engineers proposes to perform the above engineering services for a lump sum fee of **TWO HUNDRED, EIGHTY FOUR THOUSAND DOLLARS AND NO CENTS ($284,000.00).** Local travel, phone calls, meals, printing costs, etc. are included. No reimbursable costs are anticipated.

Additionally, we propose a lump sum fee of **THREE THOUSAND, FIVE HUNDRED DOLLARS AND NO CENTS ($3,500.00)** for additional design services to provide **Exterior Site Lighting**.

Thank you for the opportunity to offer you this proposal. As always, we look forward to working with you on this exciting project. If you have any questions, please feel free to contact me.

Best Regards,
EDMONDSON ENGINEERS, P.A.



Charles T. Crowl, PE
Principal

J&A
ENGINEERING CONSULTANTS

September 9, 2019

J. Paul Young, AIA NCARB
DTW Architects & Planners
229 North Gregson Street
Durham, NC 27701
pyoung@dtwarch.com

Subject: ***Audio Visual Design & Construction Administration Services for the Durham County Utilities Division, Administration Building project.***

Dear Paul,

Thank you for the opportunity to present this proposal for Audio Visual design & construction administration services. We have reviewed the project information and are excited about this opportunity. We are technically able to meet all requirements of the project schedule and project scope. Please review this proposal and let us know if you would like to discuss any of the items mentioned.

SCOPE OF PROJECT

In addition to reviewing information about the project provided to us by your office, we have made some assumptions, outlined below, in an effort to share with you our basis in arriving at the estimated fee. As we understand it, the scope of the project is as follows:

The **Audio Visual systems** that will be designed for the project include the following:

ROOM	QTY
Training rooms, with combining	4
Large Conference room	1
Medium Conference room	1
Backup Emergency Operations Center - in training room(s)	1
Work out room	1
Lab	1
Breakroom	1
Sound masking - as required	
Miscellaneous Digital Signage Locations – as required	

In general, the Audio Visual System requirements include:

- Video projectors or wide-format liquid crystal flat panel displays. All displays shall be sized in consideration of optimum viewing at last row seating distance from the screen and available ceiling height at the screens mounting location. Possible interactive displays or projectors to be incorporated. Video displays shall be deployed on portable carts where practical.

- Expectation is for interconnectivity/interoperability with Primary Emergency Operations Center.

- A/V Connector Plates with HDMI inputs to allow personnel to interface personal media hardware with the AV system.

- Wireless presentation, collaboration devices and techniques shall be incorporated as determined in the design process.

- Miscellaneous audio visual components including: video distribution amplifier, audio control system, audio/video matrix switcher, and audio amplifiers shall be required.

- Utilization of wired and wireless microphones and, where required, assisted listening devices.

- AV Standards – Design will utilize existing county standards for AV and control systems to the extent that it is practical.

PROJECT PHASES

PHASE I SCHEMATIC DESIGN (SD) PHASE

1. Attend preliminary planning meeting with the Design Team to define the requirements of the new audio visual systems.
2. Prepare a project report that reflects the project's low voltage system requirements, based on the information gathered during surveys and meetings.
3. Conduct initial coordination with engineering team members. Specific topics to include initial power requirements and raceway/conduit requirements.
4. Conduct coordination meetings with the Design Team for compliance with existing low voltage standards and requirements.
5. Conduct preliminary coordination of the low voltage system space requirements.

PHASE II DESIGN DEVELOPMENT

6. Attend a site meeting and staff conference calls with the Design Team to further define the parameters of the new audio visual systems.
7. Conduct a site survey of existing EOC to document existing systems and spaces.

8. Coordinate with existing systems. Specific topics to include: Operation Center requirements.
9. Coordinate with the design team and stakeholders for compliance with existing systems standards and requirements.
10. Develop a complete set of audio visual system design drawings and specifications that document all system requirements. All floor plan, site plan, and large-scale drawings will be developed to scale.
11. Meet and review drawings with the Design Team. Make revisions as required.
12. Develop probable costs of construction and assist in cost analysis effort. This effort will include incorporating any approved Value Engineering (VE) proposals.

PHASE III CONSTRUCTION DOCUMENTS

1. Coordinate with design team and stakeholders to incorporate any drawing changes.
2. Prepare final construction drawings and specifications.
3. The final construction documents shall include design drawings and technical specifications that shall be utilized for bidding and construction.

PHASE IV BIDDING/NEGOTIATIONS

1. Assist in the identification of certified contractors for all required scopes-of-work.
2. Participate in pre-bid conference activities for all qualified contractors.
3. Provide clarifications and interpretation of the construction documents and prepare addenda/amendments to the documents as approved by the client.
4. Assist in the evaluation of submitted bids from Audio Visual Contractors and make recommendation for award of the Contract.

PHASE V CONSTRUCTION ADMINISTRATION

1. Review all submittals, shop drawings, and brochures, by audio visual contractors to verify compliance with the Contract Documents.
2. Review re-submittals of above requirements that have been returned for corrections until all have been ACCEPTED AS NOTED in compliance with the Contract Documents.
3. Site Visits: As part of the agreement, the following site visits will be made:
    a. One visit for Pre-Final inspection
    b. One visit for Final Punch list generation
4. Site visits tasks to include pre-construction meetings and comprehensive construction observations. All site visits shall be documented with a project report or construction observation report.
5. Review all close-out documents submitted by low voltage contractors to verify compliance with the Low Voltage Contract Documents.

COMPENSATION

Basic Services: For Basic Services as listed in the **Scope of Engineering Services**, we propose the following total amount for all Phases of the Project:

AUDIO VISUAL ENGINEERING SERVICES:

	Fee
Schematic Design:	$2,700.00
Design Development Phase:	$9,350.00
Construction Document Phase:	$11,160.00
Bidding & Negotiations:	$1,470.00
Construction Administration:	$3,400.00
TOTAL:	**$28,080.00**

Reimbursable expenses would include the following items:

- Printing for milestone submittal purposes. One copy will be provided by J & A Engineering under this proposal. If multiple copies required, J & A Engineering, LLC will provide plot files to a printer of the Owner's choice.
- Plotting for milestone submittal purposes. One copy will be provided by J & A Engineering under this proposal. If multiple copies required, J & A Engineering, LLC will provide plot files to a printer of the Owner's choice.
- Courier and postal delivery services (includes shop drawing deliveries)

Additional Services:

We will provide Additional Services at your written request. Additional Services include the following:

- Revisions to the Project Scope after approval of this agreement.
- Redesign due to re-direction from the Owner after approval of final documents.

Hourly Rates:
Senior Design Engineer: $155.00/hour
Staff Engineer: $135.00/hour
CADD Designer: $95.00/hour

Terms and Conditions:

Invoicing:

J & A Engineering, LLC will invoice monthly based upon percentage completed, with payment due within 30 days from the date of our invoice. If there is a specific invoice format that you would like us to follow or project number that you would like us to reference, please let us know. We will assume that there are no concerns of this nature regarding our invoice unless we hear from you within one week of your receipt of our invoice.

Termination of Services:

Termination of services will follow the procedures outlined in Article 10 of the AIA C141Contract Form.

We thank you for this opportunity and look forward to working with you toward the completion of a successful project. Please call us if you have any questions or comments.

Sincerely,
J & A Engineering, LLC

Jim Gillis
Senior Audio Visual Engineer – Project Manager

Please indicate your acceptance of this as an Agreement by signing and returning a copy of this proposal letter, with any changes as noted and initialed in the body of the proposal.

Accepted by:

Name, Title
Date

Affiliated Engineers, Inc.

1414 Raleigh Rd. Suite 305
Chapel Hill, NC 27517
Tel 919.419.9802 ● Fax 919.419.9803
www.aeieng.com

September 15th, 2019

Paul Young, AIA, NCARB
DTW Architects
Principal
229 North Gregson Street
Durham, NC 27701

Re: City of Durham– Utilities Administration Building II
MEP Engineering Services Proposal

Dear Mr. Young,

Optimized performance and reliability. That is what you expect from your design partners who help you meet the goals of your clients. AEI provides turnkey consulting engineering services including assessment, design and commissioning. Specific to this project, AEI will provide MEP design services to specialized functions of the facility for the City of Durham Utilities Administration Building II. AEI will provide the engineering services as described below:

Scope of Work

Data Center - Concept Design Package:

- Data center workshop. AEI will lead the group of stakeholders through a series of workshops to address all critical design nuances. Three (3) meetings are assumed.
- Develop Owner Project Requirements (OPR). This includes the general needs for space planning as well as IT, electrical, mechanical, fire protection requirements and capacity/resiliency. The OPR will identify current and future growth needs.
- Develop the Basis of Design (BOD). This includes technical narratives as well as conceptual sketches for the space planning, IT, electrical, mechanical, fire protection systems. The BOD will define how the OPR is being met. Estimated drawing package to include:
  - ✓ Floorplan layout(s)
  - ✓ MEP/IT equipment general arrangements
  - ✓ Electrical one line power diagram(s)
  - ✓ Mechanical one line flow and air diagram(s)
- This package is and considered the Schematic Design Package

Data Center - 100% Design Development Package:

- Provide partial mechanical design construction documents to include drawings, book specifications, and all associated calculations.
- Provide partial instrumentation and controls construction documents to include drawings, book specifications, and all associated calculations.

- Provide partial electrical power design construction documents to include drawings, book specifications, and all associated calculations.

- Provide partial lighting design construction documents to include drawings, book specifications, and all associated calculations.

- Provide partial fire alarm and life safety detection design construction documents to include drawings, book specifications, and all associated calculations.

- Provide partial plumbing design construction documents to include drawings, book specifications, and all associated calculations.

- Two formal submissions to the Owner. Printing of documents shall be by others.

- Participate in Owner, Architect, Contractor (OAC) review meetings during the design phase. It will be acceptable for AEI team members to participate remotely via conference call when not specifically needed at the site. AEI intends to normally have one representative at the site for meetings and additional trade specific team members will attend in person on an as-needed basis as agreed to by AEI, the Architect, and Owner's rep. Four (4) meetings are assumed.

Fuel Filling System - Design Phase:

- Comprehensive review of the program. Interviews with stakeholders to confirm the program. AEI intends to provide design for all MEP work indicated for the fuel filling station which includes diesel fuel, unleaded gasoline, and a future propane fuel system. This includes provisions for fuel system storage and distribution, power, lighting, plumbing, and piping infrastructure for equipment and systems anticipated.

- Provide complete mechanical design construction documents to include drawings, book specifications, and all associated calculations.

- Provide complete instrumentation and controls construction documents to include drawings, book specifications, and all associated calculations.

- Provide complete electrical power design construction documents to include drawings, book specifications, and all associated calculations.

- Provide complete lighting design construction documents to include drawings, book specifications, and all associated calculations.

- Provide complete fire alarm and life safety detection design construction documents to include drawings, book specifications, and all associated calculations.

- Provide complete plumbing design construction documents to include drawings, book specifications, and all associated calculations.

- Four formal submissions to the Owner. Printing of documents shall be by others.

- Participate in Owner, Architect, Contractor (OAC) review meetings during the design phase. It will be acceptable for AEI team members to participate remotely via conference call when not specifically needed at the site. AEI intends to normally have one representative at the site for meetings and additional trade specific team members will attend in person on an as-needed basis as agreed to by AEI, the Architect, and Owner's rep. Eight (8) meetings are assumed.

Fuel Filling System - Construction Phase:

- Participate in Owner, Architect, Contractor (OAC) review meetings during the construction phase. It will be acceptable for AEI team members to participate remotely via conference call when not specifically needed at the site. AEI intends to normally have one representative at the site for meetings and additional trade specific team members will attend in person on an as-needed basis as agreed to by AEI, the Architect, and Owner's rep. Six (6) meetings are assumed.

- Provide construction administration services throughout the life of the project. This includes bid assistance, review submittals, and resolve RFIs and field issues in an expedient manner to ensure the work is completed correctly and on schedule.

- Provide closeout design documentation assistance for as-built record documentation.

Assumptions & Exclusions

The following assumptions and exclusions have been taken in the preparation of this proposal. Those assumptions include:

- AEI will not provide design consulting services beyond what is described above.

- This project will not be LEED or Uptime Institute certified.

- Cost estimating will be provided by others. AEI will review cost estimates for accuracy and completeness pertaining to MEP systems.

- All applications and permitting shall be provided by others.

- Meeting notes, issues logs, and other weekly progress documentation shall be maintained by others.

- AEI shall not be responsible for assembling, reproduction and distribution of project related documents to the Owner. AEI will provide electronic documents to be integrated into the overall deliverable by others.

- It is assumed the CAD will be produced in AutoCAD or Revit and the specifications in Microsoft Word.

Compensation

Based on the aforementioned tasks and hours, **AEI is proposing a lump sum of ~~$208,250~~** $94,000. This is inclusive of expenses. This will be invoiced on a monthly basis through the course of project based on percentage complete. This can be further broken out by task as indicated below:

Task	Description	Cost
~~1~~	~~Data Center – Concept Design Package~~	~~$64,750~~
~~2~~	~~Data Center – 100% DD Package~~	~~$49,500~~
3	Fuel Filling Station – Design Phase	$74,000
4	Fuel Filling Station – Construction Phase	$20,000
	Total	~~**$208,250**~~ $94,000

AEI is agreeable to provide only some of the Tasks based on the project needs and budget. Task 2 cannot be provided without Task 1 being provided. Task 4 cannot be provided without Task 3 being provided.

The following are the 2019 hourly rates. If additional work becomes necessary, AEI can work to a fixed multiple of specific rates once we know the tasks and individuals that will participate.

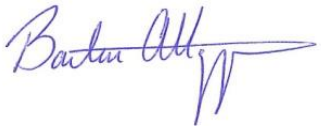
Position	Rate
Principal	$215.00
Project Manager	$190.00
Lead Mechanical Engineer	$150.00
Mechanical Engineer	$120.00
Lead Electrical Engineer	$160.00
Electrical Engineer	$125.00
Lead Piping/Fire Protection Engineer	$145.00
Piping/Fire Protection Designer	$120.00
Cost Estimator	$125.00
Commissioning Agent	$135.00
BIM/CAD Operators	$85.00
General Staff/Admin	$75.00

Notes:

1. Expenses billed at 1.0 multiplier

We are looking forward to partnering with DTW Architects, the other consultants, and the Owner for this exciting and important project. We trust this proposal is consistent with your expectations and meets the project needs. If you have questions, please call me.

Sincerely,
Affiliated Engineers



Barton A Hogge, PE, ATD, LEED AP
Principal
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