
AGENDA
CUMBERLAND COUNTY BOARD OF COMMISSIONERS
REGULAR AGENDA SESSION
JUDGE E. MAURICE BRASWELL
CUMBERLAND COUNTY COURTHOUSE - ROOM 564
NOVEMBER 9, 2021
1:00 PM

INVOCATION- Commissioner Toni Stewart

PLEDGE OF ALLEGIANCE

1. APPROVAL OF AGENDA
2. APPROVAL OF MINUTES
 - A. October 14, 2021 Agenda Session Regular Meeting Minutes
3. PRESENTATIONS
 - A. Crown Complex Capital Planning Model Review by DEC Associates Inc.
4. CONSIDERATION OF AGENDA ITEMS
 - A. Update to the Register of Deeds New Vault Doorway Project and Bid Results
 - B. Renovation Request from the Clerk of Superior Court
 - C. Request from PWC to Amend the Franklin Street Parking Garage Agreement
 - D. Contract for Volunteer Fire Department Radio Purchase
 - E. Amendments to Fort Bragg Regional Land Use Advisory Commission (RLUAC) Bylaws
 - F. Martin Luther King, Jr. Memorial Park Capital Project Budget Ordinance Amendment #B220101
 - G. Amendment to County Purchasing Policy
 - H. Consideration of the Request for Qualifications (RFQ) for Engineering Services to Assist with NORCRESS Capital Improvements
 - I. DSS Elevator Modifications Phase II Bid Award
 - J. Crown Coliseum Boiler Burner Repairs and Re-tubing Bid Award
 - K. Request of the Town of Godwin to Relinquish Its Jurisdiction to the County for Minimum Housing Code Enforcement
5. OTHER ITEMS
 - A. Timekeeping System Project
 - B. ARP Update

6. MONTHLY REPORTS

- A. Financial Report
- B. Health Insurance Update
- C. Project Updates
- D. Community Development Block Grant - Disaster Recovery (CDBG-DR) Update
- E. Southern Health Partners, Inc. Quarterly Statistics Report on Inmate Health Care

7. CLOSED SESSION: If Needed

ADJOURN

AGENDA SESSION MEETINGS:

December 9, 2021 (Thursday) 1:00 PM

January 13, 2022 (Thursday) 1:00 PM



FINANCE OFFICE

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021 AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: VICKI EVANS, FINANCE DIRECTOR

DATE: 10/27/2021

SUBJECT: CROWN COMPLEX CAPITAL PLANNING MODEL REVIEW BY DEC ASSOCIATES INC.

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): DOUG CARTER, DEC ASSOCIATES INC.

BACKGROUND

The Market and Financial Feasibility Study of the Crown Complex Multi-Purpose Facility was presented by external consultant, CSL, to the public on September 15, 2021. On October 18, 2021 the Board of Commissioners approved engaging the County's financial advisor, DEC Associates, Inc. to move forward in reviewing the financial assumptions, project costs, and to update the capital planning model. That review has been conducted and the Crown Complex capital planning model has been updated.

Doug Carter, President and Managing Director of DEC Associates Inc. will be presenting an update of the Crown Complex financial model which now incorporates the financial components of the proposed multi-purpose event center.

RECOMMENDATION / PROPOSED ACTION

For Information Only



ENGINEERING AND INFRASTRUCTURE DEPARTMENT

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021 AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: JERMAINE WALKER, COUNTY ENGINEER

DATE: 11/2/2021

**SUBJECT: UPDATE TO THE REGISTER OF DEEDS NEW VAULT DOORWAY
PROJECT AND BID RESULTS**

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): JERMAINE WALKER, COUNTY ENGINEER

BACKGROUND

On June 21, 2021, the Board of Commissioners approved the Budget Ordinance Amendment #B210338 for \$50K. The budget ordinance amendment was a shared cost to fund the construction of a vault doorway for the Register of Deeds. The doorway would provide a secondary egress and allow public and attorney access to the records vault without having to utilize the main Register of Deeds entrance.

Guidance from the Board was to move forward with planning and design with 50% of total project costs to be funded from the County's CIP fund not to exceed \$50K.

Originally, the project bid period opened on October 4, 2021 and closed on October 14, 2021 with submission of one bid which was later disqualified. The project was re-bid on October 22, 2021 and closed on October 29, 2021 with M&E Construction submitting the only bid for this project.

The planning and design costs are \$12K and the overall project costs are \$125,028. Complying with the original guidance the project now has a shortfall of \$37,028.00.

RECOMMENDATION / PROPOSED ACTION

Staff is seeking guidance as to the Board of Commissioner's desire to move forward with the project by

increasing the not-to-exceed amount and contributing additional funding of \$37,028 to the project.

ATTACHMENTS:

Description

Type

Project Bid Tab

Backup Material

Bid Tabulation Form

New Door at Room 117 Judge E. Maurice Braswell Cumberland County Courthouse

Cumberland County

Bid Opening Date and Time: October 29, 2021 at 2pm

Engineer's Project Number: 21-61

Contractor	Base Bid	IMBP	MBE	
			Affidavit	Bid Security
M & E CONTRACTING INC.	125,028. ⁰⁰	✓	✓	✓

PROPOSAL

**TO CUMBERLAND COUNTY
NORTH CAROLINA**

The undersigned hereby signifies that it is M & E CONTRACTING, INC.
intention and purpose to enter into a contract to furnish labor, materials, equipment, apparatus, etc., as
required and to do all the work necessary for

**NEW DOOR AT ROOM 117
JUDGE E. MAURICE BRASWELL CUMBERLAND COUNTY COURTHOUSE**

as described in the specifications and shown on the plans in accordance with the terms of the
Advertisement, Instructions to Bidders, the foregoing Specifications, and the following form of Contract,
and this Proposal and the Plans; and pursuant with the requirements of the Advertisement and Instructions
to bidders which are as follows:

THAT: The undersigned carefully examined the Instructions to Bidders, the Specifications, Plans,
this form of Proposal, and the Contract and Fully understands them.

THAT: The undersigned carefully examined the site or sites of the project or projects and is
familiar with the conditions under which the work, or any part of it, is to be done and the conditions
which must be fulfilled in furnishing and/or erection or construction of any or all items of the project, and
the furnishing only of any materials, equipment, or apparatus specified in connection therewith.

THAT: The undersigned will provide all necessary tools, machinery apparatus, and all means
necessary to complete such Contract as may be entered into, and in the manner prescribed in the Contract
and Specifications and according to the Plans and requirements under the of the Engineer, in the first class
manner.

THAT: The right of Cumberland County and the recommendations of the Engineer are not to be
questioned in the award of the Contract.

THAT: It is the intention of Cumberland County, North Carolina, subject to the conditions set
forth, to award contracts for the project on the basis of bids received at this letting and in such manner as
they may decide as being in the best interests of the County.

THAT: The County reserves the right to reject any of all proposals.

THAT: A proposal made by a corporation must be signed by its proper officers in a legal manner
and its official address stated herein.

THAT: A proposal made by a firm shall be signed with the name of each member of said firm
and the firm name added, with the official address of said firm.

THAT: The undersigned will complete such contract as is hereby proposed to enter into
within the time stated in the notice to proceed and stipulated in the Contract.

THAT: The Bidder acknowledges receipt of the following Addendum:

NA

THAT: The Contractor agrees to furnish all materials, labor and equipment and to install complete in place the work in accordance with the Plans and Specifications for the lump sum of:

Base Bid:

ONE HUNDRED + TWENTY-FIVE THOUSAND, & TWENTY-FOUR Dollars (\$ 125,028.00).

Submitted, this 29 day of OCTOBER, [Year] 2021

M E E CONTRACTING, INC

Contractor

By:

[Signature]

(Signature of Person, Firm or Corporation making Bid)

(Seal - If Bid is by a Corporation)

Title:

PRESIDENT

Address:

1032 71st School Rd

Fayetteville, NC 28314

Attest:

[Signature]

License No.

32417

Phone:

910-867-8708

State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of CUMBERLAND

(Name of Bidder)

Affidavit of M & E CONTRACTING, INC.

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- ☒ 1 – (10 pts) Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- ☒ 2 --(10 pts) Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- ☒ 3 – (15 pts) Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- ☐ 4 – (10 pts) Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- ☒ 5 – (10 pts) Attended prebid meetings scheduled by the public owner.
- ☐ 6 – (20 pts) Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- ☒ 7 – (15 pts) Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- ☐ 8 – (25 pts) Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- ☐ 9 – (20 pts) Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- ☐ 10 - (20 pts) Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: 10/29/2021 Name of Authorized Officer: REN W. ELLIS
 Signature: [Signature]
 Title: PRESIDENT



State of NC, County of HOKE
 Subscribed and sworn to before me this 29th day of October 2021
 Notary Public Todd Hope
 My commission expires MAY 05 2023

State of North Carolina --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____
_____ contract.
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

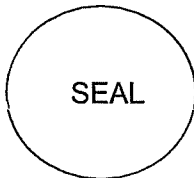
The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

[Handwritten Signature]

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20__

Notary Public _____

My commission expires _____



ASSISTANT COUNTY MANAGER - ENVIRONMENTAL/ COMMUNITY SAFETY

**MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021
AGENDA SESSION**

TO: BOARD OF COUNTY COMMISSIONERS

**FROM: TRACY JACKSON, ASSISTANT COUNTY
MANAGER/ENVIRONMENTAL & COMMUNITY SAFETY**

DATE: 11/1/2021

SUBJECT: RENOVATION REQUEST FROM THE CLERK OF SUPERIOR COURT

Requested by: AMY H. CANNON, COUNTY MANAGER

**Presenter(s): TRACY JACKSON, ASSISTANT COUNTY
MANAGER/ENVIRONMENTAL & COMMUNITY SAFETY**

BACKGROUND

Due to an increase in demand for services, the Clerk of Superior Court is requesting renovations and furnishings in order to improve service in the Estate Division (please see attached memo). Staff has reviewed the request and determined that approximately \$12,300 would be needed to make the requested changes and obtain the furnishings (renderings and quotes also attached). Funding for the project is available in Court Facilities.

RECOMMENDATION / PROPOSED ACTION

Staff recommends the following action be placed on the November 15, 2021 Board of Commissioners' Regular Meeting as a Consent Agenda Item:

Approve the renovation request to improve service in the Estates Division of the Clerk of Court's Office.

ATTACHMENTS:

Description	Type
Memo and Supporting Info from the Clerk of Court	Backup Material



LISA A. SCALES

CUMBERLAND COUNTY CLERK OF SUPERIOR COURT
JUDICIAL DISTRICT 12

PO BOX 363, FAYETTEVILLE, NC 28302

TELEPHONE: 910-475-3000 FAX: 910-475-3001

LISA.A.SCALES@NCCOURTS.ORG

TO: AMY H. CANNON, COUNTY MANAGER
FROM: LISA A. SCALES, CLERK OF COURT *AS*
DATE: October 25, 2021
SUBJECT: RENOVATION TO EXPAND THE ESTATES DIVISION OF THE CLERK OF COURT

I would like to formally request authorization to renovate the Clerk of Court Conference Room located inside suite 106 (Clerk of Court Administration office). The Estates Division (suite 104) next door has exceeded capacity for additional workstations and the steady increase of foot traffic and workload requires me to add additional staff. As it stands now, two employees are sharing one small office and are not able to service the public because of the lack of space. With the requested expansion, I will be able to add an additional employee to the estates division and put the 2 employees who share an office in a larger space to accommodate each employee's workstation and allow room for customers to come inside the office to conduct business. When meeting with Estate customers, and discussing sensitive information such as funds, bank account numbers, outstanding debt of the deceased and other personal identifying information, it requires individual offices or privacy barriers. The duration of business transactions can be lengthy, and the clientele can be of a mature age and require adequate spacing for seating. A small section of the original Clerk Conference Room will be kept intact and transformed into a storage area for filing cabinets, manuals, books, PPE, and other supplies.

I would also like to request authorization to transform room 108 (previously digital imaging) into the Clerk Conference Room. This would require two cubicles and two workstations to be removed. The current Conference room table and chairs can be reused inside this repurposed room.

I have attached figures to support the need to the expansion of my Estates division.

Thank you for your consideration!



Estate approximate Statistics:

- 43 in person Customers per day
- 30-45 minutes per Customer
- 215 in person customers per week
- 5 case managers available for customers per day
- In the last 6 months 1,058 filings via mail, attorney or pro se drop office
- Presided over 336 Guardianship Hearings in 2021
- Presided over 232 Show Cause Hearings in 2021
- Estate employees have worked an average of 133 hours over overtime each month in the last year

Number of new Estate cases established by year:

Year	Number of Cases
2017	1721
2018	1786
2019	1831
2020	1924
10/2021	2016

Cost of the Conference Room to Estate workspace renovation:

- Wall and door with window/frame install would be roughly \$5,500
- 2 L shaped desks and 2 side chairs for roughly \$1,600 per desk, \$3,200 total
- 2 Desk Hutch \$750 per hutch, \$1,500 total
- 2 Rolling Desk Chairs Price \$550 per chair, \$1,100 total
- Data/electrical \$1,000

Approximate Total: \$12,300





Cost of the Digital Imaging room to Conference Room renovation:

Breakdown of 2 cubicles and 2 tables: This product is unable to be reused (due to age vendors are unable to order additional parts to reconfigure or reconstruct) and space restrictions, County facility employees will be able to do the breakdown.

Reuse of Current Conference Table and Chairs: \$0.00

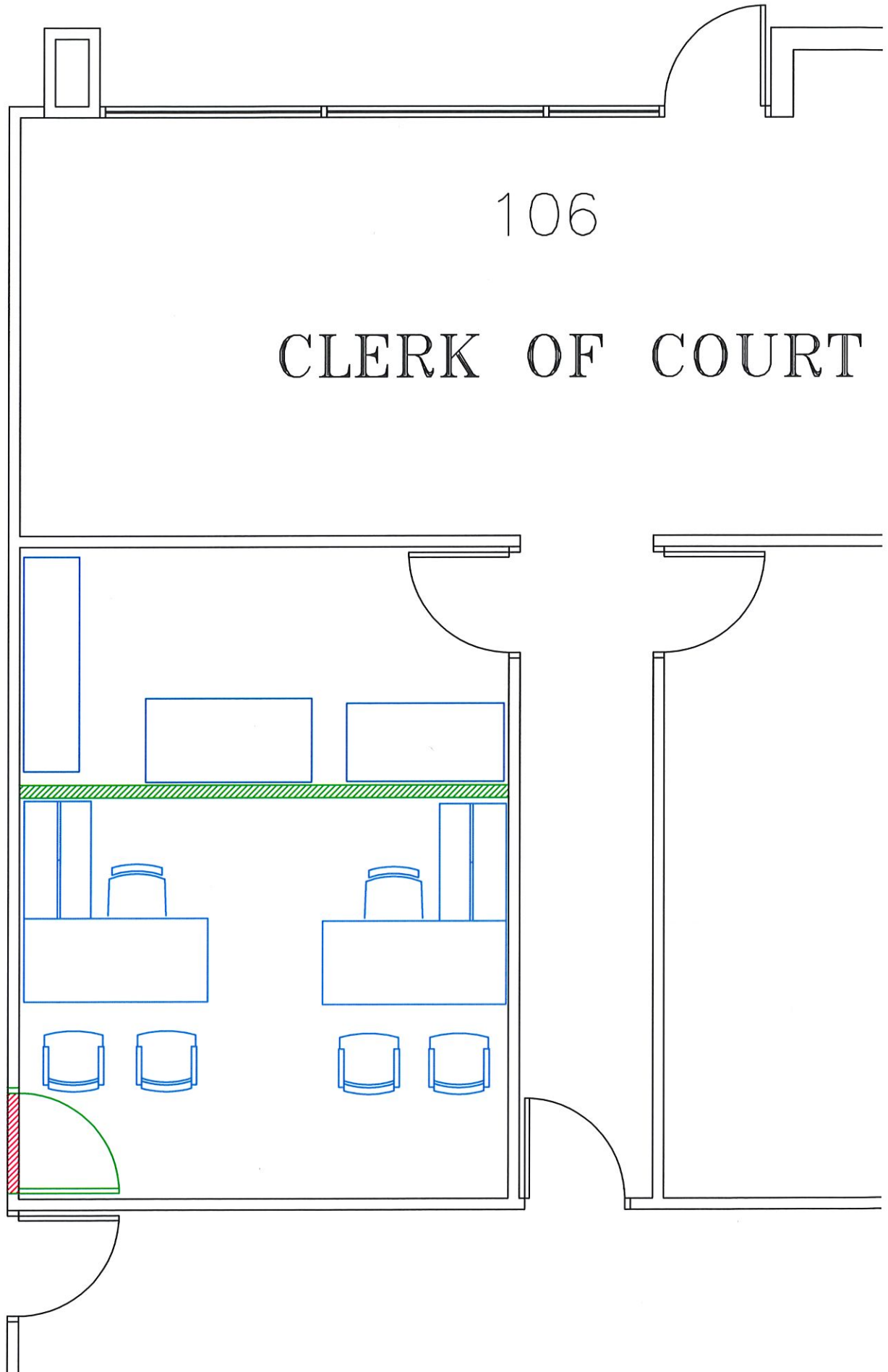
ATTACHMENTS:

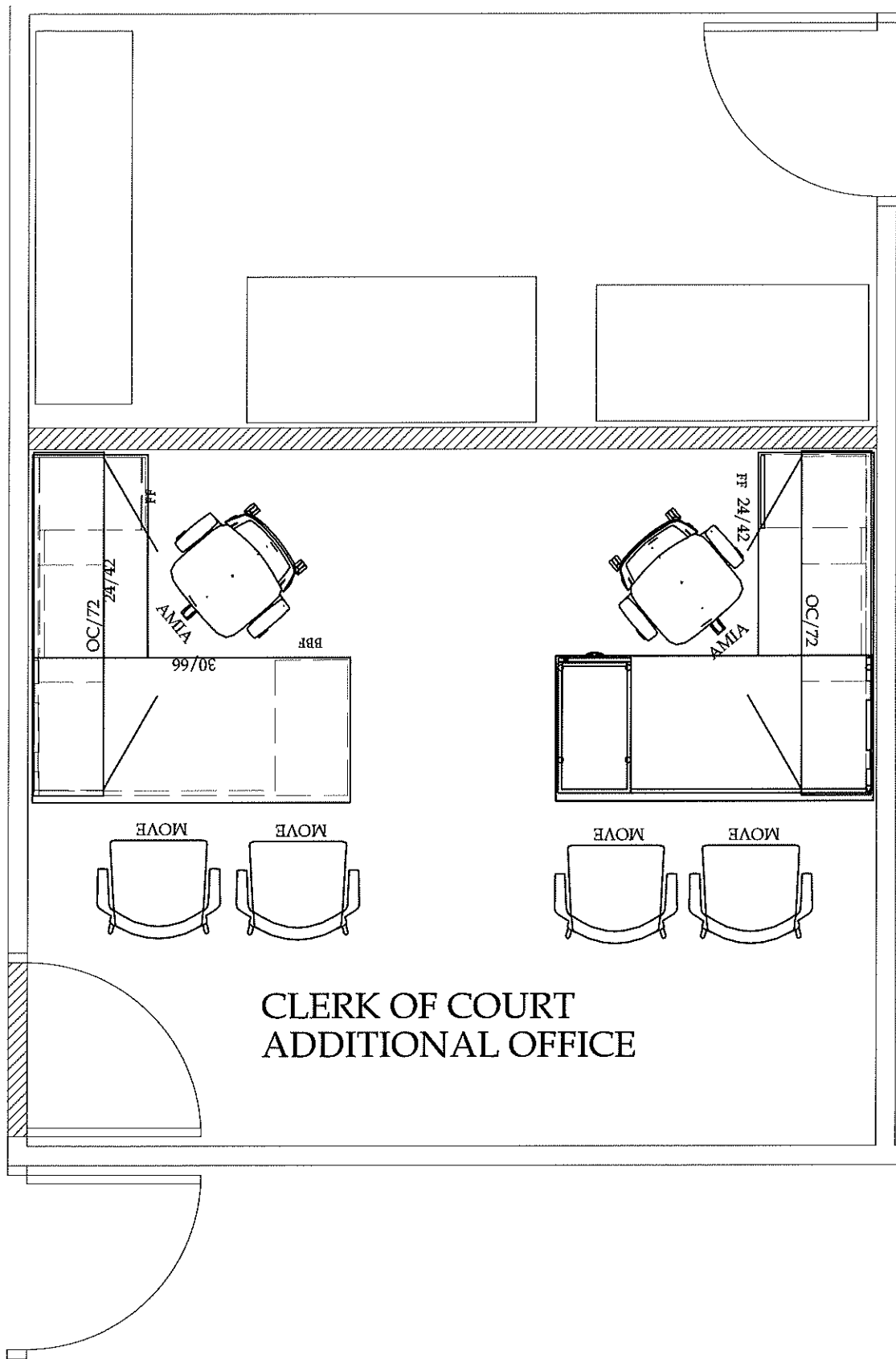
Clerk Conference Room to Estates workspace and Admin storage closet- Suite 106

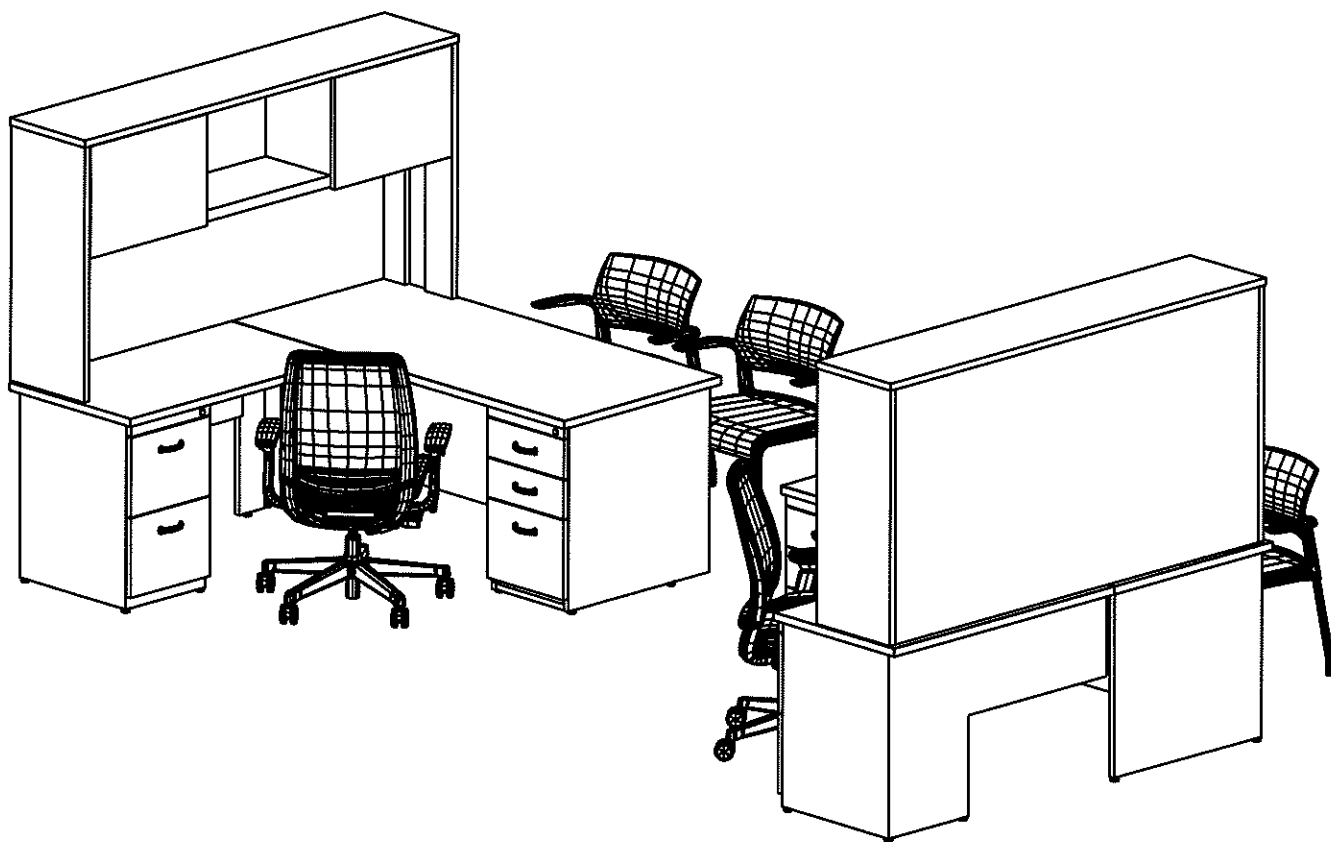
Digital Imaging Room to Clerk Conference Room- Suite 108

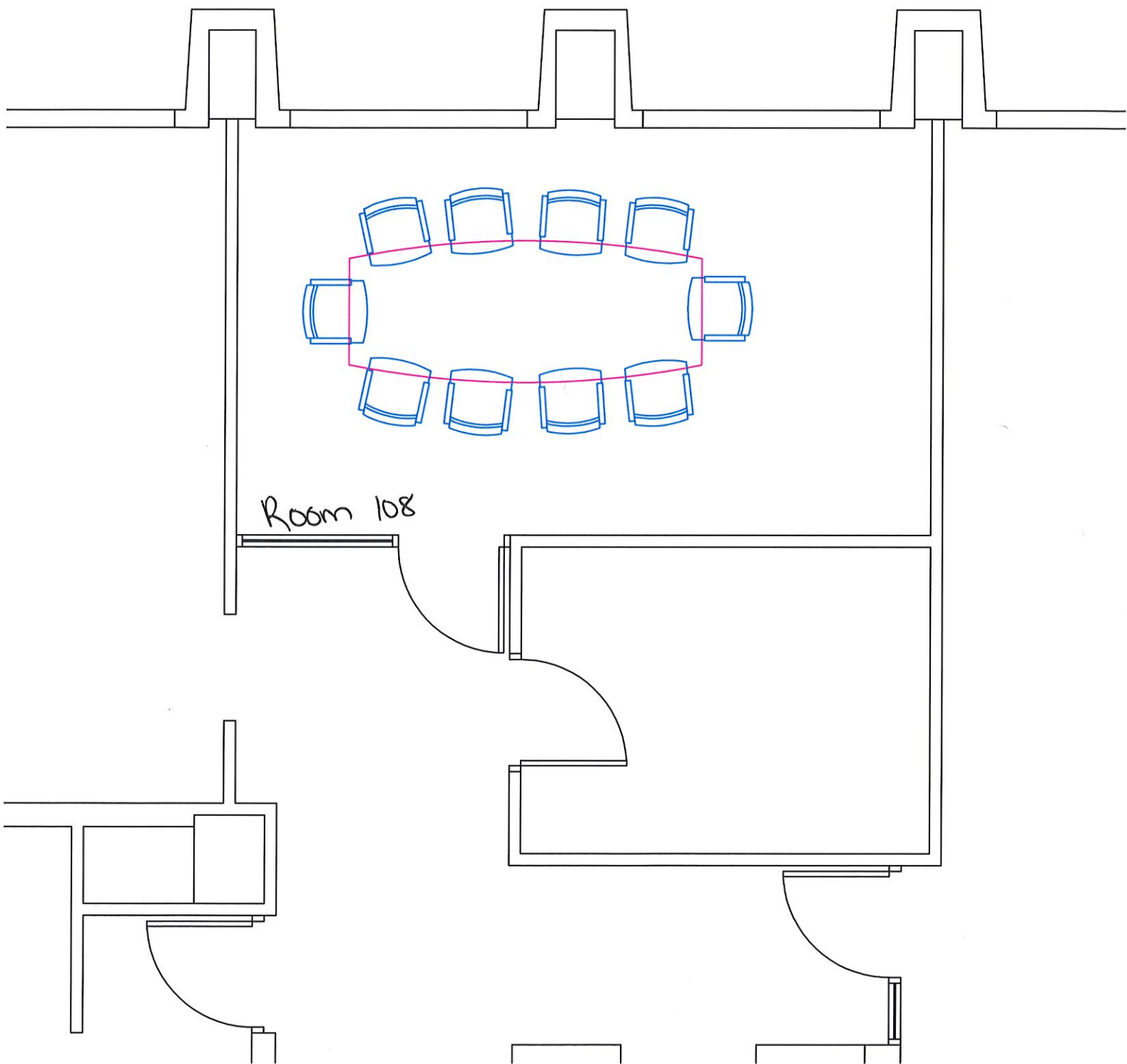
106

CLERK OF COURT









WILLIAMS OFFICE ENVIRONMENTS

409 Chicago Dr
Suite 109/110
Fayetteville NC 28306

Phone
+1 (910) 483-0354
Fax
+1 (910) 486-4077

Quotation

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Quote	Quote Date	Customer Order	Customer	Account Representative	Project
7343	10/25/21	CLERK OF COURT	D01660	LAMAR WILLIAMS, JR	

Quote To

COUNTY OF CUMBERLAND
117 DICK STREET
STE 214
Fayetteville NC 28301-5749

Ship To

COUNTY OF CUMBERLAND
117 DICK STREET
STE 214
Fayetteville NC 28301-5749

Phone +1 (910) 678-7771

Terms NET 10TH EOM

Phone +1 (910) 678-7771

Line	Quantity	Catalog Number / Description	Unit Price	Extended Amount
1	2	TSAFHN3066F STEELCASE Desk-Single pedestal, High pressure laminate, Full height modesty panel, 30D x 66W BASIC :7238 FIELDSTONE EDGE :6698 FIELDSTONE TOP-SURF:2860 GRANITE FIBER KEYS :SK PLUG OPTIONS ** OPTIONS ** PULLS *OPT:PULL OPTIONS HDL PULL HANDLE PULL PULL PULL NICKEL *PULL:NICKEL 9211 NICKEL PED OPT *OPT:PEDESTAL OPTIONS BBF PED BOX/BOX/FILE PED	636.79 1,577.00 59.62%	1,273.58
2	2	TSAFHR2442M STEELCASE Return-Pedestal, High pressure laminate, Half height modesty panel, 24D x 42W BASIC :7238 FIELDSTONE EDGE :6698 FIELDSTONE TOP-SURF:2860 GRANITE FIBER KEYS :SK PLUG OPTIONS ** OPTIONS ** PULLS *OPT:PULL OPTIONS HDL PULL HANDLE PULL PULL PULL NICKEL *PULL:NICKEL	409.45 1,014.00 59.62%	818.90

Accepted By

Date

WILLIAMS OFFICE ENVIRONMENTS

409 Chicago Dr
Suite 109/110
Fayetteville NC 28306

Phone
+1 (910) 483-0354
Fax
+1 (910) 486-4077

Quotation

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(cont'd)

Quote	Quote Date	Customer Order	Customer	Account Representative	Project
7343	10/25/21	CLERK OF COURT	D01660	LAMAR WILLIAMS, JR	

Line	Quantity	Catalog Number / Description	Unit Price	Extended Amount
3	2	9211 NICKEL PED OPT *OPT:PEDESTAL OPTIONS FF PED STD:FILE/FILE PED TSAFSD72 STEELCASE Overhead storage, Doors, 72W BASIC :7238 FIELDSTONE KEYS :SK PLUG OPTIONS ** OPTIONS ** BP OPTS *OPT:BACK PANEL OPTIONS WITH BP STD:WITH BACK PANEL	466.39 1,155.00 59.62%	932.78
4	2	TSAFTB72 STEELCASE Kick Freestanding; Tackboard, 19H x 72W TKBD :G204 NEW MELODY OPTIONS ** OPTIONS ** FAB DIR *OPT:FABRIC DIRECTION HORZ HORIZONTAL APPLICATION ONLY	158.69 393.00 59.62%	317.38
5	2	4821412 STEELCASE Amia; Chair, Upholstered, Air Backrest, Arms AIRBACK :6249 PLATINUM SOLID PLASTIC :6205 BLACK UPHLSTRY:BR30 BONE OPTIONS ** OPTIONS ** BASE OPT *OPT:BASE OPTION PLASTIC STD:PLASTIC BASE CASTERS CASTERS SOFT CST SOFT CASTERS	525.51 1,093.00 51.92%	1,051.02
6	4	490412 STEELCASE Move; Chair, Plastic back, Arms, Glides FRAME :0835 BLACK SHELL :6249 PLATINUM SOLID UPHLSTRY:BR30 BONE Tag For PRICING PER NC STATE CONTRACT 420A. PRICE INCLUDES DELIVERY AND INSTALLATION. LAMAR WILLIAMS, PRESIDENT	235.97 471.00 49.90%	943.88

Accepted By

Date

WILLIAMS OFFICE ENVIRONMENTS

409 Chicago Dr
Suite 109/110
Fayetteville NC 28306

Phone
+1 (910) 483-0354
Fax
+1 (910) 486-4077

Quotation

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(cont'd)

Quote	Quote Date	Customer Order	Customer	Account Representative	Project
7343	10/25/21	CLERK OF COURT	D01660	LAMAR WILLIAMS, JR	

Line	Quantity	Catalog Number / Description	Unit Price	Extended Amount
QUOTATION TOTALS				
Sub Total				5,337.54
NC STATE & COUNTY TAX				373.63
Grand Total				5,711.17

End of Quotation

Accepted By _____ Date _____



OFFICE OF THE COUNTY ATTORNEY

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021
AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: COUNTY ATTORNEY

DATE: 11/4/2021

**SUBJECT: REQUEST FROM PWC TO AMEND THE FRANKLIN STREET
PARKING GARAGE AGREEMENT**

Requested by: PWC

Presenter(s): COUNTY ATTORNEY

BACKGROUND

The County entered into an Interlocal Agreement with the City and PWC June 7, 2010, relating to the funding of the Franklin Street Parking Garage owned by the City. The County committed the increase in property tax revenues within the downtown business district over the base year of 2011 to the City for payment on the parking garage until the debt incurred by the City for the initial construction of the parking garage was retired. In consideration of the County's commitment to funding, PWC agreed to provide bulk water to the County for any of its rural water districts through June 30, 2030. The indefinite debt repayment term was not a good agreement for the County, but the County did the agreement because it was seeking USDA funding for a water system in Gray's Creek Water & Sewer District and the County had been unable to obtain a water purchase agreement from PWC without the parking garage agreement.

The City asked for an amendment to the Agreement in 2018 to carve out the "Stadium Re-development Site," which was made subject to a separate tax increment funding agreement. The City agreed to change the indefinite repayment term to a term ending December 31, 2030, at that time.

PWC has now asked for a second amendment to the agreement which extends PWC's right to reserve parking spaces in the parking garage for the use of the Robert C. Williams Building to June 30, 2053, and gives PWC the right to assign its interest in the parking capacity to a third party. This does not affect the County because the County's commitment to the increment tax funding lasts to December 31, 2030, regardless of the tax status

of the Robert C. Williams Building. This portion of the agreement only affects the City and PWC, and the City has already approved it.

It is the opinion of the County Attorney that this amendment is already done by the action of the City and PWC approving it because the amendment does not affect the County's obligation for payment of the tax revenue or right to obtain bulk water until June 30, 2030. Those are the only obligation and right the County has. PWC insists the County must approve the Amendment.

RECOMMENDATION / PROPOSED ACTION

The Board may certainly approve the amendment as requested by PWC. The county attorney recommends the Board to request PWC to extend the term of the County's right to purchase bulk water under the Agreement to coincide with the June 30, 2053, extension of PWC's rights under the agreement.



ASSISTANT COUNTY MANAGER - ENVIRONMENTAL/ COMMUNITY SAFETY

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021
AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

**FROM: TRACY JACKSON, ASSISTANT COUNTY
MANAGER/ENVIRONMENTAL & COMMUNITY SAFETY**

DATE: 11/1/2021

**SUBJECT: CONTRACT FOR VOLUNTEER FIRE DEPARTMENT RADIO
PURCHASE**

Requested by: AMY H. CANNON, COUNTY MANAGER

**Presenter(s): TRACY JACKSON, ASSISTANT COUNTY
MANAGER/ENVIRONMENTAL & COMMUNITY SAFETY**

BACKGROUND

In Fiscal Year (FY) 2021, the Board of Commissioners approved an agreement with Stoney Point Fire Department, Inc. to purchase replacement radios as part of an effort to obtain updated radio technology that will be compliant with Federal Communications Commission (FCC) requirements that become effective in 2025. This initial purchase was the first step in obtaining FCC compliant radios for the fire service in Cumberland County.

In order to complete the countywide radio update and obtain the remaining radios for the fire service, Stoney Point Fire Department proposes to enter into the attached agreement with Cumberland County. The fire department will finance the \$2,769,982 purchase and will request reimbursement in the amount of \$553,996.40 for five consecutive years, starting in FY22, from Cumberland County until the full cost of the radios has been reimbursed. Funding will come from the Cumberland County Fire District Grant Fund.

RECOMMENDATION / PROPOSED ACTION

Staff recommends the following action be placed on November 15, 2021 Board of Commissioners' Regular Meeting as a Consent Agenda Item:

Approve the attached agreement with Stoney Point Fire Department , Inc. to purchase FCC compliant radios for each participating rural fire district.

ATTACHMENTS:

Description

Type

Proposed FY22 Radio Purchase Agreement

Backup Material

**CUMBERLAND COUNTY FIRE PROTECTION SERVICE DISTRICT
GRANT FUNDING AGREEMENT WITH STONEY POINT FIRE DEPARTMENT, INC.**

This Grant Funding Agreement is made this ____ day of _____, 2021, by Cumberland County, hereinafter referred to as "County," and Stoney Point Fire Department, Inc., hereinafter referred to as "Applicant," on behalf of and for the benefit of all of the rural fire protection departments within Cumberland County as more particularly set forth in the Grant Request attached hereto and incorporated herein, hereinafter referred to as "Application."

WITNESSETH:

WHEREAS, County's special grant committee found Applicant's Application to comply with the requirements of the Fire Protection Service District Grant Program and recommended approval by the Board of Commissioners; and

NOW, THEREFORE, pursuant to the Grant Program Guidance established for the administration of the Fire Protection Service District Grant Program, the parties agree as follows:

- (1) Applicant will purchase the radios and distribute the radio equipment to each participating rural fire department as set forth in the Application. All radios purchased shall meet the current P25 standard and the P25 Phase 2 Time Division Multiple Access (TDMA) standard as soon as it is put in place.
- (2) County will reimburse Applicant for the purchase of the radios with grant funds in an amount not to exceed \$2,769,982 payable in annual installments of \$553,996.40 starting in Fiscal Year 2022 and ending in Fiscal Year 2026.
- (3) Applicant shall submit invoices and proof of payment before any grant funds will be disbursed by County.
- (4) Applicant shall submit project performance reports six months and one-year after receipt of any grant funds.
- (5) Applicant's failure to submit all required documentation or reports of the use of the grant funds shall result in the denial of any future grant funds until all requirements of this agreement have been fully met.
- (6) All terms in the Application which are not inconsistent with any of the terms set forth herein are incorporated fully by reference to the same extent as if set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Memorandum of Agreement in triplicate originals, the day and year indicated above.

COUNTY OF CUMBERLAND

By:

Amy Cannon, County Manager

Attest:

Candice H. White, Clerk to the Board

STONEY POINT FIRE DEPARTMENT, INC.

By:

Corporate President

Attest:

Corporate Secretary

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

County Finance Director

Approved for legal sufficiency.

County Attorney's Office



PLANNING AND INSPECTIONS DEPARTMENT

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021 AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: RAWLS HOWARD, DIRECTOR OF PLANNING AND INSPECTIONS

DATE: 11/4/2021

**SUBJECT: AMENDMENTS TO FORT BRAGG REGIONAL LAND USE ADVISORY
COMMISSION (RLUAC) BYLAWS**

Requested by: AMY H. CANNON, COUNTY MANAGER

Presenter(s): RAWLS HOWARD, DIRECTOR OF PLANNING AND INSPECTIONS

BACKGROUND

Over the past year, the Fort Bragg Regional Land Use Advisory Commission (RLUAC) has developed and voted to approve amendments to its bylaws that modernize its governance structure and implement the organization's Strategic Plan. The next step in the process requires the approval of two-thirds of the local government members of RLUAC to officially amend the bylaws. The bylaws were last updated in 2005. Highlights of the bylaws update include:

1. Expanding and clarifying the mission of the organization; including the relationship with Ft. Bragg.
2. Updating NCGS State Statute references.
3. Expanding upon membership relationships to the organization to now include regular, associate, and individual members. This also includes how and what manner each membership class may vote on organizational business.
4. Include procedures for remote meetings.
5. More clearly outlines roles and responsibilities of Commission officers and boards and committees.

The current local government members include the counties of Cumberland, Harnett, Hoke, Moore, Richmond, Robeson, and Sampson; and the municipalities of Aberdeen, Eastover, Erwin, Fayetteville, Hoffman, Hope Mills, Laurinburg, Lillington, Pinebluff, Pinehurst, Raeford, Spring Lake, Southern Pines, Vass, and Wagram.

RECOMMENDATION / PROPOSED ACTION

Staff recommends placing the following action on the November 15, 2020 Board of Commissioner's Agenda as a Consent Item:

Approve the By-Law Amendments of the Fort Bragg Regional Land Use Advisory Commission.

ATTACHMENTS:

Description	Type
RLUAC Bylaws Update Request Letter	Backup Material
RLUAC Bylaws Update Resolution	Backup Material
Proposed RLUAC Bylaws Clean Version	Backup Material
Proposed RLUAC Bylaws Strikethrough	Backup Material

RLUAC

Regional Land Use Advisory Commission

October 12, 2021

Amy Cannon, County Manager
Cumberland County
117 Dick Street
Fayetteville, NC 28301

VIA EMAIL

Dear Ms. Cannon,

Over the past year, the Fort Bragg Regional Land Use Advisory Commission (RLUAC) has developed and voted to approve amendments to its bylaws that modernize its governance structure and implement the organization's Strategic Plan. The next step in the process requires the approval of two-thirds of the local government members of RLUAC to officially amend the bylaws. The current local government members include the counties of Cumberland, Harnett, Hoke, Moore, Richmond, Robeson, and Sampson; and the municipalities of Aberdeen, Eastover, Erwin, Fayetteville, Hoffman, Hope Mills, Laurinburg, Lillington, Pinebluff, Pinehurst, Raeford, Spring Lake, Southern Pines, Vass, and Wagram.

The mission of RLUAC is to provide a forum for communication between Fort Bragg and local governments; educate and inform local government leaders, the development community, legislative representatives and the general public about compatible growth and environmental issues; provide local governments with timely, credible and authoritative analysis of the compatibility of land use and development proposals; assist local governments with the adoption of plans and policies that foster compatible growth and protect critical environmental resources; and preserve and protect Fort Bragg's training and operational mission from incompatible civilian development patterns.

A redlined version of the bylaws and proposed amendments is attached along with a clean version of the new bylaws for your review. We request your Board of Commissioner's timely consideration and approval of this request at your next available regular meeting to help us finalize the bylaw amendments and move forward into 2022.

Respectfully,

John K. McNeill, Chairman
Regional Land Use Advisory Commission
Mayor, City of Raeford

RLUAC Board of Directors

Al Aycock (MG, USA, Retired), Ex-Officio
Greg Bean (COL, USA, Retired), At-Large
Will Best, NC Department of Commerce
Roland Hall, Sampson County
Rawls Howard, Cumberland County
Mark Locklear, Vice Chairman, Harnett County

Michael Lynch, Secretary, At-Large
Robert McLaughlin, Wagram (Scotland)
John Hammond, US Fish & Wildlife Service
Glen Prillaman, At-Large
Jeff Sanborn (COL, USA, Retired), Pinehurst (Moore)
Robert Fleming, Fort Bragg

**RESOLUTION OF ADOPTION
FORT BRAGG REGIONAL LAND USE ADVISORY COMMISSION
BYLAW REVISIONS**

WHEREAS, The Fort Bragg Regional Land Use Advisory Commission (RLUAC) was established in 1991 at the conclusion of the Joint Land Use Study to serve as a regional forum to advance planning and communication between the military bases and the surrounding local governments; and

WHEREAS, RLUAC was established in 1991 under the authority of NCGS 160A-461 for the purpose of interlocal cooperation and was subsequently incorporated as a 501(c)3 membership-based non-profit organization in 2004; and

WHEREAS, RLUAC is the leading advocate for coordination and collaboration between Fort Bragg and local governments on issues related to compatible growth and environmental sustainability in the North Carolina Sandhills region; and

WHEREAS, Cumberland County is a member of RLUAC; and

WHEREAS, On November 19, 2020, and on August 19, 2021, RLUAC approved amendments to modernize its governance structure and implement the organization's strategic plan; and

WHEREAS, Approval of two-thirds of the local government members of the Commission is needed to officially amend the bylaws.

NOW, THEREFORE, BE IT RESOLVED THAT THE BOARD OF COUNTY COMMISSIONERS OF CUMBERLAND COUNTY HERBY APPROVES THE REVISED RLUAC BYLAWS AS AMENDED ON NOVEMBER 19, 2020, AND ON AUGUST 19, 2021 AT THE QUARTERLY MEMBERSHIP MEETINGS OF RLUAC.

Adopted this ____ day of _____, 2021, by the Board of County Commissioners of Cumberland County.

Charles Evans
Chairman, Cumberland County Board of
Commissioners

ATTEST:

Candice White, County Clerk

**BYLAWS OF THE
FORT BRAGG REGIONAL LAND USE ADVISORY COMMISSION, INC.
REVISED IN 2005 AND 2021**

ARTICLE 1 – TITLE

The organization shall be the Fort Bragg Regional Land Use Advisory Commission, Inc., herein after referred to as “RLUAC.”

ARTICLE 2 – MISSION

The purposes and duties of the RLUAC are as follows:

1. Provide a forum for communication between Fort Bragg and local governments;
2. Educate and inform local government leaders, the development community, legislative representatives and the general public about compatible growth and environmental issues;
3. Provide local governments with timely, credible and authoritative analysis of the compatibility of land use and development proposals with the military training and operational missions of Fort Bragg;
4. Assist local governments with the adoption of plans and policies that foster compatible growth and protect critical environmental resources; and
5. Preserve and protect Fort Bragg’s training and operational missions from incompatible civilian development patterns and environmental degradation.

ARTICLE 3 – ESTABLISHMENT

RLUAC is established through the authority of N.C.G.S. Chapters 160A-460 through 466 and 55A et. al.

ARTICLE 4 – MEMBERSHIP

1. Regular Members: Regular membership consists of the units of local government that are party to the interlocal cooperation agreement to establish the organization.
 - a. Regular Members may be admitted to the Commission upon invitation by the Board of Directors and approval by the full Commission, contingent upon the governing body of the local government adopting a resolution to join the Commission in accordance with NCGS 160A-461.
 - b. Regular Members may withdraw their membership at any time by the adoption of a resolution by the governing body effecting its withdrawal from the Commission. Upon the effective date of the withdrawal, the appointment and term of service of both voting and non-voting representatives of the Regular Member shall be rescinded.
2. Associate Members: Associate membership consists of entities or individuals that are not party to the interlocal cooperation agreement, which have a direct relationship to the mission of the organization.
 - a. Fort Bragg: United States Army Garrison Fort Bragg is admitted as an enduring Associate Member.
 - b. Partner Organizations: An organization that works closely with Fort Bragg and local governments to achieve a common mission.

- i. The US Fish & Wildlife Service, Sustainable Sandhills Inc., the NC Department of Commerce, and the NC Wildlife Resources Commission are admitted as enduring Associate Members.
 - ii. The Board of Directors may admit or remove Partner Organizations as Associate Members by a simple majority vote.
- c. Individual: An individual that has specialized knowledge, skills, or experience related to the mission of RLUAC gained through their prior association with Fort Bragg, a local government member, and/or another Partner Organization.
 - i. The Board of Directors may nominate an Individual for admission or removal as an Associate Member, subject to approval of the Commission.
 - ii. The nomination to add or remove an Individual shall not be effective until approved by a majority of the voting representatives at a regular meeting of the Commission.

ARTICLE 5 – MEMBER REPRESENTATION

1. Regular Members: The Regular Members shall have voting and non-voting representation on the Commission.
 - a. Voting Representative:
 - i. Each Regular Member shall appoint one voting representative to the Commission.
 - ii. The voting representative shall be appointed by the Regular Member's governing body.
 - iii. Regular Members are encouraged to appoint a member of the governing body as the voting representative, with preference for an individual who has basic knowledge of the Fort Bragg region's physical, environmental, social, and economic makeup and a general understanding of land use planning.
 - iv. The length of the term for a voting representative shall be three (3) years.
 - v. Voting representatives may be reappointed to successive terms, without limitation.
 - b. Non-Voting Representative(s):
 - i. Each Regular Member may appoint one or more elected officials, planning board members and/or employees of the local government as non-voting representatives, as they deem appropriate.
 - ii. Non-voting representatives' term of service shall continue until replaced or until such time that their appointment is rescinded.
2. Associate Members: Associate Members shall have non-voting representation on the Commission, as specified below:
 - a. US Army Garrison Fort Bragg: The Garrison Commander is designated as the representative for Fort Bragg. He/she may appoint additional Garrison staff at their discretion to serve as non-voting representatives on the Commission.
 - b. Partner Organizations: Partner Organizations may appoint one or more non-voting representatives to serve at the will of the Partner Organization on the Commission.
3. Individual Member: An Individual Member is a non-voting representative on the Commission.

ARTICLE 6 – MEETINGS OF THE COMMISSION

1. Meetings – Meetings of the full membership of the Commission shall be held quarterly.
2. Attendance – The attendance of the voting representatives of the Regular Members is mandatory. If a voting representative is absent from more than two (2) consecutive meetings or three (3) meetings in a calendar year, and such absences are not caused by extraordinary events, the Regular Member is obligated to remove the voting representative and appoint a replacement to fulfill the unexpired term of the removed voting representative.
3. Quorum – The presence of a simple majority of the duly appointed voting representatives of the Regular Members of the Commission shall constitute a quorum and allow the Commission to conduct business.
4. Public – All regular and special meetings, hearings, records, and accounts of the Commission shall be open to the public in accordance with North Carolina public records and open meetings law.
5. Special Meetings – Special meetings may be called at the discretion of the Chairman or by the request of a majority of the Board of Directors or the voting representatives of the Regular Members of the Commission. The Chairman may designate in advance regular or special meetings for the presentation of reports on the comprehensive plan, or on general planning discussions, deferring hearings and petitions to subsequent meetings.
6. Prayer – All Commissions meetings may be opened with prayer.
7. Written Material – All written material used for consideration in Commission meetings become part of the official records of that meeting and are to be kept on file in the office of the Executive Director.
8. Action – Transaction of business and the taking of official action shall require an affirmative vote of a majority of the voting representatives of the Commission present at the meeting.
9. Motions – Motions by a voting representative shall be restated by the Chairman before a vote is taken. The name of the maker of the motion and that of the second shall be recorded.
10. Voting – The voting representatives shall vote by voice or by show of hands. In the event that a vote is not unanimous, the minutes shall show the names of how each voted on each issue.
11. Suspension of Voting Privilege – The voting privileges of a voting representative shall be suspended if the Regular Member is not current with their annual membership dues. Voting privileges of a voting representative will be restored once the Regular Member becomes current with their annual membership dues.
12. Abstentions – When a voting representative wishes to abstain from consideration on any issue, he or she shall make a formal request to the Chairman, prior to action by the Commission. Notification of a request for abstention should be made as soon as the voting representative is aware of such a possibility. At the meeting, the Chairman shall ask if there is any opposition to the request. Abstention will be allowed only with a consenting vote of a majority of the Commission present.
13. Remote Meeting Procedures – When, in the opinion of the Chairman, it would be appropriate for the Commission to meet remotely via means of electronic communication, the policies and procedures specified by statute at the time of the meeting for remote meetings held by local governments in North Carolina shall be observed.

ARTICLE 7 – OFFICERS/DUTIES

1. Chairman – The Chairman shall preside at all meetings, appoint members to committees, and perform such other duties as may be specified by the Commission. The Chairman shall be selected from among the voting representatives of the Regular Members of the Commission.
2. Vice-Chairman – The Vice-Chairman shall act in the capacity of the Chairman in his / her absence. The Chairman shall be selected from among the voting representatives of the Regular Members of the Commission.
3. Secretary – The Secretary shall keep the minutes, execute such documents as authorized by the Commission, in the name of the Commission, and perform such other duties as the Commission may determine or direct. The Secretary may be assisted in their duties by a third-party, subject to approval by the Executive Committee of the Board of Directors. The Secretary shall be selected from among the voting representatives of the Regular Members of the Commission.
4. Treasurer – The Commission shall appoint an individual to serve as Treasurer of the Commission. The Treasurer shall be responsible for all funds of the association including income and disbursements and proper record keeping as approved by the Board of Directors. At the close of each fiscal year, the Treasurer shall be responsible for the preparation of a complete financial report which shall be submitted to the Board of Directors. The individual appointed to serve as Treasurer shall not be required to be a Member or Representative of the Commission.
5. Executive Director – The Chairman may appoint an Executive Director upon recommendation by the Board of Directors and approval by a vote of the Regular Members of the full Commission. The responsibilities of the Executive Director shall be established by the Board of Directors and set forth in an employment agreement between the Commission and the incumbent. The Executive Director shall serve in their position as an at-will employee of the Commission, and may be dismissed in accordance with the terms of their employment agreement.

ARTICLE 8 - BOARD OF DIRECTORS

1. Composition: The Board of Directors shall consist of the following:
 - a. Executive Committee (3 members):
 - i. Chairman
 - ii. Vice Chairman
 - iii. Secretary
 - b. Director (6 at-large):
 - i. Two at-large directors shall be voting representatives of Regular Members
 - ii. Four of the at large directors may be appointed from the Regular Member category, the Associate Member Partner Organization, or Individual Member categories.
 - c. Ex-Officio Director (3):
 - i. The Chairman of the Board of Directors may appoint up to three (3) additional members from any membership category to serve as non-voting members of the Board of Directors.
2. Elections: The Executive Committee shall serve as the nominating committee, establishing a slate of Officers and Directors for submission to the full Commission by May 1st of each even numbered year. The slate of officers shall be approved by the voting representatives at a regular meeting of the Commission in May of each even numbered year. If the slate of officers is not approved, open nominations will be considered for each position until each of the officers and directors are approved by the voting representatives.

3. Terms: The Board of Directors shall serve for two-year terms and may serve a maximum of three (3) consecutive terms if re-elected by the Commission (additional terms of office shall be permitted following a break in service of one term). Terms of office shall begin on July 1 of each odd numbered year, and shall continue until such time as their successors are appointed and assume office.
4. Meetings of the Executive Committee shall be called as necessary by the Chairman or Vice Chairman to plan agendas for the Commission and to deliver decisions on matters of importance when it is impractical to convene a special meeting of the Commission.
5. Meetings of the Board of Directors shall be open to the public.
6. A quorum must be present for the Board of Directors to vote. A quorum consists of a majority of the current voting membership of the Board.

ARTICLE 9 - COMMITTEES

1. The Board of Directors is authorized to form committees to carry out specialized tasks or projects, as deemed necessary and appropriate by the Board.
2. The term of the committee shall be set by the Board of Directors at the time of its formation. Standing committees are authorized, and any committee may be dissolved upon an affirmative vote of the Board of Directors.
3. Each committee shall consist of either three (3) or (5) members, at the discretion of the Board of Directors.
4. At least one member of the Board of Directors shall be appointed to serve on each committee.
5. The Chairman of the Board of Directors shall appoint and remove members of each committee, subject to the consent of the other two members of the Executive Committee. In the event of a disagreement on the appointment (removal) of an individual to a committee by the members of the Executive Committee, the matter of the appointment shall be voted on by the full Board of Directors.
6. Appointment to a committee shall be open to any voting or non-voting representative serving on the Commission.
7. Terms of appointment for representatives to a committee shall be two (2) years. Successive appointments shall be permitted, without limitation.
8. The Chairman of the Commission shall appoint an individual who is a member of the Board of Directors to serve as the Chairman of each committee.
9. Committees shall meet as needed. Meetings shall be called by the Chair of each committee. Electronic communication for committee meetings shall be authorized, provided that a record is kept of such communication.

ARTICLE 10 – AMENDMENTS

1. These Bylaws may be amended upon an affirmative vote of the full Commission, subject to approval by the governing bodies of the Regular Members of the Commission.
2. The affirmative vote of two-thirds of the governing bodies of the Regular Members of the Commission is required to approve amendments to the Bylaws.
3. Two-thirds of the Regular Member governing bodies can amend or revise the Bylaws without approval of the Commission.

ARTICLE 11 - DISSOLUTION

Two-thirds of the Regular Member governing bodies, as appointing authorities, can reorganize or dissolve the Commission at their discretion; however, the Commission shall continue in existence as long as two (2) or more local government signatories retain active membership.

ARTICLE 12 - RULES

Robert's Rules of Order Revised shall govern the conduct of meetings, unless modified by the voting representatives.

ARTICLE 13 - REPORTS

Electronic copies of the minutes of meetings shall be provided to the voting representatives of Regular Members in advance of the next regular meeting.

Amended this ____ day of _____, 2021.

_____, Chairman

BYLAWS OF THE
FT. FORT BRAGG/POPE AIR FORCE BASE REGIONAL LAND USE ADVISORY
COMMISSION, INC.
REVISED IN 2005 AND 2021

ARTICLE 1 – TITLE

The ~~title organization~~ shall be the Fort Bragg/~~Pope Air Force Base~~ Regional Land Use Advisory Commission, Inc. ~~(, herein after referred to as “RLUAC”).~~

ARTICLE 2 – MISSION

The purposes and duties of the ~~Fort Bragg/Pope Air Force Base Regional Land Use Advisory Commission~~RLUAC are as follows:

- ~~1. To promote a regional perspective on land use and~~ Provide a forum for communication between Fort Bragg and local governments;
- ~~2. Educate and inform local government leaders, the development community, legislative representatives and the general public about compatible growth and environmental issues of mutual concern to the adjacent local communities and the;~~
- ~~1-3. Provide local governments with timely, credible and authoritative analysis of the compatibility of land use and development proposals with the military installations, training and operational missions of Fort Bragg;~~
- ~~2. To provide a forum for discussing noise and accident potential problems relating to land use and deliberate and develop mitigation actions.~~
- ~~4. To Assist local governments with the adoption of plans and policies that foster compatible land uses impacted by growth and protect critical environmental resources; and~~
- ~~3-5. Preserve and protect Fort Bragg’s training and operational missions from incompatible civilian and military areas development patterns and environmental degradation.~~
- ~~4. To foster increased local economic development opportunities, particularly as they relate to the military.~~

ARTICLE 3 – ESTABLISHMENT

The ~~Fort Bragg/Pope Air Force Base Regional Land Use Advisory Commission~~RLUAC is established through the authority of N.C.G.S. Chapters 160A-460 through ~~464~~466 and 55A et. al.

ARTICLE 4 – MEMBERSHIP

- ~~1. Composition: Fort Bragg/Pope Air Force Base Regional Land Use Advisory Commission membership is limited to Fort Bragg, Pope Air Force Base, and all municipal / county governments within Cumberland, Harnett, Hoke, Moore, Richmond, Robeson, Sampson, and Scotland Counties.~~
- ~~2. Each member county and municipality shall appoint one voting member. Member governments are encouraged to appoint an elected official to be their voting member. They may also appoint as many non-voting members as they deem appropriate. Fort Bragg and Pope Air Force Base may appoint as many non-voting members as they deem appropriate.~~
- ~~3. Voting and non-voting members shall be appointed by the Boards of Commissioners from the Cities and Counties they represent. Military members/representatives shall be appointed by the Commanding Officer(s) from the military installations which they represent.~~

1. ~~Voting and non-voting members should have a~~ Regular Members: Regular membership consists of the units of local government that are party to the interlocal cooperation agreement to establish the organization.
 - a. Regular Members may be admitted to the Commission upon invitation by the Board of Directors and approval by the full Commission, contingent upon the governing body of the local government adopting a resolution to join the Commission in accordance with NCGS 160A-461.
 - b. Regular Members may withdraw their membership at any time by the adoption of a resolution by the governing body effecting its withdrawal from the Commission. Upon the effective date of the withdrawal, the appointment and term of service of both voting and non-voting representatives of the Regular Member shall be rescinded.
2. Associate Members: Associate membership consists of entities or individuals that are not party to the interlocal cooperation agreement, which have a direct relationship to the mission of the organization.
 - a. Fort Bragg: United States Army Garrison Fort Bragg is admitted as an enduring Associate Member.
 - b. Partner Organizations: An organization that works closely with Fort Bragg and local governments to achieve a common mission.
 - i. The US Fish & Wildlife Service, Sustainable Sandhills Inc., the NC Department of Commerce, and the NC Wildlife Resources Commission are admitted as enduring Associate Members.
 - ii. The Board of Directors may admit or remove Partner Organizations as Associate Members by a simple majority vote.
 - c. Individual: An individual that has specialized knowledge, skills, or experience related to the mission of RLUAC gained through their prior association with Fort Bragg, a local government member, and/or another Partner Organization.
 - i. The Board of Directors may nominate an Individual for admission or removal as an Associate Member, subject to approval of the Commission.
 - ii. The nomination to add or remove an Individual shall not be effective until approved by a majority of the voting representatives at a regular meeting of the Commission.

ARTICLE 5 – MEMBER REPRESENTATION

1. Regular Members: The Regular Members shall have voting and non-voting representation on the Commission.
 - a. Voting Representative:
 - i. Each Regular Member shall appoint one voting representative to the Commission.
 - ii. The voting representative shall be appointed by the Regular Member's governing body.
 - 4.iii. Regular Members are encouraged to appoint a member of the governing body as the voting representative, with preference for an individual who has basic knowledge of the Fort Bragg/~~Pope Air Force Base~~ region's physical, environmental, social, and economic makeup. ~~In addition, and a basic general understanding of the planning process and~~ land use planning, ~~in particular, is recommended.~~

~~5. Terms of Voting and Non-Voting Members:~~

~~a.iv. The length of the term for a voting ~~member~~representative shall be three (3) years. ~~Non-voting members serve at the will of the appointing body and have no specified terms.~~~~

~~b.v. Voting ~~members~~representatives may be reappointed to successive terms, without limitation.~~

~~b. Non-Voting Representative(s):~~

~~i. Each Regular Member may appoint one or more elected officials, planning board members and/or employees of the local government as non-voting representatives, as they deem appropriate.~~

~~ii. Non-voting representatives' term of service shall continue until replaced or until such time that their appointment is rescinded.~~

~~2. Associate Members: Associate Members shall have non-voting representation on the Commission, as specified below:~~

~~a. US Army Garrison Fort Bragg: The Garrison Commander is designated as the representative for Fort Bragg. He/she may appoint additional Garrison staff at their discretion to serve as non-voting representatives on the Commission.~~

~~b. Partner Organizations: Partner Organizations may appoint one or more non-voting representatives to serve at the will of the Partner Organization on the Commission.~~

~~3. Individual Member: An Individual Member is a non-voting representative on the Commission.~~

ARTICLE ~~5~~6 – MEETINGS OF THE COMMISSION

~~1. 1. Meetings – Meetings ~~will~~of the full membership of the Commission shall be held quarterly throughout the year, generally on the third Thursday of February, May, August, and November.~~

~~3. Attendance – ~~Attendance~~The attendance of the voting representatives of the Regular Members is mandatory. If ~~an appointee~~a voting representative is absent from more than two~~

~~2. (2) consecutive meetings or three (3) meetings in a calendar year, and such absences are not caused by extraordinary events, the ~~member~~Regular Member is obligated to ~~resign in writing~~remove the voting representative and appoint a replacement to fulfill the unexpired term of the removed voting representative.~~

~~3. Quorum – The presence of a simple majority of the duly appointed voting representatives of the Regular Members of the Commission shall constitute a quorum and allow the Commission to conduct business.~~

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4. Public – All regular and special meetings, hearings, records, and accounts of the Commission shall be open to the public in accordance with North Carolina public records and open meetings law.
5. Special Meetings – Special meetings ~~shall~~may be called at the ~~request~~discretion of the Chairman or by the request of a majority of ~~members~~the Board of Directors or the voting representatives of the Regular Members of the Commission. The Chairman may designate in advance regular or special meetings for the presentation of reports on the comprehensive plan, or on general planning discussions, deferring hearings and petitions to subsequent meetings.
6. Prayer – All Commissions meetings may be opened with prayer.
7. Written Material – All written material used for consideration in Commission meetings become part of the official records of that meeting and are to be kept on file in the office of the Executive Director.

ARTICLE 6 – OFFICERS/DUTIES

- ~~1. Chairman – The Chairman shall preside at all meetings, appoint members to committees, and perform such other duties as may be ordered by the Commission.~~
- ~~2. Vice Chairman – The Vice Chairman shall act in the capacity of the Chairman in his absence.~~

- ~~3. Secretary — The Secretary shall keep the minutes, execute such documents as authorized by the Commission, in the name of the Commission, and perform such other duties as the Commission shall determine or direct.~~
- ~~4. Executive Director — The position of Executive Director may be authorized by the Board of Directors and appointed or discharged by a vote of the Fort Bragg / Pope Air Force Base Regional Land Use Advisory Commission (RLUAC) membership. The employment of the Executive Director shall be an at will employment. The responsibilities and job requirements of the Executive Director shall be as follows:~~

~~Responsibilities~~

- ~~a. Make the logistical arrangements for and participate in RLUAC quarterly meetings (4 each year).~~
- ~~b. Make the logistical arrangements for quarterly Board of Directors meetings (4 each year). He /she shall offer suggestions for topics and speakers for the RLUAC quarterly meetings.~~
- ~~c. Serve as the “point of contact” / primary liaison for RLUAC information and public relations.~~
- ~~d. Represent the RLUAC at public hearings, meetings, and conferences as directed by the Board of Directors.~~
- ~~e. Contact and confirm speakers for the RLUAC quarterly meetings.~~
- ~~f. Prepare agendas for RLUAC quarterly meetings and Board of Directors’ meetings (8 each year).~~
- ~~g. Oversee the preparation of minutes for RLUAC quarterly and Board of Directors’ meetings (8 each year).~~
- ~~h. Coordinate the mailing of minutes and meeting notices (by U.S. mail and e-mail) for RLUAC quarterly meetings and Board of Directors’ meetings (8 each year).~~
- ~~i. Oversee the maintenance of accurate and up-to-date membership rolls and attendance records.~~
- ~~j. Maintain current information regarding regional, state, and national legislative issues of interest.~~
- ~~k. Complete various other tasks as assigned by the Board of Directors.~~
- ~~l. Fund Raising — Coordinate efforts to raise funding to support RLUAC operations.~~
 - ~~1) Prepare and submit grant proposals to appropriate corporations and foundations.~~
 - ~~2) Prepare and mail fund raising letters to potential financial supporters.~~
 - ~~3) Make presentations to potential funding entities as opportunities arise.~~
- ~~m. Incorporation — Facilitate the process of incorporating the RLUAC and securing tax exempt designation with the State of North Carolina and the federal government.~~

Job Requirements

~~A Master's Degree in Planning or Public Administration curriculum and three years planning and management experience, which includes one year in a supervisory capacity; or a College Degree and five years of specifically related planning and management experience, including one year in a supervisory capacity; or an equivalent combination of education and experience.~~

~~The Executive Director job description may be amended by the Board of Directors.~~

ARTICLE 7 BOARD OF DIRECTORS

~~1. The Board of Directors shall act as the Executive Committee and shall be elected from the membership for two year terms.~~

~~2. Composition~~

~~a. The Chairman, Vice Chairman, Secretary, one representative selected from each of the County delegations, and a representative from each of the military installations shall constitute the Board of Directors.~~

~~b. Non voting members may be named to the Board of Directors by the officers as they deem necessary.~~

~~3. Meetings of the Executive Committee shall be called as necessary by the Chairman or Vice Chairman to plan agendas for the Advisory Commission and to provide decisions on matters of importance when it is impractical to convene a special meeting of the full Advisory Commission.~~

~~4.1. Meetings of the Board of Directors shall be open to the public.~~

~~5.1. A quorum must be present for the Board of Directors to vote. A quorum consists of a majority of the current membership.~~

ARTICLE 8 ELECTIONS

~~1. The Chairman shall be elected at the first regular meeting in each odd numbered year. Terms of office shall be for two years beginning in the year 2007. The Commission shall elect the Chairman from its membership.~~

~~2. The Vice Chairman shall be elected at the first regular meeting in each odd numbered year. Terms of office shall be for two years. The Commission shall elect the Vice Chairman from its membership.~~

- ~~3. The Secretary shall be elected at the first regular meeting in each odd-numbered year. Terms of office shall be for two years. The Secretary is not required to be a member of the Commission.~~

~~ARTICLE 9 – VOTING~~

- ~~1.8.~~ Action – Transaction of business and the taking of official action shall require ~~a concurring~~ affirmative vote of a majority of the voting ~~members~~ representatives of the Commission present at the meeting.
- ~~2.9.~~ Motions – Motions by a voting representative shall be restated by the Chairman before a vote is taken. The name of the maker of the motion and that of the second shall be recorded.
- ~~3.10.~~ Voting – ~~Voting~~ The voting representatives shall ~~be~~ vote by voice or by show of hands. In the event that a vote is not unanimous, the minutes shall show the names of how each voted on each issue.
- ~~11. Abstaining~~ Suspension of Voting Privilege – The voting privileges of a voting representative shall be suspended if the Regular Member is not current with their annual membership dues. Voting privileges of a voting representative will be restored once the Regular Member becomes current with their annual membership dues.
- ~~4.12.~~ Abstentions – When a ~~Commission member~~ voting representative wishes to abstain from consideration on any issue, he or she shall make a formal request to the Chairman, prior to action by the Commission. Notification of a request for abstention should be made as soon as the ~~member~~ voting representative is aware of such a possibility. At the meeting, the Chairman shall ask if there is any opposition to the request. Abstention will be allowed only with a consenting vote of ~~a~~ majority of the Commission present.
- ~~13. Remote Meeting Procedures – When a voting member of the~~ in the opinion of the Chairman, it would be appropriate for the Commission is unable to attend a meet remotely via means of electronic communication, the policies and procedures specified by statute at the time of the meeting for remote meetings held by local governments in North Carolina shall be observed.

~~ARTICLE 7, he or she – OFFICERS/DUTIES~~

- ~~1. Chairman – The Chairman shall preside at all meetings, appoint members to committees, and perform such other duties as may assign~~ be specified by the Commission. The Chairman shall be selected from among the voting representatives of the Regular Members of the Commission.

2. Vice-Chairman – The Vice-Chairman shall act in the capacity of the Chairman in his / her absence. The Chairman shall be selected from among the voting representatives of the Regular Members of the Commission.
3. Secretary – The Secretary shall keep the minutes, execute such documents as authorized by the Commission, in the name of the Commission, and perform such other duties as the Commission may determine or direct. The Secretary may be assisted in their duties by a third-party, subject to approval by the Executive Committee of the Board of Directors. The Secretary shall be selected from among the voting representatives of the Regular Members of the Commission.
4. Treasurer – The Commission shall appoint an individual to serve as Treasurer of the Commission. The Treasurer shall be responsible for all funds of the association including income and disbursements and proper record keeping as approved by the Board of Directors. At the close of each fiscal year, the Treasurer shall be responsible for the preparation of a complete financial report which shall be submitted to the Board of Directors. The individual appointed to serve as Treasurer shall not be required to be a Member or Representative of the Commission.
5. Executive Director – The Chairman may appoint an Executive Director upon recommendation by the Board of Directors and approval by a vote of the Regular Members of the full Commission. The responsibilities of the Executive Director shall be established by the Board of Directors and set forth in an employment agreement between the Commission and the incumbent. The Executive Director shall serve in their position as an at-will employee of the Commission, and may be dismissed in accordance with the terms of their employment agreement.

ARTICLE 8 - BOARD OF DIRECTORS

1. Composition: The Board of Directors shall consist of the following:
 - a. Executive Committee (3 members):
 - i. Chairman
 - ii. Vice Chairman
 - iii. Secretary ~~voting authority to another RLUAC~~
 - b. Director (6 at-large):
 - i. Two at-large directors shall be voting representatives of Regular Members
 - ii. Four of the at large directors may be appointed from the Regular Member category, the Associate Member Partner Organization, or Individual Member categories.
 - c. Ex-Officio Director (3):
 - i. The Chairman of the Board of Directors may appoint up to three (3) additional members from any membership category to serve as non-voting members of the Board of Directors.
2. Elections: The Executive Committee shall serve as the nominating committee, establishing a slate of Officers and Directors for submission to the full Commission by May 1st of each even numbered year. The slate of officers shall be approved by the voting representatives at a regular meeting of the Commission in May of each even numbered year. If the slate of officers is not approved, open nominations will be considered for each position until each of the officers and directors are approved by the voting representatives.
3. Terms: The Board of Directors shall serve for two-year terms and may serve a maximum of three (3) consecutive terms if re-elected by the Commission (additional terms of office shall be permitted following a break in service of one term). Terms of office shall begin on July 1 of

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each odd numbered year, and shall continue until such time as their successors are appointed and assume office.

4. Meetings of the Executive Committee shall be called as necessary by the Chairman or Vice Chairman to plan agendas for the Commission and to deliver decisions on matters of importance when it is impractical to convene a special meeting of the Commission.
5. Meetings of the Board of Directors shall be open to the public.
6. A quorum must be present for the Board of Directors to vote. A quorum consists of a majority of the current voting membership of the Board.

ARTICLE 9 - COMMITTEES

1. The Board of Directors is authorized to form committees to carry out specialized tasks or projects, as deemed necessary and appropriate by the Board.
2. The term of the committee shall be set by the Board of Directors at the time of its formation. Standing committees are authorized, and any committee may be dissolved upon an affirmative vote of the Board of Directors.
3. Each committee shall consist of either three (3) or (5) members, at the discretion of the Board of Directors.
4. At least one member of the Board of Directors shall be appointed to serve on each committee.
5. The Chairman of the Board of Directors shall appoint and remove members of each committee, subject to the consent of the other two members of the Executive Committee. In the event of a disagreement on the appointment (removal) of an individual to a committee by the members of the Executive Committee, the matter of the appointment shall be voted on by the full Board of Directors.
6. Appointment to a committee shall be open to any voting or non-voting representative serving on the Commission.
7. Terms of appointment for representatives to a committee shall be two (2) years. Successive appointments shall be permitted, without limitation.
8. The Chairman of the Commission shall appoint an individual who is a member designated by of the Board of Directors to serve as the Chairman of each committee.
- 5-9. Committees shall meet as needed. Meetings shall be called by the Chair of each committee. Electronic communication for committee meetings shall be authorized, provided that voting member in writing to the Corporation, a record is kept of such communication.

ARTICLE 10 REMUNERATION

~~Members of the Commission may be reimbursed for their expenses by their appointing body in accordance with that body's policies and procedures.~~

ARTICLE 11 – AMENDMENTS

1. These Bylaws may be amended ~~by~~ upon an affirmative vote of the full Commission, subject to approval by the governing bodies of the Regular Members of the Commission.
- ~~1. The affirmative vote of two-thirds of all voting members present, provided all the governing bodies of the Regular Members of the Commission is required to approve amendments conform to established policies and law.~~

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~~2. Two-thirds of the appointing bodies must approve to~~ the Bylaws ~~and all changes.~~

~~2.3.~~ Two-thirds of the ~~appointing~~ Regular Member governing bodies can amend or revise the Bylaws without approval of the Commission.

ARTICLE ~~12~~11 - DISSOLUTION

Two-thirds of the ~~appointing~~ Regular Member governing bodies, as appointing ~~authority~~ authorities, can reorganize or dissolve the Commission ~~without advance notice~~ at their discretion; however, the Commission shall continue in existence as long as two (2) or more local government signatories retain active membership.

ARTICLE ~~13~~12 – RULES

Robert's Rules of Order Revised shall govern the conduct of meetings, unless modified by the voting ~~members~~representatives.

ARTICLE ~~14~~13 – REPORTS

~~Minutes~~Electronic copies of the minutes of meetings shall be provided to the voting representatives of Regular Members in advance of the next regular meeting. ~~Copies of the minutes of all meetings shall also be mailed to the appointing authority.~~

~~Adopted~~Amended this ~~13~~th ____ day of ~~January, 2005~~____, 2021.

~~Timothy McNeill,~~_____, Chairman



FINANCE OFFICE

**MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021
AGENDA SESSION**

TO: BOARD OF COUNTY COMMISSIONERS

**FROM: RICK MOOREFIELD, COUNTY ATTORNEY AND VICKI EVANS,
FINANCE DIRECTOR**

DATE: 10/28/2021

**SUBJECT: MARTIN LUTHER KING, JR. MEMORIAL PARK CAPITAL PROJECT
BUDGET ORDINANCE AMENDMENT #B220101**

Requested by: AMY CANNON, COUNTY MANAGER

**Presenter(s): COUNTY ATTORNEY'S OFFICE AND VICKI EVANS, FINANCE
DIRECTOR**

BACKGROUND

The Board of Commissioners previously approved a budget ordinance amount of \$2.5 million to be allocated from the capital investment fund to the Martin Luther King, Jr. Memorial Park project. In order to account for the capital project details, staff have set up a proposed capital project fund and the county attorney provided the known project details and funding parameters within the attached capital project ordinance. The capital project ordinance will remain in effect for the life of the project and requires Board of Commissioner approval prior to any changes being made.

RECOMMENDATION / PROPOSED ACTION

The County Attorney and staff recommend the following action be placed on the November 15, 2021 Board of Commissioner's Agenda as a consent item:

Adopt the Martin Luther King, Jr. Memorial Park Capital Project Budget Ordinance Amendment #B220101.

ATTACHMENTS:

Description

Type

MLK JR MEMORIAL PARK CONTRIBUTION PROJECT BUDGET
ORDINANCE AMENDMENT #B220101

Backup Material



CAPITAL PROJECT BUDGET ORDINANCE AMENDMENT #B220101

MARTIN LUTHER KING, JR. MEMORIAL PARK

CUMBERLAND COUNTY CAPITAL PROJECT FOR CONSTRUCTION TO BE UNDERTAKEN BY FAYETTEVILLE\CUMBERLAND COUNTY DR. MARTIN L. KING, JR. COMMITTEE, A NORTH CAROLINA NON-PROFIT CORPORATION

The Cumberland County Board of Commissioners hereby adopt the following Capital Project Ordinance in accordance with North Carolina General Statutes 159-13.2:

Section 1. The project authorized is the erection of a memorial spire set in a circular, stone meditation plaza in the Martin Luther King, Jr., Memorial Park located in, and owned by, the City of Fayetteville. This construction project is to be undertaken by the Fayetteville/Cumberland County Dr. Martin L. King, Jr., Committee, a North Carolina non-profit corporation. The revenue source will be a transfer from the Capital Investment Fund Balance, to the MLK, Jr. Memorial Park Project.

Section 2. The following projected expenditure is appropriated for this project:

	<u>Expenditure</u>
Capital Outlay – Other	\$2,500,000

Section 3. The following associated revenue is appropriated for this project:

	<u>Revenue</u>
Transfer from the Capital Investment Fund	\$2,500,000

Section 4. No county funds subject to this Capital Project Ordinance shall be used for any activities undertaken by the non-profit corporation before the non-profit corporation has entered into a contract with the county which sets out the obligations of the non-profit corporation in undertaking this project and is approved by the Board of Commissioners. The contract shall identify the project budget and source of funds for completion of the project, the project design, the scope of work, the schedule of completion, the procedure for the disbursement of funds, the provisions for maintenance of the project after completion, and any other matters deemed necessary or prudent by the Board of Commissioners.

Section 5. This project shall be undertaken by the non-profit corporation in all respects as a public construction project fully subject to the requirements of Chapter 143 of the North Carolina General Statutes as applied to local governments. Incident to that statutory compliance, the Cumberland County Board of Commissioners must approve any design, architectural, engineering, surveying, or construction manager professionals for the project; any bid accepted for any contract for construction on the project; any bonds received incident to bidding or contracting for the project; and all contracts for the expenditure of any funds for the project.

Section 6. Any increase or decrease in the funds appropriated to this capital project ordinance shall require a capital project ordinance amendment by the Board of Commissioners.

Section 7. Within five days after adoption, copies of this ordinance shall be filed with the Finance Officer, Budget Officer, and Clerk to the Board, to be kept on file by them for their direction in the disbursement of County funds for this project.

Adopted this _____ day of _____, 2021.

Attest:

Clerk to the Board

Chairman, Board of County
Commissioners



FINANCE OFFICE

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021 AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: VICKI EVANS, FINANCE DIRECTOR

DATE: 10/28/2021

SUBJECT: AMENDMENT TO COUNTY PURCHASING POLICY

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): VICKI EVANS, FINANCE DIRECTOR

BACKGROUND

A change is being requested to the County's Purchasing Policy within the Addendum, Uniform Guidance Procurement Policy for North Carolina Local Governments. During the recent UNC School of Government's American Rescue Plan Act training, staff learned of additional flexibility allowed for Architectural and Engineering Services. The added language will allow the County to follow the Mini-Brooks Act Exemption for amounts up to \$50,000 for federally funded A&E services.

The requested changes are shown in red font within the attachment, beginning on page ten, item J.

RECOMMENDATION / PROPOSED ACTION

Staff and County Management recommend that the following action be forwarded to the November 15, 2021 Board of Commissioners' Meeting as a Consent Agenda item:

Approval of an amendment to the Purchasing Policy reflecting changes as shown in the attached draft.

ATTACHMENTS:

Description	Type
DRAFT Purchasing Policy changes in red font	Backup Material

Cumberland County

Section I – Board Approved Policies

Subsection 3: Cumberland County Financial / Audit

Policy No. 3-3: Purchasing Policy

The following policy was originally adopted on June 21, 1999 by the Board of Commissioners. This policy was amended on February 25, 2002, November 1, 2010, June 5, 2017, June 18, 2018, August 6, 2018, June 21, 2021, and November 15, 2021, by the Board of Commissioners.

1.0 PURPOSE

This policy is established to ensure the fair and equitable treatment of all persons involved in public purchasing, to maximize the purchasing value of public funds in procurement, and to provide safeguards for maintaining a procurement system of quality and integrity, in accordance with North Carolina General Statutes (N.C.G.S) and federal law.

2.0 SCOPE

This policy applies to all County employees conducting purchases on behalf of Cumberland County. Any reference of “department head” throughout this policy is inclusive of the elected offices of the Register of Deeds and the Sheriff, as well as any interim assignments of department head responsibilities. Any reference to approval authority of the County Manager shall also apply to the County Manager’s designee as authorized in writing by the County Manager in their absence.

3.0 POLICY

3.1 Local Preference Policy

Contracts for the provision of services in any amount and all contracts for the purchase of apparatus, materials, supplies and equipment in which the aggregate purchase price in any single contract is less than \$30,000 shall be awarded to local vendors or suppliers, to the greatest extent possible, in accordance with the further conditions set out herein.

Local vendors or suppliers shall be those who demonstrate that they pay business personal or real property taxes and are either self-employed residents of Cumberland County or employ at least one resident of Cumberland County as an employee or officer of the contracting business entity.

3.2 Purchase Orders

All services and purchases in amounts of \$5,000 and more must have a purchase order prior to the purchase being made or the services being rendered. All purchases require a written (electronic or printed) document (invoice, quote, proposal, etc.) with sale details prior to payment being made.

3.3 Purchases & Services

Less than \$5,000

Department heads shall authorize services or purchases of apparatus, supplies, materials or equipment up to \$4,999.99 without a purchase order if sufficient funds are budgeted and available within the department budget. Prior to the purchase, departments must ensure there is an appropriation authorizing the obligation and that sufficient funds will remain in the appropriation to pay the amounts that are expected to come due in the fiscal year in which the obligation is incurred.

\$5,000 – \$29,999.99

Department heads shall solicit proposals for services or purchases of apparatus, supplies, materials or equipment when the estimated cost is between \$5,000 - \$29,999.99. County Purchasing will review the purchase upon receipt of requisition to ensure compliance with County policies. County Purchasing may solicit additional proposals as determined necessary and appropriate by the Finance Director.

3.4 Purchases of apparatus, supplies, materials, or equipment

\$30,000 – \$89,999.99

Informal bids are required for any purchase of apparatus, supplies, materials, or equipment that requires an expenditure of \$30,000 - \$89,999.99. Departments shall submit specifications to County Purchasing for purchases in this category. Exemptions: purchases that qualify under the Competitive Bidding Exceptions as per N.C.G.S 143-129(e).

\$90,000 and Above

Formal bids are required for any purchase of apparatus, supplies, materials, or equipment in amounts of \$90,000 or more. Departments shall submit specifications to County Purchasing for purchases in this category. The County Manager must approve bid awards in amounts between \$90,000 - \$99,999.99. The Board of Commissioners must approve bid awards in amounts of \$100,000 or greater. Bids for engineering and construction must comply with North Carolina General Statutes. Exemptions: purchases that qualify under the Competitive Bidding Exceptions as per N.C.G.S 143-129(e).

Bid award is not a substitution for receiving contract approval in accordance with the dollar thresholds established within this policy or as further delegated by the Board of Commissioners.

3.5 Purchase of Services

\$30,000 and Above

An Informal RFP process is required for services estimated to cost \$30,000 or more. County Purchasing will review the proposal upon receipt of requisition to ensure compliance with county policies. County Purchasing may solicit additional proposals as determined necessary and appropriate by the Finance Director.

3.6 Procurement Cards

The procurement card program was established to provide a more rapid turnaround of requisitions for low dollar value goods, and to reduce paperwork and handling costs. Procurement cardholders may initiate transactions in person, or by telephone, within the established limits of these procedures. Department heads may designate individuals to receive procurement cards. Prior to signing for a procurement card and annually thereafter, procurement cardholders must attend a class conducted by County Purchasing addressing the guidelines involved in the responsibility associated with the card. To ensure pre-audit requirement compliance, funds for each department's estimated procurement card charges shall be encumbered at the beginning of each fiscal year.

3.7 Contracts

A contract is an agreement stating the obligations and benefits arising out of a transaction between the County and at least one other party. A contract must be signed by the County and all other parties to the contract. The contract, in its final form, requires review for legal sufficiency approval **prior to** consideration for approval/signature. All contracts for expenditures, in amounts of \$50,000 or more require County Manager signature. Contracts **resulting from a formal bid process** for expenditures in amounts of \$100,000 or more require the Chair to the Board of Commissioners signature, after Board approval. Contracts with a total amount less than \$50,000 may be signed by the Department head.

These signature requirements pertain to all contracts in which the county is obligated to expend funds of \$5,000 and above, even if the funds have been approved by the Board of Commissioners in the original budget. Digital signatures by vendors or non-County personnel are permitted on contracts when there is legal authentication attached to the signatures and when the digital signature system being utilized provides system integrity in the process to ensure the signed document has not been altered in transit. Digital signatures by County personnel will be permitted pursuant to a system and/or process approved by the County Manager.

The Board of Commissioners must approve all interlocal agreements, regardless of the dollar amount. The action approving the agreement must be recorded within the minutes of the Board of Commissioners' meeting.

If an amendment to the original contract occurs, an equivalent position to the original contract signor must also sign the amendment, regardless of the original contract dollar amount or method of award.

Contracts funded with federal grant or loan funds must be procured in a manner that conforms with all applicable Federal laws, policies, and standards, including those under the Uniform Guidance (2 C.F.R. Part 200). See the Addendum following section 4.0 of this policy for the Uniform Guidance Procurement Policy.

3.8 Federal and State Law Compliance

Federal law and North Carolina general statutes allow local policy to be more restrictive. When comparing federal, state, and local procurement requirements to implement federal programs or grants, the most restrictive requirement shall be applied. This policy is more restrictive regarding bid requirements of services and dollar thresholds for contractual signatures in comparison to state statute requirements. Periodically, legislation results in changes to law and/or general statutes. The General Statutes referenced in this policy are incorporated by reference, and changes in the referenced General Statutes are also incorporated herein as if set out in full.

4.0 IMPLEMENTATION

The Finance Director is responsible for implementing and enforcing this Policy and to interpret it consistent with its spirit and intent, fiscal prudence and accountability. The Finance Director is authorized to prescribe additional administrative instructions for implementing the above policy.

ADDENDUM

Uniform Guidance Procurement Policy for North Carolina Local Governments

I. Purpose

The purpose of this Policy is to establish guidelines that meet or exceed the procurement requirements for purchases of goods (apparatus, supplies, materials, and equipment), services, and construction or repair projects when federal funds are being used in whole or in part to pay for the cost of the contract.

II. Policy

A. **Application of Policy.** This policy applies to contracts for purchases, services, and construction or repair work funded with federal financial assistance (direct or reimbursed). The requirements of this Policy also apply to any subrecipient of the funds.

All federally funded projects, loans, grants, and sub-grants, whether funded in part or wholly, are subject to the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for federal awards (Uniform Guidance) codified at 2 C.F.R. Part 200 unless otherwise directed in writing by the federal agency or state pass-through agency that awarded the funds.

- B. **Compliance with Federal Law.** All procurement activities involving the expenditure of federal funds must be conducted in compliance with the Procurement Standards codified in 2 C.F.R. § 200.317 through § 200.326 unless otherwise directed in writing by the federal agency or state pass-through agency that awarded the funds. Cumberland County will follow all applicable local, state, and federal procurement requirements when expending federal funds. Should the County have more stringent requirements, the most restrictive requirement shall apply so long as it is consistent with state and federal law.
- C. **Contract Award.** All contracts shall be awarded only to the lowest responsive responsible bidder possessing the ability to perform successfully under the terms and conditions of the contract.
- D. **No Evasion.** No contract may be divided to bring the cost under bid thresholds or to evade any requirements under this Policy or state and federal law.
- E. **Contract Requirements.** All contracts paid for in whole or in part with federal funds shall be in writing. The written contract must include or incorporate by reference the provisions required under 2 C.F.R § 200.326 and as provided for under 2 C.F.R. Part 200, Appendix II.
- F. **Contractors' Conflict of Interest.** Designers, suppliers, and contractors that assist in the development or drafting of specifications, requirements, statements of work, invitation for bids or requests for proposals shall be excluded from competing for such requirements.
- G. **Approval and Modification.** The administrative procedures contained in this Policy are administrative and may be changed as necessary at the staff level to comply with state and federal law.

III. **General Procurement Standards and Procedures:**

Either the Purchasing Department or the Requesting Department shall procure all contracts in accordance with the requirements of this Section of the Policy.

- A. **Necessity.** Purchases must be necessary to perform the scope of work and must avoid acquisition of unnecessary or duplicative items. The Purchasing Department and/or the Requesting Department should check with the federal surplus property agency prior to buying new items when feasible and less expensive. Strategic sourcing should be considered with other departments and/or agencies who have similar needs to consolidate procurements and services to obtain better pricing.
- B. **Clear Specifications.** All solicitations must incorporate a clear and accurate description of the technical requirements for the materials, products, or services to be procured, and shall include all other requirements which bidders must fulfill and all other factors to be used in evaluating bids or proposals. Technical requirements must not contain features that restrict competition.

- C. Notice of Federal Funding.** All bid solicitations must acknowledge the use of federal funding for the contract. In addition, all prospective bidders or offerors must acknowledge that funding is contingent upon compliance with all terms and conditions of the funding award.
- D. Compliance by Contractors.** All solicitations shall inform prospective contractors that they must comply with all applicable federal laws, regulations, executive orders, and terms and conditions of the funding award.
- E. Fixed Price.** Solicitations must state that bidders shall submit bids on a fixed price basis and that the contract shall be awarded on this basis unless otherwise provided for in this Policy. Cost plus percentage of cost contracts are prohibited. Time and materials contracts are prohibited in most circumstances. Time and materials contracts will not be used unless no other form of contract is suitable and the contract includes a "Not to Exceed" amount. A time and materials contract shall not be awarded without express written permission of the federal agency or state pass-through agency that awarded the funds.
- F. Use of Brand Names.** When possible, performance or functional specifications are preferred to allow for more competition leaving the determination of how to reach the required result to the contractor. Brand names may be used only when it is impractical or uneconomical to write a clear and accurate description of the requirement(s). When a brand name is listed, it is used as reference only and "or equal" must be included in the description.
- G. Lease versus Purchase.** Under certain circumstances, it may be necessary to perform an analysis of lease versus purchase alternatives to determine the most economical approach.
- H. Dividing Contract for Minority/Women Business Enterprises (M/WBE) Participation.** If economically feasible, procurements may be divided into smaller components to allow maximum participation of small and minority businesses and women business enterprises. The procurement cannot be divided to bring the cost under bid thresholds or to evade any requirements under this Policy.
- I. Documentation.** Documentation must be maintained by the Purchasing Department and/or the Requesting Department detailing the history of all procurements. The documentation should include the procurement method used, contract type, basis for contractor selection, price, sources solicited, public notices, cost analysis, bid documents, addenda, amendments, contractor's responsiveness, notice of award, copies of notices to unsuccessful bidders or offerors, record of protests or disputes, bond documents, notice to proceed, purchase order, and contract. All documentation relating to the award of any contract must be made available to the granting agency upon request.
- J. Cost Estimate.** For all procurements costing \$250,000 or more, the Purchasing Department and/or Requesting Department shall develop an estimate of the cost of the procurement prior to soliciting bids. Cost estimates may be developed by reviewing prior contract costs, online review of similar products or services, or other means by

which a good faith cost estimate may be obtained. Cost estimates for construction and repair contracts may be developed by the project designer.

- K. Contract Requirements.** The Requesting Department must prepare a written contract incorporating the provisions referenced in Section II.C of this Policy.
- L. Debarment.** No contract shall be awarded to a contractor included on the federally debarred bidder's list.
- M. Contractor Oversight.** The Requesting Department receiving the federal funding must maintain oversight of the contract to ensure that contractor is performing in accordance with the contract terms, conditions, and specifications.
- N. Open Competition.** Solicitations shall be prepared in a way to be fair and provide open competition. The procurement process shall not restrict competition by imposing unreasonable requirements on bidders, including but not limited to unnecessary supplier experience, excessive or unnecessary bonding, specifying a brand name without allowing for "or equal" products, or other unnecessary requirements that have the effect of restricting competition.
- O. Geographic Preference.** No contract shall be awarded on the basis of a geographic preference.

IV. Specific Procurement Procedures

Either the Purchasing Department or the Requesting Department shall solicit bids in accordance with the requirements under this Section of the Policy based on the type and cost of the contract.

- A. Service Contracts** except for Architectural/Engineering (A/E) professional services and **Purchase Contracts costing less than \$30,000** shall be procured using the Uniform Guidance "micro-purchase" procedure (2 C.F.R. § 200.320(a)) as follows:
 - 1. The contract may be awarded without soliciting pricing or bids if the price of the goods or services is considered to be fair and reasonable.
 - 2. To the extent practicable, purchases must be distributed among qualified suppliers.
 - 3. The \$30,000 threshold for "micro-purchase" is allowed as long as the County qualifies as a low-risk auditee, in accordance with the criteria in §200.520 according to the most recent audit, self-certifies annually, and maintains documentation to be made available to the Federal awarding agency and auditors upon request.
- B. Service Contracts** (except for A/E professional services) and **Purchase Contracts costing \$30,000 up to \$90,000** shall be procured using the Uniform Guidance "small purchase" procedure (2 C.F.R. § 200.320(b)) as follows:
 - 1. Obtain price or rate quotes from an "adequate number" of qualified sources (a federal grantor agency might issue guidance interpreting "adequate number," so the Requesting Department should review the terms and conditions of the grant award documents to confirm whether specific guidance has been issued).

2. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as required under 2 C.F.R. § 200.321.
3. Cost or price analysis is not required prior to soliciting bids.
4. Award the contract on a fixed-price basis (a not-to-exceed basis is permissible for service contracts where obtaining a fixed price is not feasible).
5. Award the contract to the lowest responsive, responsible bidder.

C. Service Contracts (except for A/E professional services) and **Purchase Contracts costing \$90,000 and above** shall be procured using a combination of the most restrictive requirements of the Uniform Guidance “sealed bid” procedure (2 C.F.R. § 200.320(c)) and state formal bidding procedures (G.S. 143-129) as follows:

1. Cost or price analysis is required prior to soliciting bids.
2. Complete specifications or purchase description must be made available to all bidders.
3. The bid must be formally advertised in a newspaper of general circulation for at least seven full days between the date of the advertisement and the date of the public bid opening. Electronic-only advertising must be authorized by the governing board. The advertisement must state the date, time, and location of the public bid opening, indicate where specifications may be obtained, and reserve to the governing board the right to reject any or all bids only for “sound documented reasons.”
4. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as required under 2 C.F.R. § 200.321.
5. Open bids at the public bid opening on the date, time, and at the location noticed in the public advertisement. All bids must be submitted sealed. A minimum of 2 bids must be received in order to open all bids.
6. Award the contract to the lowest responsive, responsible bidder on a fixed-price basis. Governing board approval is required for purchase contracts unless the governing board has delegated award authority to an individual official or employee. Any and all bids may be rejected only for “sound documented reasons.”

D. Service Contracts (except for A/E professional services) **costing \$250,000 and above** may be procured using the Uniform Guidance “competitive proposal” procedure (2 C.F.R. § 200.320(d)) when the “sealed bid” procedure is not appropriate for the particular type of service being sought. The procedures are as follows:

1. A Request for Proposals (RFP) must be publicly advertised. Formal advertisement in a newspaper is not required so long as the method of advertisement will solicit proposals from an “adequate number” of qualified firms.
2. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as provided under 2 C.F.R. § 200.321.
3. Identify evaluation criteria and relative importance of each criteria (criteria weight) in the RFP.
4. Consider all responses to the publicized RFP to the maximum extent practical.
5. Must have a written method for conducting technical evaluations of proposals and selecting the winning firm.
6. Award the contract to the responsible firm with most advantageous proposal taking into account price and other factors identified in the RFP. Governing board approval is not required.
7. Award the contract on a fixed-price or cost-reimbursement basis.

- E. Construction and repair contracts costing less than \$30,000** shall be procured using the Uniform Guidance “micro-purchase” procedure (2 C.F.R. § 200.320(a)) as follows:
1. The contract may be awarded without soliciting pricing or bids if the price of the goods or services is considered to be fair and reasonable.
 2. To the extent practicable, contracts must be distributed among qualified suppliers.
 3. The \$30,000 threshold for “micro-purchase” is allowed as long as the County qualifies as a low-risk auditee, in accordance with the criteria in §200.520 according to the most recent audit, self-certifies annually, and maintains documentation to be made available to the Federal awarding agency and auditors upon request.
- F. Construction and repair contracts costing \$30,000 up to \$250,000** shall be procured using the Uniform Guidance “small purchase” procedure (2 C.F.R. § 200.320(b)) as follows:
1. Obtain price or rate quotes from an “adequate number” of qualified sources (a federal grantor agency might issue guidance interpreting “adequate number,” so the requesting department should review the terms and conditions of the grant award documents to confirm whether specific guidance has been issued).
 2. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as required under 2 C.F.R. § 200.321.
 3. Cost or price analysis is not required prior to soliciting bids, although price estimates may be provided by the project designer.
 4. Award the contract on a fixed-price or not-to-exceed basis.
 5. Award the contract to the lowest responsive, responsible bidder. Governing board approval is not required.
- G. Construction and repair contracts costing \$250,000 up to \$500,000** shall be procured using the Uniform Guidance “sealed bid” procedure (2 C.F.R. § 200.320(c)) as follows:
1. Cost or price analysis is required prior to soliciting bids (this cost estimate may be provided by the project designer).
 2. Complete specifications must be made available to all bidders.
 3. Publicly advertise the bid solicitation for a period of time sufficient to give bidders notice of opportunity to submit bids (formal advertisement in a newspaper is not required so long as other means of advertising will provide sufficient notice of the opportunity to bid). The advertisement must state the date, time, and location of the public bid opening, and indicate where specifications may be obtained.
 4. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as provided under 2 C.F.R. § 200.321.
 5. Open the bids at the public bid opening on the date, time, and at the location noticed in the public advertisement. All bids must be submitted sealed. A minimum of 2 bids must be received in order to open all bids.
 6. A 5% bid bond is required of all bidders. Performance and payment bonds of 100% of the contract price is required of the winning bidder.
 7. Award the contract on a firm fixed-price basis.

8. Award the contract to the lowest responsive, responsible bidder. Governing board approval is not required. Any and all bids may be rejected only for “sound documented reasons.”

H. Construction and repair contracts costing \$500,000 and above shall be procured using a combination of the most restrictive requirements of the Uniform Guidance “sealed bid” procedure (2 C.F.R. § 200.320(c)) and state formal bidding procedures (G.S. 143-129) as follows:

1. Cost or price analysis is required prior to soliciting bids (this cost estimate should be provided by the project designer).
2. Complete specifications must be made available to all bidders.
3. Formally advertise the bid in a newspaper of general circulation for at least seven full days between the date of the advertisement and the date of the public bid opening. Electronic-only advertising must be authorized by the governing board. The advertisement must state the date, time, and location of the public bid opening, indicate where specifications may be obtained, and reserve to the governing board the right to reject any or all bids only for “sound documented reasons.”
4. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as provided under 2 C.F.R. § 200.321.
5. Open the bids at the public bid opening on the date, time, and at the location noticed in the public advertisement. All bids must be submitted sealed and in paper form. A minimum of 3 bids must be received in order to open all bids.
6. A 5% bid bond is required of all bidders (a bid that does not include a bid bond cannot be counted toward the 3-bid minimum requirement). Performance and payment bonds of 100% of the contract price is required of the winning bidder.
7. Award the contract on a firm fixed-price basis.
8. Award the contract to the lowest responsive, responsible bidder. Governing board approval is required and cannot be delegated. The governing board may reject and all bids only for “sound documented reasons.”

I. Construction or repair contracts involving a building costing \$300,000 and above must comply with the following additional requirements under state law:

1. Formal HUB (historically underutilized business) participation required under G.S. 143-128.2, including local government outreach efforts and bidder good faith efforts, shall apply.
2. Separate specifications shall be drawn for the HVAC, electrical, plumbing, and general construction work as required under G.S. 143-128(a).
3. The project shall be bid using a statutorily authorized bidding method (separate-prime, single-prime, or dual bidding) as required under G.S. 143-129(a1).

J. Contracts for Architectural and Engineering Services costing less than \$50,000 shall be procured using the Uniform Guidance “micro-purchase” procedure (2 C.F.R. 200.320(a)) when contracting for the purchase of services subject to the qualifications-based selection process in the Mini-Brooks Act; provided that such threshold shall apply to a contract only if the County has exercised an exemption to the Mini-Brooks Act, in writing, for a particular project pursuant to G.S. 143-64.32. If the exemption is not authorized, the micro-purchase threshold shall be \$0.

The threshold for “micro-purchase” is allowed as long as the County qualifies as a low-risk auditee, in accordance with the criteria in §200.520 according to the most recent audit, self-certifies annually, and maintains documentation to be made available to the Federal awarding agency and auditors upon request.

K. Contracts for Architectural and Engineering Services costing \$50,000 up to ~~under~~ \$250,000 shall be procured using the state “Mini-Brooks Act” requirements (G.S.

143- 64.31) as follows:

144- Issue a Request for Qualifications (RFQ) to solicit qualifications from qualified firms (formal advertisement in a newspaper is not required). Price (other than unit cost) shall not be solicited in the RFQ.

145- Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as provided for under 2 C.F.R. § 200.321.

146- Evaluate the qualifications of respondents based on the evaluation criteria developed by the Purchasing Department and/or Requesting Department.

147- Rank respondents based on qualifications and select the best qualified firm. Price cannot be a factor in the evaluation. Preference may be given to in-state (but not local) firms.

148- Negotiate fair and reasonable compensation with the best qualified firm. If negotiations are not successful, repeat negotiations with the second-best qualified firm.

149- Award the contract to best qualified firm with whom fair and reasonable compensation has been successfully negotiated. Governing board approval is not required.

L. Contracts for Architectural and Engineering Services costing \$250,000 or more shall be procured using the Uniform Guidance “competitive proposal” procedure (2 C.F.R. § 200.320(d)(5)) as follows:

1. Publicly advertise a Request for Qualifications (RFQ) to solicit qualifications from qualified firms (formal advertisement in a newspaper is not required). Price (other than unit cost) shall not be solicited in the RFQ.

2. Take affirmative steps to solicit price quotes from M/WBE vendors and suppliers as provided under 2 C.F.R. § 200.321.

3. Identify the evaluation criteria and relative importance of each criteria (the criteria weight) in the RFQ.

4. Proposals must be solicited from an “adequate number of qualified sources” (an individual federal grantor agency may issue guidance interpreting “adequate number”).

5. Must have a written method for conducting technical evaluations of proposals and selecting the best qualified firm.

6. Consider all responses to the publicized RFQ to the maximum extent practical.

7. Evaluate qualifications of respondents to rank respondents and select the most qualified firm. Preference may be given to in-state (but not local) firms provided that granting the preference leaves an appropriate number of qualified firms to compete for the contract given the nature and size of the project.

8. Price cannot be a factor in the initial selection of the most qualified firm.

9. Once the most qualified firm is selected, negotiate fair and reasonable compensation. If negotiations are not successful, repeat negotiations with the second-best qualified firm.
10. Award the contract to best qualified firm with whom fair and reasonable compensation has been successfully negotiated. Governing board approval is not required.

V. Exceptions

Non-competitive contracts are allowed *only* under the following conditions and with the written approval of the federal agency or state pass-through agency that awarded the federal funds:

- A. Sole Source.** A contract may be awarded without competitive bidding when the item is available from only one source. The Purchasing Department and/or Requesting Department shall document the justification for and lack of available competition for the item. A sole source contract must be approved by the governing board.
- B. Public Exigency.** A contract may be awarded without competitive bidding when there is a public exigency. A public exigency exists when there is an imminent or actual threat to public health, safety, and welfare, and the need for the item will not permit the delay resulting from a competitive bidding.
- C. Inadequate Competition.** A contract may be awarded without competitive bidding when competition is determined to be inadequate after attempts to solicit bids from a number of sources as required under this Policy does not result in a qualified winning bidder.
- D. Federal Contract.** A contract may be awarded without competitive bidding when the purchase is made from a federal contract available on the U.S. General Services Administration schedules of contracts.
- E. Awarding Agency Approval.** A contract may be awarded without competitive bidding with the express written authorization of the federal agency or state pass-through agency that awarded the federal funds so long as awarding the contract without competition is consistent with state law.

<END>



ENGINEERING AND INFRASTRUCTURE DEPARTMENT

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021 **AGENDA SESSION**

TO: BOARD OF COUNTY COMMISSIONERS

FROM: JERMAINE WALKER, COUNTY ENGINEER

DATE: 11/2/2021

**SUBJECT: CONSIDERATION OF THE REQUEST FOR QUALIFICATIONS (RFQ)
FOR ENGINEERING SERVICES TO ASSIST WITH NORCRESS
CAPITAL IMPROVEMENTS**

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): JERMAINE WALKER, COUNTY ENGINEER

BACKGROUND

On September 23, 2021, the Public Utilities Division advertised a Request for Qualifications from qualified individuals or firms to provide engineering services for design, contract administration & inspection, and evaluation of the NORCRESS sanitary sewer system. Based on the study that was completed and presented to the Board in June 2021, the firm selected would assist the Public Utilities Division with the recommended capital improvements as a multi-phase project. The immediate needs detailed in the study and funds budgeted for Year 1 in FY22, consist of the following: Wade 2 lift station pump repairs, Falcon Force Main additional testing and inspection, new electrical equipment and generators moved outside of the buildings at all four lift stations, and system-wide inflow & infiltration (I&I) reduction.

Firms had until October 12, 2021, to submit their Statement of Qualifications. There were three firms that responded, Public Utilities Division and Engineering Division staff reviewed the documents and scored them separately. Our scores were then summarized with Freese and Nichols, Inc. having the highest score of the three firms.

RECOMMENDATION / PROPOSED ACTION

The Public Utilities Division and County Management recommend that the following proposed actions below

be placed on the November 15, 2021, Board of Commissioners agenda and the NORCRESS Governing Board agenda as consent items:

1. Accept the selection of Freese and Nichols, Inc. as the preferred choice for Engineering Services for the NORCRESS sanitary sewer system capital improvements.
2. Grant permission to enter negotiations for detailed scope of work, cost of services and prepare contract for approval at a future Board of Commissioners meeting.

ATTACHMENTS:

Description	Type
NORCRESS RFQ Matrix Results	Backup Material
RFQ for NORCRESS Capital Improvements	Backup Material

EVALUATION MATRIX

NORCRESS Engineering Services for Design, Contract Administration & Inspection & Evaluation of the Sewer System

CRITERIA		CONSULTING FIRMS			
		Sample	MCGILL ASSOCIATES	THE WOOTEN COMPANY	FREESE & NICHOLS
PRIMARY CONSULTANTS	PROJECT & PROJECT MANAGEMENT EXPERIENCE				
	PROJECT MANAGEMENT EXPERIENCE OF KEY INDIVIDUALS	10	10.00	10.00	10.00
	SIMILAR PROJECTS COMPLETED IN LAST 5 YEARS	10	8.67	7.50	9.33
	REFERENCES	10	10.00	10.00	9.67
	25%	25.00	23.89	22.92	24.17
	PROJECT UNDERSTANDING AND APPROACH				
	GENERAL PROJECT UNDERSTANDING	10	8.33	7.33	9.67
	PROJECT DESCRIPTION AND KEY INDIVIDUALS	10	9.17	8.33	9.33
	PROJECT MANAGEMENT APPROACH, QUALITY CONTROL MEASURES, ALTERNATIVE ENGINEERING METHODS	10	8.00	8.67	9.33
	PROPOSED SCHEDULE	10	8.33	7.00	9.33
	35%	35.00	29.60	27.42	32.96
	PERSONNEL QUALIFICATIONS				
	SPECIFIC AND DIRECT WORK EXPERIENCE OF KEY/SUPPORT PERSONNEL	10	9.00	9.00	9.00
	RESUMES OF PROJECT MANAGER	10	9.67	9.33	9.67
	LOCATION OF KEY PROJECT PERSONNEL	10	9.00	8.50	8.50
	ADEQUACY & AVAILABILITY OF KEY PERSONNEL & RESOURCES	10	9.00	8.67	9.33
	20%	20.00	18.33	17.75	18.25
	CONSULTANTS, SUB-CONSULTANTS & OTHER PARTICIPANTS				
	PERCENTAGE OF THE PROJECT RESPONSIBILITY ASSIGNED TO CONSULTANTS/SUB-CONSULTANTS	10	10.00	8.33	7.67
	RELATIVE & RELATED WORK EXPERIENCE	10	10.00	8.33	8.67
	LOCATION OF CONSULTANTS/SUB-CONSULTANTS	10	10.00	8.67	8.33
	10%	10.00	10.00	8.44	8.22
	GENERAL QUALIFICATIONS				
	COMPLETENESS AND QUALITY OF SUBMITTAL	10	9.67	9.67	9.67
	OPERATING HISTORY	10	9.67	9.67	9.67
	INSURANCE & LICENSING IN NC	10	10.00	10.00	10.00
	DBE	10	5.00	5.00	5.00
	FIRMS STANDARD UNIT PRICES	10	7.33	7.67	8.00
	10%	10.00	8.33	8.40	8.47
	TOTAL RATING	100.00%	90.16%	84.93%	92.06%

Max Score: 100%

Rating range is 1 to 10 with 10 being most favorable and 1 being less favorable.



REQUEST FOR QUALIFICATIONS (RFQ)

CUMBERLAND COUNTY DESIRES TO ENGAGE A QUALIFIED INDIVIDUAL OR FIRM TO PROVIDE ENGINEERING SERVICES FOR DESIGN, CONTRACT ADMINISTRATION & INSPECTION, AND EVALUATION OF THE SANITARY SEWER SYSTEM

Cumberland County is soliciting Statements of Qualifications from qualified individuals or firms that are licensed Professional Engineers in the State of North Carolina with experience in design, contract administration and inspection, and additional investigation into the sanitary sewer system based on the findings stated in the report prepared by Freese and Nichols, Inc. The Northern Cumberland Regional Sewer System better known as NORCRESS, was created as a partnership between the three towns of Godwin, Falcon, and Wade as well as Cumberland County to provide sanitary sewer to the residents. The system went online October 2005 and currently serves three hundred and ninety-five (395) residential and commercial customers. Cumberland County owns the system and contracts with Public Works Commission (PWC) to treat the sewer and perform the operation and maintenance work for the system. The system has 78,692 feet of force main, 108,598 feet of gravity sewer and four lift stations.

Based on the study provided by Freese and Nichols, Inc., Cumberland County is looking to engage in an agreement with a qualified individual or firm to assist Cumberland County with the recommended capital improvements as a multi-phase project. The Freese and Nichols, Inc. report is attached as Exhibit A. The full RFQ can be viewed at <https://ccmunis.co.cumberland.nc.us/MSS/Vendors/VBids/SearchResults.aspx>.

Cumberland County will work with the selected firm to define the full scope of services to be completed at the time services are requested. Once the scope of services are fully defined, the cost of such engineering services will be fully agreed upon by both parties prior to work commencing.

PROJECT SCOPE

The following is a general description of the work required. This is not intended to be all-inclusive. The project scope will consist of immediate needs and future needs so that interested firms can understand the scale of work to be accomplished by the selected firm.

Immediate Needs

1. The Consultant shall survey, design, bid, and provide contract management and inspection for the electrical system and SCADA upgrades at all four lift stations. A detailed preliminary cost estimate shall be provided at the time of design.

2. Perform testing and evaluation of the Falcon force main to include, but not limited to checking pressures/HGL along the force main, internal pipe inspection, replacement or adding of ARV's.
3. Oversee inspection and cleaning of the pumps at the four lift stations to determine if replacement of the pumps is needed based on the internal pump inspections.
4. Identify entry points and retrieval points for pigging the force main. Consultant shall design and provide construction drawings for any modifications to the system for the entry and retrieval of the pig.
5. Present the information to County Management and to the Board of Commissioners at a regular scheduled Agenda Session with the Board of Commissioners.
6. Prepare reproducible as-built record drawings and deliver two hard copy sets to the Owner. Firm shall also provide digital AutoCAD drawings along with a GIS shape file of the completed system.

Future Needs

1. Survey, design, bid, and provide contract management and inspection for the replacement of the pumps at each of the four lift stations.
2. Conduct additional evaluations of the system's functionality and determine if additional improvements are needed.
3. Recommend future capital projects for the district and determine a budget number for each project.

MINIMUM QUALIFICATIONS

1. The respondent shall have a minimum of 5 years of experience in designing sanitary sewer force mains in a rural setting and familiar with operational challenges that a long force main presents in a sewer system.
2. Qualifications of Professional Staff – Identify the key engagement partners, managers, and other staff members who would be assigned to conduct the study and indicate their qualifications.
3. Subcontractors – Please clearly indicate whether subcontractors will be used in fulfilling either proposal. If the firm plans to use subcontractors, please provide an overview of the firm, project involvement, qualifications of staff, and the percentage of work in which you anticipate them to complete.

SUBMITTAL REQUIREMENTS

1. Firm name, address, telephone numbers and year established.
2. Provide a copy of the firm's licensure.
3. Provide a copy of the firm's Certificate(s) of Insurance.
4. Identify if the firm is classified as a Disadvantaged Business Enterprise.
5. Types of services customarily provided by the firm.
6. Name and resume of Project Manager to be assigned to this project.
7. Number of staff available for this assignment and their qualifications.
8. Names of outside consultants, if any, who would be retained to provide services required for this project and the percentages of services that the sub-consultant would provide.
9. The firm's prior experience evaluating long force mains. Highlight and provide governmental references for past projects within the last three years. Please include a brief description of each project, including a dollar amount along with a name, address and phone number of a reference for each project listed.
10. Describe in detail the firm's project deliverables to Cumberland County and the benefit of each and how the County can use this information moving forward.
11. List of current projects underway and the estimated cost and completion date of each.
12. The proposed time in which the firm foresees to complete the work based on the information provided in the scope of services.
13. Provide the firm's standard unit prices for services.

The Cumberland County Engineering & Infrastructure Department shall review the Statements of Qualifications and shall select the best qualified individual or firm in their estimation and negotiate a fee for professional services rendered.

E-VERIFY. CONTRACTOR shall comply with the requirements of Article 2 of Chapter 64 of the General Statutes. Further, if CONTRACTOR utilizes a subcontractor, CONTRACTOR shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the General Statutes.

IRAN DIVESTMENT ACT CERTIFICATION. Contractor hereby certifies that Contractor, and all subcontractors, are not on the Iran Final Divestment List (“List”) created by the North Carolina State Treasurer pursuant to N.C.G.S. 147-86.55-69. Contractor shall not utilize any subcontractor that is identified on the List.

Cumberland County reserves the right to request interviews of selected proposers, to make selections based on initial proposals, or to reject all proposals submitted.

All interested firms shall submit five (5) hard copies and one (1) USB flash drive containing a PDF of their Statement of Qualifications no later than **2:00 PM, Tuesday October 12, 2021**. Late submittals will not be considered.

Qualifications packages shall be mailed or personally delivered to:

Engineering & Infrastructure Department
Public Utilities Division
Attention: Amy Hall, Public Utilities Specialist
130 Gillespie Street, Suite 214
Fayetteville, North Carolina 28301

Submittals shall be limited to a maximum of twenty (20) standard typewritten pages (8 ½” x 11”, font size 11 or larger). This page limit includes tabs and other dividers. Double-sided pages will be counted as two (2) pages.

EVALUATION AND AWARD OF PROJECTS

The County will consider and evaluate Qualification Packages in accordance with N.C.G.S. 143-64.31. As part of the evaluation process, the County reserves the right to request additional information and/or interview any or all firms.

QUESTIONS

Questions regarding this Request for Qualifications shall be submitted in writing to the attention of Amy Hall, Public Utilities Specialist, or by e-mail to ahall@co.cumberland.nc.us, no later than **2:00 PM, Thursday, September 30, 2021**. Questions received after this date and time will not be considered for response.

Upon receipt of questions, an Addendum will be issued if deemed necessary. A signed copy of each addendum must be included in the proposal package (the signed addendum will not be counted towards the page limit). Prospective firms are strictly prohibited from contacting County officials or employees regarding this Request for Qualifications, except in the manner described above. Violation of this provision may result in disqualification of the firm’s submittal.

Exhibit A



Innovative approaches
Practical results
Outstanding service

NORTHERN CUMBERLAND REGIONAL SEWER SYSTEM COMPREHENSIVE SEWER EVALUATION

June 2021

Prepared for:



Prepared by:

FREESE AND NICHOLS, INC.
1017 Main Campus Drive, Suite 1200
Raleigh, NC 27606
919-582-5850

NORTHERN CUMBERLAND REGIONAL SEWER SYSTEM COMPREHENSIVE SEWER EVALUATION

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1017 Main Campus Drive, Suite 1200
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FNI Project No.: CBL20465

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APPENDICES

Appendix A	Lift Station Assessment Reports
Appendix B	Lift Station Electrical Assessment Report
Appendix C	Individual Lift Station Basin Flow Monitors
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1.0 INTRODUCTION

The Northern Cumberland Regional Sewer System (NORCRESS) is a partnership between the Towns of Godwin, Falcon, and Wade, as well as Cumberland County to provide sanitary sewer service to the residents and businesses of these areas. The systems have been in service since October 2005 and currently serves three hundred and ninety-five (395) residential and commercial customers. Cumberland County owns the collection system and contracts with Fayetteville Public Works Commission (PWC) to treat and perform the operation and maintenance work for the system. The system has 78,692 feet of force main and four lift stations.

This report has been prepared to provide the County with a comprehensive overview of the sanitary sewer system needs and a planning tool to serve as a guide to meet those needs on a short-term (5-year) and long-term (20-year) basis.

The major elements of the scope of this project included:

- Wastewater Flow Monitoring and Data Analysis
- Wastewater Lift Station Testing and Risk-Based Assessment
- Wastewater Lift Station and Force Main Evaluation
- Wastewater System Capacity Analyses

1.1 ABBREVIATIONS

Table 1-1: List of Abbreviations

Abbreviation	Full Nomenclature
ASCE	American Society of Civil Engineers
CCTV	Closed-Circuit Television
CIP	Capital Improvement Plan
County	Cumberland County
d/D	Depth of Flow to Diameter Ratio
DDS	Data Delivery System
DI	Ductile Iron
EPA	Environmental Protection Agency
FNI	Freese and Nichols, Inc.
ft	Feet
gal/LF	Gallons per Linear Foot
GIS	Geographic Information System
gpm	Gallons per Minute
gpcd	Gallons per Capita per Day
gpd	Gallons per Day
gped	Gallons per Employee per Day
HGL	Hydraulic Grade Line
IDF	Intensity-Duration-Frequency
I/I	Inflow and Infiltration
LF	Linear Feet
LRWRP	Long Range Water Resources Plan
LS	Lift Station
MG	Million Gallons
MGD	Million Gallons per Day
mi	Miles
MSL	Mean Sea Level
NORCRESS	Northern Cumberland Regional Sewer System
NCDEQ	North Carolina Department of Environmental Quality
NOAA	National Oceanic and Atmospheric Administration
OSHA	Occupational Safety and Health Administration
PWC	Public Works Commission
RDII	Rainfall Dependent Inflow and Infiltration
RTU	Remote Terminal Unit
SCS	Soil Conservation Service
SSes	Sanitary Sewer Evaluation Study
SSO	Sanitary Sewer Overflow
SSOAP	Sanitary Sewer Overflow Analysis Planning
TAZ	Traffic Analysis Zone
TVSS	Transient Voltage Surge Suppressor
WEF	Water Environment Federation
WRF	Water Reclamation Facility

2.0 HYDRAULIC MODELING

2.1 MODEL BACKGROUND

Fayetteville PWC operates and maintains the NORCRESS collection system. PWC also maintains a wastewater system model of the entire drainage basin for the Cross Creek Water Reclamation Facility (WRF) which includes NORCRESS. The sewer model is maintained in Innovyze® InfoSWMM software and includes all the pipes in the NORCRESS collection system.

2.2 MODEL SUMMARY

FNI received a copy of the Cross Creek WRF basin model from PWC and reduced the model to the NORCRESS system for evaluation. The model was intended to be used to evaluate the system capacity in the NORCRESS gravity sewer network. The areas of the collection system served by NORCRESS are not areas that anticipate much growth so there were no future flow scenarios to evaluate. The model was reviewed and compared with the flow monitoring data to analyze the capacity of the existing system under current system flows and operations. The flow monitoring section of the report will discuss the existing system capacities based on the dry weather and wet weather flow analysis from the monitoring data.

The results of the flow monitoring will be shared with PWC to assist in any dry weather loading updates to the NORCRESS system with the Cross Creek system-wide model.

3.0 ASSET MANAGEMENT

The NORCRESS wastewater service area includes the Towns of Wade, Falcon and Godwin which are roughly 3.69 square miles total. Within the service area, there are approximately 35 miles of wastewater pipe including both gravity and force main which are owned by the County and maintained by PWC.

Figure 3-1 shows a map of the existing wastewater collection system.

3.1 EXISTING SANITARY SEWER SYSTEM

3.1.1 Gravity Sewer

The NORCRESS wastewater collection system network consists of roughly 425 manholes and 4,336 pipe segments totaling nearly 109,000 linear feet (LF). The wastewater lines range in size from 8-inches to 15-inches for the gravity system. **Table 3-1** shows a breakdown of the linear footage of pipe by diameter for each sub-basin throughout the wastewater collection system.

Table 3-1: Collection System Length by Diameter

Diameter (inches)	Length of Pipe (LF)	Length of Pipe (miles)	Percent of Total System
8"	7,974	1.51	7.3%
10"	13,689	2.59	12.6%
12"	4,660	0.88	4.3%
Falcon	26,322	4.99	24.2%
8"	4,180	0.79	3.8%
10"	18,631	3.53	17.2%
12"	4,304	0.82	4.0%
Godwin	27,115	5.14	25.0%
8"	27,368	5.18	25.2%
10"	2,631	0.50	2.4%
12"	18,079	3.42	16.6%
15"	7,083	1.34	6.5%
Wade	55,161	10.45	50.8%
Total	108,598	20.57	

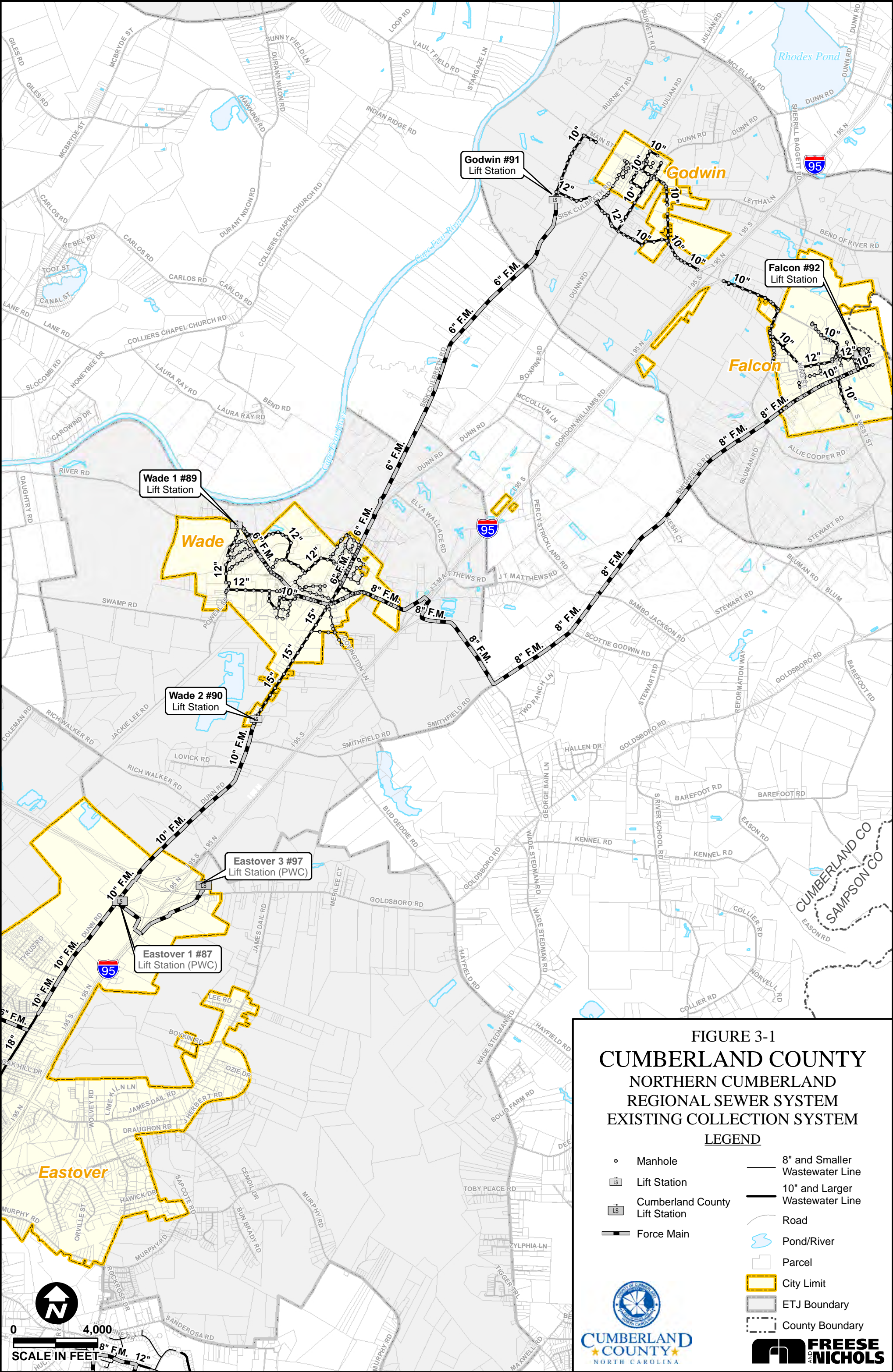
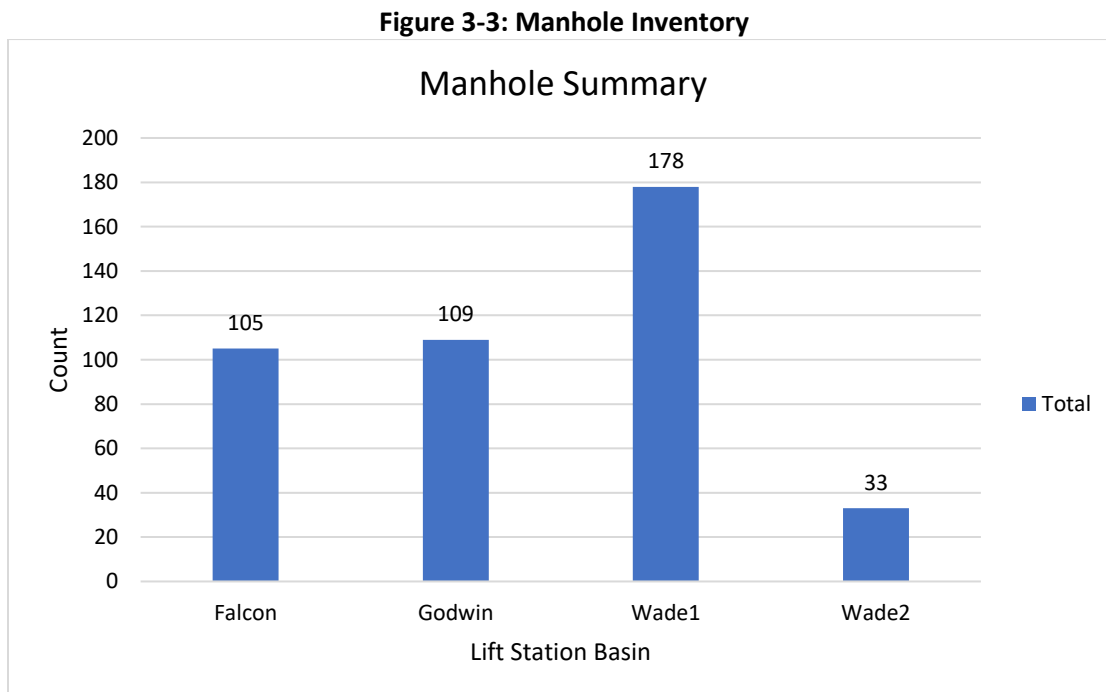
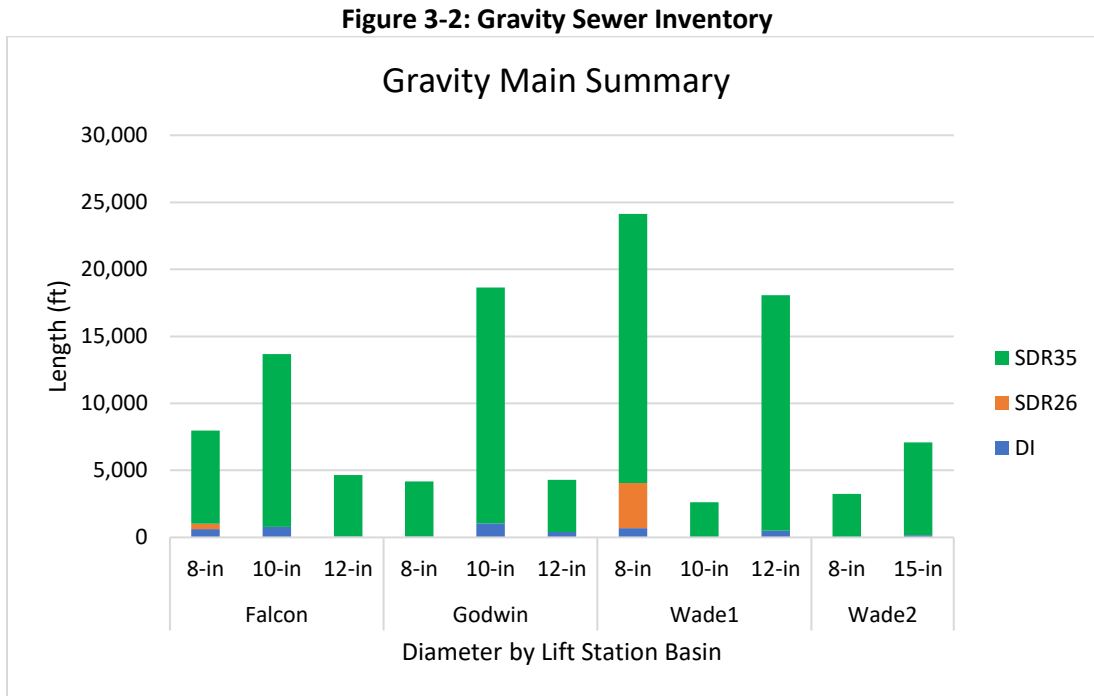


Figure 3-2: Gravity Sewer Inventory and **Figure 3-3:** Manhole Inventory below provides additional details for the gravity sewer inventory for each of the sub systems within the overall NORCRESS collection system.



3.1.2 Lift Stations

The NORCRESS system includes four (4) wastewater lift stations (LS) in the Towns of Falcon (1), Godwin (1) and Wade (2). These lift stations have approximately 14 miles of associated force mains, with diameters of 6-inches, 8-inches and 10-inches. **Figure 3-4** provides additional detail on the pipeline sizes and material. The Wade 2 lift station receives flow from the other three lift stations and then pumps the flow into the PWC collection system. The Wade 2 force main manifolds with the PWC Eastover LS No. 1, and then discharges to a manhole in the Town of Eastover. The County's ownership stops at the connection with the Eastover LS No. 1 force main.

Figure 3-4: Force Main Inventory

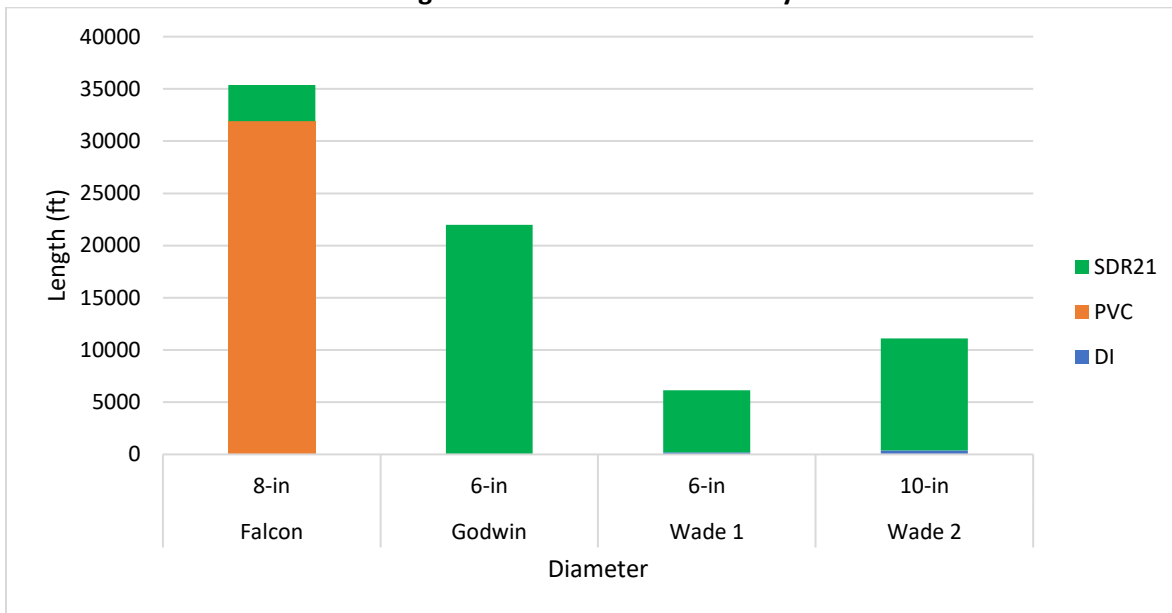


Table 3-2 shows a list of the lift stations and their location in the collection system.

Table 3-2: List of Lift Stations in NORCRESS Service Area

Lift Station Name	Location
Falcon – LS #92	Lucas Street, Falcon, NC
Godwin – LS #91	State Road 1812, Godwin, NC
Wade 1 – LS #89	State Road 1714, Wade, NC
Wade 2 – LS #90	6425 Main Street, Wade, NC

FNI assembled a lift station inventory using data obtained from County and PWC staff, construction drawings, and lift station site visits conducted during the lift station assessment. The lift station inventory is included in **Table 3-3: Lift Station Inventory** below.

Table 3-3: Lift Station Inventory															
Name	Physical Address	Number of Pumps	Firm Capacity		Force Main		Wet Well			Pumps		Influent Gravity Line(s)		Documentation	
			(gpm)	(MGD)	Diameter (inches)	Length (LF)	Diameter (feet)	Floor Elevation (feet MSL)	Depth (feet)	Single Pump Design Flow (gpm)	Single Pump Design TDH (feet)	Diameter(s) (inches)	Invert (feet MSL)	Pump Curve	Drawings
Falcon LS #92	Lucas Street, Falcon, NC	2	350	0.5	8	35,363	8	109.8	15.48	350	108	12	116.11	Gorman Rupp T4A-B	Contract 2 Record Dwgs
Godwin LS #91	State Road 1812, Godwin, NC	2	200	0.29	6	21,981	6	113.3	14.37	200	114	12	120.3	Gorman Rupp T3A3S-B	Contract 3 Record Dwgs
Wade-1 LS #89	State Road 1714, Wade, NC	2	200	0.29	6	6,142	8	84.5	19.17	200	87	12	91.3	Gorman Rupp T4A3-B	Contract 1 A&B Record Dwgs
Wade-2 LS #90	6425 Main Street, Wade, NC	2	700	1.0	10	11,109	8	110.6	14.06	700	82	15	118.3	Gorman Rupp T6A3S-B	Contract 1 A&B Record Dwgs

3.2 LIFT STATION CONDITION ASSESSMENT

FNI performed lift station assessments that included pump testing and a condition assessment for each of the County's lift stations in the NORCRESS service area. The results of this assessment were used to determine the overall condition and functionality of each lift station and provide recommendations for the rehabilitation and long-term needs. Field testing included measuring wet well dimensions, electrical evaluation, and determining pump characteristics and performance. This section summarizes the results of the condition assessment, pump operational results, and recommendations. Complete lift station evaluation reports for each lift station are included in **Appendix A**.

Table 3-4 compares each of the lift station's design flow to the flow that was recorded during the pump test. This test is an indication of how close the pump is operating to its design point and may be an indication of poor pump performance or force main operational issues if the current operating flow is well below the design flow.

Table 3-4: Pump Design Flows vs. Pump Tested Flows

Lift Station/Pump		Design Flow (gpm)	Tested Flow (gpm)	Data Source for Design Flow
Falcon – LS #92	Pump 1	350	175	Record Drawings
	Pump 2	350	153	Record Drawings
Godwin – LS #91	Pump 1	200	159	Record Drawings
	Pump 2	200	181	Record Drawings
Wade 1 – LS #89	Pump 1	200	156	Record Drawings
	Pump 2	200	157	Record Drawings
Wade 2 – LS #90	Pump 1	700	322 ⁽¹⁾	Record Drawings
	Pump 2	700	355 ⁽¹⁾	Record Drawings

⁽¹⁾Wade 2 pumps were retested to confirm the flows on June 1, 2021. The updated test results indicated a flow for P1 = 352 gpm and P2 = 375 gpm. Flows are slightly higher than the original test results, but still indicate underperformance. PWC also provided pump flow estimates based on SCADA for May 31st and the pump flow estimates were P1 = 287 gpm and P2 = 332 gpm. PWC data is included in **Appendix G**.

The condition of each lift station was evaluated based on three main categories: civil, mechanical, and electrical. Specific components that were included within each main category are listed in **Table 3-5**.

Table 3-5: Lift Station Condition Assessment Components

Civil	Mechanical	Electrical
Access	Bolts	Conduits
Drainage	Fittings	Control Panel
Bypass Pumping	Hardware	Generator
Security	Piping – Suction	Lighting
Site	Piping – Discharge	Motor Starters
Structures	Pumps	Panels
Penetrations/Joints	Valves – Check	RTU
Wet Well	Valves – Isolation	TVSS
Other	Valves – Other	Wiring
	Ventilation	Other
	Other	

Each component was inspected, tested, and assigned a score based on performance and physical condition of the component. Details on the scoring criteria are included in **Table 3-6**. The detailed lift station evaluation reports include the scoring of individual components for each lift station. Additionally, a condition matrix that tabulates each lift station’s condition score across all categories is included in **Table 3-7**.

Table 3-6: Lift Station Component Condition Scoring Criteria

Score	Description
N/A	Component does not exist on the site, is not applicable, or could not be scored.
1	Component is like new, showing no signs of wear or damage. Fully functional.
2	Component is fully functional, lightly used with minimal signs of wear, damage, and corrosion.
3	Component has moderate signs of wear, damage, and corrosion. Component may have minorly reduced functionality and does not appear to be in danger of failure.
4	Component has significant signs of wear, damage, or corrosion. Component has limited functionality and appears to be in danger of failure if issues are not addressed.
5	Component is in imminent danger of failure; functionality is reduced to marginal levels or is completely non-functional.

Table 3-7: Lift Station Condition Matrix

Component Group	Falcon LS#92	Wade 1 LS #89	Wade 2 LS #90	Godwin LS #91
Site – Drainage, Access Drive, Security, Fencing	1.8	1.2	1.3	3.0
Instrumentation and Electrical	4.2	4.0	4.0	4.3
Wet Well	2.3	1.6	2.0	1.6
Pumps and Motors	5.0	4.0	5.0	3.5
Bypass	1.0	1.0	1.0	1.0
Odor Control	1.0	n/a	1.0	n/a
Overall Score	3.14	2.56	3.01	2.61

As shown in **Table 3-7**, the highest condition deficiencies observed at each station resulted from the electrical /instrumentation and pump/motor scorings. The overall condition scores indicate that Falcon is the highest scoring lift station with the poorest condition. Falcon is followed by Wade 1 and Wade 2 lift stations and Godwin which has the best overall condition score.

The electrical evaluation of the four lift stations concluded that the electrical equipment at each station is in very poor condition. The current electrical equipment is not properly rated for the hazardous area in which it is installed (enclosed in the same room as an above-grade wastewater pumping station) and poses a significant safety hazard. Electrical recommendations at each station include upgrading the electrical equipment, including backup generators, and relocating outside the buildings in NEMA 3R rated enclosures. A detailed electrical condition assessment report is included in **Appendix B**.

High condition scores in the pump/motor category are primarily attributed to the inability of the lift stations to pump at their design capacity (according to field testing results), although corrosion was also observed at several stations. The following section discusses the pump performance results in greater detail.

4.0 HYDRAULIC LIFT STATION AND FORCE MAIN EVALUATION

FNI performed a hydraulic analysis of the four (4) existing lift station/force main systems in the NORCRESS system: 1) Falcon 2) Godwin 3) Wade 1 and 4) Wade 2. The intent of this desktop analysis was to assess operational performance of the lift stations and associated force mains and to identify potential issues for further investigation, as well as the most suitable approach for their assessment.

As discussed in the previous section, FNI conducted limited field testing for each of the lift stations. The intent of the field testing was to collect data for a high-level assessment of station operations. Using the field measurements, available data from as-built drawings, staff knowledge, and GIS data, FNI produced pipe and hydraulic grade line profiles for each force main as well as low (end of service, C=120) and high (initial service, C=140) system curve plots overlaid with the associated pump curves for each station. Both low and high system curves were developed to evaluate an envelope of reasonable operating ranges. Field measured operating points determined from drawdown testing are also plotted for comparison of actual operating conditions to expected operating conditions.

All four lift stations are Gorman Rupp belt-driven suction lift pumps. Operations staff have the flexibility to adjust pump speeds to adjust pumping rates. During field testing, it was observed that both the Falcon and Godwin pumps were running at faster speeds than the max speed according to the manufacturer's pump curves. Operating pump curves for these stations were determined by applying pump affinity laws to the max speed manufacturer's pump curve.

Table 4-1 summarizes the design parameters for each of the lift stations, as reported in available record drawings.

Table 4-1: Lift Station Summary

Design Parameters	Falcon – LS #92	Godwin – LS #91	Wade 1 – LS #89	Wade 2 – LS #90
Flow	0.5 MGD (350 gpm)	0.29 MGD (200 gpm)	0.29 MGD (200 gpm)	1.0 MGD (700 gpm)
Pump HP	30 hp	25 hp	20 hp	40 hp
Speed	1,950 rpm	2,200 rpm	1,700 rpm	1,400 rpm
Model #	T4A3S-B	T3AS-B	T4A3S-B	T6A3S-B
Impeller Diameter	9.75"	8.75"	9.75"	12.38"

4.1 FALCON

Figure 4-1 presents the system and pump curves plot for the Falcon Lift Station. As shown in the graph, field-measured data indicates that the Falcon Lift Station pumps are operating under higher head conditions than typical headloss assumptions ($C=120-140$) for the system would predict, which results in decreased pumping capacity. Field testing results indicate that current operating capacity for a single pump is approximately 54% below design capacity (approximately 162 gpm compared to 350 gpm design capacity). Currently, the Falcon Lift Station pumps must operate in series to achieve pumped flows which are nearer to the lift station capacity.

Excessive headloss induced the force main is approximately equivalent to a roughness coefficient of 58, as shown from the “best fit” system curve line. This is significantly below the NCDEQ’s maximum end of service roughness coefficient for PVC of 120. The following factors may be contributing to the excessive headloss observed in the Falcon force main and require further investigation:

- Sediment/sludge/grease buildup, particularly in sag locations along the force main profile, which restricts the available cross-sectional flow area
- Gas binding, particularly in high point locations along the force main profile, may be causing restrictions in the available cross-sectional flow area. Fayetteville PWC staff have indicated that the current odor control chemical (Bioxide) has caused previous gas binding problems along the Falcon force main. The switch to Bioxide is a temporary measure needed to control metals content in bio-solids at the downstream wastewater treatment facility.
- Partially closed/broken valve(s) along the force main could be causing a flow restriction

Figure 4-2 shows the Falcon force main profile and a comparison of hydraulic grade lines for design flow conditions (0.50 MGD) using typical a typical roughness coefficient of 120 to current operating conditions (0.41 MGD) with an “effective” roughness coefficient of 58. **Table 4-2** summarizes the hydraulic results for the Falcon Lift Station. As shown in the table, the station currently operates under significantly higher head conditions than originally designed, which has reduced the pumping capacity and causes low velocity in the force main.

Figure 4-1: Falcon System Curve
8" Diameter Force Main

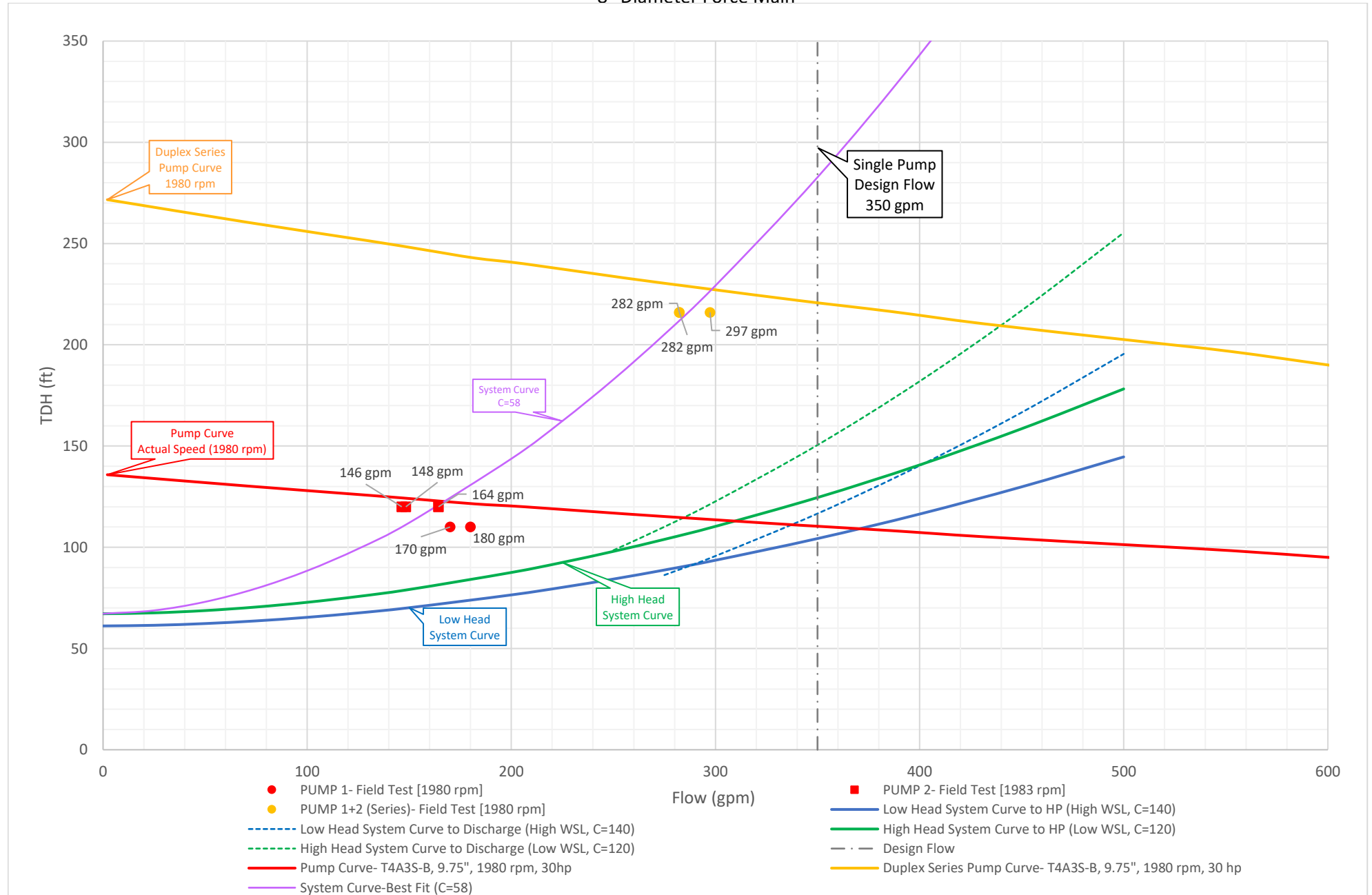


Figure 4-2: Falcon Force Main Profile and Hydraulic Grade Lines

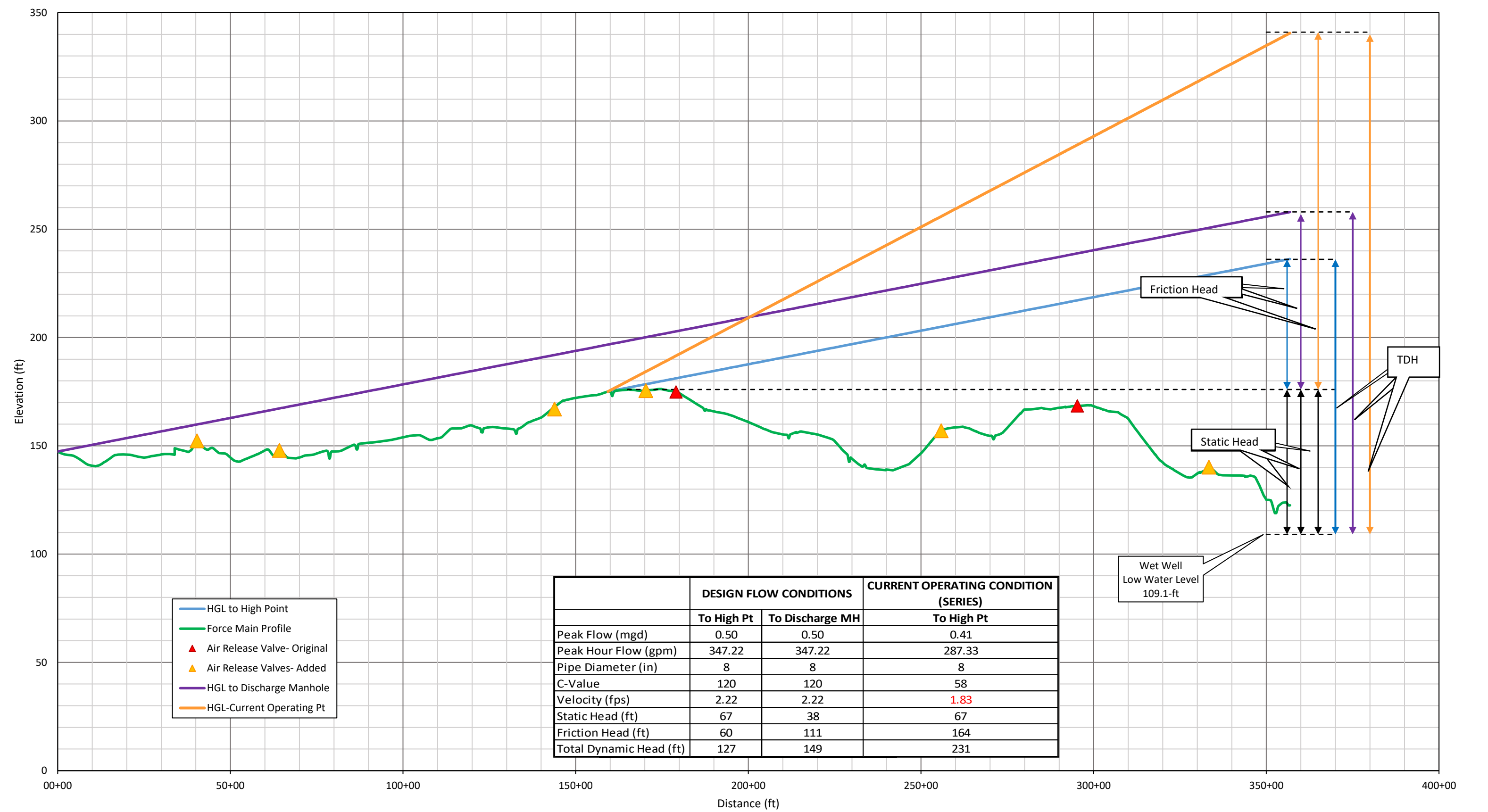


Table 4-2: Falcon Hydraulic Summary

	Design Point	Current Operation
	<i>To High Point</i>	<i>To High Point</i>
Peak Flow (MGD)	0.50	0.41
Peak Flow (gpm)	347	287
Diameter (in)	8	8
C-Value	120	58 ⁽¹⁾
Velocity (ft/s)	2.22	1.83
Total Dynamic Head (ft)	127	231

⁽¹⁾Approximate equivalent C-value of 58 determined from best fit curve based on field measurements.

Recommendations for the Falcon LS are as follows:

- Installation of pressure gauges at ARVs along the force main and additional testing to field verify the HGL along the profile and potentially narrow down areas of increased headloss
- Pigging the force main to clean accumulated sludge/sediment that may be restricting flow and causing excessive headloss

4.2 GODWIN

Figure 4-3 presents the system and pump curves for the Godwin Lift Station. Field testing results indicate that current operating capacity is approximately 15% below design capacity (approximately 170 gpm compared to 200 gpm design capacity).

Figure 4-4 shows the Godwin force main profile and a comparison of hydraulic grade lines for design flow conditions to current operating conditions. **Table 4-3** summarizes the Godwin Lift Station Hydraulic results.

Table 4-3: Godwin Hydraulic Summary

	Design Point	Current Operation
Peak Flow (MGD)	0.29	0.24
Peak Flow (gpm)	200	170
Diameter (in)	6	6
C-Value	120	135
Velocity (ft/s)	2.27	1.93
Total Dynamic Head (ft)	140	100

Figure 4-3: Godwin System Curve
6" Diameter Force Main

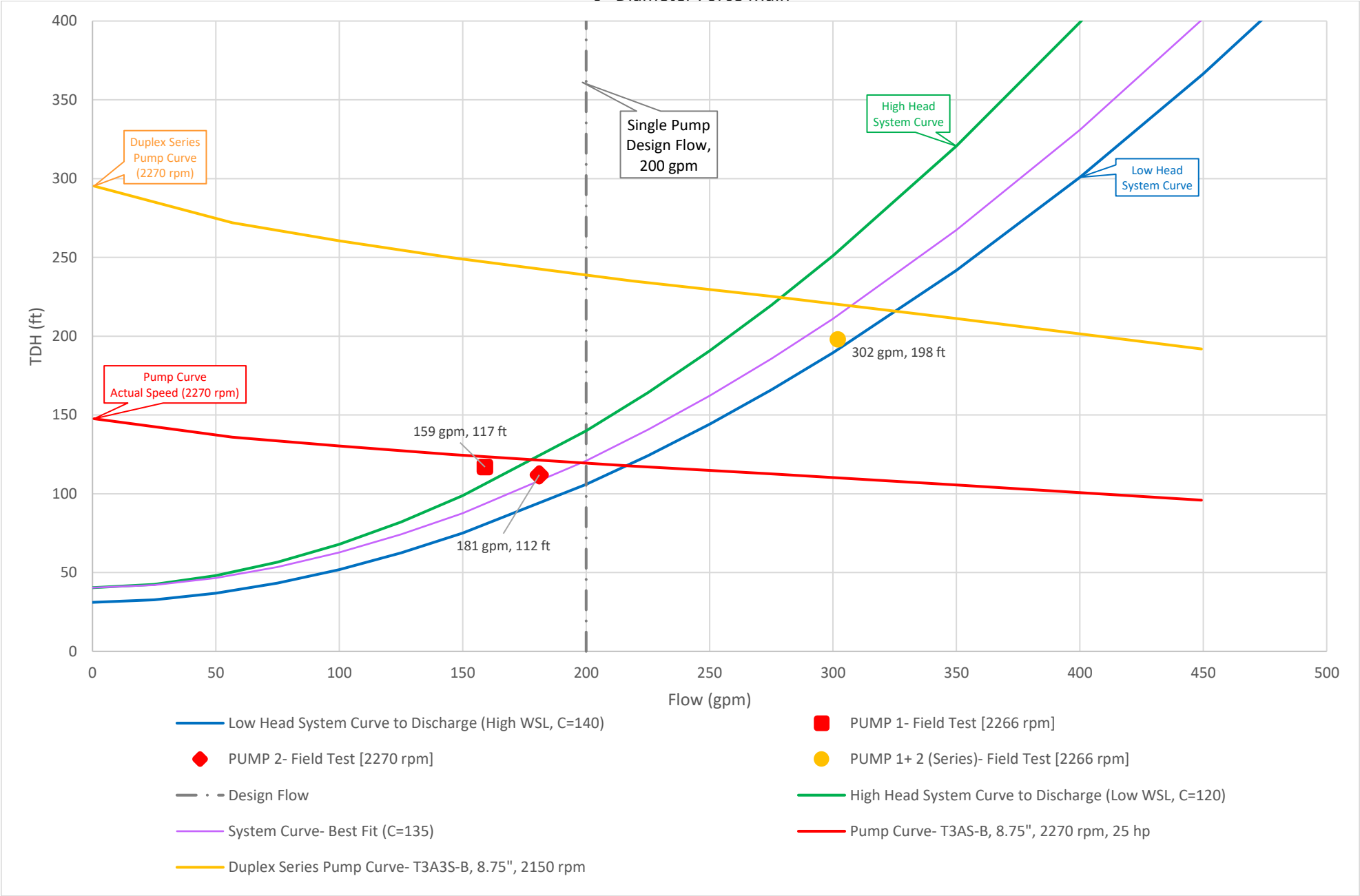
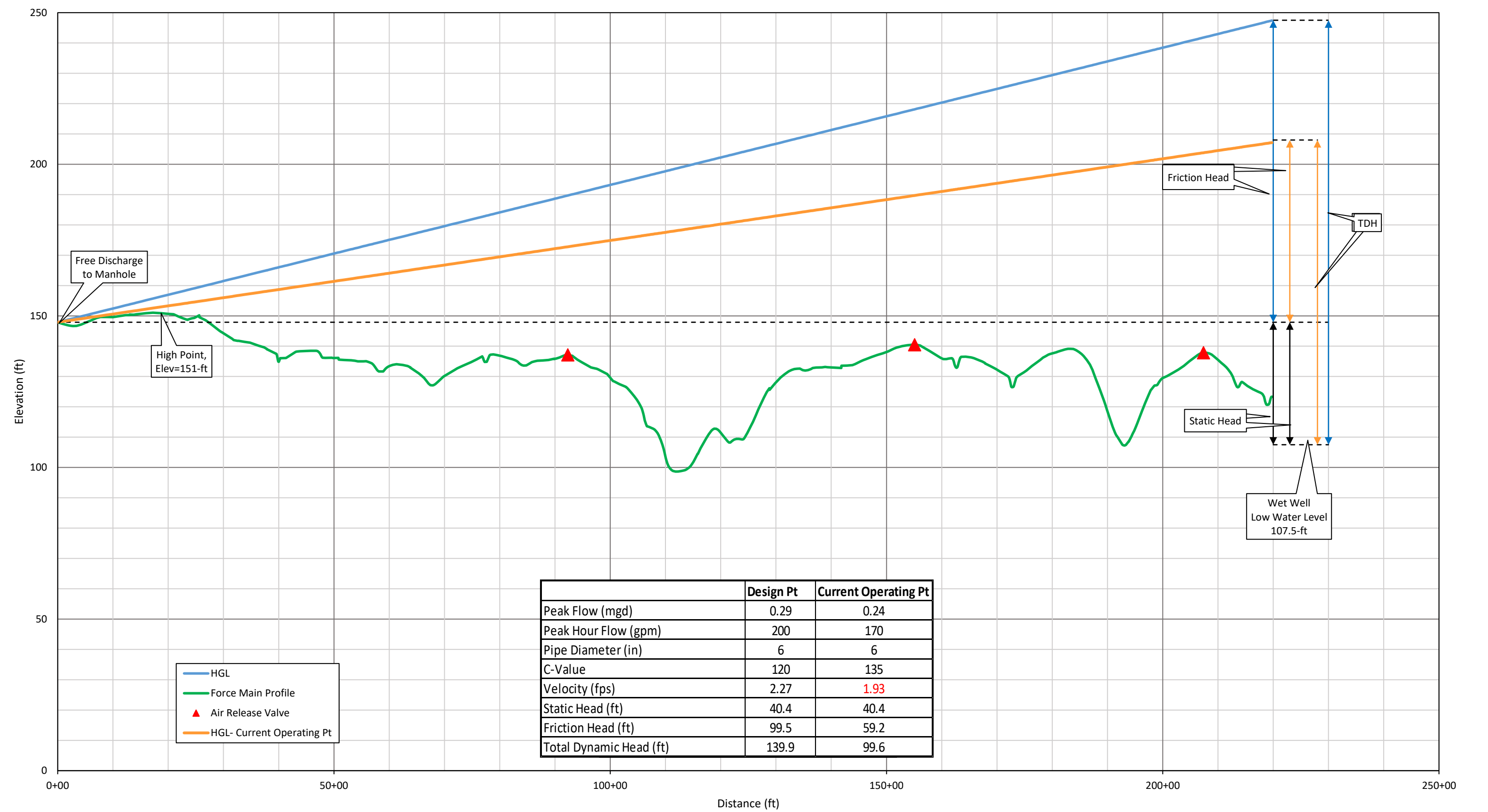


Figure 4-4: Godwin Force Main Profile and Hydraulic Grade Lines



The reduced pumping capacity measured in field testing may indicate a slight pump performance issue (likely wear/tear or potential clogging). Additionally, the force main experiences low velocities (1.93 ft/s under current operating conditions) which could allow solids deposition and increased head loss in the force main.

Recommendations for the Godwin LS are as follows:

- Inspection/cleaning of the pumps
- Continued monitoring of pump performance

4.3 WADE 1

Figure 4-5 shows low (blue) and high (green) system curves for the Wade 1 Lift Station overlaid with pump curves for single and duplex series operation. Field testing results indicate that current operating capacity is approximately 20% below design capacity (156 gpm compared to 200 gpm design capacity).

Figure 4-6 shows the Wade 1 force main profile and a comparison of hydraulic grade lines for design flow conditions to current operating conditions. **Table 4-4** summarizes the hydraulic results for the Wade 1 Lift Station.

Table 4-4: Wade 1 Hydraulic Summary

	Design Point	Current Operation
Peak Flow (MGD)	0.29	0.22
Peak Flow (gpm)	200	156
Diameter (in)	6	6
C-Value	120	120
Velocity (ft/s)	2.27	1.77
Total Dynamic Head (ft)	89	79

Low force main velocities (<2.0 ft/s) are present during current operations which may allow solids accumulation in the force main. Field testing results also indicated slightly reduced pump performance.

Recommendations for the Wade 1 LS are as follows:

- Inspection/cleaning of the pumps
- Continued monitoring of pump performance

Figure 4-5: Wade 1 System Curve
6" Diameter Force Main

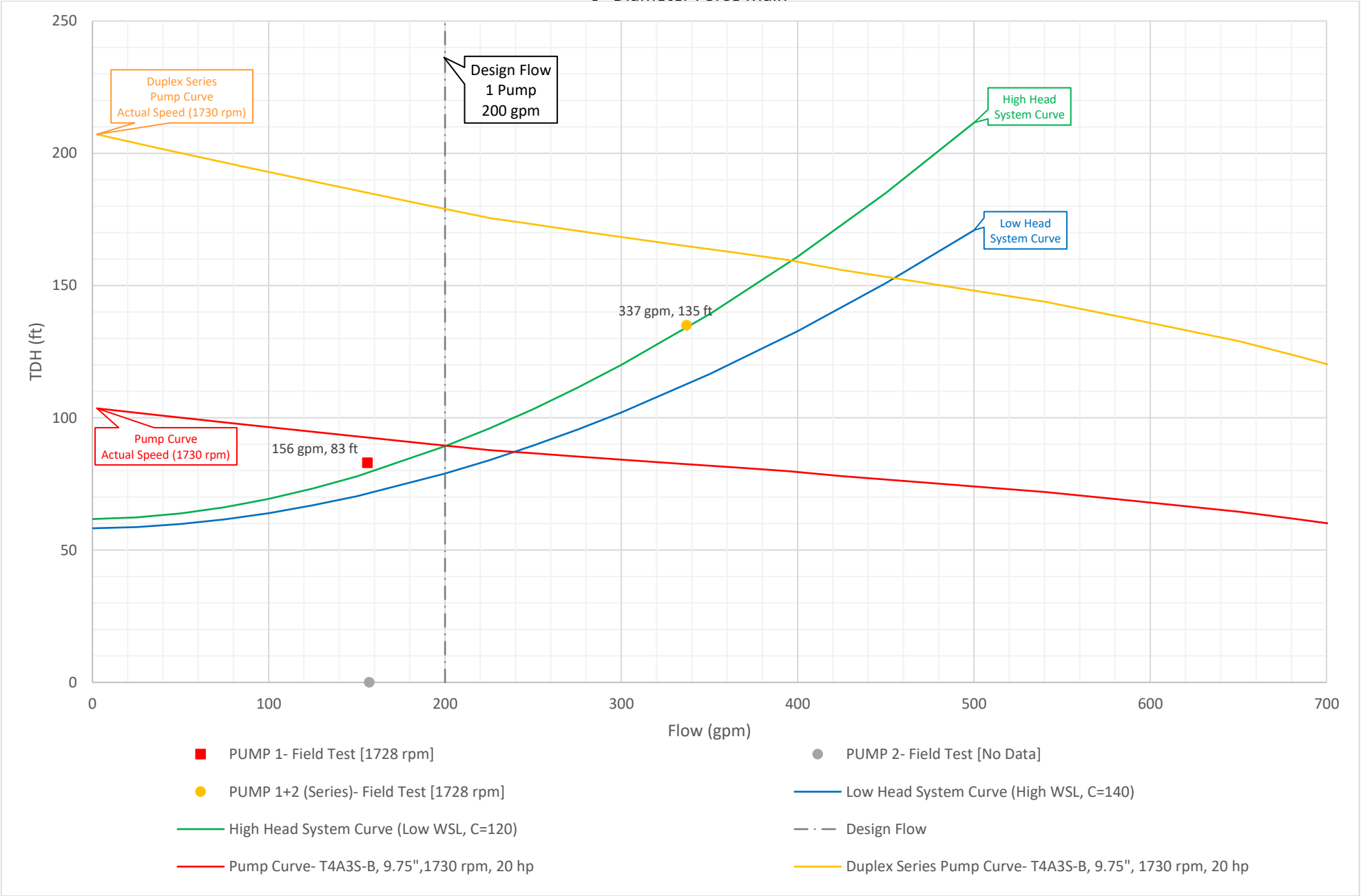
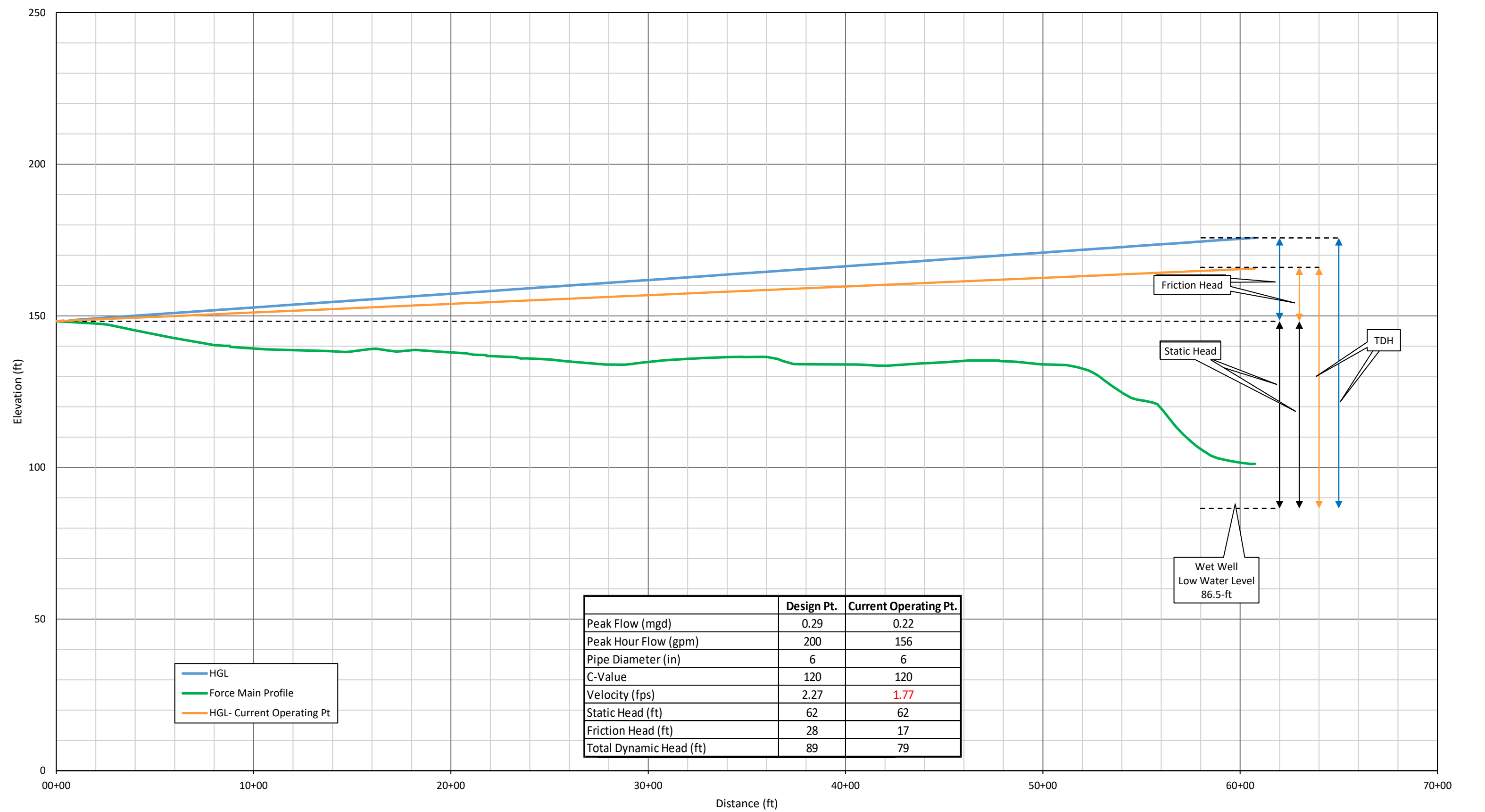


Figure 4-6: Wade 1 Force Main Profile and Hydraulic Grade Lines



4.4 WADE 2

Figure 4-7 shows the pump and system curves for the Wade 2 Lift Station. It should be noted that the status of the downstream Eastover 1 LS, which shares a section force main with the Wade 2 force main, was unknown at the time of the drawdown testing for Wade 2 LS. The initial hydraulics evaluation was performed under the assumption that the Eastover 1 LS was “off” and therefore had no impact on the hydraulic operation of Wade 2 LS. Field testing results indicate that current operating capacity of Wade 2 LS is more than 50% below design capacity (approximately 340 gpm compared to 700 gpm design capacity). Additional testing was performed on the Wade 2 pumps after the initial evaluation. The test was performed with the Eastover 1 LS off. The results of the test indicate slightly higher pump flows of P1 = 352 gpm and P2 = 375 gpm.

Based on the field measurements collected, the pumps are operating significantly below their corresponding pump curves. The operating points generally appear to align along the high system curve. These results either indicate poor field data (erroneous flow readings) or significant pump performance problems.

Figure 4-8 shows the Wade 2 force main profile and a comparison of hydraulic grade lines for design flow conditions to current operating conditions. The hydraulic results for Wade 2 are summarized in **Table 4-5**.

Table 4-5: Wade 2 Hydraulic Summary

	Design Point	Current Operation
Peak Flow (MGD)	1.00	0.49
Peak Flow (gpm)	694	339
Diameter	10	10
C-Value	120	120
Velocity (ft/s)	2.84	1.38
Total Dynamic Head (ft)	97	47

Field testing results reveal that current pump capacity is significantly below the original capacity flow of 700 gpm. The apparent reduced pump performance may be due problems with the pumps, such as ragging or impeller damage, or be attributed to erroneous field-testing measurements.

Recommendations for the Wade 2 LS are as follows:

- Confirm the accuracy of the flow meter on the force main which was used for the drawdown testing data
- Pump inspection/repair as necessary

Figure 4-7: Wade 2 System Curve (Eastover 1 LS Off)

10" Diameter Force Main

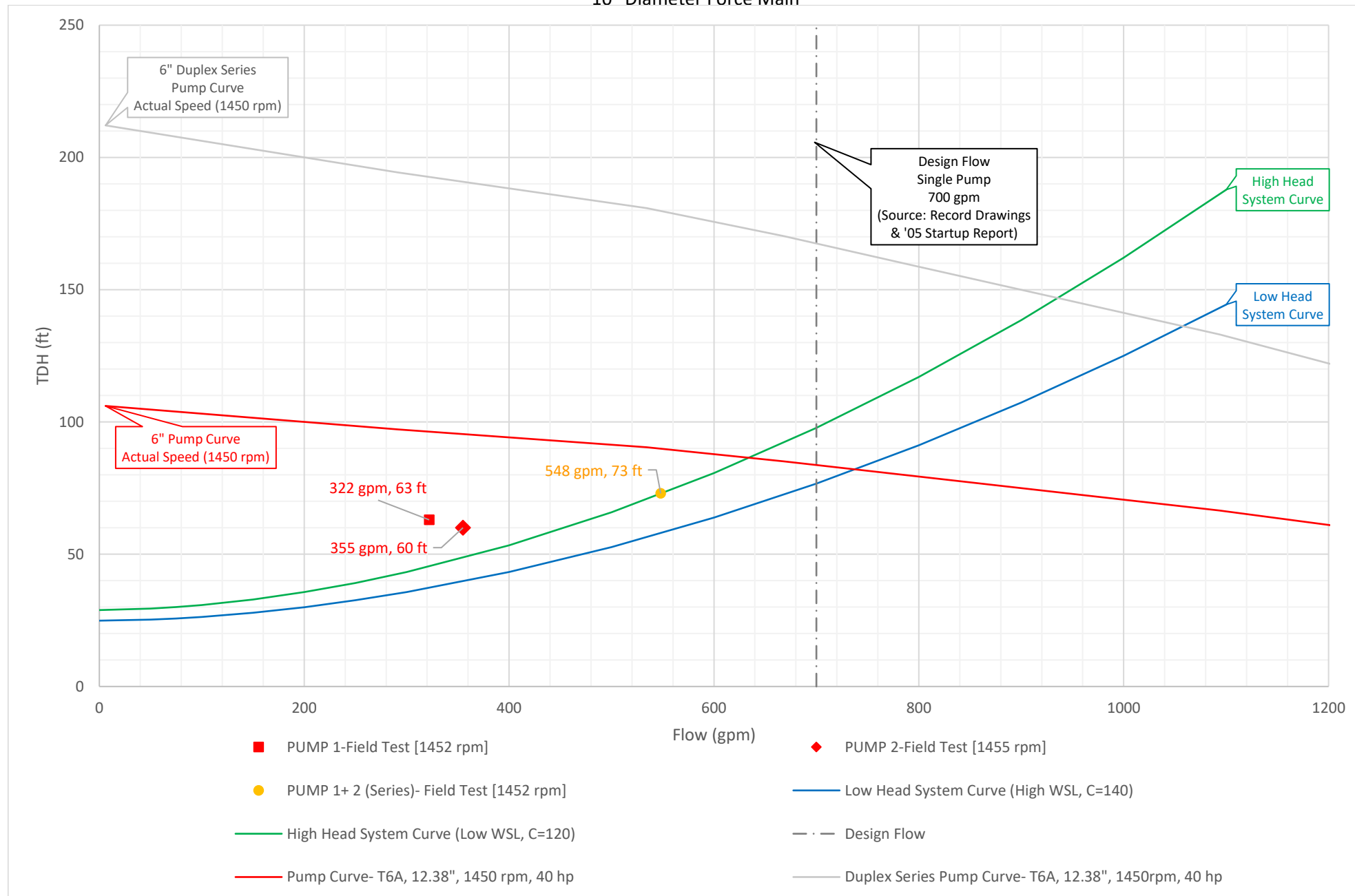
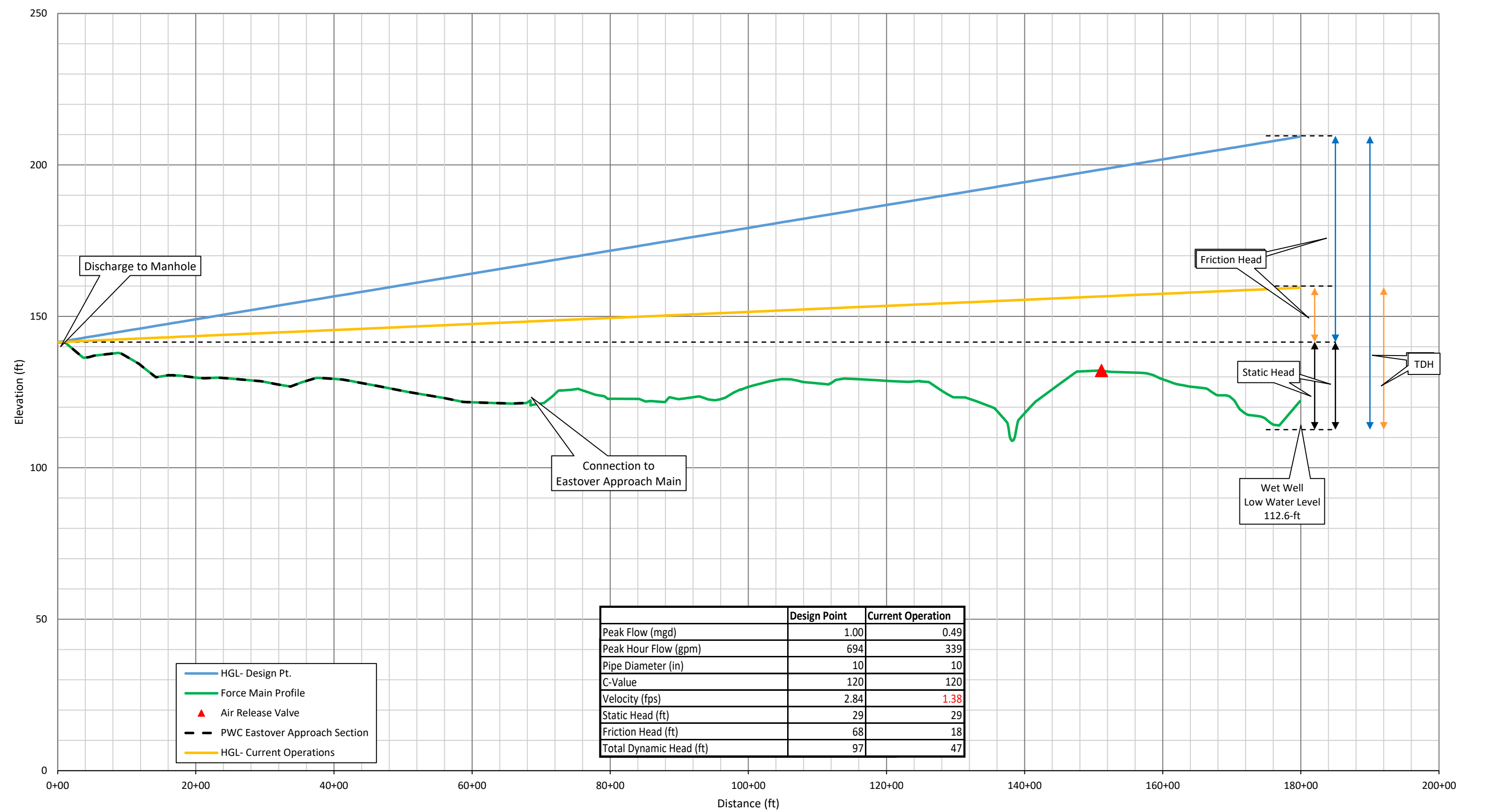


Figure 4-8: Wade 2 Force Main Profile and Hydraulic Grade Lines



5.0 WASTEWATER FLOW MONITORING

5.1 WASTEWATER BASINS

The NORCRESS wastewater collection system is divided into four (4) discrete wastewater basins. The wastewater basins, as provided by the County, are generally delineated based on the topographic layout of the service area and generally follow the major hydrologic feature within each basin. Each of the major basins is associated with a wastewater lift station. The following is a list of the major wastewater basins in the NORCRESS collection system:

- Falcon
- Godwin
- Wade 1
- Wade 2

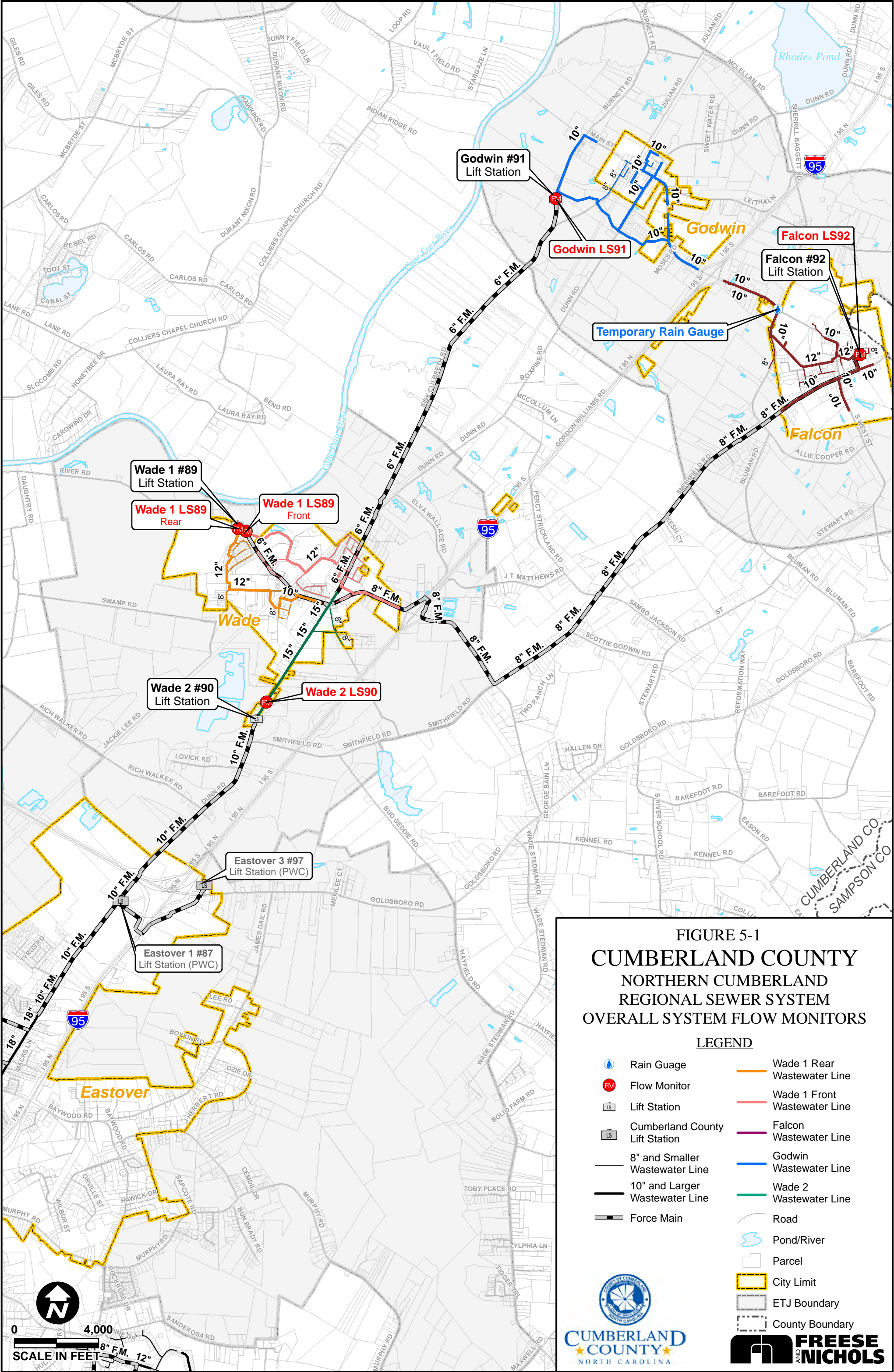
The performance of the wastewater collection system during dry and wet weather conditions was determined by installing temporary flow monitors at critical locations within the collection system. Flow monitor locations were identified to capture most of the existing wastewater system flow within each of the four wastewater basins. The locations were strategically selected to allow the temporary flow monitors to monitor the system's performance during rain events to quantify level of inflow and infiltration (I/I) and provide data about system capacity. FNI retained Hydrostructures to conduct temporary flow monitoring throughout the NORCRESS service area. Evaluation of the flow monitoring data allows for the characterization of dry and wet weather flows at key locations within the wastewater system. In addition, the data allows for severity ranking of observed rainfall dependent inflow and infiltration (RDII) to assist in subsequent planning, condition assessment, and rehabilitation recommendations.

5.2 FLOW MONITOR INSTALLATION

A total of five (5) flow monitoring locations were identified for the purposes of understanding flow patterns and wet weather responses within the system. A temporary rain gauge was installed at the Godwin-Falcon Volunteer Fire Department to obtain rainfall data for this project. Once the flow monitoring locations were identified, FNI developed discrete metersheds for each flow monitor. **Figure 5-1** shows the overall locations of flow monitors and the associated gravity sewer upstream of each monitor. **Appendix C** includes detailed individual lift station basin maps for the flow monitor locations in each area.

The flow monitors were installed throughout the NORCRESS system in November 2020. Flow monitoring was performed using Hach FL900 series area-velocity flow monitors each with cellular relay to provide near real-time data via the Data Delivery System (DDS). Each flow monitor battery and data storage unit were mounted near the top of a manhole and connected to an ultrasonic depth and velocity sensors positioned within the incoming wastewater line. The ultrasonic depth sensor was mounted at the crown of the wastewater pipe, and the velocity sensor mounted at or near the bottom invert of the incoming wastewater line. The Hydrostructures flow monitor installation reports can be found in **Appendix D**.

Observed depth, velocity, and flow data from November 10, 2020, through January 26, 2021 (77 days), from all five locations, was collected and evaluated in 15 minutes intervals. This high-resolution flow monitoring data was utilized to provide insight into wastewater system performance, providing important information about how the existing wastewater system conveys observed flow rates. Detailed results from the flow monitoring that include the measured velocity and level, along with the calculated flowrate are included in **Appendix E** for each of the five monitoring locations.



5.3 DRY WEATHER PERFORMANCE

Dry weather flow conditions are characterized by evaluating flow monitor data observed during normal conditions, excluding wet weather events and the periods associated with the recovery from wet weather events. The average daily dry weather pattern is identified as a diurnal curve and results from the collective daily flows of residential, commercial, institutional, and industrial users. Land use within a particular area affects the shape of the diurnal pattern. A typical residential diurnal pattern has peaks during the early morning and evening with valleys during the workday and night. Typical weekend patterns tend to have later morning peaks with limited mid-day valleys. The dry weather diurnal patterns for each flow monitor in the NORCRESS system can be found in **Appendix F**. Some observations from the diurnal patterns are as follows:

- The Falcon flow monitoring basin exhibited a diurnal pattern with an extended peak between the hours of 8:00 a.m. and 3:00 p.m. that is mostly prevalent during the weekday. This pattern typically indicates that most of the flow in the basin most likely comes from a commercial or industrial user.
- The Wade 1 Front and Wade 1 Rear flow monitoring basins exhibit a much more standard diurnal pattern, indicating a more traditional, residential usage in the basin.
- The Godwin flow monitoring basin exhibits a low, flat diurnal, indicating either a steady base flow from traditional I/I sources, or a small residential population.
- The Wade 2 flow monitoring basin is comprised of the other four basins, and as such it exhibits the midday peak of the Falcon basin, with the slight residential diurnal curvature from the Wade 1 basins.

The depth-to-diameter (d/D) ratio is used to assess available wastewater pipe capacity. The maximum flow depth observed during dry weather and the corresponding d/D ratio observed during the study period are summarized in **Table 5-1**. The maximum dry weather flow depth is the maximum depth of flow consistently observed during normal dry weather conditions.

Table 5-1: Dry Weather Depth to Diameter Ratios

Flow Monitor	Pipe ID	Pipe Diameter (inches)	Maximum Dry Weather Recorded Depth (inches)	Dry Weather d/D
Falcon	SGM027104	12	2.46	20.5%
Godwin	SGM025924	12	2.41	20.1%
Wade 1 Front	SGM027253	12	1.37	11.4%
Wade 1 Rear	SGM027411	12	1.58	13.2%
Wade 2	SGM027306	15	3.29	21.9%

Wastewater collection systems are designed to flow under open channel flow conditions with some additional capacity reserved for RDII. As a result, the American Society of Civil Engineers (ASCE) and the Water Environment Federation (WEF) recommend that wastewater lines with diameters up to 15 inches be designed to flow with dry weather d/D ratios of 50%, and larger diameter lines be designed to flow with dry weather d/D ratios of 75%. These recommendations are found in *Gravity Sanitary Sewer Design and Construction* according to ASCE Manuals and Reports on Engineering Practice No. 60. All of locations for the monitoring period fall within these recommendations.

5.4 WET WEATHER PERFORMANCE

Wet weather flow conditions are characterized by evaluating flow monitor data observed during each storm event that occurred during the study period. During the monitoring period there were two wet weather events captured, 11/11/2020 and 12/24/2020. A summary of recorded rainfall events is provided in **Table 5-2**.

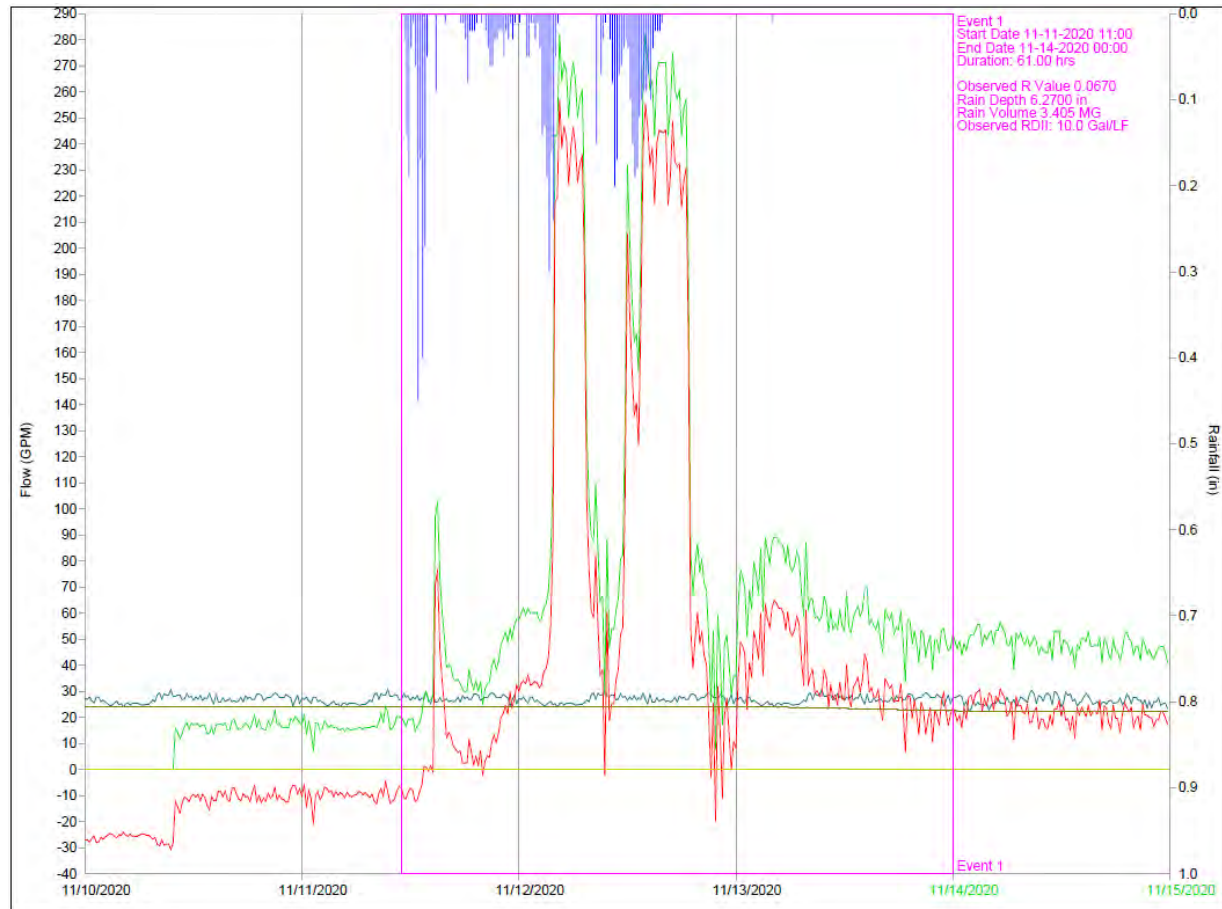
Table 5-2: Rainfall Summary

Date	Duration (hours)	Intensity (inches/hour)	Depth (inches)
11/11/2020	29	0.21	6.27
12/24/2020	16	0.085	1.36

A comparison of flow monitor data from the dry and wet weather periods is used to analyze the amount of RDII entering the system, which is calculated by subtracting the recorded flow during an average dry day in the study period from the measured flow during a rainfall event. A wet weather storm decomposition hydrograph is illustrated on **Figure 5-2** and shows the observed flow rate during a storm event (green) compared to the average dry day diurnal pattern (teal). The difference between the two is

the RDII measured by the flow monitor (**red**) resulting from the rainfall (**blue**). The hydrograph compares the wet weather response to the diurnal pattern to determine the impact of the rain event on the collection system. The effects of the rain event are then measured during and following the rain event, and to the point where the flow pattern returns to the typical diurnal pattern, resulting in the calculated RDII for the observed storm event.

Figure 5-2: Storm Decomposition Hydrograph



5.5 FLOW MONITORING DATA

The average dry and peak wet weather flows and observed RDII at each temporary flow monitoring location are summarized in **Table 5-3**. RDII and peaking factor values for flow monitoring period were calculated from the November 11, 2020, storm event. Normalized RDII values greater than six gallons per linear foot (gal/LF) are considered high. Moderate RDII response is approximately six to four gal/LF, medium RDII response ranges from four to two gal/LF, and low RDII values are typically anything less than two gal/LF.

Table 5-3: Summary of Flow Monitoring

Flow Monitor	Average Daily Dry Weather Flow (gpd)	Maximum Wet Weather Flow (gpd)	Wet Weather to Dry Weather Peaking Factor	RDII (gal)	Basin Size (LF)	Normalized RDII (gal/LF)
Falcon	44,035	938,318	21.3	368,012	18,335	20.07
Godwin	38,851	406,094	10.5	228,311	22,914	9.96
Wade 1 Front	28,036	187,128	6.7	79,149	10,888	7.27
Wade 1 Rear	31,507	76,449	2.4	6,122	8,978	0.68
Wade 2	148,017	1,023,163	6.9	546,843	24,505	22.32

A peaking factor is a simple ratio of the wet weather to dry weather flow recorded in the basin and does not account for basin size or additional flow monitors upstream. Peaking factors are commonly used to estimate maximum flow rates based on average flow rate estimates and play a key role in sewer design. Peaking factors are typically inversely proportional to the population served and generally decrease as average dry weather flow increases. The highest peaking factor in the system is in Falcon, however Godwin also has a relatively high peaking factor. Wade 2 cannot be as directly analyzed, since it receives flow from all the other basins, and as such, their RDII will influence the results for Wade 2. The RDII of each metershed was normalized by the total length of pipe in each flow monitor basin. The normalized RDII by linear footage illustrates which metersheds have higher levels of RDII versus those basins that are relatively large or downstream of a basin with large flows.

The wet weather d/D ratio is used to assess wastewater pipe capacity during wet weather events. Wastewater collection systems are designed to flow under open channel flow conditions during dry weather and near full pipe capacity during wet weather. Typical recommendations for wet weather d/D ratios are less than 100%, so the pipe does not operate under surcharged conditions. **Table 5-4** show the observed d/D ratios during the November 11th event. Multiple observed d/D ratios during this storm are

over the 100% recommendation, indicating that there is a downstream flow restriction or insufficient capacity to accommodate maximum observed wet weather flows at these locations without surcharged conditions.

Table 5-4: Wet Weather Depth-to-Diameter Ratios

Flow Monitor	Pipe ID	Pipe Diameter (inches)	Maximum Wet Weather Recorded Depth (inches)	Wet Weather d/D ¹
Falcon	SGM027104	12	95.4	795.0%
Godwin	SGM025924	12	54.6	455.0%
Wade 1 Front	SGM027253	12	2.6	21.7%
Wade 1 Rear	SGM027411	12	1.97	16.4%
Wade 2	SGM027306	15	5.2	34.7%

1. Values in red are in excess of design recommendations.

5.6 SUMMARY OF FLOW MONITORING ANALYSIS

The conclusions and recommendations in this study are based on data gathered using five (5) temporary flow monitors from Hydrostructures, and one permanent rain gauges for approximately two months. A detailed analysis of dry weather and wet weather periods was performed which included an evaluation of wet weather to dry weather peaking factors and RDII.

During dry weather conditions, all five monitors had observed dry weather d/D ratios that were well within the design criteria recommended by ASCE and WEF, indicating that there is currently sufficient capacity to accommodate dry weather flow rates at these locations.

During peak wet weather events, flow monitoring results indicated several high peaking factors that were above normal ranges at the Falcon and Godwin lift stations and d/D values greater than 100%. These results indicate potential I/I issues within these basins that will require further investigation. For all other monitoring locations, the d/D results were within standard tolerances, indicating sufficient capacity and minimal signs of RDII.

6.0 RECOMMENDATIONS

6.1 LIFT STATION RECOMMENDATIONS

Included with each lift station evaluation report is a list of recommendations to improve the lift station and correct deficiencies. **Table 6-1** summarizes the initial recommendations for each lift station.

Table 6-1: Lift Station Condition Assessment Recommendations

Lift Station	Initial Recommendations
Falcon	<ul style="list-style-type: none"> • Install pressure gauges at ARVs along force main profile and conduct additional testing to field verify hydraulic profile • Clean the force main to remove any accumulated sediment/grease • Replace existing electrical equipment and generator
Godwin	<ul style="list-style-type: none"> • Inspect/clean the pumps • Continue monitoring pump performance • Replace existing electrical equipment and generator
Wade 1	<ul style="list-style-type: none"> • Inspect/clean the pumps • Continue monitoring pump performance • Replace existing electrical equipment and generator
Wade 2	<ul style="list-style-type: none"> • Inspect/clean the pumps • Repair/replace pumps if necessary • Replace existing electrical equipment and generator

6.1.1 Falcon Pump Station

The Falcon PS force main is a long force main with several intermediate high points along the profile and a section of pipe at the end that functions like a gravity pipe based on the slope. The length of the force main provides operational challenges as the pump station does not completely fill the pipeline during a single pump cycle. Therefore, ‘slugs’ of flow are pushed along the pipeline as the pumps cycle on and off. This operation, combined with odor control chemicals and extended residence time in the force main, create opportunity for air to become entrapped in the pipeline and for solids to settle out of solution between cycles, especially at low points, or sags. Initial drawdown testing indicated excessive headloss in the force main resulting in decreased pump capacity. The additional headloss could be due to sediment deposits, air/gas pockets or a combination of both. Due to the overall length of the force main, cleaning the entire length of the force main will be costly. To further identify the cause of the additional losses in the force main, the County should perform additional testing in the force main as an initial step. Capital improvement costs for the additional testing and rehabilitation options are included in **Section 6.3** below.

Air release valves (ARVs) are often a point of operational deficiency in a wastewater force main system. If ARVs are not well maintained, they can fail to function properly, and air/gas entrapped in the pipeline will not escape. The existing ARVs can be replaced with new ARVs, or the County may want to consider stocking additional ARVs and implementing a regular replacement and cleaning/reconditioning rotation to ensure the ARVs continue to function properly. Additional ARVs at key intermediate high points in the force main should also be considered. Testing the force main hydraulics, using pressure gauges at the ARVs, can identify specific ARVs that may not be functioning properly. Testing may also indicate the need for additional ARVs. The cost for replacement and new ARVs is also provided below.

The odor control chemicals used at this pump station should also be evaluated to determine if they are compatible with the pump materials. Based on initial discussion with the pump vendor, the ferrous sulphate chemical used for a period has a compatibility rating with cast iron of D which is Not Recommended.

6.1.2 Wade 2 Pump Station

The initial performance testing at Wade 2 PS indicated reduce capacity based on pump station draw down results. The field results are based on the existing flow meter at the pump station (*Note: other PS tests were conducted using other equipment to estimate flow from wet well level changes*) and the accuracy of the flow meter is unknown. The Wade 2 PS force main also connects with another PS and force main from Eastover before discharging to a manhole. The status of the Eastover 1 pump station was unavailable during the initial testing. If the Eastover 1 PS was in operation at the same time, this will affect the draw down results at Wade 2. FNI is coordinating with the County and with PWC to perform a second test at the Wade 2 PS and confirm the draw down results and current operating capacity. If the results continue to indicate under performance, the County should plan to recondition or replace the pumps.

The odor control chemicals used at this pump station should also be evaluated to determine if they are compatible with the pump materials. Based on initial discussion with the pump vendor, the ferrous sulphate chemical used for a period has a compatibility rating with cast iron of D which is Not Recommended.

6.1.3 Electrical Equipment (All PS)

As indicated in **Section 3.0** above, and in the detailed electrical report in **Appendix B**, the electrical equipment for all the pump stations should be relocated to outside of the pump station buildings due to

the hazardous environment within the building from the wet well vapors. The costs provided in **Section 6.3** below include the new electrical equipment on an equipment rack outside the PS, a new generator and ATS, and new SCADA equipment. Cost opinions are also included for additional site easements, if required, for the electrical equipment. The generators will require approximately 8 ft x 4 ft area with a 6 ft clearance on all sides. The equipment rack requires approximate 12 ft x 4 ft area with a 6ft clearance around the rack. Additional details on the electrical costs are included in **Appendix B**. The County may also consider removing the PS buildings to eliminate the hazardous conditions. The pumps, generators and electrical can be housed in weatherproof enclosures if the building is removed.

6.1.4 Inflow and Infiltration

As indicated by the flow monitoring data summary, the Falcon and Godwin pump station basins both show higher than average values of rainfall dependent inflow and infiltration (RDII). The County is already proactively investigating these areas by smoke testing certain sections of the gravity sewer. The County should continue to focus smoke testing in these areas. The RDII can be further narrowed down using smaller flow monitoring areas. The cost for additional flow monitoring is provided below. The County can also identify manholes in low lying areas where ponding water is prevalent during wet weather events and install rain collection inserts in the manholes to reduce inflow directly at those locations. Approximate costs for the County to purchase the manhole inserts is provided below.

6.2 LIFT STATION PRIORITIZATION

All the NORCRESS lift stations require the same electrical system improvements, new generators and SCADA system upgrades as noted above. Additional improvements and maintenance requirements are needed as detailed in the condition assessment and testing reports. **Table 6-2** is a prioritized list of lift stations for the other improvements in addition to the electrical improvements. Lift stations under high priority indicates the presence of one or more issues that need to be addressed immediately.

Table 6-2: Lift Station Prioritization

Priority	Recommendations
High	<ul style="list-style-type: none">Falcon
Medium	<ul style="list-style-type: none">Wade 2
Low	<ul style="list-style-type: none">GodwinWade 1

6.3 CAPITAL IMPROVEMENT PLANNING

6.3.1 Year 1 Improvements

The immediate needs required for the continued operations and long-term maintenance of the NORCRESS lift stations includes the following improvements and associated costs within the next year:

- **Falcon Force Main:** The initial field test results for Falcon indicate elevated headloss within the force main from the original design and operations. It is recommended that the County perform additional testing by checking pressures/HGL along the force main during operations to narrow the potential cause for the greater headloss. This cost is approximately \$10,000.
- **Falcon Force Main:** A long force main provides the opportunity for grease and sediment build-up. The pipeline can also be constructed with intermediate high and low points that create areas where that sediment and gas can accumulate. Internal pipe inspection can confirm the pipeline profile and all the high and low points in the pipeline, as well as gas and sediment in the pipeline. The cost for an internal pipe inspection is approximately \$100,000.
- **All Lift Stations:** All four lift stations require electrical system upgrades. The electrical equipment should be moved outside of the building to eliminate future deterioration from the corrosive environment due to the wet well gases. The cost to replace the electrical equipment and move it outside of the lift station buildings is approximately \$50,000 for each lift station, or a total of \$200,000. This work will also require additional easements, survey, and site work. The additional costs associated with the electrical upgrades is estimated at \$10,000 for each lift station, or a total of \$40,000.
- **System-wide Inflow and Infiltration Reduction:** Flow monitoring data indicated higher I/I values in the Godwin and Falcon basins. The County should continue to perform targeted smoke testing in these areas and consider additional smaller area flow monitoring to pinpoint the larger sources of I/I. Additional flow monitoring in these areas will cost between \$12,000 and \$24,000. Plastic manhole inserts can also help to reduce inflow to manholes in low lying areas. The cost for inserts is between \$50 and \$80 each. It is recommended that the County purchase and install manhole inserts on approximate 10% of the system. The total cost for 42 manhole inserts is \$2,100.

6.3.2 Year 2-5 Improvements

Additional capital improvements that are recommended within the next five years include continued operational improvements to the Falcon force main, upgrades to the Wade 2 pumps, SCADA upgrades at all of the pump stations, and continued I/I monitoring and reduction. The costs associated with these improvements is summarized below:

- **Wade 2 Pump Replacement:** The draw down testing results from Wade 2 indicate the pump performance has been reduced from the original pump start up capacity. The station runs frequently, and pump wear is likely a factor in the reduced capacity. The pumps should be inspected and cleaned in year 1, but the County should also budget to replace the pumps within the next few years based on the internal pump inspection. Cost to replace the pumps is approximately \$50,000.
- **Falcon Force Main:** Initial assessment of the force main and existing ARVs indicate several locations on the force main where additional ARVs may benefit the operation of the system. The addition of four (4) new ARVs at a cost of \$20,000 each is a total capital cost of \$80,000.
- **All Lift Stations:** The existing SCADA equipment at the lift stations is outdated and requires upgrades. The cost to replace the SCADA equipment is approximately \$60,000 for each lift station for a total cost of \$240,000.
- **System-wide Inflow and Infiltration Reduction:** I/I reduction provides a direct benefit to the County as all flow that enters the collection system is metered by PWC and billed to the County. If the County reduces I/I into the system, the flow to PWC will also be reduced resulting in lower monthly billing from PWC during rainy periods. Therefore, it is recommended that the County continue a I/I reduction program and include budget for additional flow monitoring, smoke testing, or manhole and pipe inspections. Total budgetary costs for an annual I/I program is between \$25,000 and \$50,000.

In addition to the capital costs outlined above over the next five years, the County should plan for pump repair or replacement costs at all the other pump stations as they begin to reach their useful life (> 20 years). The cost to replace both pumps at each lift station is approximately \$50,000.

6.3.3 Capital Improvements by Pump Station

The following tables provide a cost summary of the proposed capital improvements for each pump station with the associated costs and the year in which the improvements are recommended.

Table 6-3: Falcon Improvements

	Recommendations	Cost	Planning Year
Additional testing	<ul style="list-style-type: none"> Install pressure gauges along the force main, assess field measured HGL Test/verify existing ARV functionality Option: install push camera at existing ARV locations to assess grease/sediment 	\$10,000 \$10,000 Optional	Year 1
SmartBall pipe inspection	<ul style="list-style-type: none"> Identify air/gas pockets Confirm pipeline high and low spots 	\$98,000	Year 1
Electrical system upgrades	<ul style="list-style-type: none"> Detailed cost opinions included in Electrical Condition Assessment Report in Appendix B Additional easement and site improvements 	\$50,000 \$10,000	Year 1
New generator and ATS	<ul style="list-style-type: none"> New 55kW 	\$40,000	Year 1
SCADA upgrades	<ul style="list-style-type: none"> New Rockwell PLC Upgrade 	\$60,000	Year 2-3
Replace pumps and motors	<ul style="list-style-type: none"> Replace two existing pumps and motors 	\$25,000/ea. \$50,000 Total	Year 5+

Table 6-4: Wade 2 Improvements

	Recommendations	Cost	Planning Year
Electrical system upgrades	<ul style="list-style-type: none"> Detailed cost opinions included in Electrical Condition Assessment Report in Appendix B Additional easement and site improvements 	\$50,000 \$10,000	Year 1
New generator and ATS	<ul style="list-style-type: none"> New 55kW 	\$40,000	Year 1
Replace pumps and motors	<ul style="list-style-type: none"> Replace two existing pumps and motors 	\$25,000/ea. \$50,000 Total	Year 2
SCADA upgrades	<ul style="list-style-type: none"> New Rockwell PLC Upgrade 	\$60,000	Year 2-3

Table 6-5: Godwin Improvements

	Recommendations	Cost	Planning Year
Electrical system upgrades	<ul style="list-style-type: none"> Detailed cost opinions included in Electrical Condition Assessment Report in Appendix B Additional easement and site improvements 	\$50,000 \$10,000	Year 1
New generator and ATS	<ul style="list-style-type: none"> New 55kW 	\$40,000	Year 1
SCADA upgrades	<ul style="list-style-type: none"> New Rockwell PLC Upgrade 	\$60,000	Year 2-3
Replace pumps and motors	<ul style="list-style-type: none"> Replace two existing pumps and motors 	\$25,000/ea. \$50,000 Total	Year 5+

Table 6-6: Wade 1 Improvements

	Recommendations	Cost	Planning Year
Electrical system upgrades	<ul style="list-style-type: none"> Detailed cost opinions included in Electrical Condition Assessment Report in Appendix B Additional easement and site improvements 	\$50,000 \$10,000	Year 1
New generator and ATS	<ul style="list-style-type: none"> New 40kW 	\$38,000	Year 1
SCADA upgrades	<ul style="list-style-type: none"> New Rockwell PLC Upgrade 	\$60,000	Year 2-3
Replace pumps and motors	<ul style="list-style-type: none"> Replace two existing pumps and motors 	\$25,000/ea. \$50,000 Total	Year 5+

APPENDIX A

Lift Station Assessment Reports

Condition Rating				
1 Very Good	2 Good	3 Fair	4 Poor	5 Very Poor

Lift Station Number	Lift Station Name	Condition Rating
#92	Falcon	4.15
#89	Wade #1	3.3
#90	Wade #2	2.85
#91	Godwin	2.3

Component Group	Wade #1	Wade #2	Godwin	Falcon
Site - Drainage, Access Drive, Security, Fencing	1.2	1.3	3.0	1.8
Instrumentation and Electrical	4.0	4.0	4.3	4.2
Wet Well	1.6	2.0	1.6	2.3
Pumps and Motors	4.0	5.0	3.5	5.0
Bypass	1.0	1.0	1.0	1.0
Odor Control	N/A	1.0	N/A	1.0

Inspection Date: 8/25/2020

Facility Information: Wet Well

Capacity (Gal):	23,300
Shape:	Circular
Bottom Elevation (ft):	109.80
Height (ft):	15.5
Width (ft):	N/A
Length/Diameter (ft):	8

Facility Information: Pumps

	Pump #1	Pump #2
Manufacturer:	Gorman-Rupp	Gorman-Rupp
Horse Power:	30.0	30.0
Model:	T4A3S-B	T4A3S-B
Design Capacity (gpm):	350	350
Design Head (ft):	108	108
Pump RPM:	1,950	1,950



Condition Rating

1 Very Good	2 Good	3 Fair	4 Poor	5 Very Poor
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CONDITION ASSESSMENT

Component Group	Condition Rating (A)	Weight Factor (B)	Weighted Rating (A x B / 100)	Comments
Site - Drainage, Access Drive, Security, Fencing	1.8	5%	0.09	<ul style="list-style-type: none"> Standing water on site.
Instrumentation and Electrical	4.2	25%	1.04	<ul style="list-style-type: none"> Class 1 Division 1 hazardous area - existing equipment is not explosion-proof.
Wet Well	2.3	25%	0.56	<ul style="list-style-type: none"> There is corrosion on piping and valves
Pumps and Motors	5.0	25%	1.25	<ul style="list-style-type: none"> Pump 1: 50% below design capacity Pump 2: 56% below design capacity
Bypass	1.0	10%	0.10	
Odor Control	1.0	10%	0.10	<ul style="list-style-type: none"> Ferric sulfate recently switched to calcium nitrate

Overall Condition Rating -- 100% 3.14

Overall Comments:



Corrosion on piping and valves



Corrosion on piping and valves

Inspection Date: 8/25/2020

Facility Information: Wet Well

Capacity (Gal):	28,575
Shape:	Circular
Bottom Elevation (ft):	84.50
Height (ft):	19
Width (ft):	N/A
Length/Diameter (ft):	8

Facility Information: Pumps

	Pump #1	Pump #2
Manufacturer:	Gorman-Rupp	Gorman-Rupp
Horse Power:	20.0	20.0
Model:	T4A3S-B	T4A3S-B
Design Capacity (gpm):	200	200
Design Head (ft):	87	87
Pump RPM:	1,700	1,700



Condition Rating

1 Very Good	2 Good	3 Fair	4 Poor	5 Very Poor
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CONDITION ASSESSMENT

Component Group	Condition Rating (A)	Weight Factor (B)	Weighted Rating (A x B / 100)	Comments
Site - Drainage, Access Drive, Security, Fencing	1.2	5%	0.06	<ul style="list-style-type: none"> Parking area would benefit from filling depressions with gravel
Instrumentation and Electrical	4.0	25%	1.00	<ul style="list-style-type: none"> Class 1 Division 1 hazardous area - existing equipment is not explosion-proof. Generator and MCC ATS out of service for several years
Wet Well	1.6	25%	0.40	<ul style="list-style-type: none"> Minor leakage and corrosion
Pumps and Motors	4.0	25%	1.00	<ul style="list-style-type: none"> Pump 1: 22% below design capacity Pump 2: 22% below design capacity
Bypass	1.0	10%	0.10	
Odor Control	N/A	10%	0.00	<ul style="list-style-type: none"> No odor control present at this station
Overall Condition Rating	--	100%	2.56	

Overall Comments:



Minor corrosion on piping



Parking area needs more gravel

Inspection Date: 8/25/2020

Facility Information: Wet Well

Capacity (Gal):	21,050
Shape:	Circular
Bottom Elevation (ft):	110.50
Height (ft):	14
Width (ft):	N/A
Length/Diameter (ft):	8

Facility Information: Pumps

	Pump #1	Pump #2
Manufacturer:	Gorman-Rupp	Gorman-Rupp
Horse Power:	40.0	40.0
Model:	T4A3S-B	T4A3S-B
Design Capacity (gpm):	700	700
Design Head (ft):	82	82
Pump RPM:	1,400	1,400



Condition Rating

1 Very Good	2 Good	3 Fair	4 Poor	5 Very Poor
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CONDITION ASSESSMENT

Component Group	Condition Rating (A)	Weight Factor (B)	Weighted Rating (A x B / 100)	Comments
Site - Drainage, Access Drive, Security, Fencing	1.3	5%	0.06	<ul style="list-style-type: none"> Comm tower base rusted. Tower has fallen over in the past.
Instrumentation and Electrical	4.0	25%	1.00	<ul style="list-style-type: none"> Class 1 Division 1 hazardous area - existing equipment is not explosion-proof. Sewage gas causing generator failure and rust. ATS needs manual resetting and ATS does not show source. Cables have corrosion damage from sewage gas.
Wet Well	2.0	25%	0.50	<ul style="list-style-type: none"> Aluminum hatch with normal wear
Pumps and Motors	5.0	25%	1.25	<ul style="list-style-type: none"> Pump 1: 54% below design capacity Pump 2: 49% below design capacity
Bypass	1.0	10%	0.10	
Odor Control	1.0	10%	0.10	<ul style="list-style-type: none"> Calcium Nitrate
Overall Condition Rating	--	100%	3.01	

Overall Comments:



Corrosion on piping



Wet well vent rusted comm tower base. Safety concern.

Inspection Date: 8/25/2020

Facility Information: Wet Well

Capacity (Gal):	12,250
Shape:	Circular
Bottom Elevation (ft):	113.30
Height (ft):	14.5
Width (ft):	N/A
Length/Diameter (ft):	6

Facility Information: Pumps

	Pump #1	Pump #2
Manufacturer:	Gorman-Rupp	Gorman-Rupp
Horse Power:	25.0	25.0
Model:	T3	T3
Design Capacity (gpm):	200	200
Design Head (ft):	114	114
Pump RPM:	2,200	2,200



Condition Rating

1	2	3	4	5
Very Good	Good	Fair	Poor	Very Poor

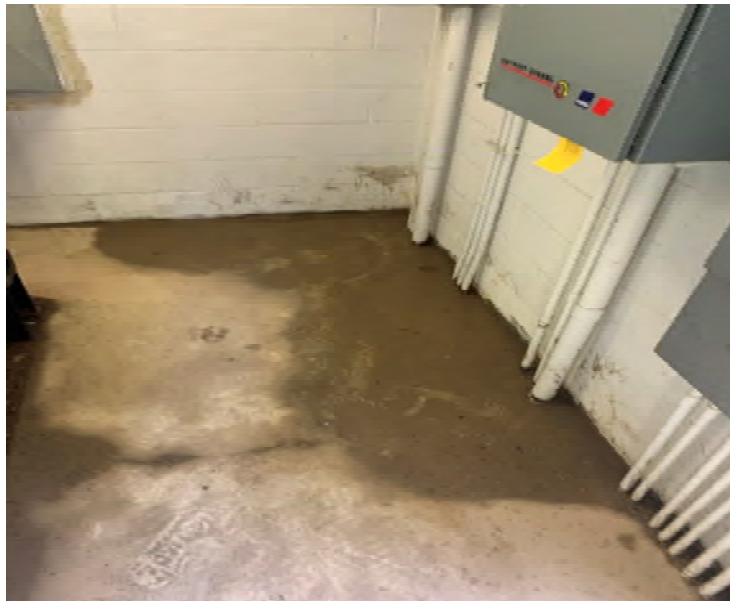
CONDITION ASSESSMENT

Component Group	Condition Rating (A)	Weight Factor (B)	Weighted Rating (A x B / 100)	Comments
Site - Drainage, Access Drive, Security, Fencing	3.0	5%	0.15	<ul style="list-style-type: none"> Parking area would benefit from filling depressions with gravel Fair amount of standing water on site and inside structure
Instrumentation and Electrical	4.3	25%	1.08	<ul style="list-style-type: none"> Phase voltage alarms - poor power quality Class 1 Division 1 hazardous area - existing equipment is not explosion-proof. Rust on generator base Water damage on floor under electrical panels ATS transferring issues due to product age
Wet Well	1.6	25%	0.40	<ul style="list-style-type: none"> Minor leakage and corrosion on piping
Pumps and Motors	3.5	25%	0.88	<ul style="list-style-type: none"> Pump 1: 23% below design capacity Pump 2: 12% below design capacity
Bypass	1.0	10%	0.10	
Odor Control	N/A	10%	0.00	<ul style="list-style-type: none"> No odor control present at this station
Overall Condition Rating	--	100%	2.61	

Overall Comments:



Standing water on site



Water damage on floor under electrical building

APPENDIX B

Lift Station Electrical Assessment Report



Cumberland County/NORCRESS Lift Stations Electrical Condition Assessment Report

Prepared For:

Cumberland County/NORCRESS & Freese and Nichols

Prepared By:

Coffman Engineers

Evaluation Date:

August 26, 2020

Report Date:

September 16, 2020

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Executive Summary

The Northern Cumberland Regional Sewer System (NORCRESS) is a partnership between Cumberland County and the towns of Wade, Godwin, and Falcon to provide sanitary sewer to residents in this area. These systems have been in service since the early 2000s and serve around 400 customers. Cumberland County owns the collection systems and contracts Fayetteville Public Works Commission (PWC) to perform operation and maintenance on the system.

The project is to provide Cumberland County/NORCRESS with a sewer evaluation that includes condition assessments of four wastewater lift stations. In this section of the report, the lift stations' condition assessment for the electrical system is described and recommendations are provided.

The electrical evaluation of the four Cumberland County/NORCRESS lift stations is rated in very poor condition: rehabilitation or replacement required due to NFPA 820 Standard for Fire Protection in Wastewater Treatment and Collection Facilities requirements. NFPA 820 requires all electrical equipment located within the same room as an above-grade wastewater pumping station to be rated for Class I Division 2 hazardous areas. The current electrical equipment is not properly rated for the hazardous area and poses a significant safety hazard. It is recommended to upgrade the electrical equipment including the backup generator to be outdoor NEMA 3R rated and placed outside of the lift station building.

Electrical System Review

The Cumberland County/NORCRESS lift stations (LS) consist of four county owned lift stations: two located in Wade, one located in Godwin, and one located in Falcon, North Carolina. The four lift stations were built in the early 2000s and are approximately 15 years old; electrical equipment has a typical lifespan of 25 years. As part of the county's sewer evaluation project, a condition risk assessment of the four lift stations was performed. The scope of the evaluation was to provide assessment of the electrical system, meet with Operations and Maintenance (O&M) staff to understand system history and issues, and to provide recommendations and replacement cost estimates.

Each of the four lift stations' electrical systems are similar in design. The existing electrical distribution system to each lift station includes two incoming power sources: a 120/240V, 3 phase, 4 wire utility service and a 120/240V, 3 phase, 4 wire Detriot Diesel standby generator. Duke Energy provides utility power to Wade 1 LS, Wade 2 LS, and Falcon LS while South River EMC provides power to Godwin LS. The two power sources are connected to a Detriot Diesel automatic transfer switch (ATS) which provides power to the lift station. A disconnect switch is provided between the utility meter and the ATS. The electrical equipment for the lift stations is located within the building that houses the wet well and pumps. The existing electrical enclosures are NEMA 1 and are rated for unclassified areas. Refer to Appendix 12 through Appendix 15 for the lift stations' electrical record drawings.

The corrosive environment created by the sewage gas from the wet well has caused damage to the electrical equipment and the electronics of the generator, ATS, and controller. As well, water damage was found at several of the lift stations. Damage included generator failures and rust, automatic transfer switch issues, and corroded cables. Several of the Cumberland County/NORCRESS automatic transfer switches no longer automatically operate and require manual operation. The wet well vent at Wade 2 lift station rusted the communications tower base and PWC indicated the tower has fallen over in the past. The generator and Automatic Transfer Switch at Wade 1 have been out of service for several years.

NFPA 820 Standard for Fire Protection in Wastewater Treatment and Collection Facilities is one of the governing codes for wastewater lift stations. NFPA 820 provides the requirements for collection systems and describes that the entire room of an above-grade wastewater pumping station is classified as a Class I Division 2 hazardous area. Because these lift stations were built in the early 2000s, the 1999 version of the NFPA 820 was checked and verified to have the same classification requirement. With this hazardous classification, all electrical equipment within the lift station buildings is required to be explosion proof. The existing electrical equipment at the Cumberland County/NORCRESS lift stations is not explosion proof and not properly rated for the hazardous area. Therefore, the electrical evaluation is rated in very poor condition: rehabilitation or replacement required. Please refer to Appendix 10 for additional information regarding NFPA 820.

OSHA and NFPA 70E Standard for Electrical Safety in the Workplace both describe the requirements for marking electrical equipment with arc flash hazard warning labels. The four Cumberland County/NORCRESS lift stations did not have arc flash labels present.

PWC indicated the TCU controllers for the SCADA system have been failing at the lift stations which leaves operators without remote control or alarms. As well, Operations and Maintenance described communication issues with the line of sight for the lift stations' antennas.

Please refer to Appendix 1 through Appendix 5 for the condition assessment scoring guidelines and the individual lift stations' electrical condition assessments.

Recommendations

In this report, issues concerning the lift stations' electrical systems and SCADA systems were presented. The Electrical System Review section should be referenced for detailed information. This section provides recommendations to remedy the described issues. Please refer to Appendix 6 through Appendix 9 for opinions of probable construction costs for the individual lift stations.

1. **Electrical System**

The lift stations' electrical equipment is located within a Class I Division 2 hazardous area as defined by NFPA 820. The existing electrical equipment is not explosion-proof and not properly rated for the hazardous area. This presents a significant safety concern. It is recommended to upgrade all of the electrical equipment including the backup generator to be outdoor NEMA 3R rated and placed outside of the lift station building. This may require additional land and fencing to provide ample space and protection of outdoor equipment; this cost is not included in the Opinion of Probable Construction Cost (refer to Appendices 6 through 9). Any equipment that must remain indoors (e.g. unit heaters, exhaust fans, and the indoor building lights) should be replaced with an explosion-proof model. Conduit leading to a control or junction box in the hazardous area must have seal-offs. The recommended design for the new outdoor electrical equipment would include a metal H-frame with an aluminum weatherhood to provide weather protection and structural support for the outdoor electrical equipment. Underneath the weatherhood, weatherproof lighting would be used to provide ample lighting. The new outdoor H-frame would house the utility disconnect switch, generator disconnect switch, automatic transfer switch, main distribution panel, and pump control panel.

2. **Arc Flash Hazard Labels**

As described above, the four lift stations did not have arc flash labels present. It is recommended to perform an arc flash study and place arc flash labels on the electrical equipment to meet OSHA and NFPA 70E requirements.

3. **SCADA**

The previous section described frequent TCU controller failures at the lift stations. When the controllers fail, the SCADA system loses remote control and alarming of the lift station. Repairs to the TCU controllers were estimated to be between \$2,000 and \$3,000. The SCADA recommendations are as follows: convert the TCU controllers to Rockwell PLCs with cell modem communication. Place the new control panel outside on the recommended H-frame as described above.

4. **Site Lighting**

In order to improve visibility at night, it is recommended to add site lighting at the lift station sites.

Appendix 1. Lift Station Condition Assessment Scoring Guidelines

Scoring Guidelines	
1	Very Good condition; no improvements recommended to maintain function
2	Good condition; minor improvements recommended to maintain function
3	Fair condition; improvements recommended to improve performance or efficiency
4	Poor condition; improvements recommended to maintain reliability
5	Very Poor condition; rehabilitation or replacement requirement

Appendix 2. Wade 1 Condition Assessment – Electrical

Facility Information				
Lift Station Name		Wade 1 Lift Station		
Inspected By		James Chen and Chandler Hershberger		
Inspection Date		8/26/2020		
Address		Wade, NC		
Year in service		Approximately 2003-2005		
Monitoring (SCADA)		Monitored by SCADA		
Generator type (on-site/portable)		On-site diesel generator		
Condition Assessment				
Component Group	Item	Indiv. Score	Overall Score	Comments
Site	Site Drainage			
	Security/Fencing			
	Adequate Lighting	3		A pole light would increase visibility at night
	Access			
	Pavement Condition/Width/Parking			
	Potable Water			
Instrumentation and Electrical	Monitoring (SCADA)	3	5	
	Alarms	3		
	Generator	5		Class 1 Division 2 hazardous area – existing equipment is not explosion-proof. Out of service for several years
	Panel	5		Class 1 Division 2 hazardous area - existing equipment is not explosion-proof
	Back-up Power	5		ATS out of service for several years - part sewage gas, part product issues
	MCC	N/A		N/A
	Cables	3		

Appendix 3. Wade 2 Condition Assessment – Electrical

Facility Information				
Lift Station Name		Wade 2 Lift Station		
Inspected By		James Chen and Chandler Hershberger		
Inspection Date		8/26/2020		
Address		Wade, NC		
Year in service		Approximately 2003-2005		
Monitoring (SCADA)		Monitored by SCADA		
Generator type (on-site/portable)		On-site diesel generator		
Condition Assessment				
Component Group	Item	Indiv. Score	Overall Score	Comments
Site	Site Drainage			
	Security/Fencing			
	Adequate Lighting	3		A pole light would increase visibility at night
	Access			
	Pavement Condition/Width/Parking			
	Potable Water			
Instrumentation and Electrical	Monitoring (SCADA)	5	5	Wet well vent rusted comm tower base - safety concern, tower has fallen over in the past
	Alarms	3		
	Generator	5		Class 1 Division 2 hazardous area – existing equipment is not explosion-proof. Sewage gas causing generator failure and rust
	Panel	5		Class 1 Division 2 hazardous area - existing equipment is not explosion-proof
	Back-up Power	5		ATS needs manual resetting and ATS does not show source
	MCC	N/A		N/A
	Cables	5		Corrosion damage from sewage gas

Appendix 4. Godwin Condition Assessment – Electrical

Facility Information				
Lift Station Name		Godwin Lift Station		
Inspected By		James Chen and Chandler Hershberger		
Inspection Date		8/26/2020		
Address		Godwin, NC		
Year in service		Approximately 2003-2005		
Monitoring (SCADA)		Monitored by SCADA		
Generator type (on-site/portable)		On-site diesel generator		
Condition Assessment				
Component Group	Item	Indiv. Score	Overall Score	Comments
Site	Site Drainage			
	Security/Fencing			
	Adequate Lighting	3		A pole light would increase visibility at night
	Access			
	Pavement Condition/Width/Parking			
	Potable Water			
Instrumentation and Electrical	Monitoring (SCADA)	4	5	
	Alarms	4		Phase voltage alarms - poor power quality
	Generator	5		Class 1 Division 2 hazardous area – existing equipment is not explosion-proof. Rust on generator base
	Panel	5		Class 1 Division 2 hazardous area - existing equipment is not explosion-proof. Water damage on floor under panels
	Back-up Power	5		ATS transferring issues - due to product quality and age
	MCC	N/A		N/A
	Cables	3		

Appendix 5. Falcon Condition Assessment – Electrical

Facility Information				
Lift Station Name		Falcon Lift Station		
Inspected By		James Chen and Chandler Hershberger		
Inspection Date		8/26/2020		
Address		Falcon, NC		
Year in service		Approximately 2003-2005		
Monitoring (SCADA)		Monitored by SCADA		
Generator type (on-site/portable)		On-site diesel generator		
Condition Assessment				
Component Group	Item	Indiv. Score	Overall Score	Comments
Site	Site Drainage			
	Security/Fencing			
	Adequate Lighting	3		A pole light would increase visibility at night
	Access			
	Pavement Condition/Width/Parking			
	Potable Water			
Instrumentation and Electrical	Monitoring (SCADA)	4	5	Rust at the base of the comm tower. PWC reported Falcon has the most trouble with SCADA communication
	Alarms	3		
	Generator	5		Class 1 Division 2 hazardous area – existing equipment is not explosion-proof
	Panel	5		Class 1 Division 2 hazardous area - existing equipment is not explosion-proof. Water damage on floor under panels
	Back-up Power	5		Class 1 Division 2 hazardous area – existing equipment is not explosion-proof
	MCC	N/A		N/A
	Cables	3		

Appendix 6. Wade 1 Opinion of Probable Construction Cost

PROJECT NAME		Cumberland County/NORCRESS Wastewater Lift Stations Condition Assessment - Wade 1		DATE	9/16/2020	
CLIENT		Cumberland County/NORCRESS		GROUP		
% SUBMITTAL		Electrical Condition Assessment Report		PM	Chandler Hershberger	
ESTIMATED BY		QC CHECKED BY			Coffman PROJECT NUMBER	
Chandler Hershberger		James Chen			201523	
ITEM	DESCRIPTION		QUANTITY	UNIT	UNIT PRICE	TOTAL
Electrical System						
1	Demo Existing Electrical		1	LS	\$4,000	\$4,000
2	New 40kW Generator & ATS		1	LS	\$36,740	\$36,740
3	Incoming Power Wiring		1	LS	\$500	\$500
4	Underground Service		1	LS	\$3,500	\$3,500
5	Equipment Rack with Aluminum Weatherhood		1	LS	\$13,000	\$13,000
6	Panelboard 120/240V, 225A NEMA 3R		1	EA	\$500	\$500
7	Disconnect Switch 200A NEMA 3R for utility feed		1	EA	\$400	\$400
8	Disconnect Switch 200A NEMA 3R for generator		1	EA	\$400	\$400
9	Miscellaneous Wiring		1	LS	\$4,200	\$4,200
10	Explosion Proof Lights		4	EA	\$1,700	\$6,800
11	Explosion Proof Exhaust Fan		1	EA	\$1,400	\$1,400
12	Explosion Proof Unit Heater		1	EA	\$2,700	\$2,700
Arc Flash Hazard Labels						
13	Arc Flash Study		1	LS	\$2,000	\$2,000
SCADA						
14	Rockwell PLC Upgrade		1	LS	\$60,000	\$60,000
Site Lighting						
15	Site Lighting with Aluminum Pole		1	EA	\$3,150	\$3,150
Notes: 1. OPCC does not include costs associated with engineering fees, permits, surveying, etc. 2. OPCC does not include the cost of a new or upgraded electrical service from the local utility company.			SUBTOTAL \$139,290			
			MOBILIZATION 5% \$ 6,965			
			SUBTOTAL \$146,255			
			CONTINGENCY 20% \$29,251			
PROJECT TOTAL (2020 COSTS)						\$175,600

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Appendix 7. Wade 2 Opinion of Probable Construction Cost

PROJECT NAME		Cumberland County/NORCRESS Wastewater Lift Stations Condition Assessment - Wade 2		DATE	9/16/2020	
CLIENT		Cumberland County/NORCRESS		GROUP		
% SUBMITTAL		Electrical Condition Assessment Report		PM	Chandler Hershberger	
ESTIMATED BY		QC CHECKED BY			Coffman PROJECT NUMBER	
Chandler Hershberger		James Chen			201523	
ITEM	DESCRIPTION		QUANTITY	UNIT	UNIT PRICE	TOTAL
Electrical System						
1	Demo Existing Electrical		1	LS	\$4,000	\$4,000
2	New 55kW Generator & ATS		1	LS	\$40,425	\$40,425
3	Incoming Power Wiring		1	LS	\$500	\$500
4	Underground Service		1	LS	\$3,500	\$3,500
5	Equipment Rack with Aluminum Weatherhood		1	LS	\$13,000	\$13,000
6	Panelboard 120/240V, 400A NEMA 3R		1	EA	\$600	\$600
7	Disconnect Switch 400A NEMA 3R for utility feed		1	EA	\$1,200	\$1,200
8	Disconnect Switch 400A NEMA 3R for generator		1	EA	\$1,200	\$1,200
9	Miscellaneous Wiring		1	LS	\$4,200	\$4,200
10	Explosion Proof Lights		4	EA	\$1,700	\$6,800
11	Explosion Proof Exhaust Fan		1	EA	\$1,400	\$1,400
12	Explosion Proof Unit Heater		1	EA	\$2,700	\$2,700
Arc Flash Hazard Labels						
13	Arc Flash Study		1	LS	\$2,000	\$2,000
SCADA						
14	Rockwell PLC Upgrade		1	LS	\$60,000	\$60,000
Site Lighting						
15	Site Lighting with Aluminum Pole		1	EA	\$3,150	\$3,150
Notes: 1. OPCC does not include costs associated with engineering fees, permits, surveying, etc. 2. OPCC does not include the cost of a new or upgraded electrical service from the local utility company.			SUBTOTAL \$144,675			
			MOBILIZATION 5% \$7,234			
			SUBTOTAL \$151,909			
			CONTINGENCY 20% \$30,382			
PROJECT TOTAL (2020 COSTS)						\$182,300

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Appendix 8. Godwin Opinion of Probable Contruction Cost

PROJECT NAME		Cumberland County/NORCRESS Wastewater Lift Stations Condition Assessment - Godwin		DATE	9/16/2020	
CLIENT		Cumberland County/NORCRESS		GROUP		
% SUBMITTAL		Electrical Condition Assessment Report		PM	Chandler Hershberger	
ESTIMATED BY		QC CHECKED BY			Coffman PROJECT NUMBER	
Chandler Hershberger		James Chen			201523	
ITEM	DESCRIPTION		QUANTITY	UNIT	UNIT PRICE	TOTAL
Electrical System						
1	Demo Existing Electrical		1	LS	\$4,000	\$4,000
2	New 55kW Generator & ATS		1	LS	\$40,425	\$40,425
3	Incoming Power Wiring		1	LS	\$500	\$500
4	Underground Service		1	LS	\$3,500	\$3,500
5	Equipment Rack with Aluminum Weatherhood		1	LS	\$13,000	\$13,000
6	Panelboard 120/240V, 225A NEMA 3R		1	EA	\$500	\$500
7	Disconnect Switch 200A NEMA 3R for utility feed		1	EA	\$400	\$400
8	Disconnect Switch 200A NEMA 3R for generator		1	EA	\$400	\$400
9	Miscellaneous Wiring		1	LS	\$4,200	\$4,200
10	Explosion Proof Lights		4	EA	\$1,700	\$6,800
11	Explosion Proof Exhaust Fan		1	EA	\$1,400	\$1,400
12	Explosion Proof Unit Heater		1	EA	\$2,700	\$2,700
Arc Flash Hazard Labels						
13	Arc Flash Study		1	LS	\$2,000	\$2,000
SCADA						
14	Rockwell PLC Upgrade		1	LS	\$60,000	\$60,000
Site Lighting						
15	Site Lighting with Aluminum Pole		1	EA	\$3,150	\$3,150
Notes: 1. OPCC does not include costs associated with engineering fees, permits, surveying, etc. 2. OPCC does not include the cost of a new or upgraded electrical service from the local utility company.			SUBTOTAL \$142,975			
			MOBILIZATION 5% \$7,149			
			SUBTOTAL \$150,124			
			CONTINGENCY 20% \$30,025			
PROJECT TOTAL (2020 COSTS)						\$180,200

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

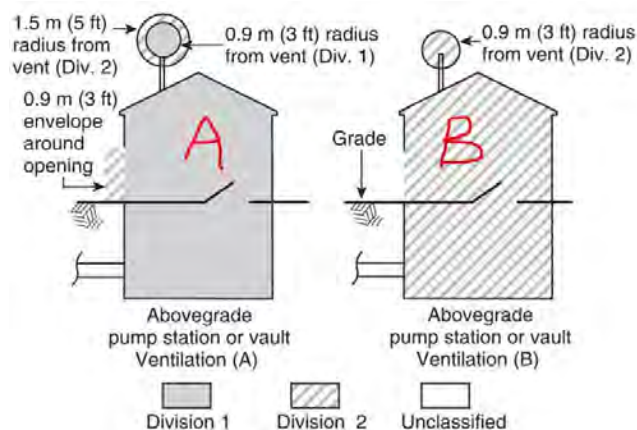
Appendix 9. Falcon Opinion of Probable Construction Cost

PROJECT NAME		Cumberland County/NORCRESS Wastewater Lift Stations Condition Assessment - Falcon		DATE	9/16/2020	
CLIENT		Cumberland County/NORCRESS		GROUP		
% SUBMITTAL		Electrical Condition Assessment Report		PM	Chandler Hershberger	
ESTIMATED BY		QC CHECKED BY			Coffman PROJECT NUMBER	
Chandler Hershberger		James Chen			201523	
ITEM	DESCRIPTION		QUANTITY	UNIT	UNIT PRICE	TOTAL
Electrical System						
1	Demo Existing Electrical		1	LS	\$4,000	\$4,000
2	New 55kW Generator & ATS		1	LS	\$40,425	\$40,425
3	Incoming Power Wiring		1	LS	\$500	\$500
4	Underground Service		1	LS	\$3,500	\$3,500
5	Equipment Rack with Aluminum Weatherhood		1	LS	\$13,000	\$13,000
6	Panelboard 120/240V, 400A NEMA 3R		1	EA	\$600	\$600
7	Disconnect Switch 400A NEMA 3R for utility feed		1	EA	\$1,200	\$1,200
8	Disconnect Switch 400A NEMA 3R for generator		1	EA	\$1,200	\$1,200
9	Miscellaneous Wiring		1	LS	\$4,200	\$4,200
10	Explosion Proof Lights		4	EA	\$1,700	\$6,800
11	Explosion Proof Exhaust Fan		1	EA	\$1,400	\$1,400
12	Explosion Proof Unit Heater		1	EA	\$2,700	\$2,700
Arc Flash Hazard Labels						
13	Arc Flash Study		1	LS	\$2,000	\$2,000
SCADA						
14	Rockwell PLC Upgrade		1	LS	\$60,000	\$60,000
Site Lighting						
15	Site Lighting with Aluminum Pole		1	EA	\$3,150	\$3,150
Notes: 1. OPCC does not include costs associated with engineering fees, permits, surveying, etc. 2. OPCC does not include the cost of a new or upgraded electrical service from the local utility company.			SUBTOTAL \$144,675			
			MOBILIZATION 5% \$7,234			
			SUBTOTAL \$151,909			
			CONTINGENCY 20% \$30,382			
PROJECT TOTAL (2020 COSTS)						\$182,300

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Appendix 10. NFPA 820 – Collection Systems

Row	Line	Location and Function	Fire and Explosion Hazard	Ventilation	Extent of Classified Area	NEC-Area Electrical Classification (All Class I, Group D)	Material of Construction for Buildings or Structures	Fire Protection Measures
19	a	ABOVEGRADE WASTEWATER PUMPING STATION Pump room not physically separated from wet well; pumping of wastewater from a sanitary or combined sewer system through closed pumps and pipes	Possible ignition of flammable gases and floating flammable liquids	A	Entire space or room	Division 1	NC	FE
	b			B		Division 2	NC, LC, or LFS	



Note: The following codes are used in this table:

A: No ventilation or ventilated at less than 12 air changes per hour

B: Continuously ventilated at 12 changes per hour

C: Continuously ventilated at six air changes per hour

CGD: Combustible gas detection system

D: No ventilation or ventilated at less than six air changes per hour

FAS: Fire alarm system

FE: Portable fire extinguisher

LC: Limited-combustible material

LFS: Low flame spread index material

N/A: Not applicable

NC: Noncombustible material

NEC: In accordance with *NFPA 70*

NNV: Not normally ventilated

NR: No requirement

^aThe "Row" and "Line" columns are used to refer to specific figures in A.4.2 and specific requirements for each location and function.

^bThis column indicates the ventilation requirements for processes. Additional ventilation requirements are provided in Chapter 9. Ventilation signaling and alarm requirements are provided in Chapter 7.

^cThis column indicates the materials of construction for processes. Materials of construction for buildings in which these processes are housed are in accordance with the applicable building code and construction requirements provided in Chapter 8.

Appendix 11. Meeting Minutes

Date: 08/27/2020

Mr. Scott Haberstroh
Freese and Nichols Inc.
1017 Main Campus Dr #1200
Raleigh, NC 27606

Project: Cumberland County/NORCRESS Wastewater Lift Stations Condition Assessment
CEI Project # 201523

Subject: Condition Assessment Electrical Field Notes

Meeting Time: Wednesday, 08/26/2020 9:00AM

Meeting Venue:

Wade 1 Lift Station, Wade NC
Wade 2 Lift Station, Wade NC
Godwin Lift Station, Godwin NC
Falcon Lift Station, Falcon NC

Attendees:

Vance McGougan, PWC
Mike Wright, PWC
Scott Haberstroh, Freese and Nichols (FNI)
Logan Michaels, Freese and Nichols (FNI)
James Chen, Coffman Engineers (Coffman)
Chandler Hershberger, Coffman Engineers (Coffman)

Dear Scott:

Coffman performed an onsite condition assessment walkdown with PWC and FNI for the four Cumberland County/NORCRESS wastewater lift stations. Please refer to the below sections for detailed meeting minutes.

Meeting Discussion:

General:

1. PWC advised that the existing Cumberland County/NORCRESS lift stations were built around the same time in the early 2000s.
2. Lift stations' exhaust fans are controlled by the thermostat for temperature control and not necessarily used for hazardous declassification.
3. Photocells at the individual lift stations control the outdoor lighting.

4. PWC indicated pole area lighting would be desired for better visibility at night.
5. The corrosive environment in the lift stations has caused generator and automatic transfer switch failure and rust. Most of the automatic transfer switches do not automatically transfer and require manual transfer and resetting.
6. The lift station TCU controllers have been failing which is causing loss of control and alarming to the SCADA system. When a TCU controller fails, PWC estimated a repair cost of approximately \$2,000 to \$3,000.
7. PWC indicated a project to convert all of PWC lift stations' TCU controllers to Rockwell PLCs with cell modem communication. PWC estimated \$60,000 per site to perform this upgrade.

Wade 1:

8. The generator and automatic transfer switch have been out of service for several years. A bypass pump is brought to the lift station during power outages.

Wade 2:

9. The wet well vent rusted the communication tower base at Wade 2. PWC indicated the tower has fallen over.

Godwin:

10. PWC indicated Godwin does not have as many electrical issues as the other lift stations.
11. A phase voltage alarm frequently occurs for Godwin. PWC described this lift station has power quality issues.
12. The Falcon lift station's communication signal is sent to Godwin. If the Godwin tower goes down, the SCADA system will lose both the Godwin and Falcon lift stations.
13. Godwin showed signs of flooding. The electrical conduit through the floor and the generator base showed signs of rust. PWC indicated the flooded water leaks into wet well which then pumps the water out of the lift station.

Falcon:

14. Falcon showed signs of flooding. The electrical conduit through the floor, the generator base, and communication tower base showed signs of rust.
15. PWC detailed the Falcon lift station has the most trouble in regards to the SCADA system.

LEGEND

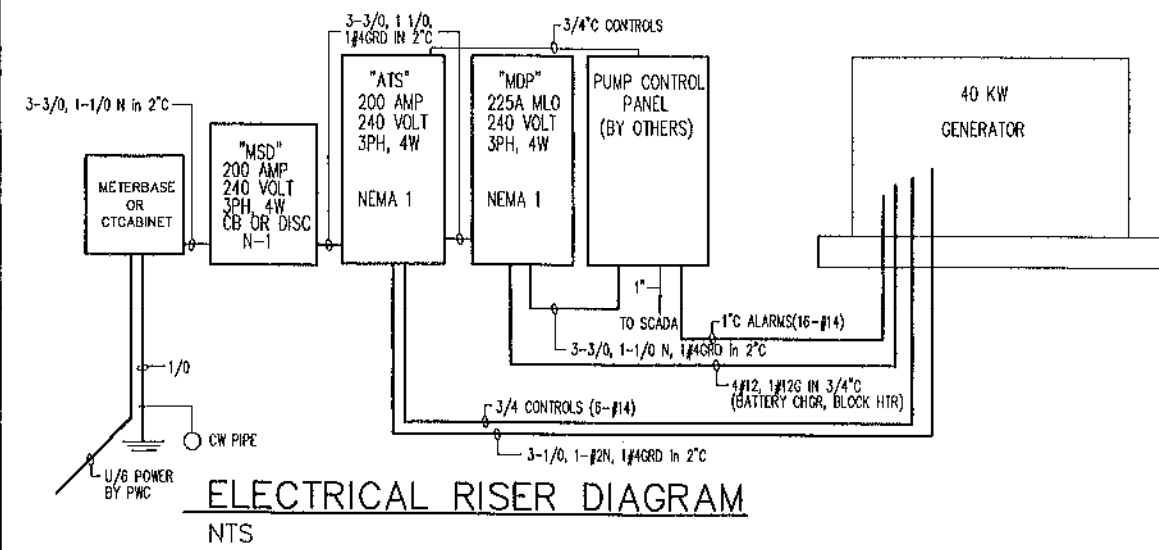
- GFI 20A, 120V, DUPLEX RECEPT, GFI
WP WEATHERPROOF
J JUNCTION BOX
S 20A, 120V, SINGLE POLE SWITCH
- DISCONNECT RATING AS SHOWN
POWER PANEL
AUTOMATIC TRANSFER SW
FLOW TRANSMITTER

PANEL TYPE: SQ D I-LINE TYPE HCM
VOLTS: 120/240
PHASE: 3 PHASE, 4 WIRE
30 KAIC

225 AMP MLO
"MDP"

PROVIDE GROUND BAR
NEMA 1 ENCLOSURE

W	LOAD DESCRIPTION	WIRE SIZE	BKR. SIZE	CKT. NO.	L1 L2 L3	CKT. NO.	BKR. SIZE	WIRE SIZE	LOAD DESCRIPTION	W
980	EXHAUST FAN / LOUVER	12	20	1		2		2/0	PUMP CONTROL PANEL	18600
984	LIGHTS	12	20	3		4	150	2/0	PUMP CONTROL PANEL	18600
3000	RECEPTACLES	12	20	5		6	3	2/0	PUMP CONTROL PANEL	18600
1500	GEN. BLOCK HEATER	12	20	7		8		10	UNIT HEATER	1666
400	GEN. BATTERY CHARGER	12	20	9		10	30/3	10	UNIT HEATER	1666
800	SCADA PANEL	12	20	11		12	3	10	UNIT HEATER	1666
300	EXTERIOR LIGHTS	12	20	13		14			SPACE	
	SPACE			15		16			SPACE	
	SPACE			17		18			SPACE	
				19		20				



ELECTRICAL RISER DIAGRAM
NTS

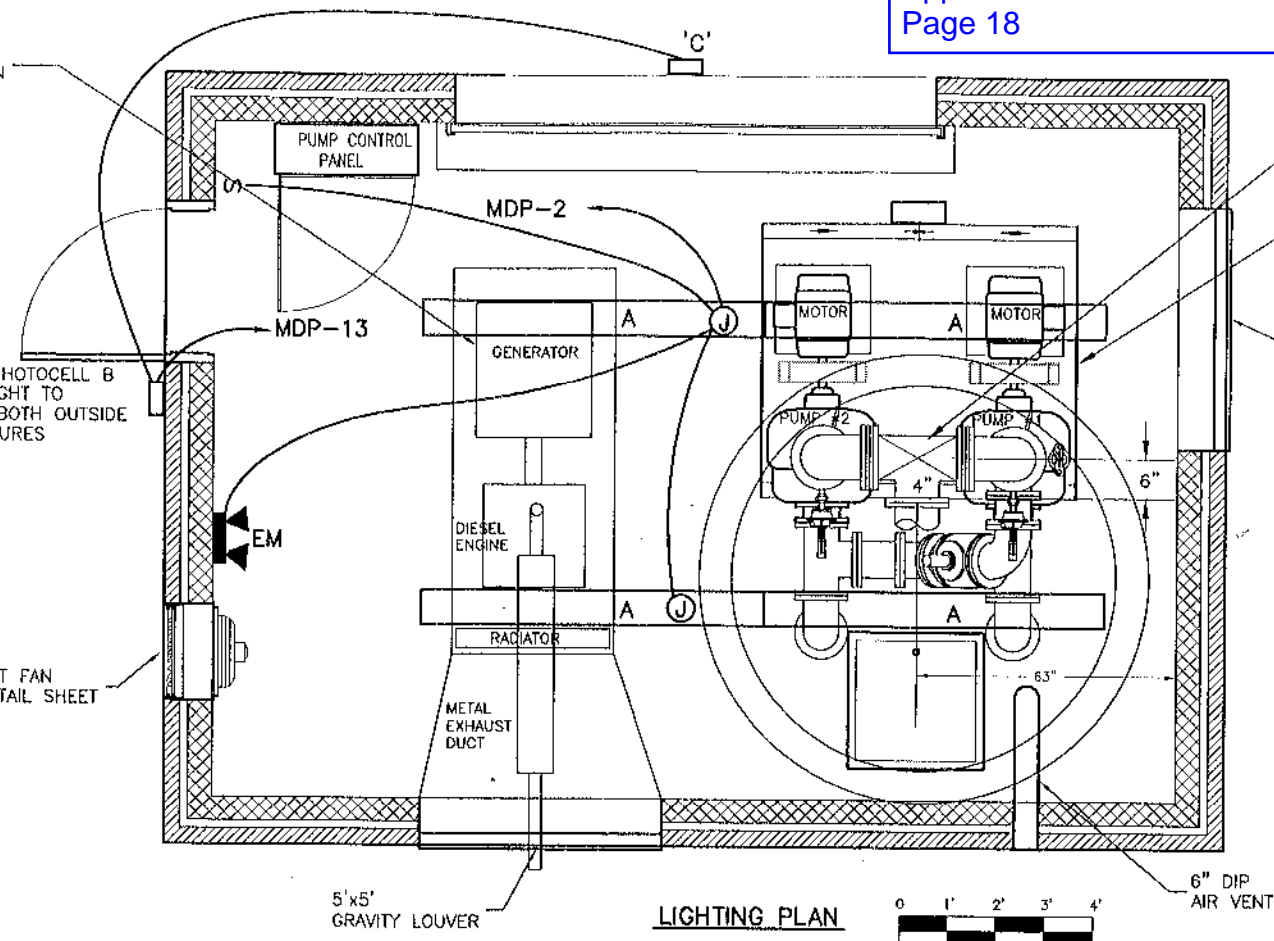
SYMBOL	MANUF.	CAT NO.	LAMPS	REMARKS
A	COLUMBIA	LU8-296H0-120	2-F96T12H0 (110 WATT)	PROVIDE SPACER BETWEEN LIGHT & CEILING
B	SPAULDING	WGSI-M100PS-MT	1-100WMH	MOUNT 10'0" AFG
C	SPAULDING	WGSI-M175-MT	1-175MH	MOUNT OVER DOOR 12'0" AFG
EM	PRESCOLITE	LMP-16	2-7.2W	MOUNT 10'0" AFF

H:\C00003\PROJECTS\ELECTRICAL\Wade 1 LS Electrical Record Drawing, 9/15/2003 8:54:34 AM, D:\Wade 1 LS Electrical Record Drawing\Wade 1 LS Electrical Record Drawing.dwg, 1/2

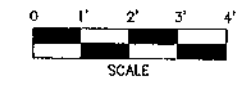
PROPOSED GENERATOR
MOUNTED ON 300 GALLON
FUEL TANK BASE

PROVIDE PHOTOCELL B
IN THIS LIGHT TO
CONTROL BOTH OUTSIDE
LIGHT FIXTURES

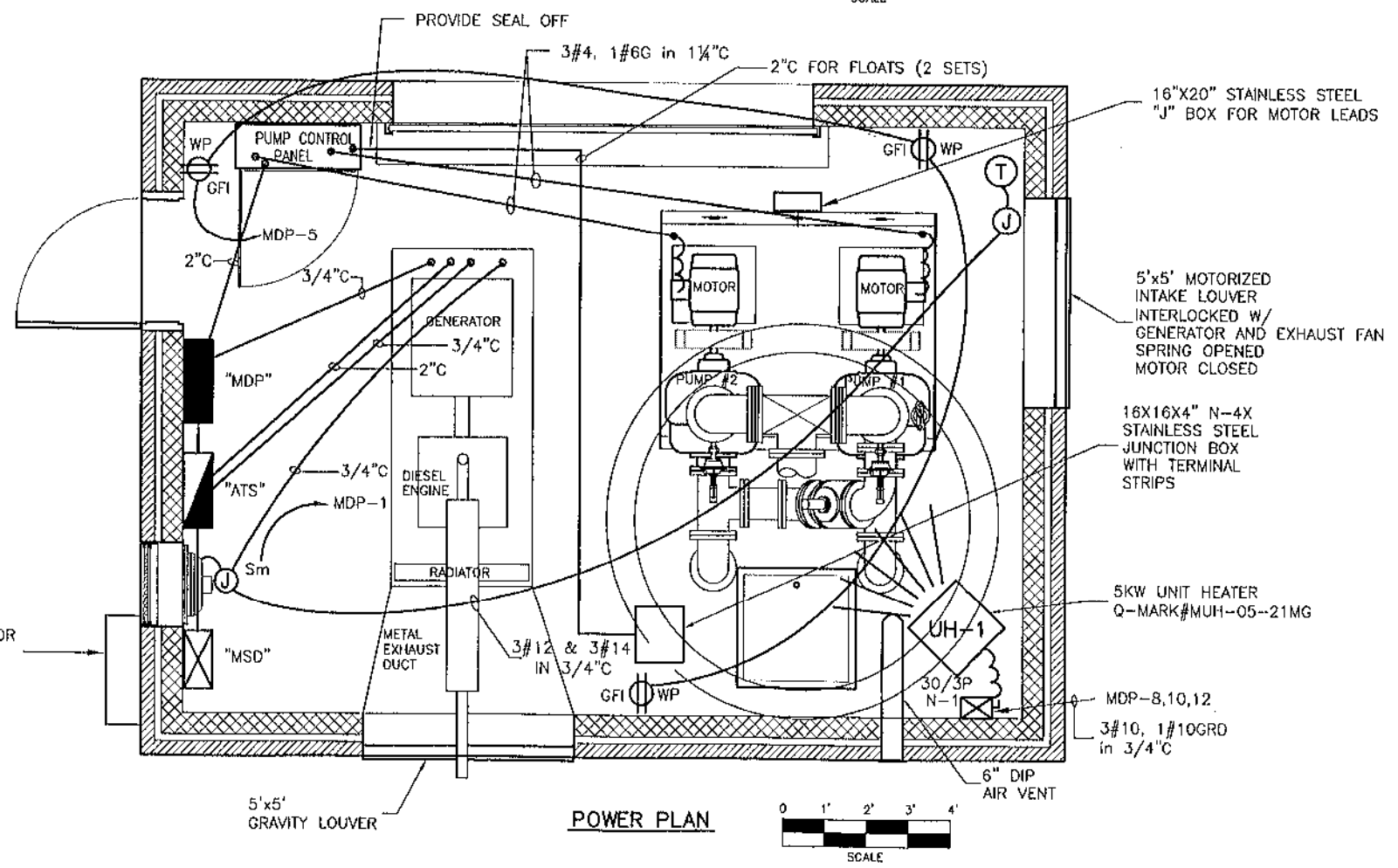
EXHAUST FAN
SEE DETAIL SHEET



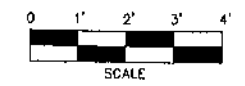
LIGHTING PLAN



NOTE: ELECTRICAL DESIGN
BY ALLEN TOWNSEND
PE 13797



POWER PLAN



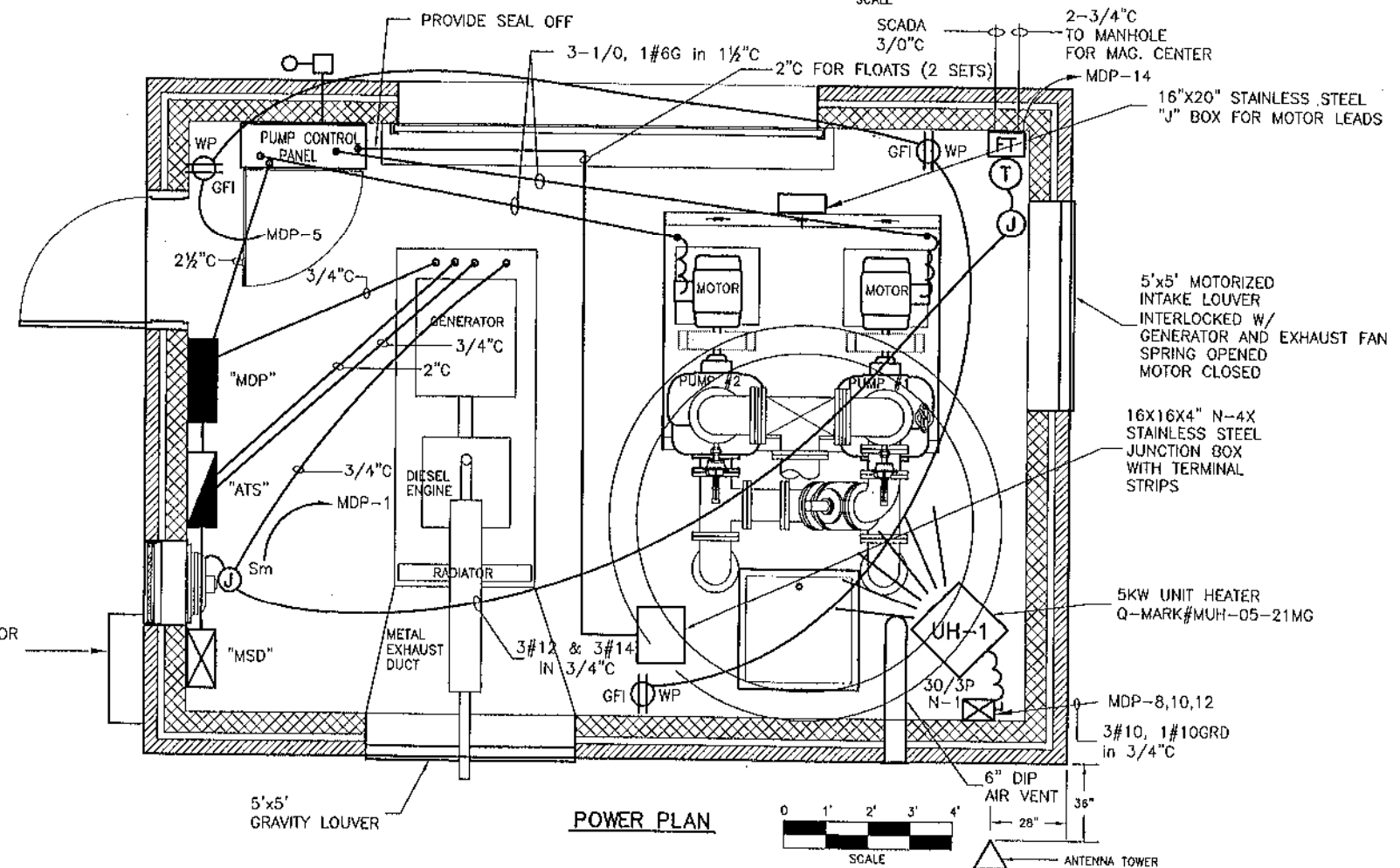
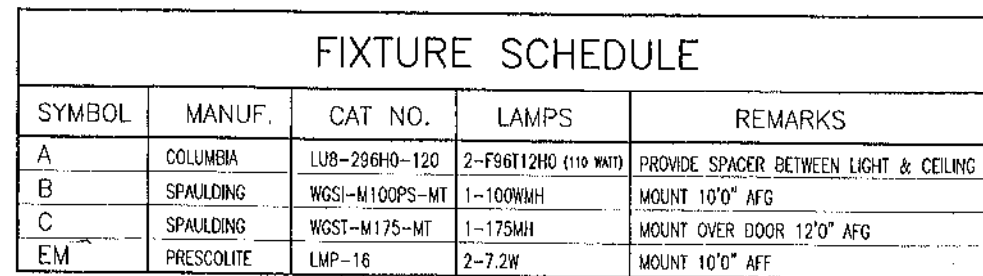
Hobbs, Upchurch & Associates, P.A.
Consulting Engineers
SOUTHERN PINES, NC - CHARLOTTE, NC
WCS HEAD, NC - RALEIGH, NC
MYRTLE BEACH, SC - BEAUFORT, SC
300 S.W. Broad Street, Southern Pines, North Carolina 28387
Phone: (910) 692-5615 - Fax: (910) 692-4795

PUMP STATIONS
FOR THE
NORCROSS WATER AND SEWER DISTRICT
CUMBERLAND COUNTY, NORTH CAROLINA
PUMP STATION W-1 POWER
AND LIGHTING PLANS

DATE:	DEC., 2003
DESIGNED:	DFW
DRAWN:	DFW
CHECKED:	KSL
SCALE:	SCALE
SHEET NO.	E1

DC-12470

PANEL TYPE: SQ D I-LINE TYPE HCM					400 AMP MLO					PROVIDE GROUND BAR				
VOLTS: 120/240					"MDP"					NEMA 1 ENCLOSURE				
PHASE: 3 PHASE, 4 WIRE														
42 KAIC														
W	LOAD DESCRIPTION	WIRE SIZE	BKR. SIZE	CKT. NO.	L1	L2	L3	CKT. NO.	BKR. SIZE	WIRE SIZE	LOAD DESCRIPTION	W		
980	EXHAUST FAN / LOUVER	12	20	1				2		250	PUMP CONTROL PANEL	34100		
984	LIGHTS	12	20	3				4	250	250	PUMP CONTROL PANEL	34100		
3000	RECEPTACLES	12	20	5				6	3	250	PUMP CONTROL PANEL	34100		
1500	GEN. BLOCK HEATER	12	20	7				8		10	UNIT HEATER	1666		
400	GEN. BATTERY CHARGER	12	20	9				10	30	10	UNIT HEATER	1666		
800	SCADA PANEL	12	20	11				12	3	10	UNIT HEATER	1666		
300	EXTERIOR LIGHTS	12	20	13				14	20	12	FLOWMETER	50		
	SPACE			15				16			SPACE			
	SPACE			17				18			SPACE			
				19				20						



DATE: DEC., 2003
DESIGNED:
DRAWN: DFW
CHECKED: KSL
SCALE:
SHEET NO. E2

LEGEND

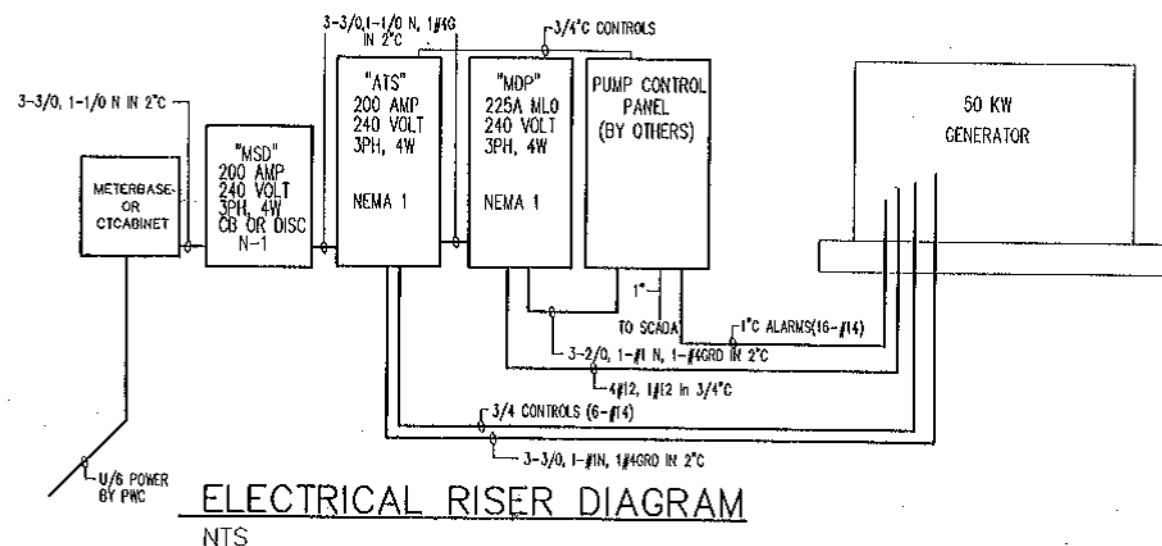
GFI	20A, 120V, DUPLEX RECEPT, GFI	DISCONNECT RATING AS SHOWN
WP	WEATHERPROOF	POWER PANEL
J	JUNCTION BOX	AUTOMATIC TRANSFER SW
S	20A, 120V, SINGLE POLE SWITCH	FLOW TRANSMITTER

PANEL TYPE: SQ D I-LINE TYPE HCM
VOLTS: 120/240
PHASE: 3 PHASE, 4 WIRE
30 KAIC

225 AMP MLO
"MDP"

PROVIDE GROUND BAR
NEMA 1 ENCLOSURE

W	LOAD DESCRIPTION	WIRE SIZE	BKR. SIZE	CKT. NO.	L1L2L3	CKT. NO.	BKR. SIZE	WIRE SIZE	LOAD DESCRIPTION	W
980	EXHAUST FAN / LOUVER	12	20	1		2		3/0	PUMP CONTROL PANEL	22900
984	LIGHTS	12	20	3		4	175	3/0	PUMP CONTROL PANEL	22900
3000	RECEPTACLES	12	20	5		6	3/0	3/0	PUMP CONTROL PANEL	22900
1500	GEN. BLOCK HEATER	12	20	7		8		10	UNIT HEATER	1666
400	GEN. BATTERY CHARGER	12	20	9		10	30	10	UNIT HEATER	1666
800	SCADA PANEL	12	20	11		12		10	UNIT HEATER	1666
300	EXTERIOR LIGHTS	12	20	13		14				
				15		16				
				17		18				
				19		20				

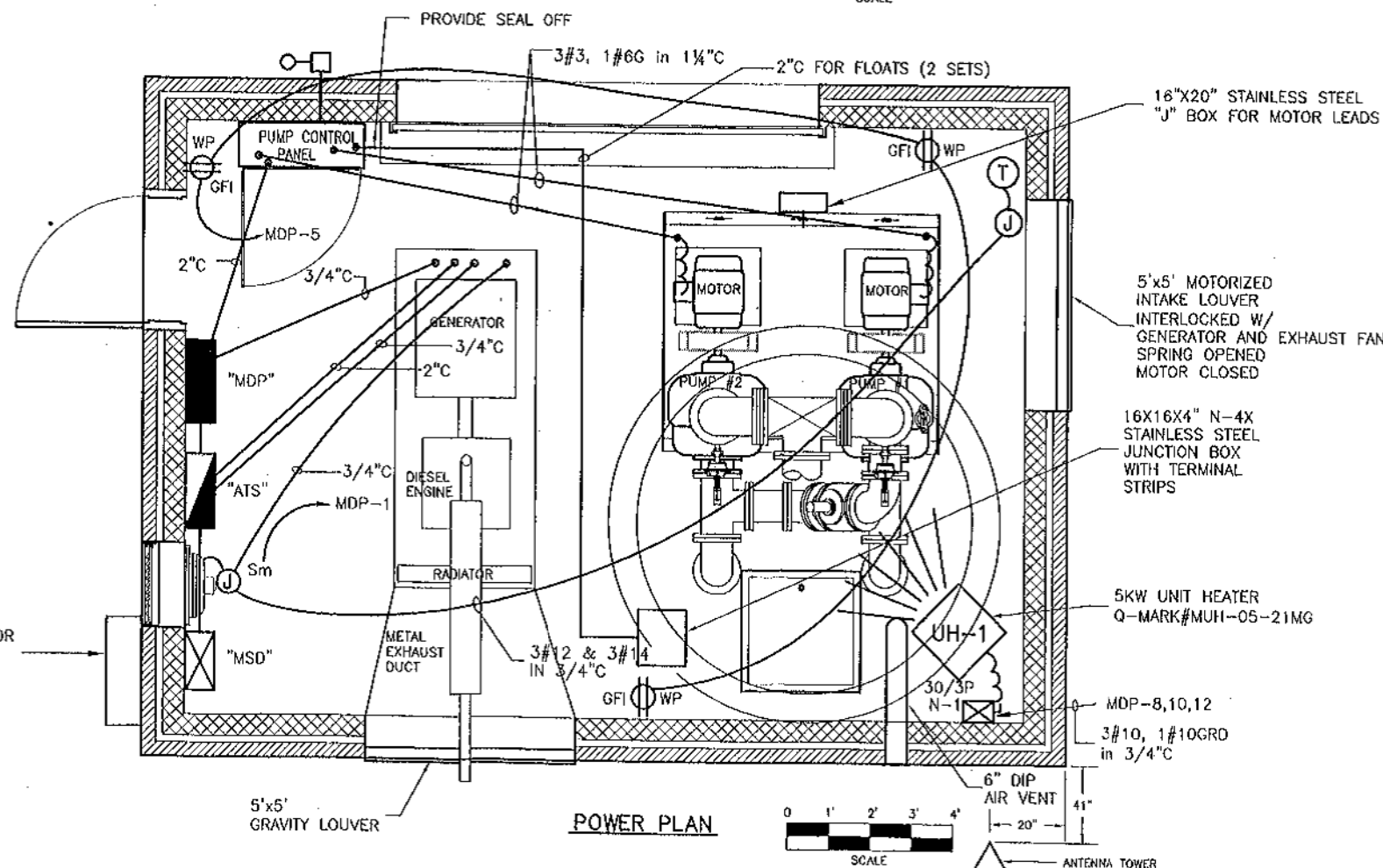
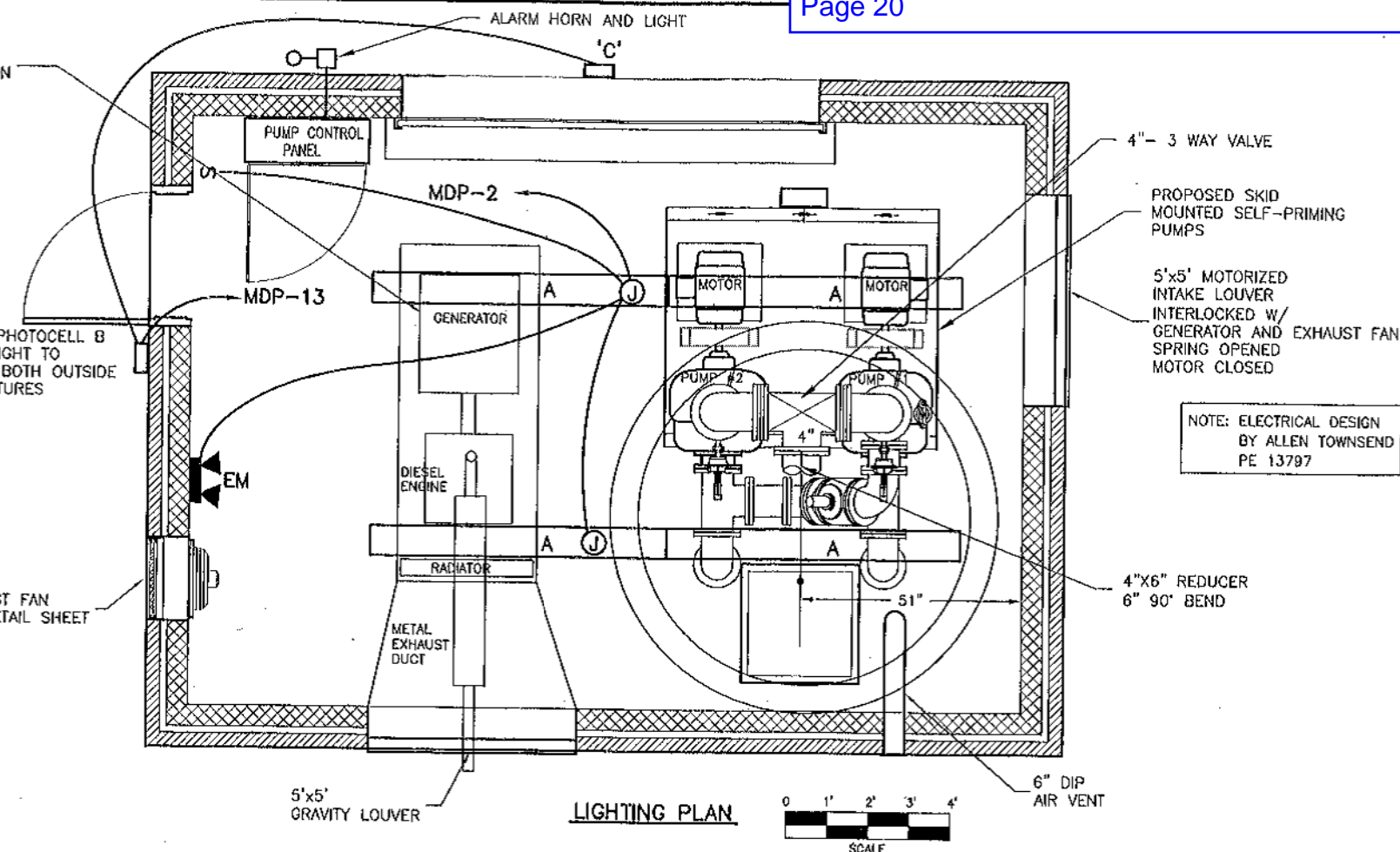


SYMBOL	MANUF.	CAT NO.	LAMPS	REMARKS
A	COLUMBIA	LU8-296H0-120	2-F96T12H0 (110 WATT)	PROVIDE SPACER BETWEEN LIGHT & CEILING
B	SPAULDING	WGS1-M100PS-MT	1-100WMMH	MOUNT 10'0" AFG
C	SPAULDING	WGS1-M175-MT	1-175MMH	MOUNT OVER DOOR 12'0" AFG
EM	PRESCOLITE	LMP-16	2-7.2W	MOUNT 10'0" AFF

PROPOSED GENERATOR
MOUNTED ON 300 GALLON
FUEL TANK BASE

PROVIDE PHOTOCELL B
IN THIS LIGHT TO
CONTROL BOTH OUTSIDE
LIGHT FIXTURES

EXHAUST FAN
SEE DETAIL SHEET



Hobbs, Upchurch & Associates, P.A.
Consulting Engineers

SOUTHERN PINES, NC - CHARLOTTE, NC
NAGS HEAD, NC - RALEIGH, NC
MYRTLE BEACH, SC - BEAUFORT, SC
300 S.W. Broad Street, Southern Pines, North Carolina 28387
Phone: (910) 892-5616 - Fax: (910) 892-4795

PUMP STATIONS
FOR THE
NORCROSS WATER AND SEWER DISTRICT
CUMBERLAND COUNTY, NORTH CAROLINA
PUMP STATION G-1 POWER
AND LIGHTING PLANS

DATE: DEC., 2003
DESIGNED: DFW
DRAWN: DFW
CHECKED: KSL
SCALE: SCALE
SHEET NO. E1

LEGEND

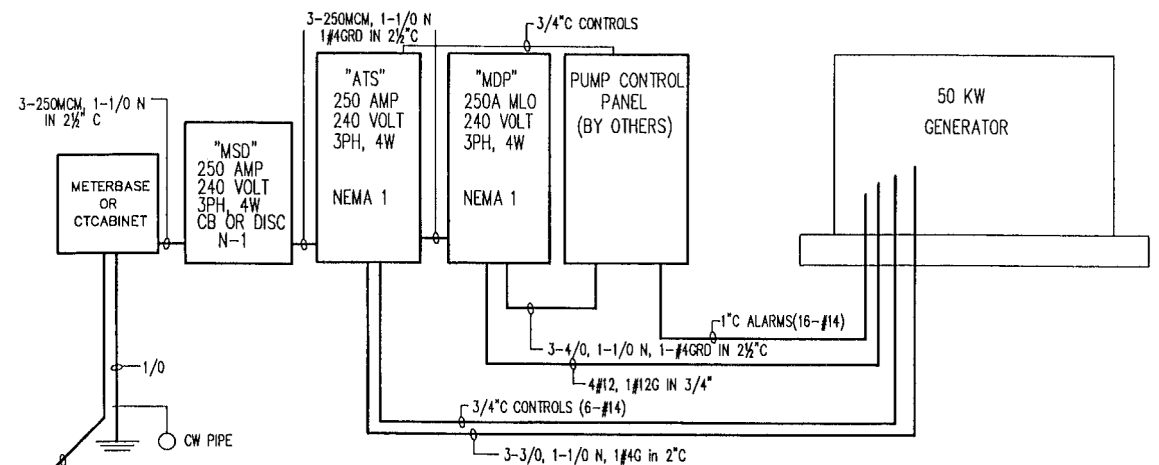
- GFI 20A, 120V, DUPLEX RECEPT, GFI
WP WEATHERPROOF
J JUNCTION BOX
S 20A, 120V, SINGLE POLE SWITCH
- DISCONNECT RATING AS SHOWN
POWER PANEL
AUTOMATIC TRANSFER SW
FLOW TRANSMITTER

PANEL TYPE: SQ D I-LINE TYPE HCM
VOLTS: 120/240
PHASE: 3 PHASE, 4 WIRE
30 KAIC

250 AMP MLO
"MDP"

PROVIDE GROUND BAR
NEMA 1 ENCLOSURE

W	LOAD DESCRIPTION	WIRE SIZE	BKR. SIZE	CKT. NO.	L1L2L3	CKT. NO.	BKR. SIZE	WIRE SIZE	LOAD DESCRIPTION	W
980	EXHAUST FAN / LOUVER	12	20	1		2		4/0	PUMP CONTROL PANEL	26600
984	LIGHTS	12	20	3		4		4/0	PUMP CONTROL PANEL	26600
3000	RECEPTACLES	12	20	5		6		4/0	PUMP CONTROL PANEL	26600
1500	GEN. BLOCK HEATER	12	20	7		8		10	UNIT HEATER	1666
400	GEN. BATTERY CHARGER	12	20	9		10		10	UNIT HEATER	1666
800	SCADA PANEL	12	20	11		12		10	UNIT HEATER	1666
300	EXTERIOR LIGHTS	12	20	13		14			SPACE	
				15		16			SPACE	
				17		18			SPACE	
				19		20				



ELECTRICAL RISER DIAGRAM
NTS

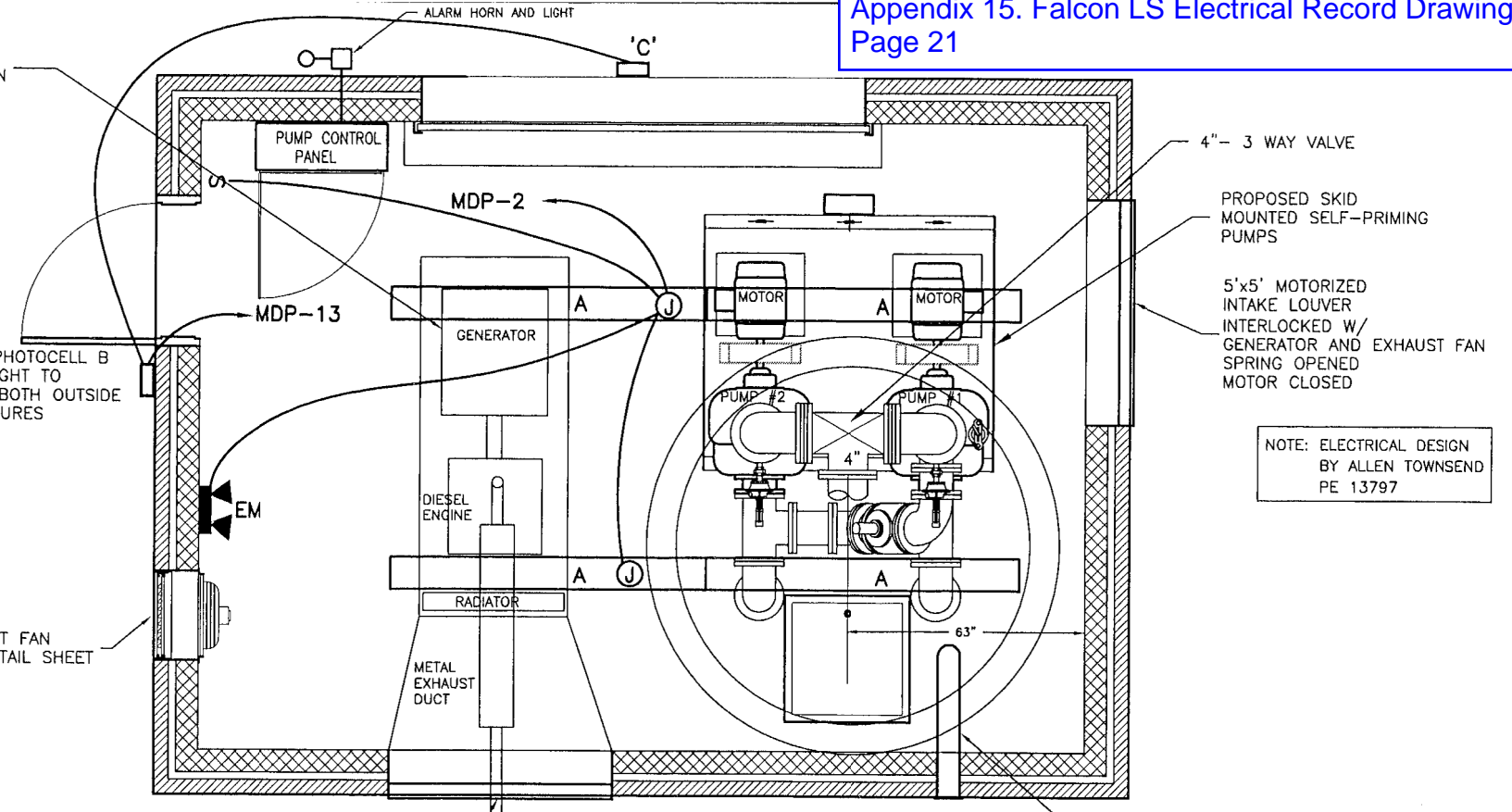
FIXTURE SCHEDULE

SYMBOL	MANUF.	CAT NO.	LAMPS	REMARKS
A	COLUMBIA	LU8-296H0-120	2-F96T12H0 (110 WATT)	PROVIDE SPACER BETWEEN LIGHT & CEILING
B	SPAULDING	WGS1-M100PS-MT	1-100WMH	MOUNT 10'0" AFG
C	SPAULDING	WGST-M175-MT	1-175MH	MOUNT OVER DOOR 12'0" AFG
EM	PRESCOLITE	LMP-16	2-7.2W	MOUNT 10'0" AFF

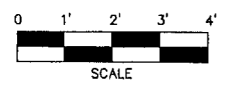
PROPOSED GENERATOR MOUNTED ON 300 GALLON FUEL TANK BASE

PROVIDE PHOTOCELL B IN THIS LIGHT TO CONTROL BOTH OUTSIDE LIGHT FIXTURES

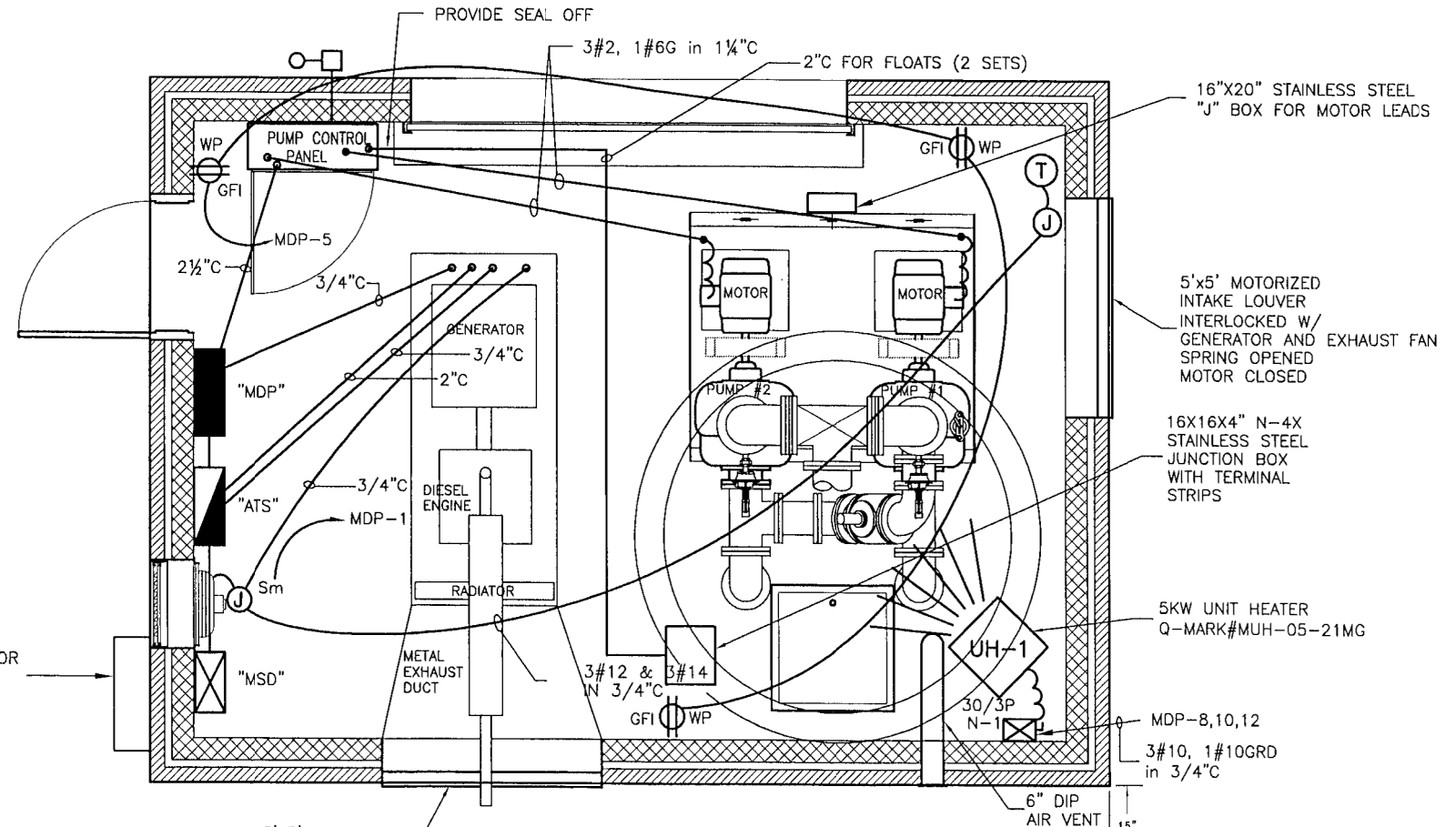
EXHAUST FAN SEE DETAIL SHEET



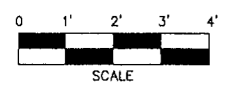
LIGHTING PLAN



METERBASE OR CTCABINET WITH PWC



POWER PLAN



RECORD DRAWINGS OCTOBER 2005

REVISIONS

SYMBOL	DESCRIPTION	DATE	BY
	REVISED	10/20/05	DFW

10-20-05

10-20-05

Hobbs, Upchurch & Associates, P.A.
Consulting Engineers
SOUTHERN PINES, NC - CHARLOTTE, NC
NAGS HEAD, NC - RALEIGH, NC
MYRTLE BEACH, SC - BEAUFORT, SC
300 S.W. Broad Street, Southern Pines, North Carolina 28387
Phone: (910) 692-5616 - Fax: (910) 692-4795

PUMP STATIONS
FOR THE
NORCROSS WATER AND SEWER DISTRICT
CUMBERLAND COUNTY, NORTH CAROLINA

PUMP STATION F-1 POWER
AND LIGHTING PLANS

DATE: DEC., 2003
DESIGNED: DFW
DRAWN: DFW
CHECKED: KSL
SCALE: SCALE
SHEET NO. E1
OF: 1

APPENDIX C

Individual Lift Station Basin Flow Monitors

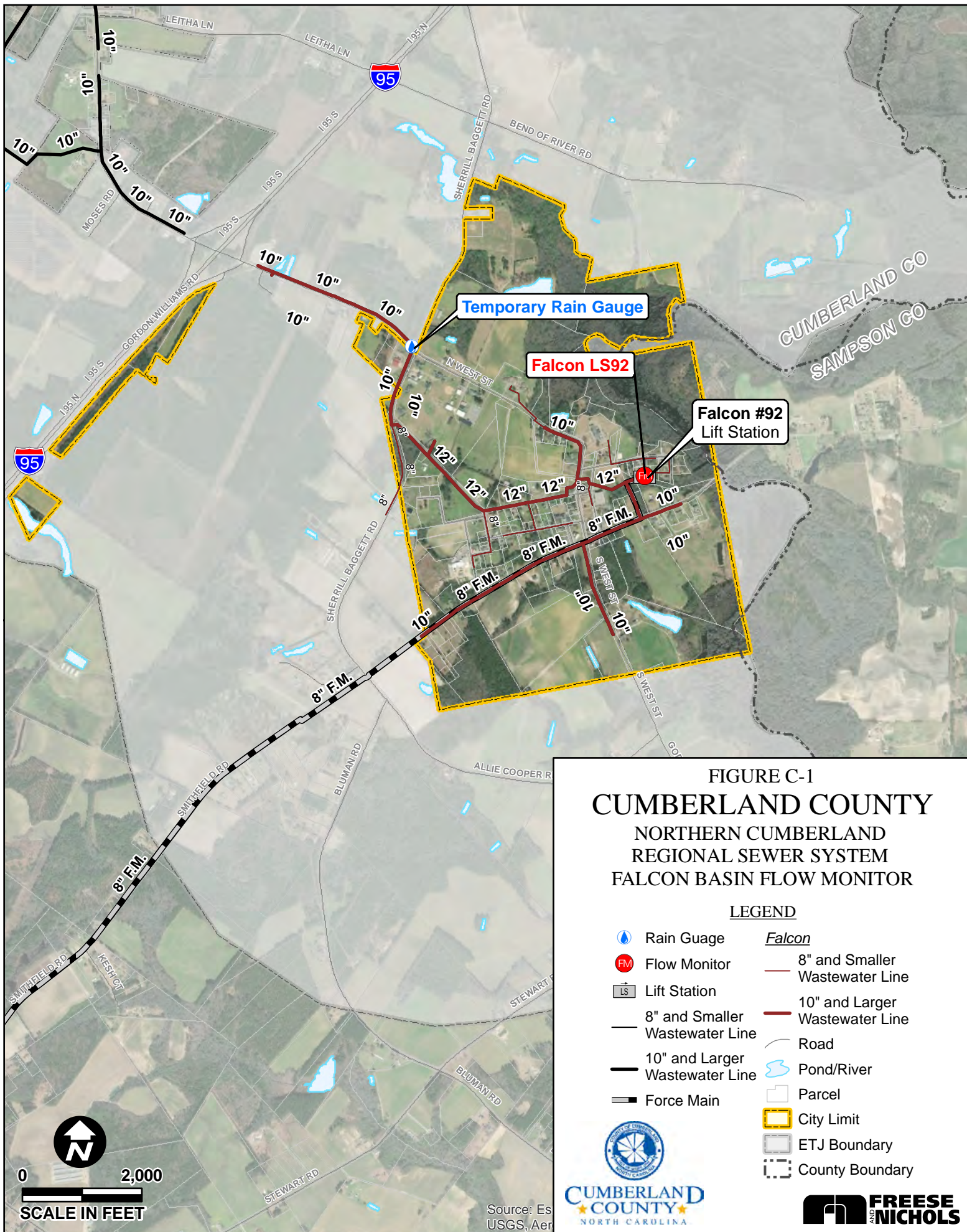


FIGURE C-2 CUMBERLAND COUNTY NORTHERN CUMBERLAND REGIONAL SEWER SYSTEM GODWIN BASIN FLOW MONITOR

LEGEND



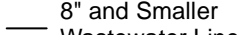

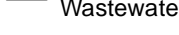
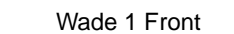
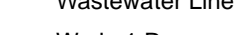
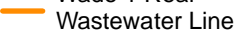



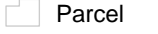
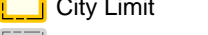
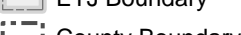
- | | |
|--------------------------------|--------------------------------|
| Rain Gauge | <u>Godwin</u> |
| Flow Monitor | 8" and Smaller Wastewater Line |
| Lift Station | 10" and Larger Wastewater Line |
| 8" and Smaller Wastewater Line | Road |
| 10" and Larger Wastewater Line | Pond/River |
| Force Main | Parcel |
| | City Limit |
| | ETJ Boundary |
| | County Boundary |

FREESE AND NICHOLS



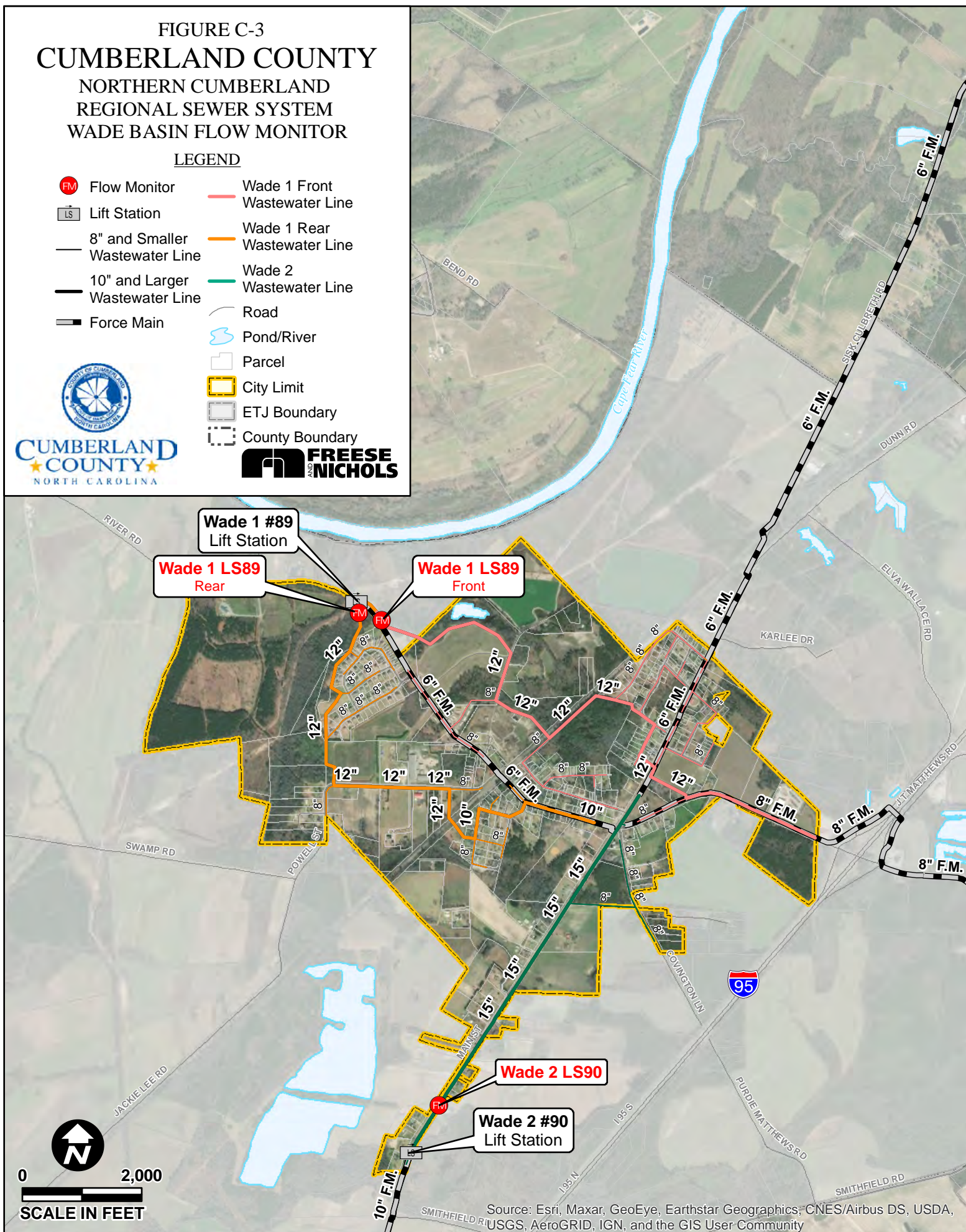
FIGURE C-3 CUMBERLAND COUNTY NORTHERN CUMBERLAND REGIONAL SEWER SYSTEM WADE BASIN FLOW MONITOR

LEGEND

-  Flow Monitor
-  Lift Station
-  8" and Smaller Wastewater Line
-  10" and Larger Wastewater Line
-  Force Main
-  Wade 1 Front Wastewater Line
-  Wade 1 Rear Wastewater Line
-  Wade 2 Wastewater Line
-  Road
-  Pond/River
-  Parcel
-  City Limit
-  ETJ Boundary
-  County Boundary



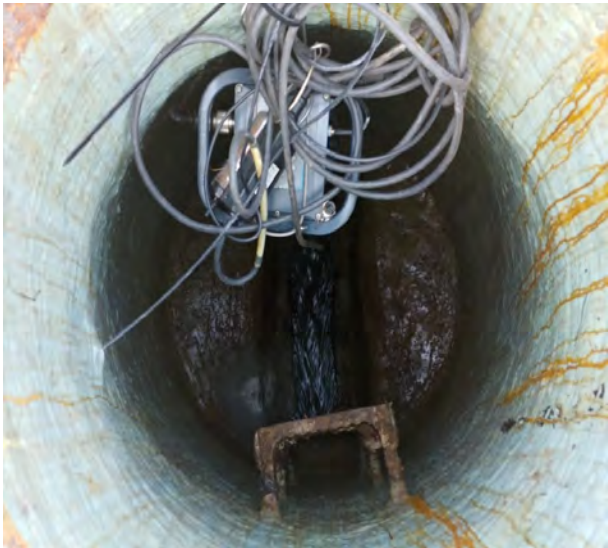




**FREESE
 AND
 NICHOLS**







APPENDIX D





Flow Monitoring Installation Reports

HYDROSTRUCTURES[®]		Northern Cumberland Regional Sewer System District Cumberland County, North Carolina	
LOCATION INFORMATION			
Meter ID	Wade 2 LS#90		
SITE ADDRESS/LOCATION:	6650 Main St		
INSTALL DATE:	11/10/2020		
MANHOLE ID:	SMH028040		
Comments:			
SITE INFORMATION		HYDRAULIC INFORMATION	
PIPE MATERIAL:	PVC	INITIAL VELOCITY (ft/s):	2.9
PIPE DIAMETER (Inches):	15	INITIAL LEVEL (Inches):	2.0
GROUND COVER		PIPE INSTALLATION	
			
METER INSTALLATION		METER LOCATION	
			

HYDROSTRUCTURES™		Northern Cumberland Regional Sewer System District Cumberland County, North Carolina	
LOCATION INFORMATION			
Meter ID	Wade LS#89 - Front		
SITE ADDRESS/LOCATION:	Shoulder of River Rd		
INSTALL DATE:	11/10/2020		
MANHOLE ID:	SMH028202		
Comments:			
SITE INFORMATION		HYDRAULIC INFORMATION	
PIPE MATERIAL:	PVC	INITIAL VELOCITY (ft/s):	0.9
PIPE DIAMETER (Inches):	12	INITIAL LEVEL (Inches):	0.8
GROUND COVER		PIPE INSTALLATION	
			
METER INSTALLATION		METER LOCATION	
			

HYDROSTRUCTURES™		Northern Cumberland Regional Sewer System District Cumberland County, North Carolina	
LOCATION INFORMATION			
Meter ID	Wade LS#89 - Rear		
SITE ADDRESS/LOCATION:	Wade woods		
INSTALL DATE:	11/10/2020		
MANHOLE ID:	SMH028233		
Comments:			
SITE INFORMATION		HYDRAULIC INFORMATION	
PIPE MATERIAL:	PVC	INITIAL VELOCITY (ft/s):	1.7
PIPE DIAMETER (Inches):	12	INITIAL LEVEL (Inches):	0.5
GROUND COVER		PIPE INSTALLATION	
			
METER INSTALLATION		METER LOCATION	
			

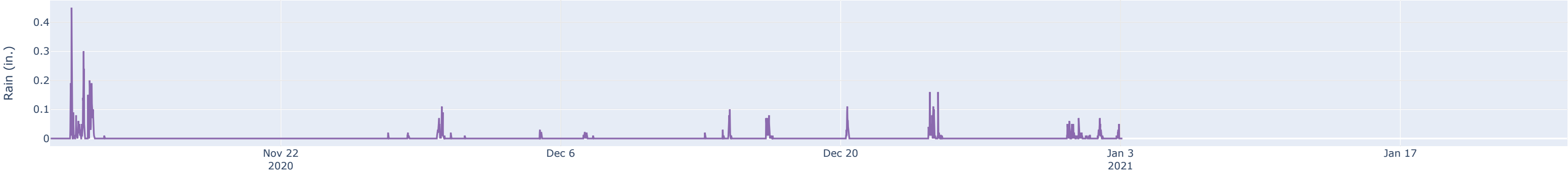
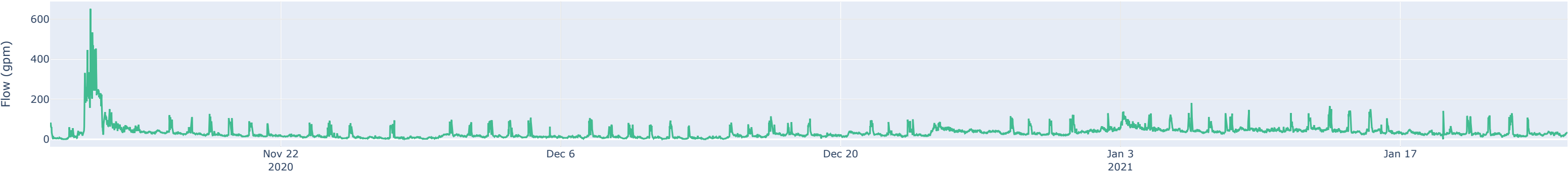
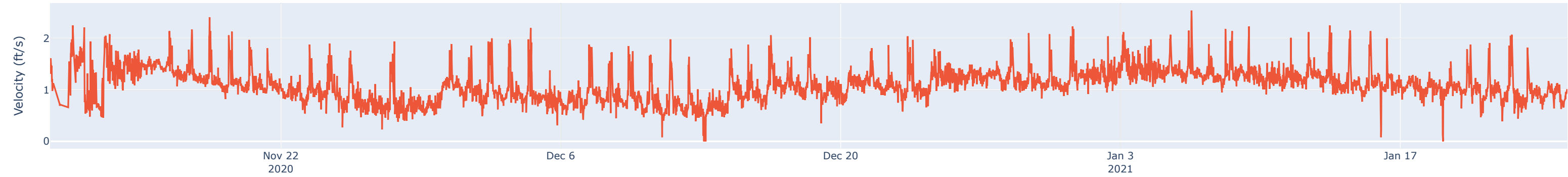
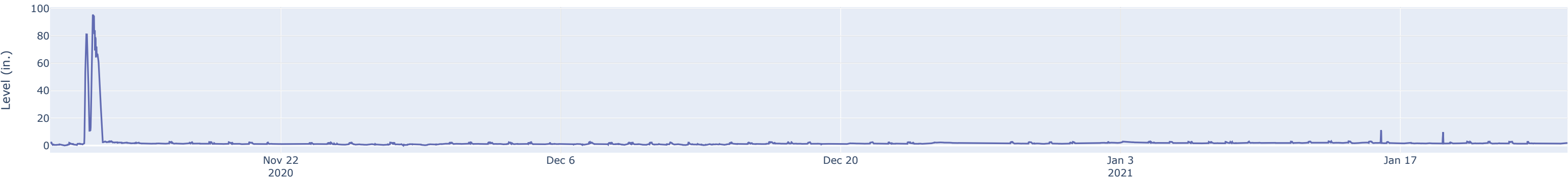
HYDROSTRUCTURES™		Northern Cumberland Regional Sewer System District Cumberland County, North Carolina	
LOCATION INFORMATION			
Meter ID	Falcon LS#92		
SITE ADDRESS/LOCATION:	LS#92		
INSTALL DATE:	11/10/2020		
MANHOLE ID:	SMH026884		
Comments:			
SITE INFORMATION		HYDRAULIC INFORMATION	
PIPE MATERIAL:	PVC	INITIAL VELOCITY (ft/s):	1.7
PIPE DIAMETER (Inches):	11.75	INITIAL LEVEL (Inches):	2.5
GROUND COVER		PIPE INSTALLATION	
			
METER INSTALLATION		METER LOCATION	
			

HYDROSTRUCTURES[®]		Northern Cumberland Regional Sewer System District Cumberland County, North Carolina	
LOCATION INFORMATION			
Meter ID	Godwin LS#91		
SITE ADDRESS/LOCATION:	Lift Station 91 Burnett Rd		
INSTALL DATE:	11/10/2020		
MANHOLE ID:	SMH027944		
Comments:			
SITE INFORMATION		HYDRAULIC INFORMATION	
PIPE MATERIAL:	PVC	INITIAL VELOCITY (ft/s):	0.5
PIPE DIAMETER (Inches):	12	INITIAL LEVEL (Inches):	2.0
GROUND COVER		PIPE INSTALLATION	
			
METER INSTALLATION		METER LOCATION	
			

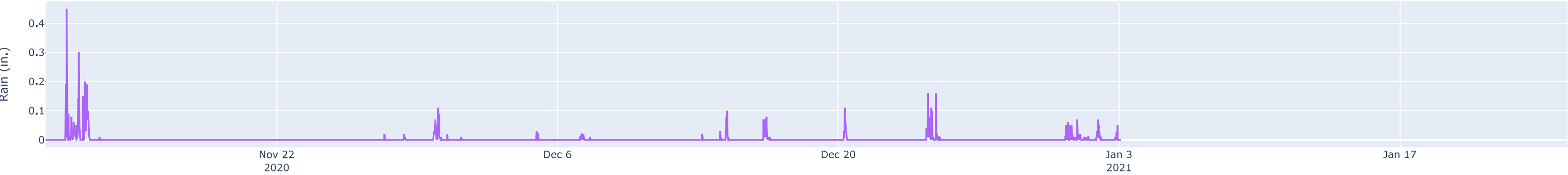
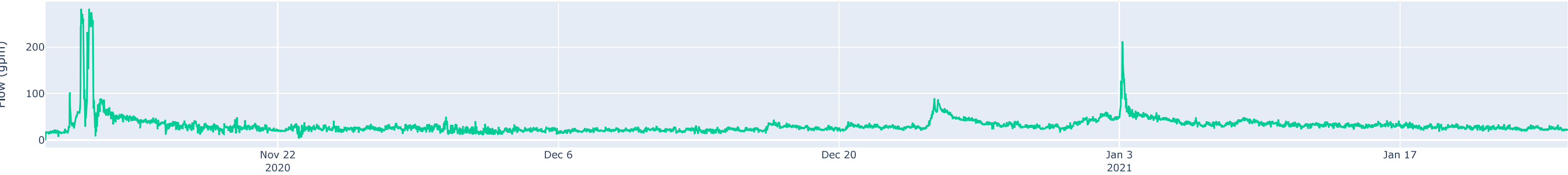
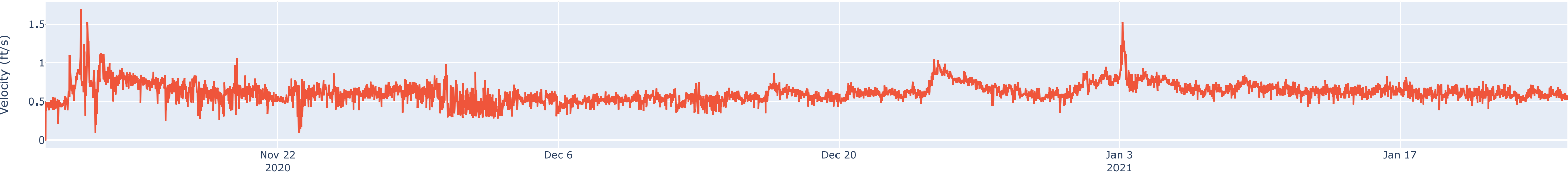
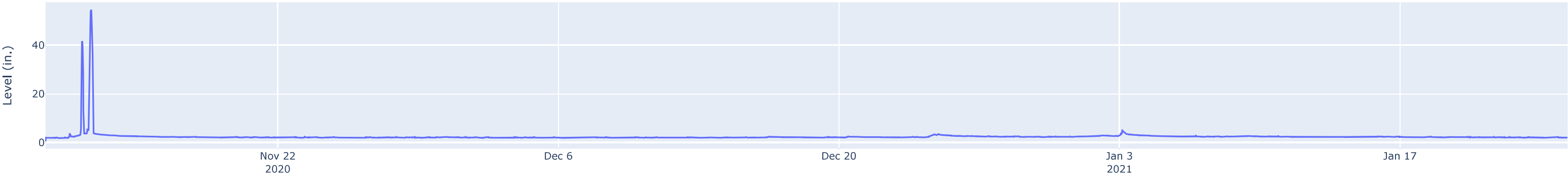
APPENDIX E

Flow Monitor Results Graphs

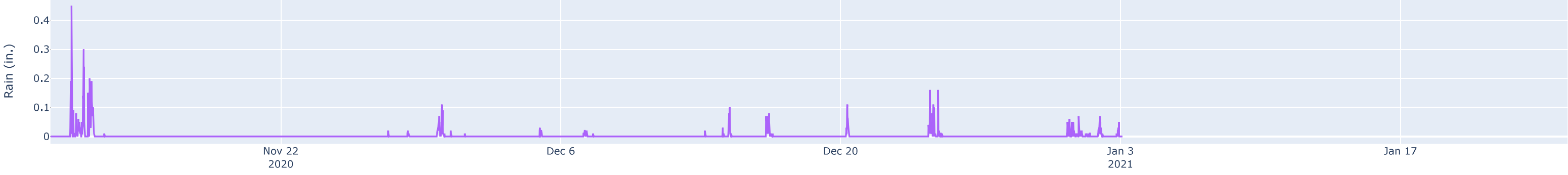
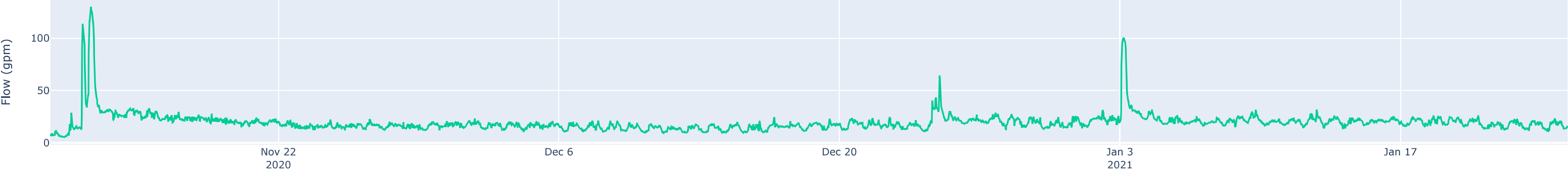
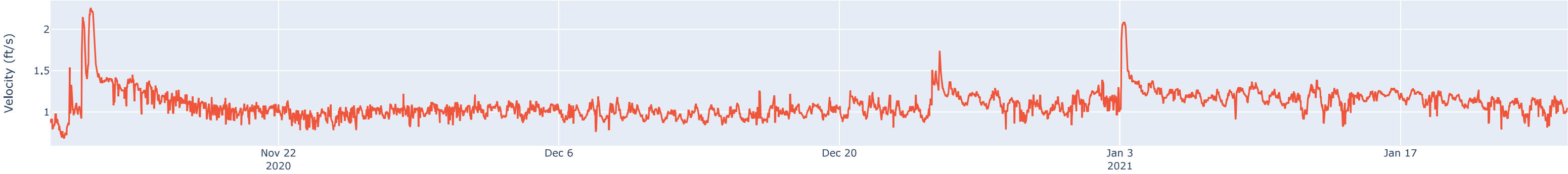
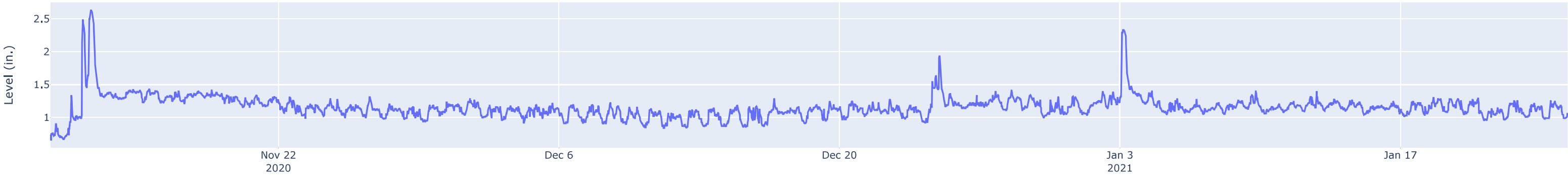
Falcon



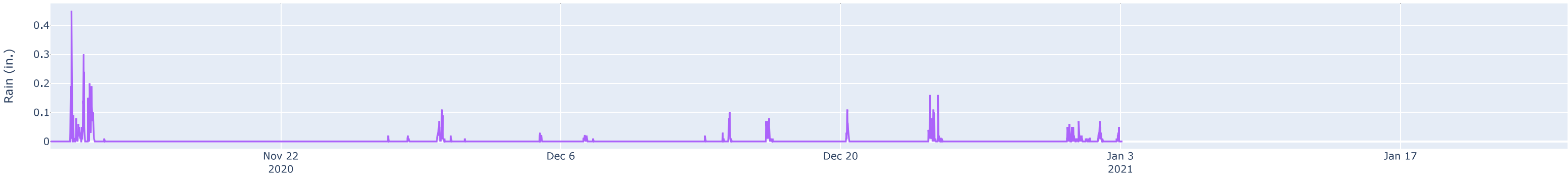
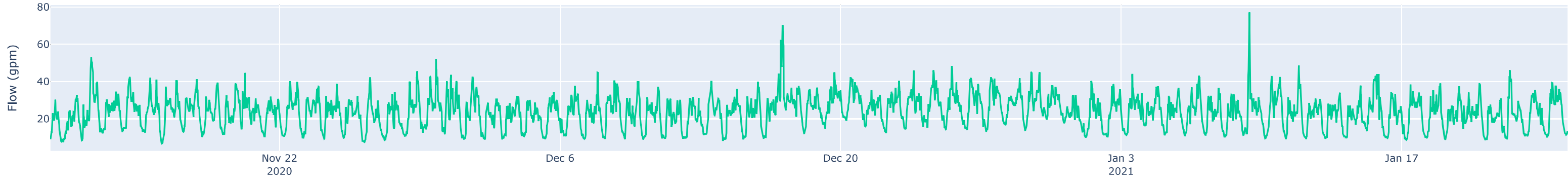
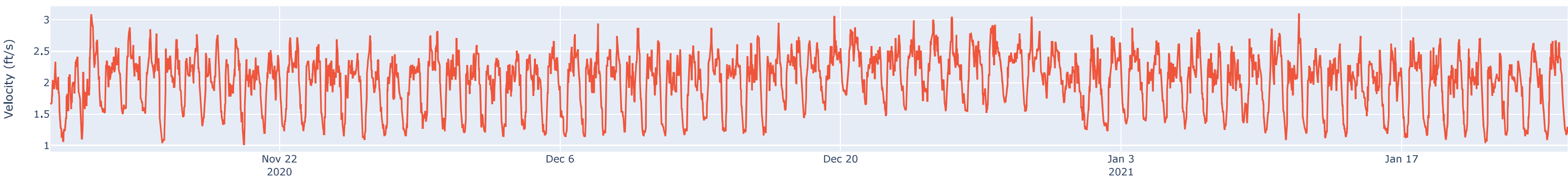
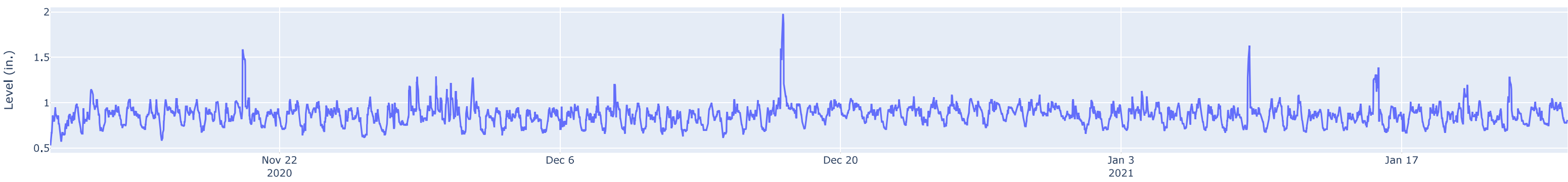
Godwin



Wade 1 Front



Wade 1 Rear



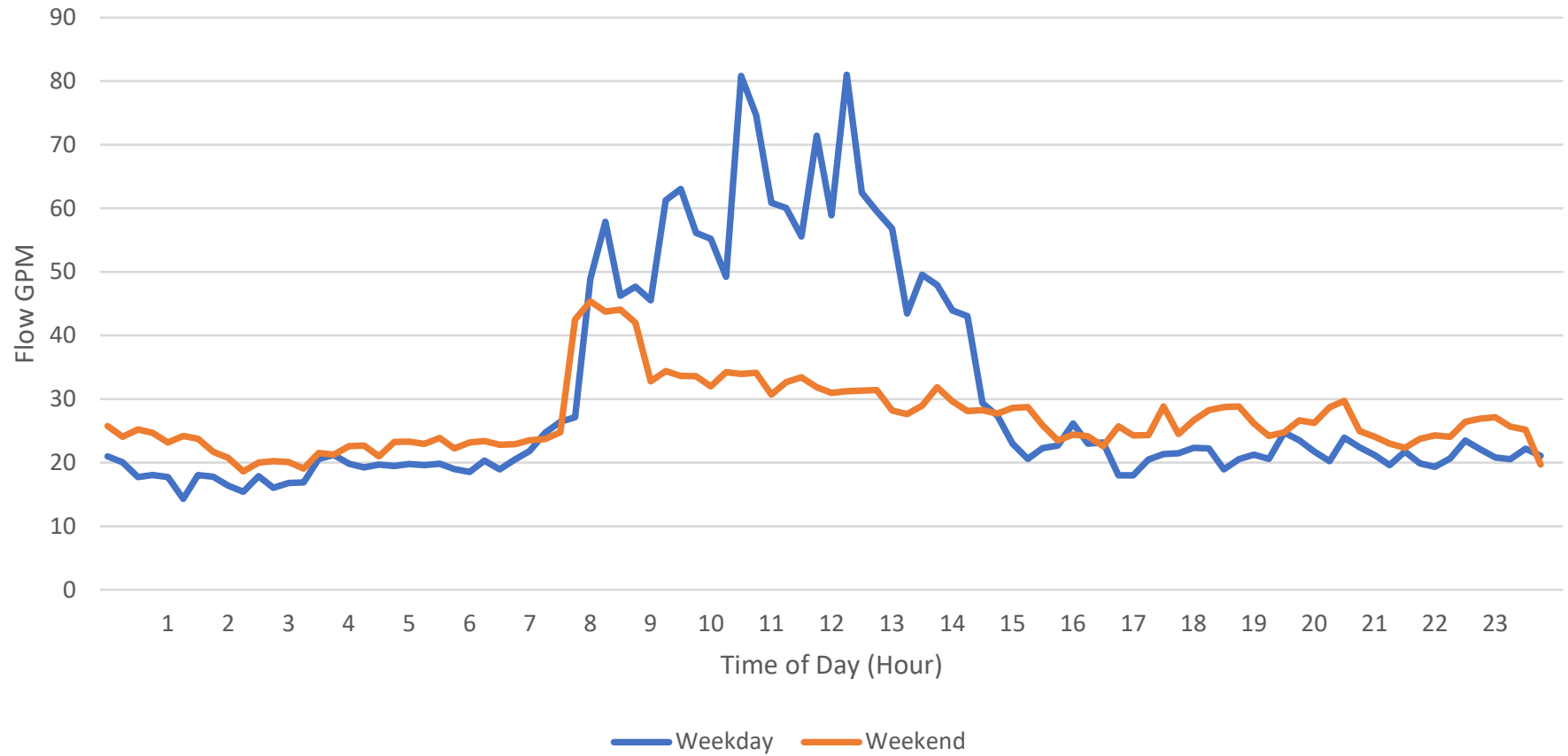
Wade 2



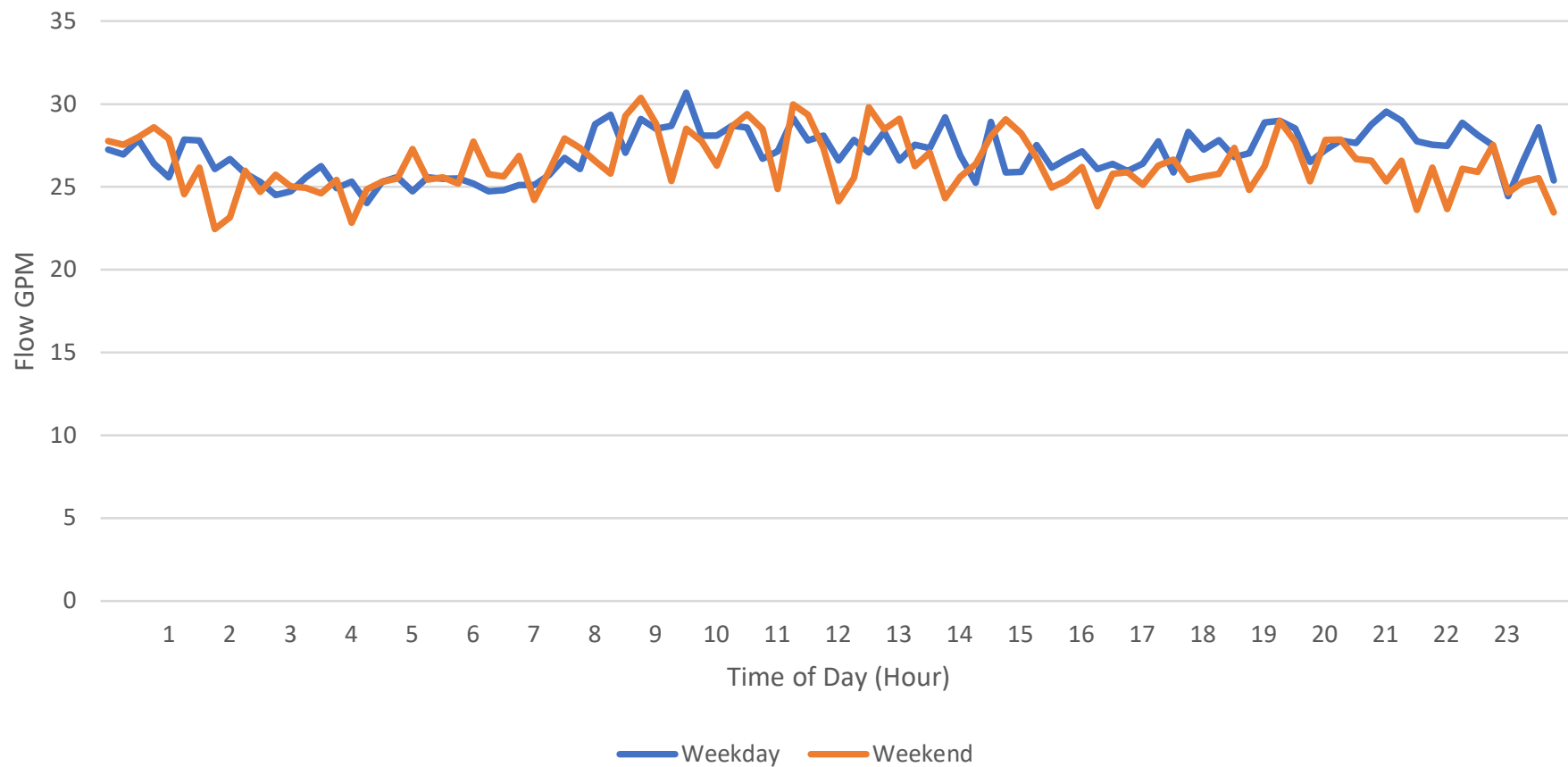
APPENDIX F

Dry Weather Diurnal Pattern

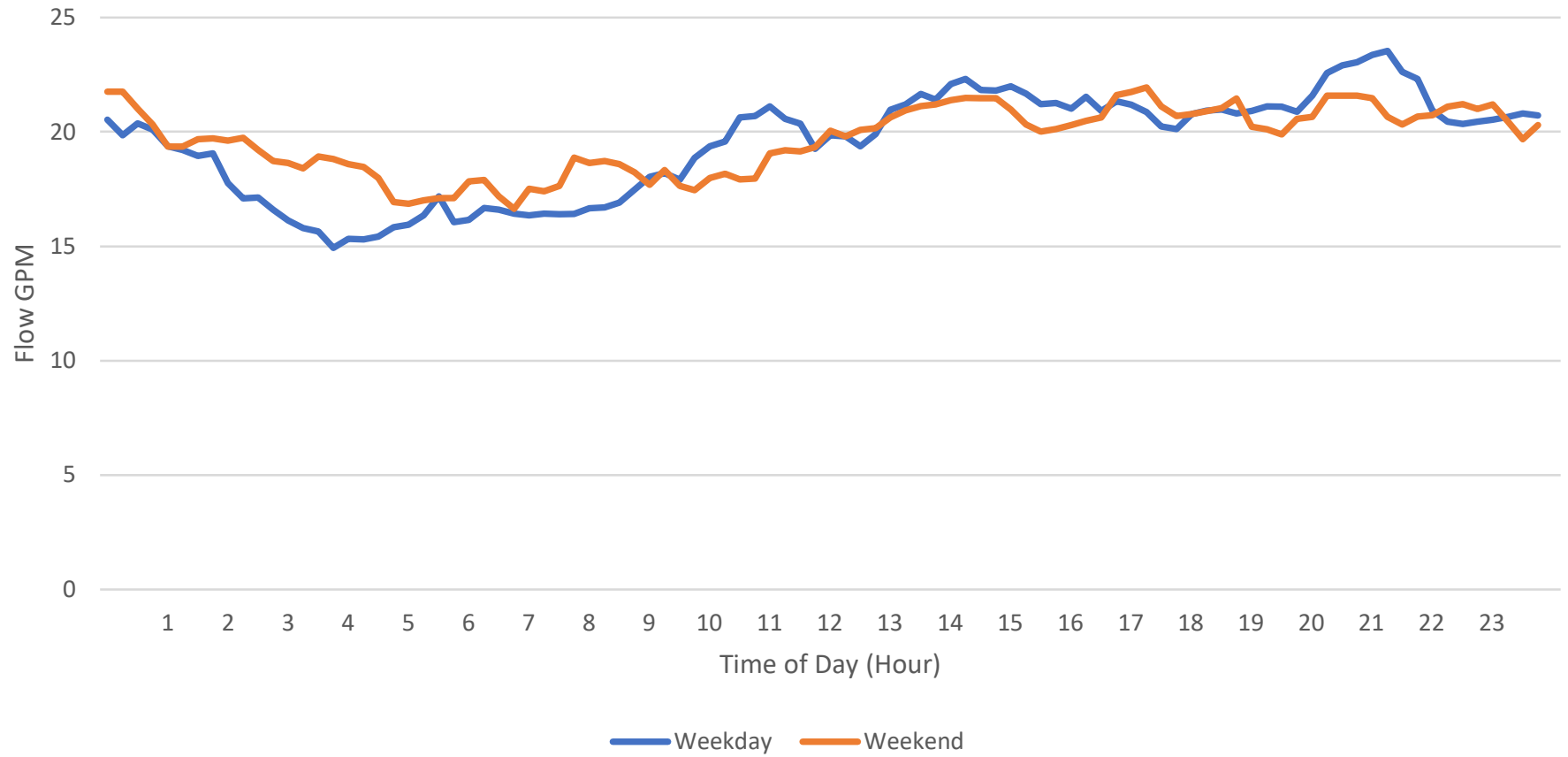
Falcon LS92



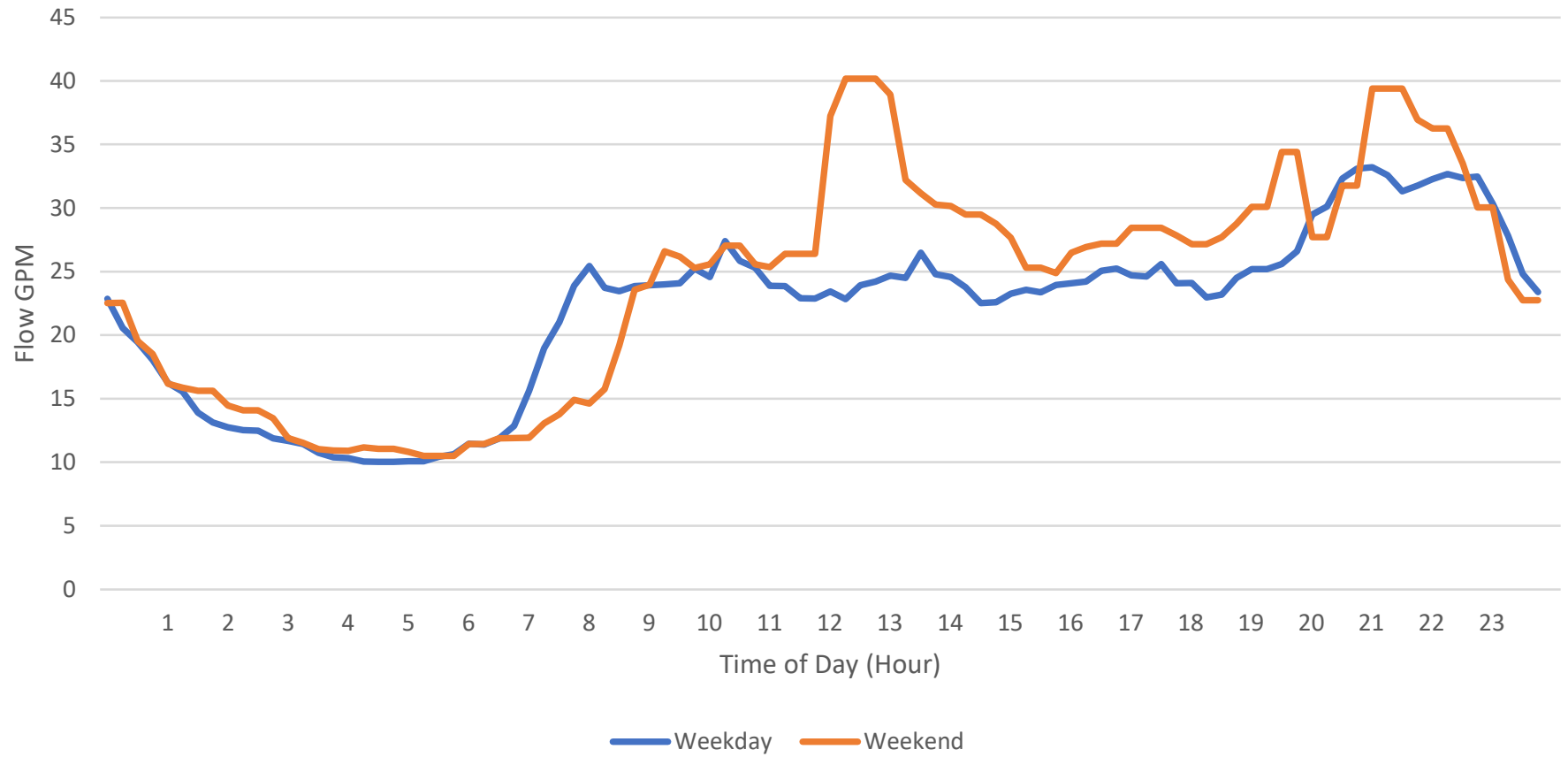
Godwin PS91



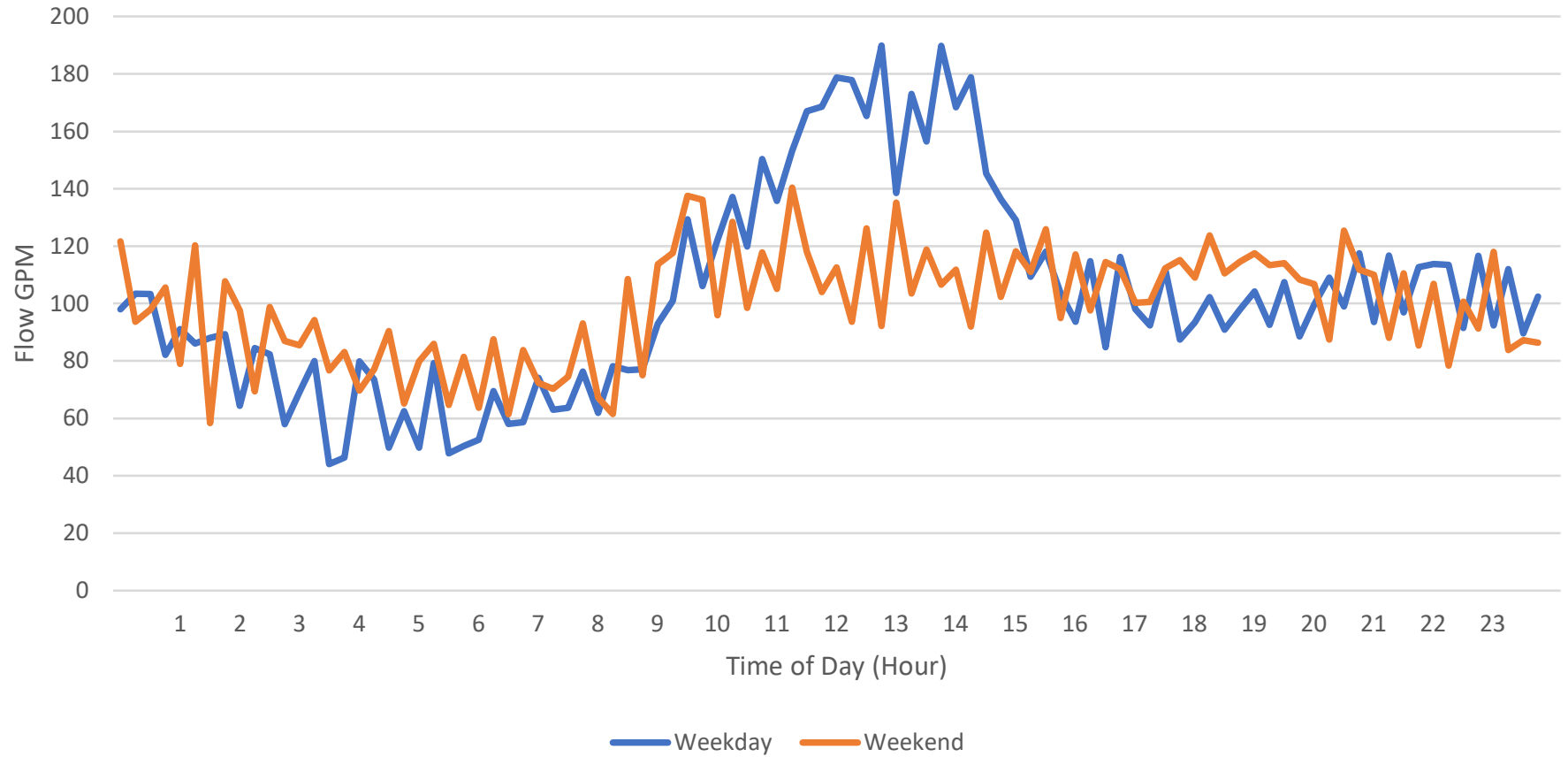
Wade 1 LS89 Front



Wade 1 LS89 Rear



Wade 2 LS90



APPENDIX G

Wade 2 SCADA Pumping Estimates from PWC

LS #90 - Wade #2 (NORCRESS)

Detail Report from May 31, 2021 08:00:00 to May 31, 2021 12:00:00

Wet Well Detention Volume

8 -ft. dia.

1.25 -ft. Pump On --> Pump Off

470 gallons

Date	Time	Description	Value	Off Time		Inflow Rate	Pump #1			Pump #2		
				(h:m:s)	minutes		On Time		Pump Rate	On Time		Pump Rate
						(gpm)	(h:m:s)	minutes	(gpm)	(h:m:s)	minutes	(gpm)
31-May-21	8:32:26	Pump #1 STATUS	OFF									
				0:07:24	7.40	63						
31-May-21	8:39:50	Pump #2 STATUS	RUNNING							0:01:39	1.65	340
31-May-21	8:41:29	Pump #2 STATUS	OFF									
				0:09:56	9.93	47						
31-May-21	8:51:25	Pump #1 STATUS	RUNNING				0:01:56	1.93	278			
31-May-21	8:53:21	Pump #1 STATUS	OFF									
				0:21:37	21.12	22						
31-May-21	9:14:58	Pump #2 STATUS	RUNNING							0:01:25	1.42	349
31-May-21	9:16:23	Pump #2 STATUS	OFF									
				0:34:55	34.92	13						
31-May-21	9:51:18	Pump #1 STATUS	RUNNING				0:01:29	1.48	334			
31-May-21	9:52:47	Pump #1 STATUS	OFF									
				0:23:37	23.62	20						
31-May-21	10:16:24	Pump #2 STATUS	RUNNING							0:02:00	2.00	263
31-May-21	10:18:24	Pump #2 STATUS	OFF									
				0:13:06	13.1	36						
31-May-21	10:31:30	Pump #1 STATUS	RUNNING				0:02:08	2.13	250			
31-May-21	10:33:38	Pump #1 STATUS	OFF									
				0:19:46	19.77	24						
31-May-21	10:53:24	Pump #2 STATUS	RUNNING							0:01:19	1.32	377
31-May-21	10:54:43	Pump #2 STATUS	OFF									
				0:25:50	25.83	18						
31-May-21	11:20:33	Pump #1 STATUS	RUNNING				0:01:52	1.87	284			
31-May-21	11:22:25	Pump #1 STATUS	OFF									
				0:09:44	9.73	48						
31-May-21	11:32:09	Pump #2 STATUS	RUNNING									
Average						31			287			332



ENGINEERING AND INFRASTRUCTURE DEPARTMENT

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021 AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: JERMAINE WALKER, COUNTY ENGINEER

DATE: 11/2/2021

SUBJECT: DSS ELEVATOR MODIFICATIONS PHASE II BID AWARD

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): JERMAINE WALKER, COUNTY ENGINEER

BACKGROUND

The DSS Elevator Modernization Phase II is the final phase of the FY20 Capital Improvement Project. Phase I consisted of bringing various supplemental components (i.e. shunt trip breakers, back-up power, HVAC in mechanical room, and dedicated GFCI outlets for sump pump) into code compliance before the actual elevator modernization project could be executed.

On September 24, 2020, the County entered into an agreement with Cromwell Architects Engineers Incorporated, for engineer design services for the Department of Social Services Elevator Modernization. The project was advertised for bid on September 8, 2021, and closed on September 28, 2021, with Abell Elevator having the lowest bid of \$709, 831.37.

RECOMMENDATION / PROPOSED ACTION

Staff recommends that the following proposed actions below be placed on the November 15, 2021, Board of Commissioners consent agenda:

1. Accept the selection of Abell Elevators with the bid.
2. Grant approval of a \$75K contingency with funding being available in the project budget.

3. Delegate authority to the County Manager to approve changes orders not to exceed \$75K aggregate amount.

ATTACHMENTS:

Description

Type

Project Bid Tab

Backup Material

BID TABULATION
DSS Elevator Modifications Phase 2
4:00pm 04 OCT 2021

BIDDER	BASE BID	BID OPTION 0001	TOTAL W/OP	BID BOND
Abell Elevator	\$543,226.16	\$166,605.21	\$709,831.37	X
Oracle Elevator	\$989,370.00	\$149,370.00	\$1,138,740.00	X
TK Elevator	\$620,415.00	\$120,710.00	\$741,125.00	X

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Cromwell Architects Engineers
1300 East 6th Street
Little Rock, AR 72202

ADD 001	ADD 002	ADD 003	COLI
X	X	X	
X	X	X	X
X	X	X	

Used the
wrong bid form

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ENGINEERING AND INFRASTRUCTURE DEPARTMENT

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021 AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: JERMAINE WALKER, COUNTY ENGINEER

DATE: 11/2/2021

**SUBJECT: CROWN COLISEUM BOILER BURNER REPAIRS AND RE-TUBING
BID AWARD**

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): JERMAINE WALKER, COUNTY ENGINEER

BACKGROUND

This is a combination of two Crown FY22 CIP boiler projects. This increased the County's ability to negotiate a better price instead of having separate contractors performing work on the Crown's boilers. The initial Bid Opening was on August 24, 2021 with only two bids. Subsequent to that process, it was determined that the project should be bid as construction project as opposed to a repair project. The project was released as a formal bid with the opening on October 5, 2021. Two bids were received with Valley Boilers submitting the lowest responsive and responsible bid.

One boiler is currently inoperable and requires a re-tubing while both need burner upgrades. Both boilers are original to the Crown's opening and this work will add another 7-10 years to the useful life of the system allowing fiscal flexibility for the complete replacement as a future CIP project.

RECOMMENDATION / PROPOSED ACTION

Staff recommends that the following proposed actions below be placed on the November 15, 2021, Board of Commissioners consent agenda:

1. Accept the selection of Valley Boilers with the lowest responsive and responsible bid.

2. Grant approval of a \$15K contingency with the funding being available in the project budget.
3. Delegate authority to the County Manager to approve changes orders not to exceed \$15K aggregate amount.

ATTACHMENTS:

Description	Type
Crown Boiler Bid Tab	Backup Material

[illegible]



OFFICE OF THE COUNTY ATTORNEY

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021
AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: COUNTY ATTORNEY

DATE: 11/4/2021

**SUBJECT: REQUEST OF THE TOWN OF GODWIN TO RELINQUISH ITS
JURISDICTION TO THE COUNTY FOR MINIMUM HOUSING CODE
ENFORCEMENT**

Requested by: TOWN OF GODWIN

Presenter(s): COUNTY ATTORNEY

BACKGROUND

On October 18, 2021, the Town of Godwin Board of Commissioners adopted a formal resolution to subject the jurisdiction of the Town of Godwin to the county's Minimum Housing Code and to request the Board of County Commissioners to accept the jurisdiction of the Town of Godwin for this purpose and apply and enforce the county's Minimum Housing Code within the town's jurisdiction. A copy of the Town Resolution is attached.

The Town of Godwin and the county have the authority to undertake this transfer of jurisdiction and application of the county's Minimum Housing Code pursuant to N.C.G.S. § 160D-202. The county revised its Minimum Housing Ordinance June 21, 2021. The process by which the county may accept the jurisdiction of a town and apply the county's ordinance requires that both governing boards adopt formal resolutions.

This action requested by the Town of Godwin is what the Board of Commissioner approved for the Town of Linden.

RECOMMENDATION / PROPOSED ACTION

The Board may accept the jurisdiction of the Town of Godwin for the purpose of applying and enforcing the

county's Minimum Housing Code as set forth in Article IV, Chapter 4, *Cumberland County Code* by adopting the attached County Resolution.

ATTACHMENTS:

Description	Type
TOWN RESOLUTION	Backup Material
COUNTY RESOLUTION	Backup Material

RESOLUTION NO. 1-2021RESOLUTION GRANTING AUTHORITY FOR CUMBERLAND COUNTY TO ENFORCE
ITS MINIMUM HOUSING CODE ORDINANCE AND STANDARDS WITHIN THE
CORPORATE LIMITS AND JURISDICTIONAL AREA OF THE TOWN OF GODWIN

WHEREAS, the Town of Godwin Board of Commissioners desires to voluntarily authorize and empower Cumberland County, acting through the Code Enforcement Division of its Department of Planning and Inspections, to enforce the provisions and standards of the Cumberland County Code, Article IV, Minimum Housing Code, within the corporate limits and jurisdictional area of the Town of Godwin; and

WHEREAS, the Board of Commissioners is adopting this Resolution in accordance with the provisions of N.C.G.S. § 160D-202, which authorizes a county, on request of a municipal governing body, to exercise specified powers, including Minimum Housing Code enforcement, within the municipal corporate limits and jurisdictional area;

NOW, THEREFORE, BE IT RESOLVED that the Town of Godwin Board of Commissioners approves and adopts this Resolution to authorize the application and enforcement of the Cumberland County Code, Article IV, Minimum Housing Code, within the corporate limits and jurisdictional area of the Town of Godwin, pursuant to N.C.G.S. 160D-202 and Article 12 of N.C.G.S. Chapter 160D; and further requests that the Cumberland County Board of Commissioners adopt a resolution accepting and approving this request, to the end that the Code Enforcement Division of the Department of Planning and Inspections shall enforce the provisions and standards of the Cumberland County Minimum Housing Code within the corporate limits and jurisdictional area of the Town of Godwin.

Adopted and effective this 18th day of October, 2021.

TOWN OF GODWIN, NORTH CAROLINA

ATTEST:

Jacqueline Cooper-Kelley
Town Clerk



APPROVED AS TO FORM:

H. Ellen Hankins
Town Attorney

Cumberland County Board of Commissioners
Resolution to Accept the Jurisdiction of the Town of Godwin for the
Application and Enforcement of the County's Minimum Housing Code

Whereas, N.C.G.S. § 160D-202 authorizes a town to relinquish its jurisdiction to a county for the application and enforcement of the county's Minimum Housing Code and authorizes a county to accept such jurisdiction to apply and enforce its Minimum Housing Code within the town; and

Whereas, October 18, 2021, the Town of Godwin Board of Commissioners adopted a resolution relinquishing its jurisdiction to the County of Cumberland for the purpose of applying and enforcing the county's Minimum Housing Code, being Article IV, Chapter 4, *Cumberland County Code*, with a copy of the Town's Resolution being attached hereto.

Now therefore, be it resolved that the Cumberland County Board of Commissioners do accept the jurisdiction of the Town of Godwin for the application and enforcement of the county's Minimum Housing Code, being Article IV, Chapter 4, *Cumberland County Code*.

Be it further resolved that the effective date of the application of the County's Minimum Housing Code within the jurisdiction of the Town of Godwin shall be the date the amendment expanding the jurisdiction of the Cumberland County Minimum Housing Code is adopted by the Board of Commissioners after public hearing.

Adopted November ____, 2021.

Cumberland County Board of Commissioners
By:

Charles Evans, Chair



INFORMATION SERVICES

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021 AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: KEITH TODD, CHIEF INFORMATION SERVICES DIRECTOR

DATE: 11/9/2021

SUBJECT: TIMEKEEPING SYSTEM PROJECT

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): KEITH TODD, CHIEF INFORMATION SERVICES DIRECTOR

BACKGROUND

Cumberland County Innovation and Technology Services has completed an extensive RFP process for acquiring a new Timekeeping software solution. The intention of the new Timekeeping system is to streamline, automate and improve the time keeping and payroll process. This system will improve customer service by increasing efficiency in operations by electronically storing, calculating, and processing employee time and attendance thereby creating a truly paperless timekeeping system. Advanced scheduling, leave request management, reporting, analytics, and mobility through web access and a mobile app will also be a part of the new system.

The new Timekeeping system will replace a very manual process in which time sheets are currently printed, signed, approved, and manually keyed into the payroll system for processing. Manual processing timesheets creates challenges in terms of discrepancies, entering and re-entering data, and making corrections.

Innovation and Technology Services budgeted \$220,000 for this project in FY21 and reappropriated the funds to FY22 to effectively complete the selection process. The selection process included a comprehensive evaluation of five vendors that responded to the RFP. The goal is to have the bid award to you at the next meeting for approval.

RECOMMENDATION / PROPOSED ACTION

Informational purposes only. No action necessary.



OFFICE OF THE COUNTY MANAGER

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021
AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: AMY CANNON, COUNTY MANAGER

DATE: 11/5/2021

SUBJECT: ARP UPDATE

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): AMY CANNON, COUNTY MANAGER

BACKGROUND

The County Manager will give an ARP Update to the Board.



FINANCE OFFICE

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021
AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: VICKI EVANS, FINANCE DIRECTOR

DATE: 10/27/2021

SUBJECT: FINANCIAL REPORT

Requested by: AMY CANNON, COUNTY MANAGER

Presenter(s): NA

BACKGROUND

The financial report is included which shows results of the general fund for the first quarter of fiscal year 2022. Results of fiscal year 2021 will be added upon completion of the audit. Additional detail has been provided on a separate page explaining any percentages that may appear inconsistent with year-to-date budget expectations.

RECOMMENDATION / PROPOSED ACTION

For information purposes only. No action needed.

ATTACHMENTS:

Description

Monthly Financial Report

Type

Backup Material

**County of Cumberland
General Fund Revenues**

REVENUES	FY21-22 ADOPTED BUDGET	FY21-22 REVISED BUDGET	YTD ACTUAL (unaudited) as of September 30, 2021	PERCENT OF BUDGET TO DATE	*
Ad Valorem Taxes					
Current Year	\$ 168,721,614	\$ 168,721,614	\$ 9,641,407	5.7% (1)	
Prior Years	828,000	828,000	771,687	93.2%	
Motor Vehicles	22,348,691	22,348,691	4,254,206	19.0% (2)	
Penalties and Interest	578,000	578,000	124,657	21.6%	
Other	894,959	894,959	311,845	34.8%	
Total Ad Valorem Taxes	193,371,264	193,371,264	15,103,801	7.8%	
Other Taxes					
Sales	53,023,227	53,023,227	-	0.0% (3)	
Real Estate Transfer	1,600,000	1,600,000	787,235	49.2%	
Other	873,000	873,000	107,457	12.3%	
Total Other Taxes	55,496,227	55,496,227	894,692	1.6%	
Unrestricted & Restricted Intergovernmental Revenues	65,581,449	68,825,771	5,159,600	7.5% (4)	
Charges for Services	13,422,090	13,422,090	2,386,802	17.8% (5)	
Other Sources (includes Transfers In)	1,184,882	1,321,839	229,022	17.3%	
Lease Land CFVMC	4,313,522	4,313,522	3,766,062	87.3%	
Total Other	5,498,404	5,635,361	3,995,084	70.9%	
Total Revenue	\$ 333,369,434	\$ 336,750,713	\$ 27,539,978	8.2%	
Fund Balance Appropriation	9,159,873	12,051,963	-	0.0%	
Total Funding Sources	\$ 342,529,307	\$ 348,802,676	\$ 27,539,978	7.9%	

County of Cumberland
General Fund Expenditures

DEPARTMENTS	FY21-22	FY21-22	YTD ACTUAL	PERCENT OF	**
	ADOPTED BUDGET	REVISED BUDGET	(unaudited) as of September 30, 2021	BUDGET TO DATE	
Governing Body	\$ 682,250	\$ 682,250	\$ 200,149	29.3%	
Administration	1,992,345	1,992,345	302,217	15.2%	
Public Affairs/Education	916,658	916,658	163,792	17.9%	
Human Resources	1,071,556	1,071,556	146,717	13.7%	
Print, Mail, and Design	780,535	780,535	160,474	20.6%	
Court Facilities	144,920	144,920	17,966	12.4% (1)	
Facilities Maintenance	1,158,465	1,170,465	192,396	16.4%	
Landscaping & Grounds	800,763	800,763	117,818	14.7%	
Carpentry	217,753	217,753	42,520	19.5%	
Facilities Management	1,556,056	1,556,056	278,678	17.9%	
Public Buildings Janitorial	965,301	965,301	193,963	20.1%	
Central Maintenance	675,219	676,378	132,494	19.6%	
Information Services	6,507,246	7,175,248	973,508	13.6%	
Board of Elections	1,556,013	1,556,013	115,244	7.4% (2)	
Finance	1,378,438	1,406,949	249,832	17.8%	
Legal	1,087,181	1,087,181	164,676	15.1%	
Register of Deeds	2,616,316	3,157,082	430,454	13.6%	
Tax	6,387,092	6,551,767	1,322,648	20.2%	
General Government Other	4,622,876	4,992,823	786,733	15.8%	
Sheriff	58,503,564	58,965,910	8,896,766	15.1%	
Emergency Services	4,190,026	4,237,647	894,237	21.1%	
Criminal Justice Pretrial	691,215	691,215	101,425	14.7%	
Youth Diversion	36,687	36,687	6,419	17.5%	
Animal Services	3,509,785	3,833,509	629,326	16.4%	
Public Safety Other (Medical Examiners, NC Detention Subsidy)	1,369,155	1,369,155	135,374	9.9% (3)	
Health	25,020,602	28,201,923	4,743,473	16.8%	
Mental Health	5,694,167	5,694,167	2,519,631	44.2%	
Social Services	64,644,188	64,644,188	9,342,120	14.5%	

County of Cumberland
General Fund Expenditures

DEPARTMENTS	FY21-22		YTD ACTUAL	PERCENT OF BUDGET TO DATE	**
	ADOPTED BUDGET	REVISED BUDGET	(unaudited) as of September 30, 2021		
Veteran Services	547,167	547,167	96,722	17.7%	
Child Support	5,693,462	5,693,462	889,051	15.6%	
Spring Lake Resource Administration	39,074	39,074	5,207	13.3%	
Library	10,495,183	10,804,608	1,880,291	17.4%	
Culture Recreation Other (Some of the Community Funding)	260,569	260,569	42,500	16.3%	
Planning	3,489,338	3,564,370	627,267	17.6%	
Engineering	607,937	607,937	117,351	19.3%	
Cooperative Extension	839,559	839,559	103,657	12.3%	(4)
Location Services	275,533	200,501	32,271	16.1%	
Soil Conservation	2,288,939	2,303,639	29,995	1.3%	(5)
Public Utilities	96,900	96,900	18,249	18.8%	
Economic Physical Development Other	20,000	20,000	-	0.0%	(6)
Industrial Park	4,332	4,332	1,103	25.5%	
Economic Incentive	767,447	767,447	48,749	6.4%	(7)
Water and Sewer	250,000	268,570	15,648	5.8%	(8)
Education	98,053,453	98,053,453	24,078,144	24.6%	
Other Uses:					
Transfers Out	20,024,042	20,154,644	999	0.0%	(9)
TOTAL	\$ 342,529,307	\$ 348,802,676	\$ 61,248,251	17.6%	

Expenditures by Category	YTD ACTUAL			
	FY20-21 ADOPTED BUDGET	FY20-21 REVISED BUDGET	(unaudited) as of September 30, 2021	PERCENT OF BUDGET TO DATE
Personnel Expenditures	\$ 154,487,473	\$ 154,682,589	\$ 25,397,432	16.4%
Operating Expenditures	164,954,413	170,484,386	35,796,845	21.0%
Capital Outlay	3,063,379	3,481,057	52,975	1.5% ⁽¹⁰⁾
Transfers To Other Funds	20,024,042	20,154,644	999	0.0% ⁽⁹⁾
TOTAL	\$ 342,529,307	\$ 348,802,676	\$ 61,248,251	17.6%

COUNTY OF CUMBERLAND

Fiscal Year 2022 - September Year-to-Date Actuals (Report Run Date: October 26, 2021)

Additional Detail

General Fund Revenues

*

- (1) **Current Year Ad Valorem 5.7%** - The bulk of revenues are typically recorded between November - January.
- (2) **Motor Vehicles 19.0%** - YTD Actual reflects 2 months of collections.
- (3) **Sales Tax 0.0%** - There is a three month lag. Collections for the fiscal year are first recorded in October.
- (4) **Unrestricted/Restricted Intergovernmental 7.5%** - There is typically a one to two-month lag in receipt of this funding.
- (5) **Charges for Services 17.8%** - The largest component of charges for services is revenue from the Board of Ed for security at 22% of budget. Only 6% of that revenue has been billed/collected to date.

General Fund Expenditures

**

- (1) **Court Facilities 12.4%** - Expenditures are in line with past fiscal year trends at this point in the fiscal year.
- (2) **Board of Elections 7.4%** - Municipal election expenses have been budgeted but not yet utilized.
- (3) **Public Safety Other 9.9%** - Outside agency invoices are typically paid at the beginning of the second quarter.
- (4) **Cooperative Extension 12.3%** - Expenditures are in line with past fiscal year trends at this point in the fiscal year.
- (5) **Soil Conservation 1.3%** - Approximately \$2.1M in USDA Grant funds were budgeted and are unexpended.
- (6) **Economic Physical Development Other 0.0%** - Payment has occurred and will be reflected on the October report.
- (7) **Economic Incentive 6.4%** - Economic incentives are paid when the company complies.
- (8) **Water and Sewer 5.8%** - Expenditures are in line with past fiscal year trends at this point in the fiscal year.



RISK MANAGEMENT

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021 AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: JULIE A. CRAWFORD, BENEFITS COORDINATOR

DATE: 10/22/2021

SUBJECT: HEALTH INSURANCE UPDATE

Requested by: AMY H. CANNON, COUNTY MANAGER

Presenter(s): N/A

BACKGROUND

As of July 1, 2019, retirees who are 65 and older became covered by a County funded fully insured plan through AmWINS. All other covered members remained insured by the County's self-funded plan through BCBS. The information provided below and within the graphs has been updated to include the monthly premium amount paid to fund the fully insured plan and the actual monthly claims amounts for all other covered members. Combining these amounts for FY20 and beyond is necessary to ensure a complete picture when comparing the claims results to prior years.

Total health insurance claims plus the fully insured premium amount for FY22 are up 51.68% for the month of September as compared to the same month in FY21. To provide some perspective, below is the three-month average for the past five fiscal years. This average represents the average monthly year-to-date claims for each fiscal year and includes the fully insured premium for fiscal years 20, 21 and 22. Additionally, graphs are provided in the attachment to aid in the analysis. *If this trend continues, a budget ordinance amendment will be needed to appropriate health insurance fund balance in order to cover the cost increase.*

Year to date claims and premium payment through September	\$7,584,522
Less year to date stop loss credits	<u>(\$631,039)</u>
Net year to date claims and premium payment through September	\$6,953,483

Average monthly claims and fully insured premium (before stop loss) per fiscal year through September:

FY18 \$1,447,991
FY19 \$1,508,543
FY20 \$1,399,015
FY21 \$1,507,260
FY22 \$2,528,174

RECOMMENDATION / PROPOSED ACTION

For information only – no action needed.

ATTACHMENTS:

Description

Health Insurance Graphs

Type

Backup Material



ENGINEERING AND INFRASTRUCTURE DEPARTMENT

**MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021
AGENDA SESSION**

TO: BOARD OF COUNTY COMMISSIONERS

FROM: JERMAINE WALKER, COUNTY ENGINEER

DATE: 11/4/2021

SUBJECT: PROJECT UPDATES

Requested by: BOARD OF COMMISSIONERS

Presenter(s): JERMAINE WALKER, COUNTY ENGINEER

BACKGROUND

Please find attached the monthly project report update for your review.

RECOMMENDATION / PROPOSED ACTION

No action is necessary. This is for information only.

ATTACHMENTS:

Description

11092021 Monthly Agenda Session Report

Type

Backup Material

MONTHLY PROGRESS REPORT				
Project Location	Contract Amount	Project Status	Contract Start Date	Contract Duration
500 Executive Place - Cumberland County Emergency Services Center	\$16.8M	60% Complete. Completed structural steel for new addition. Executing drywall installation. Completed mechanical yard demolition. Conducted install of plumbing, mechanical and electrical fixtures. Will condition air for drywall finishing over the next two weeks. Roofing materials expected on site by mid-December. Experiencing delay for server room UPS.	3/8/2021	360 days
Spring Lake Family Resource Center, Chiller Replacement	\$197,000.00	Project initiated on November 1, 2021. Start up planned for November 8, 2021.	N/A	90 days
DSS Elevators	\$1,000,000.00	Conducted bid-opening on October 4, 2021. Abell Elevator was winning bid of \$710K. Awaiting final bid tab for presentation to BOC.	N/A	N/A
Judge Maurice E. Braswell Courthouse Switchgear Replacement	\$470,000.00	On schedule for Thanksgiving weekend completion. Conducting additional transformer replacement project with PWC. Completed new concrete slab for new transformer. Conducted partial installation of new busway on October 18, 2021.		
Headquarters Library Parking Lot	\$37,200.00	Contract signed. Survey complete and design process underway.	5/13/2021	1/19/2022
Doorway for Register of Deeds	Pending	Conducted pre-bid on October 4, 2021. Bid opening is October 14, 2021. Bid closed on October 28, 2021 with one and only winning bid for \$125K. Staff will seek guidance from BOC.	N/A	N/A
DSS Camera Replacement and Security System Upgrades	\$219K	Received proposal from Security 101 for \$219K. Awaiting fiscal year funding rollover approval before contract review by legal and finance. Contract approved. Estimated completion date is February 18, 2022.	10/11/2021	270 days
Public Health Camera Replacement and Security System Upgrades	\$202K	Contract approved. Conducted kickoff meeting on October 7, 2021. Construction started on November 1, 2021. Estimated completion date is December 10, 2021.	10/11/2021	270 days
Judge Maurice E. Braswell Courthouse Access Management and Security Camera System	\$452K	Contract approved. Estimated completion date is May 20, 2022.	10/11/2021	270 days
Judge Maurice E. Braswell Courthouse Bathroom Updates	Pending	Finalized scope July 23, 2021. Put out for bid on August 13, 2021. Intent is to do LL bathroom first. Working contract. Estimated start date is mid- January 2022.	N/A	N/A
DSS roof replacement	\$1.5M	In design with Fleming and Associates.	N/A	N/A
Judge Maurice E. Braswell Courthouse roof replacement	\$400K	In design with Fleming and Associates.	N/A	N/A
LEC roof replacement	\$300K	In design with Fleming and Associates.	N/A	N/A



COMMUNITY DEVELOPMENT

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021 AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: DEE TAYLOR, DIRECTOR OF COMMUNITY DEVELOPMENT

DATE: 11/4/2021

**SUBJECT: COMMUNITY DEVELOPMENT BLOCK GRANT - DISASTER
RECOVERY (CDBG-DR) UPDATE**

Requested by: AMY H. CANNON, COUNTY MANAGER

Presenter(s): COMMUNITY DEVELOPMENT STAFF

BACKGROUND

Cumberland County, in partnership with the North Carolina Office of Recovery & Resiliency (NCORR), is implementing a Multifamily Rental Housing activity funded through the Community Development Block Grant Disaster Recovery Program. The attached report is an update on the status of the activity (Robin's Meadow Permanent Supportive Housing) undertaken by Cumberland County.

RECOMMENDATION / PROPOSED ACTION

No action is needed. This item is provided for informational purposes only.

ATTACHMENTS:

Description	Type
Cumberland County Disaster Recovery Programs Update	Backup Material

CUMBERLAND COUNTY DISASTER RECOVERY PROGRAMS UPDATE
FOR THE NOVEMBER 9, 2021
BOARD OF COMMISSIONERS' AGENDA SESSION

Status as of October 31, 2021:

Milestones/Activities (beginning with the most recent activity):

- NCORR will be amending the current Subrecipient Agreement to extend the project deadline.
- The plan was to issue an Invitation for Bid (IFB) by the end of December 2021. However, the latest Producer Price Index of Building Materials and Supplies is still showing very little improvement;
- Cumberland County Community Development (CCCD) had issued the Invitation for Bid (IFB) for the construction of the Robin's Meadow Permanent Housing Program. The bids from contractors were due by June 17, 2021. No bids were received. An IFB was reissued with a deadline of July 27, 2021. However, due to the low attendance at the pre-bid meeting and concerns of the fluctuation of price in construction, the IFB was cancelled. CCCD Director and the Wooten Company had expressed concerns to the State, during a recent conference call, regarding the challenges of obtaining bids and meeting the funding obligation by August 2021. The CCCD Director requested the State to amend the funding obligation date in the subrecipient agreement. The request is currently under review;
- The City of Fayetteville completed the final commercial review of the project. Within the next week, Cumberland County Community Development will post the invitation for bids for the construction of the project;
- On April 15, 2021, a virtual meeting was held between Tracey Colores (NCORR), Dee Taylor (CCCD), and Devon Newton (CCCD). Tracey provided an update on the status of the request for additional funds to support the project. NCORR is planning to provide additional funding. The additional funds requested by CCCD will only be eligible for construction activities. There were challenges with obtaining additional funding to assist with supportive services. The official letter and amended sub recipient agreement from NCORR is forthcoming. An updated Project Information Form will also need to be submitted;
- The Wooten Company submitted an updated project schedule. It is anticipated that construction will be completed June 2022;
- NCORR completed its review of the construction project manual;
- The construction project manual prepared by The Wooten Company was sent to NCORR for review. Invitation to Bid for the construction of the project are expected to be posted within the next month pending the City of Fayetteville's final commercial review and NCORR's final review of the construction project manual;
- NCORR held a technical assistance session with Community Development Staff (Sylvia McLean and Dee Taylor) on December 16, 2020 to ensure Community Development is carrying out the requirements of the agreement and the CDBG-DR program. NCORR staff included Dan Blaisdell, Bill Blankenship, Joe Brook, Mary Glasscock, Tracey Colores, and Kristina Cruz;
- A letter (dated July 28, 2020) was sent to NCORR requesting additional CDBG-DR funds in the amount of \$1,000,000 to cover construction and supportive services. A follow-up was made with NCORR regarding the status of the request and Community Development had to submit a revised

letter (dated October 21, 2020) to clarify the amount requested. Community Development is still waiting to receive a response from NCORR regarding the status of the request;

- The Wooten Company submitted a revised project schedule. Community Development submitted a request to NCORR to extend the deadline to obligate funds to March 9, 2021;
- Robins Meadow Permanent Supportive Housing Project/Community Recovery Infrastructure - A/E Services – The Wooten Company is providing construction administration services and completing the construction document phase. The firm had submitted documents to City of Fayetteville Technical Review Committee and Engineering Review Committee to complete the final review process;
- DRA-17 & HMGP Projects – County completed acquisition and demolition of 10 properties;
- Robins Meadow Permanent Supportive Housing Project/Community Recovery Infrastructure – received project specific award letter January 23, 2020; and
- NCORR executed SRA with County December 17, 2019.

Current Staffing:

- State POC: John Ebbighausen – Director of Disaster Recovery Programs, NC Office of Recovery & Resiliency (NCORR); Mary Glasscock; Infrastructure Manager (NCORR); and Tracey Colores
- Cumberland County:
 - Sylvia McLean, P.T. Community Development (CD) Consultant



FINANCE OFFICE

MEMORANDUM FOR THE AGENDA OF THE NOVEMBER 9, 2021
AGENDA SESSION

TO: BOARD OF COUNTY COMMISSIONERS

FROM: VICKI EVANS, FINANCE DIRECTOR

DATE: 10/27/2021

**SUBJECT: SOUTHERN HEALTH PARTNERS, INC. QUARTERLY STATISTICS
REPORT ON INMATE HEALTH CARE**

Requested by: BOARD OF COUNTY COMMISSIONERS

Presenter(s): NA

BACKGROUND

Through a contract with the Board of County Commissioners, Southern Health Partners, Inc. has been providing services to the inmates at the Cumberland County Detention Center since July 2017.

The most recently updated quarterly statistical report of inmate healthcare as reported by Southern Health Partners, Inc. is provided in the attachment.

RECOMMENDATION / PROPOSED ACTION

For information only. No action needed.

ATTACHMENTS:

Description	Type
SHP - Quarterly Report	Backup Material

Southern Health Partners, Inc. Quarterly Statistics Report on Inmate Health Care
July 1, 2018 - September 30, 2021
 Provided for the Cumberland County Board of Commissioners

Data Set	Description	Fiscal Year 2019				Fiscal Year 2020				Fiscal Year 2021				Fiscal Year 2022			
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
1	# of Hospital Admissions	6	4	4	3	3	4	2	3	2	5	8	3	5			
2	# Sent to Emergency Room	18	16	11	8	10	16	6	9	6	15	29	7	24			
3	# Outside Medical Visits (includes any specialty)	44	27	28	40	41	19	24	12	15	26	31	28	34			
4	# of In-House X-Ray Services	78	54	69	95	75	78	105	45	195	88	51	66	59			
5	# Seen On-Site By Mental Health	1220	1403	1324	963	1043	859	1034	691	528	938	733	737	960			
6	# Seen by Physician and/or Physician Providers	354	288	299	319	256	300	267	196	251	321	227	248	198			
7	# Seen by Dentist (includes on-site & off-site)	53	42	56	69	63	51	48	54	54	52	20	49	44			
8	# of Receiving Screens done by Medical Staff	0	2021	3500	2946	2924	2923	2836	1479	1959	1970	1895	2287	2616			
9	# Seen by Medical Staff for Sick Call	3512	3672	3739	3598	3507	4304	3513	3045	3553	2834	3350	2527	4114			
10	# of History and Physicals Performed	1365	1353	1296	1243	1721	1476	1418	925	1011	1064	933	853	906			
11	# of Rapid Plasma Reagin s performed (STD testing/syphilis)	538	489	486	440	342	415	312	0	0	0	0	0	0			
12	# of Other Sexually Transmitted Diseases	12	6	18	14	7	13	6	8	5	8	22	16	16			
13	# of Medical Refusals by Inmate	504	358	409	502	602	774	603	385	564	352	367	414	502			
14	# of Inmate Blood Sugar Checks	2508	2100	4265	3455	3362	3993	4105	2651	1818	1633	1647	1814	2706			
15	# of Inmate Blood Pressure Checks	1193	1508	1705	2105	2510	2006	1776	1012	1036	1184	2112	1615	1480			
16	# of TB Screens and/or PPD Tests	1365	1353	1296	1250	1305	1476	1418	925	1011	1068	933	920	906			
17	# of Staph/MRSA Patients In-house	0	1	0	15	7	1	2	1	0	2	3	4	2			
18	# of Pregnant Females	22	19	18	12	9	14	15	5	9	9	4	15	13			
19	# of HIV Patients In-House	16	11	25	26	25	14	17	12	17	15	20	13	19			
20	# of Inmates Placed on Suicide Watch	94	141	133	305	861	169	260	504	765	530	529	215	51			
21	# of Inmate Deaths	0	0	0	0	2	1	0	0	1	0	0	0	1			
22	# of Inmates on Detox Protocols	80	200	175	208	214	177	150	49	111	88	110	179	184			
23	# of Diabetic Patients	no data	no data	no data	no data	no data	no data	41	19	30	31	30	40	54			
24	# of Asthma Patients	no data	no data	no data	no data	no data	no data	33	12	21	15	23	40	24			
25	# of Meds Administered	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	1858	2470	4578			
26	# of Medication Assisted Treatment	no data	no data	no data	no data	no data	no data	9	0	0	0	0	0	0			
27	# of patients tested for COVID19	no data	no data	no data	no data	no data	no data	0	121	423	886	1194	826	1134			
28	# of patients testing positive for COVID19	no data	no data	no data	no data	no data	no data	0	20	9	16	98	8	11			
Average Daily Population per Quarter:		751	725	697	649	680	714	674	537	501	472	452	442	467			

ADDITIONAL INFORMATION ON OUTLIERS AS COMPARED TO AVERAGES:

Gray highlighted cells show outliers as compared to quarterly averages. Per contact at SHP, those quarters' data were inaccurately counted and reported.

Please note: HIPAA laws do not allow cause of death information to be released within the quarterly reports.

Line 27 Per Dr. Jennifer Green, Cumberland County Public Health Director: All new inmates are being tested upon intake (~day 5 or 6 after arrival) and quarantined.

Line 28 Per Dr. Jennifer Green, Cumberland County Public Health Director: Some of the positive tests were among those that were tested upon intake and already in quarantine. There was one outbreak which was concluded in June 2020. No new outbreaks have been identified since then.