

ADDENDUM NO. 2

INTERNATIONAL LOGISTICS PARK & MID-ATLANTIC INDUSTRIAL RAIL PARK  
WASTEWATER COLLECTION IMPROVEMENTS

County of Columbus & County of Brunswick, NORTH CAROLINA

OCTOBER 21, 2019

<p><b>PROJECT MANUAL</b></p>	<p><b>ADVERTISEMENT FOR BIDS – BID DATE</b> Please note that the <u>bid date has changed</u>. The new bid date is Tuesday meeting will be held on <b>Thursday November 7<sup>th</sup> at 3:00 PM</b> local time in the Brunswick County Public Utilities Operations Center in Supply, NC. Directions are as follows: From Wilmington follow US 17 toward Supply. Turn right onto Hwy. 211 heading toward Bolton. Turn right onto Grey Water Road in approximately one mile (beside athletic park). Utilities Operations Center is on right.</p> <p><b>GENERAL INFORMATION / QUESTIONS / CLARIFICATIONS</b></p> <p>- Please find attached pre-bid conference sign in sheet.</p> <p>Q: Should a trash basket be included on each Wet Well? There is a detail for a specific trash basket on detail page C-9 but none are shown on Wet Well detail sheets <b>A: No Trash Baskets will be used as part of this project scope. Do not include.</b></p> <p>Q: Who is main contact person with Columbus County? <b>A: Primary contact person with Columbus County is Gary Lanier, Director Columbus County Economic Development Commission. Phone Number – 910-640-6608 ; Email – <a href="mailto:glanier@columbusco.org">glanier@columbusco.org</a></b></p> <p>Q: What is information on Owner Supplied Equipment? <b>A: More details will be given in upcoming addendum on owner supplied equipment.</b></p> <p>Q: What information is available for wall thickness of encasement pipe and carrier pipe for existing bore under Hwy 74? Spiders used in installation? <b>A: A change has been made on plan sheets (C-4) . Current approach is to utilize the existing piping within the encasement, and attach new force main to existing force main piping with fittings as shown on updated plans. Valves have been added to help with testing procedure.</b></p>
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**PLANS**

Q: How will power to the two pump stations be handled?

**A: Arrangement with Duke Power is being addressed and instructions will be issued in future addendum.**

Q: Is there a detail that shows the sizes for the hatches for all Wet Wells, Valve Vaults, and Meter Vaults?

**A: The sizes for all hatches for each structure have been added to sheets C-6 & C-7 respectively.**

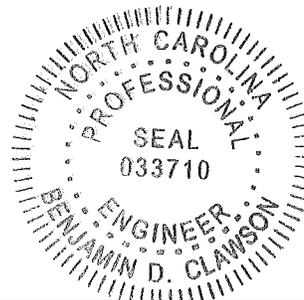
**SPECIFICATIONS**

Attached are updated forms. These forms have been revised to include Columbus County as the owner and responsible entity in terms of the construction contract. Please replace the original forms with these attached forms within the project manual.

**PLAN SHEETS**

Please incorporate attached plan sheets into your set. Note Manhole 3A has been added to the project along with associated gravity sewer line.

All other conditions remain the same.



By:  10-21-19

Benjamin Clawson, P.E.  
Municipal Engineering Services Co., PA  
License No. C-0281  
68 Shipwash Drive, Garner, NC 27529

**MINORITY BUSINESS PARTICIPATION REQUIREMENTS:**

Provide with the bid - Under NCGS 143-128.2(c) the undersigned Bidder shall identify **on its bid** (Identification of Minority Business Participation Form) the minority businesses that it will use on the project with the total dollar value of the bids that will be performed by the minority businesses. **Also** list the good faith efforts (Affidavit A) made to solicit minority participation in the bid effort.

**NOTE:** A Contractor that performs all of the work with its own workforce may submit an Affidavit B to that effect in lieu of Affidavit A required above. The Minority Business Participation Form must still be submitted even if there is zero participation.

After the bid opening - The Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low Bidder, the Bidder shall then file within seventy-two (72) hours of the notification of being the apparent lowest Bidder, the following:

An Affidavit C that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total Contract price, which is equal to or more than the goal established as indicated in the Notice to Bidders. This affidavit shall give rise to the presumption that the Bidder has made the required good faith effort and Affidavit D is not necessary;

**OR**

If less than the goal, Affidavit D of its good faith effort to meet the goal shall be provided. The document must include evidence of all good faith efforts that were implemented, including any advertisements, solicitations, and other specific actions demonstrating recruitment and selection of minority businesses for participation in the Contract.

**Note:** Bidders must always submit **with their bid** the Identification of Minority Business Participation Form listing all Minority Business contractors, vendors, and suppliers that will be used. If there is no Minority Business participation, then enter none or zero on the form. Affidavit A or Affidavit B, as applicable, also must be submitted with the bid. Failure to file a required affidavit or documentation with the bid or after being notified apparent low Bidder is grounds for rejection of the bid.

### Proposal Signature Page

The undersigned further agrees that in the case of failure on his part to execute the said Contract, provide performance and payment bonds, and certificates of insurance within ten (10) consecutive calendar days after being given written notice of the award of Contract, the certified check, cash, or bid bond accompanying this bid shall be paid into the funds of the Owner's account set aside for the project, as liquidated damages for such failure; otherwise the certified check, cash, or bid bond accompanying this proposal shall be returned to the undersigned.

Respectfully submitted this day of \_\_\_\_\_

\_\_\_\_\_  
(Name of Firm or Corporation Making Bid)

WITNESS:  
  
\_\_\_\_\_  
(Proprietorship, Partnership, or LLC)

By: \_\_\_\_\_  
Signature  
  
Name: \_\_\_\_\_  
Print or Type  
  
Title: \_\_\_\_\_  
(Owner/Co-Partner/President/Vice President/Manager)  
  
Address: \_\_\_\_\_

ATTEST:  
  
By: \_\_\_\_\_  
  
Title: \_\_\_\_\_  
(Corp. Sec. or Asst. Sec. only)

\_\_\_\_\_  
  
License No. \_\_\_\_\_  
  
Federal I.D. No. \_\_\_\_\_

(CORPORATE SEAL)

Addendum received and used in computing bid:

Addendum No. 1 \_\_\_\_\_ Addendum No. 3 \_\_\_\_\_ Addendum No. 5 \_\_\_\_\_ Addendum No. 7 \_\_\_\_\_  
Addendum No. 2 \_\_\_\_\_ Addendum No. 4 \_\_\_\_\_ Addendum No. 6 \_\_\_\_\_ Addendum No. 8 \_\_\_\_\_

# FORM OF BID BOND

**BIDDER (Name and Address):**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SURETY (Name and Address of Principal Place of Business):**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**OWNER:**

**COLUMBUS County**  
**111 Washington Street**  
**Whiteville, NC 28472**

**BID**

BID DUE DATE: \_\_\_\_\_  
PROJECT (Brief Description Including Location): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**BOND**

BOND NUMBER: \_\_\_\_\_  
DATE: (Not Later than Bid Due Date): \_\_\_\_\_  
PENAL SUM: \_\_\_\_\_

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms of the Contract Documents, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative. THE CONDITION OF THE ABOVE OBLIGATION is such, that if the Bidder shall be awarded the Contract for which the bid is submitted and shall execute the Contract and give bond for the faithful performance thereof within ten (10)days after the award of same to the Bidder, then this obligation shall be null and void; but if the Bidder fails to so execute such Contract and give performance bond as required by NCGS 143-129, the surety shall, upon demand, forthwith pay to the Owner the penal sum amount set forth above. Provided further, that the bid may be withdrawn as provided by NCGS 143-129.1

BIDDER

SURETY

\_\_\_\_\_  
Bidder's Name and Corporate Seal (Seal)

\_\_\_\_\_  
Surety's Name and Corporate Seal (Seal)

By: \_\_\_\_\_  
Signature and Title

By: \_\_\_\_\_  
Signature and Title  
(Attach Power of Attorney)

Attest: \_\_\_\_\_  
Signature and Title

Attest: \_\_\_\_\_  
Signature and Title

Note: (1) Above addresses are to be used for giving required notice.  
(2) Any singular reference to Bidder, Surety, Owner, or other party shall be considered plural where applicable.



# COLUMBUS County AFFIDAVIT A – Listing of Good Faith Efforts

(Name of Bidder)

Affidavit of \_\_\_\_\_

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 ten (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 ten (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 that provide assistance in recruitment of minority businesses.
- 5 – (10 pts) Attended pre-bid meetings scheduled by the 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.
- 11 – (20 pts) A minimum of two (2) or all, if only one (1) is indicated, of the MBE firms indicated on the "Identification of Minority Business Participation" form are **COLUMBUS County** based.

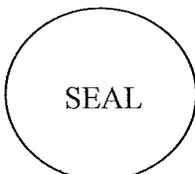
The undersigned, if apparent low Bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of Contract to be executed with the Owner. Substitution of Contractors must be in accordance with NCGS143-128.2(d) 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: \_\_\_\_\_ Name of Authorized Officer: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_



State of \_\_\_\_\_, County of \_\_\_\_\_  
Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_  
Notary Public \_\_\_\_\_  
My commission expires \_\_\_\_\_

**COLUMBUS County**

**AFFIDAVIT B – Intent to Perform Contract  
with Own Workforce**

Affidavit of \_\_\_\_\_  
(Name of Bidder)

I hereby certify that it is our intent to perform one hundred percent (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 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: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_



State of \_\_\_\_\_, County of \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

Notary Public \_\_\_\_\_

My commission expires \_\_\_\_\_

## COLUMBUS County    **AFFIDAVIT C** – Portion of the Work to be Performed by Minority Firms

**(Note this form is to be submitted only by the apparent lowest responsible, responsive Bidder.)**

If the portion of the work to be executed by minority businesses as defined in NCGS143-128.2(g) is equal to or greater than the percentage goal listed in the Notice to Bidders of the Bidders total Contract price, then the Bidder must complete this affidavit. This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **seventy-two (72) hours** after notification of being low Bidder.

Affidavit of \_\_\_\_\_ I do hereby certify that on the  
(Name of Bidder)

\_\_\_\_\_ (Project Name)

Amount of Bid \$ \_\_\_\_\_

I will expend a minimum of \_\_\_\_\_% of the total dollar amount of the Contract with Minority Business Enterprises. Minority businesses will be employed as construction Subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below.

Attach additional sheets if required

Name and Phone #	*Minority Category	Work Description	Dollar Value

\*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**), Socially and Economically Disadvantaged (**D**)

Pursuant to NCGS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a Contract with the Owner. Failure to fulfill this commitment may constitute a breach of the Contract.

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

Date: \_\_\_\_\_ Name of Authorized Officer: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_



State of \_\_\_\_\_, County of \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Notary Public \_\_\_\_\_

My commission expires \_\_\_\_\_

Do not submit with bid    Do not submit with bid    Do not submit with bid    Do not submit with bid

# COLUMBUS County                      AFFIDAVIT D – Good Faith Efforts

**(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)**

If the percentage goal of participation by minority business listed in the Notice to Bidders **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of \_\_\_\_\_ I do hereby certify that on the  
(Name of Bidder)

\_\_\_\_\_ (Project Name)

Amount of Bid \$ \_\_\_\_\_

I will expend a minimum of \_\_\_\_\_% of the total dollar amount of the Contract with Minority Business Enterprises. Minority businesses will be employed as construction Subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone #	*Minority Category	Work Description	Dollar Value

\*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**), Socially and Economically Disadvantaged (**D**)

**Examples** of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this Contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date, and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible Sub-Bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any Contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster.
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive Bidder.

Pursuant to NCGS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a Contract with the Owner. Failure to fulfill this commitment may constitute a breach of the Contract.

Do not submit with bid    Do not submit with bid    Do not submit with bid    Do not submit with bid

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

Date: \_\_\_\_\_ Name of Authorized Officer: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_



State of \_\_\_\_\_, County of \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Notary Public \_\_\_\_\_

My commission expires \_\_\_\_\_

# NOTICE OF AWARD

Dated \_\_\_\_\_, 20 \_\_\_\_

To: \_\_\_\_\_  
(BIDDER)

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Owner: **COLUMBUS COUNTY** \_\_\_\_\_

Owner's Contract No. **N/A** \_\_\_\_\_

Project: \_\_\_\_\_  
\_\_\_\_\_  
(Insert Name of Contract as it Appears in the Construction Documents)

You are hereby notified that your bid dated \_\_\_\_\_, 20 \_\_\_\_ for the above described project has been considered and has been accepted by the Owner.

The amount of your Contract is: \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

Enclosed with this Notice of Award are the following:

Form of Performance Bond, Form of Payment Bond, and Certificate of Insurance.

You must comply with the following conditions precedent within twelve (12) days of the date of this Notice of Award, that is by:

\_\_\_\_\_, 20 \_\_\_\_

1. You must execute the contract by electronic signature. A Docu-sign email with an electronic form of construction contract has been/will be sent to you for electronic signature.
2. You must deliver to the Owner 2 each of the fully executed Performance Bond, Payment Bond, and Form of Insurance. Each of the Documents must bear your signature.
3. List other condition precedents:

None  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do not submit with bid  
Failure to comply with these conditions within the time specified will entitle Owner to consider your bid in default, to annul this Notice of Award and to declare your Bid Security forfeited.

After you have satisfactorily complied with the above conditions, Owner will return to you a fully signed copy of the Contract.

**COLUMBUS COUNTY**

\_\_\_\_\_  
(OWNER)

By: \_\_\_\_\_

(AUTHORIZED SIGNATURE)

\_\_\_\_\_  
(TITLE)

**ACCEPTANCE OF AWARD**

\_\_\_\_\_  
(CONTRACTOR)

By: \_\_\_\_\_

(AUTHORIZED SIGNATURE)

\_\_\_\_\_  
(TITLE)

\_\_\_\_\_  
(DATE)

COPY to ENGINEER  
(Use Certified Mail, Return Receipt Requested)

Name:  
Address:

**NORTH CAROLINA**

**CONSTRUCTION OR REPAIR AGREEMENT**

**[Standard]**

**COLUMBUS COUNTY**

**THIS CONSTRUCTION OR REPAIR AGREEMENT** (hereinafter referred to as the "Agreement" or "Contract") is made and entered into by and between COLUMBUS County, a body politic and corporate of the State of North Carolina, (hereinafter referred to as "County" or "Owner"), party of the first part, and {Vendor Name}, (hereinafter referred to as "Contractor"), party of the second part.

**WITNESSETH:**

**1. PROJECT; FEES**

Contractor shall furnish and deliver all materials and perform all work in the manner and form as provided by enumerated plans, specifications and documents, including, without limitation and as applicable: the Invitation to Bid; Notice to Bidders; Instructions to Bidders; General Conditions; Supplementary General Conditions; Specifications; Addenda; Accepted Proposal; Notice to Proceed; Performance Bond; Payment Bond; MBE forms; Power of Attorney; Workers' Compensation, Public Liability, Property Damage and Builder's Risk Insurance Certificates; Approval by the Board of Commissioners; Tax Statement and Certification; Notice of Substantial Completion; Notice of Final Completion and Acceptance; and Drawings (hereinafter referred to collectively as the "Bid Documents") titled:

**Project: {Project Title}** \_\_\_\_\_

Consisting of the following sheets **{Sheet Labels}** \_\_\_\_\_

dated **{Sheet Date or Dates}** \_\_\_\_\_

And the following addenda:

Addendum No. <u>  {Addendum No. 1}  </u>	Dated: <u>  {Date of Addendum No. 1}  </u>
Addendum No. <u>  {Addendum No. 2}  </u>	Dated: <u>  {Date of Addendum No. 2}  </u>
Addendum No. <u>  {Addendum No. 3}  </u>	Dated: <u>  {Date of Addendum No. 3}  </u>
Addendum No. <u>  {Addendum No. 4}  </u>	Dated: <u>  {Date of Addendum No. 4}  </u>
Addendum No. <u>  {Addendum No. 5}  </u>	Dated: <u>  {Date of Addendum No. 5}  </u>
Addendum No. <u>  {Addendum No. 6}  </u>	Dated: <u>  {Date of Addendum No. 6}  </u>

The Bid Documents are incorporated by reference and made an integral part of this Agreement. To the extent the terms of such documents conflict with the terms of this Agreement, the terms of this Agreement shall prevail.

## 2. TERM OF AGREEMENT

The term of this Agreement begins upon issuance of the Notice to Proceed by COLUMBUS County (the "Effective Date") and continues in effect for **{Number of Days - Alpha}** (**{Number of Days - Numeric}**) consecutive calendar days, unless extended or sooner terminated as provided for in the COLUMBUS County General Conditions of the Contract.

## 3. COLUMBUS COUNTY GENERAL CONDITIONS OF THE CONTRACT

This Agreement, in addition to any construction documents prepared hereunder, shall be subject to the COLUMBUS County, North Carolina General Conditions of the Contract (for construction contracts), unless the County directs otherwise. In the event of a conflict between the General Conditions of the Contract and this Agreement, this Agreement shall prevail.

## 4. NONAPPROPRIATION

If the Board of County Commissioners does not appropriate the funding needed by the County to make payments under this Agreement for a given fiscal year, the County will not be obligated to pay amounts due beyond the end of the last fiscal year for which funds were appropriated. In such event, the County will promptly notify the Contractor of the non-appropriation and this Agreement will be terminated at the end of the last fiscal year for which funds were appropriated. No act or omission by the County which is attributable to non-appropriation of funds shall constitute a breach of or default under this Agreement.

## 5. COMPENSATION

The County agrees to pay Contractor the total amount of **{Contract Amount - Alpha} Dollars** (**{Contract Amount - Numeric}**) for the Project. Payment shall be subject to additions and deductions as provided in the specifications or Bid Documents. County shall make monthly progress payments to Contractor on the basis of a duly certified and approved estimate of work performed during a given calendar month, less five percent (5%) of the amount of such estimate which is to be retained by County until all work has been performed strictly in accordance with this Agreement and such work has been accepted by County. The County shall not require further retainage after fifty percent (50%) of the work has been satisfactorily completed on schedule as more fully set forth in the General Conditions included with the Bid Documents. County shall make full and final payment to Contractor within thirty (30) days after completion of the Project and acceptance of such work by County and upon Contractor's submittal of satisfactory evidence that all payrolls, material bills and other costs incurred in connection with the Project have been paid in full. Notwithstanding the foregoing, County will not pay late fees on any charges under this Agreement. If County disputes any portion of the charges, the County shall inform Contractor in writing of the disputed charges.

## 6. INDEPENDENT CONTRACTOR

Both County and Contractor agree that Contractor shall act as an independent contractor and shall not represent itself as an agent or employee of the County for any purpose in the performance of its duties under this Agreement. Contractor represents that it has or will secure, at its own expense, all personnel required in performing the work under this Agreement. Accordingly, Contractor shall be responsible for payment of all federal, state and local taxes arising out of its activities in accordance with this Agreement, including, without limitation, federal and state income tax, social security tax, unemployment insurance taxes and any other taxes or business license fees as required. Contractor shall not be entitled to participate in any plans, arrangements or distributions by the County pertaining to or in connection with any pension, stock, bonus, profit sharing or other benefit extended to County employees.

In the event the Internal Revenue Service should determine that Contractor is, according to Internal Revenue Service guidelines, an employee subject to withholding and social security contributions, then Contractor hereby acknowledges that all payments hereunder are gross payments, and the Contractor is responsible for all income taxes and social security payments thereon.

## 7. CONTRACTOR REPRESENTATIONS

- (1) Contractor is a duly organized entity or corporation qualified to do business and in good standing under the laws of the State of North Carolina;
- (2) Contractor has all requisite corporate power and authority to execute, deliver and perform its obligations under this Agreement;
- (3) No approval, authorization or consent of any governmental or regulatory authority is required to be obtained or made by it in order for Contractor to enter into and perform its obligations under this Agreement;
- (4) Contractor shall not violate any agreement with any third party by entering into or performing the work under this Agreement;
- (5) Contractor will perform all work in conformity with the specifications and requirements of this Agreement;
- (6) Unless otherwise agreed by the parties, Contractor agrees that all materials will be new and of good quality;
- (7) The work provided by Contractor under this Agreement will not violate, infringe or misappropriate any patent, copyright, trademark or trade secret rights of any third party, or any other third-party rights (including without limitation non-compete agreements);

- (8) Contractor will perform the work in a professional and workmanlike manner exercising reasonable care and diligence and will ensure that it adheres to the highest generally accepted standards in the industry when performing said work;
- (9) Contractor acknowledges that if any specific licenses, certifications or related credentials are required in its performance of the work, it will ensure that such credentials remain current and active and not in a state of suspension or revocation; and
- (10) Contractor shall ensure that whenever its employees or agents are on County property, they will strictly abide by all instructions and directions issued by the County with respect to rules, regulations, policies and security procedures applicable to work on the County's premises. Such rules, regulations, policies and security procedures shall include, but not be limited to: (i) not possessing any controlled substances; (ii) smoking only in designated smoking areas, if any; and (iii) not possessing weapons, except for weapons possessed by law enforcement officials.

#### **8. NON-ENDORSEMENT AND PUBLICITY**

County is not endorsing Contractor or its work, and Contractor is not permitted to reference this Agreement or County in any manner without the prior written consent of County. Notwithstanding the foregoing, the parties agree that Contractor may list the County as a reference in response to requests for proposals and may identify County as a customer in presentations to potential customers.

#### **9. NON-EXCLUSIVITY**

Contractor acknowledges that County is not obligated to contract solely with Contractor for the work covered under this Agreement.

#### **10. DIVESTMENT FROM COMPANIES THAT BOYCOTT ISRAEL**

Contractor hereby certifies that it has not been designated by the North Carolina State Treasurer as a company engaged in the boycott of Israel pursuant to N.C.G.S. § 147-86.81.

#### **11. DEBARMENT**

Contractor hereby certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this Agreement by any governmental department or agency. Contractor must notify County within thirty (30) days if debarred by any governmental entity during this Agreement.

#### **12. MINORITY BUSINESS ENTERPRISES**

Contractor will make a good faith effort to utilize Minority Business Enterprises (MBEs) per N.C. Gen. Stat. 143-128 as subcontractors in the performance of this Agreement.

### **13. WORKERS' COMPENSATION**

To the extent required by law, Contractor shall comply with the North Carolina Workers' Compensation Act and shall provide for the payment of workers' compensation to its employees in the manner and to the extent required by such Act. In the event Contractor is excluded from the requirements of such Act and does not voluntarily carry workers' compensation coverage, Contractor shall carry or cause its employees to carry adequate medical/accident insurance to cover any injuries sustained by its employees or agents while fulfilling Contractor's obligations under this Agreement. Contractor agrees to furnish County proof of compliance with said Act or adequate medical/accident insurance coverage upon request.

### **14. TAXES**

Contractor shall be responsible for paying all taxes, fees, assessments and premiums of any kind payable on its employees and operations. Contractor shall substantiate, on demand by the County, that all taxes and other charges are being properly paid.

### **15. COMPLIANCE WITH E-VERIFY PROGRAM**

Pursuant to N.C.G.S. § 143-133.3, Contractor understands that it is a requirement of this Agreement that Contractor and its subcontractors must comply with the provisions of Article 2 of Chapter 64 of the North Carolina General Statutes. In doing so, Contractor agrees that, unless it is exempt by law, it shall verify the work authorization of its employees utilizing the federal E-Verify program and standards as promulgated and operated by the United States Department of Homeland Security, and Contractor shall require its subcontractors to do the same. Upon request, Contractor agrees to provide County with an affidavit of compliance or exemption.

### **16. CONFIDENTIAL INFORMATION**

For purposes of this Agreement, the party disclosing Confidential Information is the "Discloser," and the party receiving Confidential Information is the "Recipient." "Confidential Information" shall mean any nonpublic information concerning the parties' respective businesses including, but not limited to, all tangible, intangible, visual, electronic, present or future information such as: (a) trade secrets; (b) financial information, including pricing; (c) technical information, including research, development, procedures, algorithms, data, designs and know-how; (d) business information, including operations, planning, marketing interests and products; and (e) the terms of any agreement between the parties and the discussions, negotiations and proposals related thereto. Confidential Information disclosed to the other party must be clearly identified. Written Confidential Information must be clearly marked in a conspicuous place with an appropriate legend identifying the information as "Confidential." Confidential Information that is not written must be identified as confidential at the time of disclosure and confirmed in writing delivered to Recipient within fifteen (15) days of disclosure.

The restrictions regarding the use and disclosure of Confidential Information do not apply to information that is:

- (1) in the public domain through no fault of the Recipient;
- (2) within the legitimate possession of the Recipient, with no confidentiality obligations to a third party;
- (3) lawfully received from a third party having rights in the information without restriction, and without notice of any restriction against its further disclosure;
- (4) independently developed by the Recipient without breaching this Agreement or by parties who have not had, either directly or indirectly, access to or knowledge of the Confidential Information;
- (5) disclosed with the prior written consent of the Discloser; or
- (6) required to be disclosed by law, regulation or court or governmental order, specifically including requests pursuant to the Public Records Laws of North Carolina contained in Chapter 132 of the North Carolina General Statutes. In the event Recipient receives such a request, it shall notify Discloser and Discloser shall have the opportunity to defend against production of such records at Discloser's sole expense.

#### **17. NO ASSIGNMENT WITHOUT CONSENT**

Neither party shall assign this Agreement (or assign any right or delegate any obligation contained herein whether such assignment is of service, of payment or otherwise) without the prior written consent of the other party hereto. Any such assignment without the prior written consent of the other party hereto shall be void. An assignee shall acquire no rights, and County shall not recognize any assignment in violation of this provision.

#### **18. GOVERNING LAW AND VENUE**

This Agreement shall be governed by applicable federal law and by the laws of the State of North Carolina without regard for its choice of law provisions. All actions relating in any way to this Agreement shall be brought in the General Court of Justice of the State of North Carolina in COLUMBUS County or in the Federal District Court for the Eastern District of North Carolina, Wilmington division.

#### **19. DISPUTE RESOLUTION**

Should a dispute arise as to the terms of this Agreement, both parties agree that neither may initiate binding arbitration. The parties may agree to non-binding mediation, as more fully set forth in the General Conditions of the Contract.

## **20. GOVERNMENTAL IMMUNITY**

County, to the extent applicable, does not waive its governmental immunity by entering into this Agreement and fully retains all immunities and defenses provided by law with regard to any action based on this Agreement.

## **21. NON-WAIVER**

Failure by County at any time to require the performance by Contractor of any of the provisions of this Agreement shall in no way affect County's right hereunder to enforce the same, nor shall any waiver by County of any breach be held to be a waiver of any succeeding breach or a waiver of this Section.

## **22. ENTIRE AGREEMENT**

This Agreement constitutes the entire agreement between the parties with respect to the subject matter herein. There are no other representations, understandings or agreements between the parties with respect to such subject matter. This Agreement supersedes all prior agreements, negotiations, representations and proposals, written or oral, related specifically to the Project herein.

## **23. HEADINGS**

The headings in this Agreement are for convenience of reference only and shall not define or limit any of the terms or provisions hereof.

## **24. SEVERABILITY**

The invalidity of one or more of the phrases, sentences, clauses or sections contained in this Agreement shall not affect the validity of the remaining portion of the Agreement so long as the material purposes of this Agreement can be determined and effectuated. If a provision of this Agreement is held to be unenforceable, then both parties shall be relieved of all obligations arising under such provision, but only to the extent that such provision is unenforceable, and this Agreement shall be deemed amended by modifying such provision to the extent necessary to make it enforceable while preserving its intent.

## **25. AMENDMENTS**

Amendments or changes to this Agreement shall not be valid unless in writing and signed by authorized agents of both Contractor and County.

## 26. NOTICES

- (1) **DELIVERY OF NOTICES.** Unless otherwise specified in the General Conditions, any notice, consent or other communication required or contemplated by this Agreement shall be in writing, and shall be delivered in person, by U.S. mail, by overnight courier, by electronic mail or by facsimile to the intended recipient at the address set forth below.
- (2) **EFFECTIVE DATE OF NOTICES.** Any notice shall be effective upon the date of receipt by the intended recipient; provided that any notice which is sent by facsimile or electronic mail shall also be simultaneously sent by mail deposited with the U.S. Postal Service or by overnight courier.
- (3) **NOTICE ADDRESS.**

- a. Communications that relate to any breach, default, termination, amendment or waiver of any provision of this Agreement shall be sent to:

For the County:    COLUMBUS County Attorney  
                          P.O. Box 249  
                          Bolivia, NC 28422

With a copy to:    {County Contact for Notices}  
                          {County Contact Title}  
                          {Contact Address}  
                          {Contact City}, {Contact State} {Contact Zip}

- b. Communications that relate to any delay in performance, prevention of performance, modification or extension of this Agreement shall be sent to:

For the County:    {County Contact for Notices}  
                          {County Contact Title}  
                          {Contact Address}  
                          {Contact City}, {Contact State} {Contact Zip}

- c. All communications to Contractor shall be sent to:

For the Contractor: {Vendor Name}  
                          {Vendor Address}  
                          {Vendor City}, {Vendor State or Territory} {Vendor Zip}

**27. SIGNATURES**

This Agreement, together with any amendments or modifications, may be executed in one or more counterparts, each of which shall be deemed an original and all of which shall be considered one and the same agreement. This Agreement may also be executed electronically. By signing electronically, the parties indicate their intent to comply with the Electronic Commerce in Government Act (N.C.G.S § 66-358.1 et seq.) and the Uniform Electronic Transactions Act (N.C.G.S § 66-311 et seq.). Delivery of an executed counterpart of this Agreement by either electronic means or by facsimile shall be as effective as a manually executed counterpart.

ATTEST:

**COLUMBUS COUNTY**

\_\_\_\_\_  
Clerk to the Board

By: \_\_\_\_\_  
Chairman

[SEAL]

{VENDOR NAME}

By: \_\_\_\_\_

Printed Name: {Vendor Signatory Name}

Title: {Vendor Signatory Title}

Date: \_\_\_\_\_

“This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act.”

\_\_\_\_\_  
Finance Director  
COLUMBUS County, North Carolina

APPROVED AS TO FORM

\_\_\_\_\_  
COLUMBUS County Attorney/Asst Attorney

### FORM OF PERFORMANCE BOND

Date of Contract: \_\_\_\_\_  
Date of Execution: \_\_\_\_\_  
Name of Principal:  
(Contractor) \_\_\_\_\_  
Name of Surety: \_\_\_\_\_  
Name of Contracting  
Body: \_\_\_\_\_  
Amount of Bond: \_\_\_\_\_  
Project: \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the above named contracting body, hereinafter called the contracting body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind, ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain Contract with the contracting body, identified as shown above and hereto attached:

NOW, THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term of said Contract and any extensions thereof that may be granted by the contracting body, with or without notice to the surety, and during the life of any guaranty required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in \_\_\_\_\_ counterparts.

Witness:

\_\_\_\_\_  
Contractor: (Trade or Corporate Name)

\_\_\_\_\_  
(Proprietorship or Partnership)

By: \_\_\_\_\_

Attest: (Corporation)

Title: \_\_\_\_\_  
(Owner, Partner, or Corp.  
President or Vice President Only)

By: \_\_\_\_\_

Title: \_\_\_\_\_  
(Corp. Sec. or Asst. Sec. Only)

(Corporate Seal)

\_\_\_\_\_  
(Surety Company)

Witness:

By: \_\_\_\_\_

\_\_\_\_\_

Title: \_\_\_\_\_  
(Attorney in Fact)

Countersigned:

\_\_\_\_\_  
(Surety Corporate Seal)

\_\_\_\_\_  
(N.C. Licensed Resident Agent)

\_\_\_\_\_

\_\_\_\_\_  
(Name and Address-Surety Agency)

\_\_\_\_\_

\_\_\_\_\_  
(Surety Company Name and N.C.  
Regional or Branch Office Address)

**FORM OF PAYMENT BOND**

Date of Contract: \_\_\_\_\_

Date of Execution: \_\_\_\_\_

Name of Principal  
(Contractor) \_\_\_\_\_

Name of Surety: \_\_\_\_\_

Name of Contracting  
Body: \_\_\_\_\_

Amount of Bond: \_\_\_\_\_

Project: \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the above named contracting body, hereinafter called the contracting body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain Contract with the contracting body identified as shown above and hereto attached:

NOW, THEREFORE, if the principal shall promptly make payment to all persons supplying labor/material in the prosecution of the work provided for in said Contract, and any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in \_\_\_\_\_ counterparts.

Witness:

\_\_\_\_\_  
Contractor: (Trade or Corporate Name)

\_\_\_\_\_  
(Proprietorship or Partnership)

By: \_\_\_\_\_

Attest: (Corporation)

Title: \_\_\_\_\_  
(Owner, Partner, or Corp.  
Pres. or Vice Pres. only)

By: \_\_\_\_\_

Title: \_\_\_\_\_  
(Corp. Sec. or Asst. Sec. Only)

(Corporate Seal)

\_\_\_\_\_  
(Surety Company)

Witness:

By: \_\_\_\_\_

\_\_\_\_\_

Title: \_\_\_\_\_  
(Attorney in Fact)

Countersigned:

\_\_\_\_\_  
(Surety Corporate Seal)

\_\_\_\_\_  
(N.C. Licensed Resident Agent)

\_\_\_\_\_  
(Name and Address - Surety Agency)

\_\_\_\_\_  
(Surety Company Name and N.C.  
Regional or Branch Office Address)

Do not submit with bid    Do not submit with bid    Do not submit with bid    Do not submit with bid  
**CERTIFICATE OF INSURANCE (Workmen's Compensation and Liability)**

This certificate of insurance neither affirmatively nor negatively amends, extends, or alters the coverage afforded by the policy(ies) listed on this certificate.

Project \_\_\_\_\_ Location \_\_\_\_\_  
 Owner COLUMBUS County Address P. O. Box 249; Bolivia, NC 28422  
 Contractor (Insured) \_\_\_\_\_ Address \_\_\_\_\_

The undersigned hereby certifies that the following policies, subject to their terms, conditions, and exclusions have been issued by the named companies to the above insured and are presently in full force and effect:

**A. WORKMEN'S COMPENSATION:**

Policy No. \_\_\_\_\_ Expiration Date \_\_\_\_\_  
 Insurance Co. \_\_\_\_\_ Address \_\_\_\_\_

COVERAGE: Statutory Workmen's Compensation. Employers Liability Limit \$ \_\_\_\_\_ Each Accident.

Locations Covered: \_\_\_\_\_

**B. COMPREHENSIVE GENERAL LIABILITY & PROPERTY DAMAGE:**

Policy No. \_\_\_\_\_ Expiration Date \_\_\_\_\_  
 Insurance Co. \_\_\_\_\_ Address \_\_\_\_\_

**LIMITS:**

Bodily Injury, including Personal Injury.  
 \$ \_\_\_\_\_ Each Person  
 \$ \_\_\_\_\_ Each Occurrence  
 \$ \_\_\_\_\_ Aggregate

Property Damage \$ \_\_\_\_\_ Each Occurrence  
 \$ \_\_\_\_\_ Aggregate  
 Other \_\_\_\_\_

**COVERAGE PROVIDED (Check Applicable Squares):**

	Yes	No	Property Damage Liability Includes:	Yes	No
Premises Operations	<input type="checkbox"/>	<input type="checkbox"/>	Damage Due to Blasting (explosion)	<input type="checkbox"/>	<input type="checkbox"/>
Subcontractor Operations	<input type="checkbox"/>	<input type="checkbox"/>	Damage Due to Collapse	<input type="checkbox"/>	<input type="checkbox"/>
Personal Injury	<input type="checkbox"/>	<input type="checkbox"/>	Damage to Underground Facilities	<input type="checkbox"/>	<input type="checkbox"/>
Completed Operations	<input type="checkbox"/>	<input type="checkbox"/>	Broad Form Property Damage:	<input type="checkbox"/>	<input type="checkbox"/>
Contractual Liability (Per Spec)	<input type="checkbox"/>	<input type="checkbox"/>	Operations of Contractor	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	Contractual	<input type="checkbox"/>	<input type="checkbox"/>

**C. COMPREHENSIVE AUTOMOBILE LIABILITY & PROPERTY DAMAGE:**

Policy No. \_\_\_\_\_ Expiration Date \_\_\_\_\_  
 Insurance Co. \_\_\_\_\_ Address \_\_\_\_\_

**LIMITS:**

Bodily Injury  
 \$ \_\_\_\_\_ Each Person  
 \$ \_\_\_\_\_ Each Occurrence  
 \$ \_\_\_\_\_ Aggregate

Property Damage \$ \_\_\_\_\_ Each Occurrence  
 Other \_\_\_\_\_

COVERAGE PROVIDED - for operation of all owned, non-owned, and hired vehicles.

**D. UMBRELLA EXCESS LIABILITY:**

Policy No. \_\_\_\_\_ Expiration Date \_\_\_\_\_  
 Insurance Co. \_\_\_\_\_ Address \_\_\_\_\_

LIMITS: Single Limit Bodily Injury and Property Damage \$ \_\_\_\_\_ Each Occurrence.

COVERAGE PROVIDED - applies in excess of the coverages listed above for Employer's Liability, Comprehensive General, Automotive, and Property Damage Coverage.

The undersigned further certifies that in the event of cancellation or any material change in any of the above policies, thirty (30) days prior written notice of such cancellation or change shall be delivered by registered or certified mail to the above Owner.

**COLUMBUS COUNTY, ITS OFFICERS, AGENTS AND EMPLOYEES ARE INCLUDED AS ADDITIONAL INSURED UNDER CONTRACTOR'S GENERAL LIABILITY INSURANCE**

Name of Agency \_\_\_\_\_ Address \_\_\_\_\_  
 Date \_\_\_\_\_ By \_\_\_\_\_

# NOTICE TO PROCEED

Dated \_\_\_\_\_, 20 \_\_\_\_

To: \_\_\_\_\_  
(CONTRACTOR)

Address: \_\_\_\_\_  
\_\_\_\_\_

Owner: **COLUMBUS COUNTY**

Owner's Contract No. **N/A**

Project: \_\_\_\_\_  
\_\_\_\_\_  
(Insert Name of Contract as it Appears in the Bidding Documents)

You are notified that the Contract times under the above Contract will commence to run on:

\_\_\_\_\_  
By that date, you are to start performing your obligations under the Contract Documents. Your Contract completion date is therefore: \_\_\_\_\_.  
The Contract provides for the assessment of liquidated damages for each consecutive calendar day that the work remains incomplete after the above established completion date.

Before you may start any Work at the site, you must deliver the required certificates of insurance to the Owner.

Also, before you may start any Work at the site, you must: (add other requirements)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**COLUMBUS County**  
(OWNER)

By: \_\_\_\_\_  
(AUTHORIZED SIGNATURE)

\_\_\_\_\_  
(TITLE)

**Project:**  
**Date:**  
**Columbus County**

**Contractor Submittal**  
**Submittal #:** \_\_\_\_\_

ATTENTION: \_\_\_\_\_  
TO (Designer): \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ATTENTION: \_\_\_\_\_  
FROM (Contractor): \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

WE ARE SENDING YOU:  First Submittal  Re-submittal # \_\_\_\_\_  
 Shop Drawings  O&M Manuals  Specifications  Samples  Or-Equal Item  Substitution Item  Other \_\_\_\_\_

MANUFACTURER	COPIES	SPEC. SECTION #	SCHEDULED SUBMITTAL DATE	DESCRIPTION

THESE ARE TRANSMITTED AS CHECKED BELOW:  
 For approval  For your use  As Requested  For review and comment

"I certify that I have reviewed the Contract Documents and that the information herein submitted meets the requirements outlined in the Contract Documents except as specifically stated on this submittal form."

(Affix Contractor's Stamp of Approval Above)

REMARKS (Include any exceptions to the Contract Documents):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

COPY TO: \_\_\_\_\_

SIGNED: \_\_\_\_\_



---

*Directive/Written Notice/Correspondence/Order/Minor Change in the Work  
Columbus County*

**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_ a.m./p.m. **Project Name:** \_\_\_\_\_

**Designer:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_

**Designer Rep:** \_\_ **Contractor Rep:** \_\_

---

In accord with the Article "Construction Supervision" of the General Conditions, the Contractor, by signing below, 1) acknowledges receipt of this correspondence, and 2) acknowledges that, unless noted otherwise under Contractor's comments, he/she agrees that the correspondence contained herein does **not** constitute a "Change In The Work" or an "Extra Cost" (as defined in the General Conditions) that would require additional compensation or an extension of the Contract time.

*Contractor's Comments:*

(The Contractor is directed to the General Conditions when making "Claims for Extra Cost." If the Contractor views instructions from the Designer as requiring additional compensation or an extension of the Contract time, the contractor shall not proceed with the work affected until further advised.)

**Signature/Date:** \_\_\_\_\_ **Print Name:** \_\_\_\_\_

**Representing:** \_\_\_\_\_ **Position:** \_\_\_\_\_

*Work Change Directive  
Columbus County*

Date: \_\_\_\_\_ Time: \_\_\_\_\_ a.m./p.m. Project Name: \_\_\_\_\_  
Designer: \_\_\_\_\_ Contractor: \_\_\_\_\_  
Designer Rep: \_\_\_\_\_ Contractor Rep: \_\_\_\_\_

Directive:

Reason for Change:

The preceding directive requires the following actions by the Contractor before  
(Date):

**CONTRACTOR:**

The total lump sum cost for the change noted above shall not exceed \$\_\_\_\_\_.

**OR**

The estimated quantities, maximum unit prices, and maximum extended prices for each item are  
as follows:

<u>Item</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Extended Price</u>
-------------	---------------------------	-------------------	-----------------------

The total change to the Time of Completion shall be an increase/decrease of \_\_\_\_\_ days.

**DESIGNER:**

The work change noted above is in the best interests of the owner. The price and Contract Time  
adjustment have been evaluated and are reasonable. The changes will be effected by a final  
adjusting change order at the close of the project **or** by \_\_\_\_\_ (date), whichever is sooner.

**OWNER:**

The Owner agrees to the change as being in the Owner's best interest.

**SIGNATURES:**

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Date

\_\_\_\_\_  
Designer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Owner

\_\_\_\_\_  
Date

Original Designer

Yellow Contractor

Pink Owner

**Change Proposal  
Columbus County**

**Date:** \_\_\_\_\_

**Project Name:** \_\_\_\_\_

**Designer:** \_\_\_\_\_

**Contractor:** \_\_\_\_\_

**Designer Rep:** \_\_\_\_\_

**Contractor Rep:** \_\_\_\_\_

The Contractor recommends the following change to the project with associated changes to the Time of Completion and/or total project cost:

This change will:    ADD                  SUBTRACT                  NOT CHANGE                  (circle as appropriate) the total project cost by \$\_\_\_\_\_.

The total change to the Time of Completion shall be an:    INCREASE    DECREASE    (circle as appropriate) of \_\_\_\_\_ days.

A breakdown of the proposed work is attached. No work shall be commenced until authorized by the Owner. All work shall be in accordance with the terms, stipulations, and conditions of the Contract Documents.

**SIGNATURES:**

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Date

Designer's Action:     Recommend                           Do Not Recommend  
    Recommend with the following changes

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Designer

\_\_\_\_\_  
Date

COLUMBUS COUNTY  
CHANGE ORDER NO.

PROJECT:  
ORIG. TIME OF COMP.  
ORIG. DATE OF COMP.

CAUSE CODE:

FOR CC USE ONLY	
<input type="checkbox"/>	OR Owner Request
<input type="checkbox"/>	CR Contractor Request
<input type="checkbox"/>	DR Designer Request
<input type="checkbox"/>	CC Concealed Condition
<input type="checkbox"/>	DE Design Error
<input type="checkbox"/>	DO Design Omission
<input type="checkbox"/>	SC Schedule Change
<input type="checkbox"/>	OT Other

Under the terms of the Contract and without invalidating the original provisions thereof, the following change(s) in work is(are) authorized for the change in Contract amount herein set forth: (Description of change order with detailed breakdown attached)

The Time of Completion including previous orders is \_ calendar days and shall be (increased) (decreased) (unchanged) by calendar days by this change order for a revised Contract date of completion of \_\_\_\_\_. (Detailed analysis supporting the requirements for a change in duration is attached)

**CONTRACT COST SUMMARY**

					TOTALS
1. Original Contract Amount					\$
2. Amount of Previous Orders	ADD	\$0	Deduct	\$0	
3. Amount of This Order:	ADD	\$0	Deduct	\$0	
4. Total additions lines 2 & 3			Minus Total Deducts:	\$0	\$
(Line 4 shall show the net amount to be added or [deducted] from the <b>original</b> Contract amount.)					
5. Revised Contract Total Amount					\$

I certify that my Bonding Company will be notified forthwith that my Contract has been changed by the amount of this change order, and that a copy of the approved change order will be mailed upon receipt by me to my surety.

\_\_\_\_\_  
(Contractor) By: \_\_\_\_\_ (Date)

\_\_\_\_\_  
(Designer) By: \_\_\_\_\_ (Date)

\_\_\_\_\_  
(Owner) By: \_\_\_\_\_ (Date)

\_\_\_\_\_  
(County Commissioners) By: \_\_\_\_\_, Chairman (Date)

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

Approved as to Form

\_\_\_\_\_  
Columbus County Finance Officer

\_\_\_\_\_  
Columbus County Attorney

DISTRIBUTION: 1 original to Owner

1 original to Contractor

**Request for Payment  
Columbus County**

**Project Name:** \_\_\_\_\_

**Period: From** \_\_\_\_\_ **to** \_\_\_\_\_  
(1<sup>st</sup> day of month to last day of month)

**Designer:** \_\_\_\_\_

**Contractor:** \_\_\_\_\_

Contract Value as Awarded: \$ \_\_\_\_\_

Time of Completion as Awarded: \_\_\_\_\_ days

Date of Completion as Awarded: \_\_\_\_\_

**PREVIOUS PAYMENTS AUTHORIZED**

Req.	Payment Authorized	Req.	Payment Authorized
#1	_____	#9	_____
#2	_____	#10	_____
#3	_____	#11	_____
#4	_____	#12	_____
#5	_____	#13	_____
#6	_____	#14	_____
#7	_____	#15	_____
#8	_____	#16	_____

**CHANGE ORDERS:**                      Amount                      Days

#1	\$ _____	_____
#2	\$ _____	_____
#3	\$ _____	_____
#4	\$ _____	_____

Total Change Orders: \$ \_\_\_\_\_

Adjusted Contract Value: \$ \_\_\_\_\_

The undersigned Contractor certifies that 1) all previous progress payments received from Owner on account of work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; 2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such liens, security interests, or encumbrances); 3) all Work covered by this Request for Payment is in accordance with the Contract Documents and is not defective; and 4) that, to the best of his knowledge, the estimate is correct, due, and unpaid.

Total Value of Completed Work	\$ _____
5% Retained	- \$ _____
95% of Material on Hand	+ \$ _____
Liquidated Damages	
Days _____ /Days _____	- \$ _____
Net Total	= \$ _____
Previous Payments	- \$ _____
Total Due This Payment	= \$ _____

Certified By: \_\_\_\_\_  
Contractor                      Date

Reviewed By: \_\_\_\_\_  
Designer                      Date

Reviewed By: \_\_\_\_\_  
Brunswick County                      Date

Approved By: \_\_\_\_\_  
Columbus County                      Date

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

To Be Completed by Designer:

Record Drawings are complete & Up to Date:	YES - NO
Monthly Rain Day Record Submitted:	YES - NO
Erosion Control Documentation Submitted:	YES - NO
MBE Document. for Contract Payments Submitted:	YES - NO
Updated Schedule Submitted:	YES - NO
Tax Statement & Certification Submitted:	YES - NO
Status Report Submitted:	YES - NO

Finance Officer  
Columbus County, North Carolina

**Minority Business Enterprise (MBE) Documentation for Contract Payments  
Columbus County**

**Project Name:** \_\_\_\_\_

**Period: From** \_\_\_\_\_ **to** \_\_\_\_\_  
(1<sup>st</sup> day of month to last day of month)

**Designer:** \_\_\_\_\_

**Contractor:** \_\_\_\_\_

The following is a list of payments made to Minority Business Enterprises on this project for the above-mentioned period.

MBE FIRM NAME	* INDICATE TYPE OF MBE	AMOUNT PAID THIS MONTH	TOTAL PAYMENTS TO DATE	TOTAL AMOUNT COMMITTED

\*Minority categories: Black, African American (B), Hispanic (H), Asian American (A), American Indian (I), Female (F), Social and Economically Disadvantage (D)

Date: \_\_\_\_\_

Approved/Certified By: \_\_\_\_\_  
(Contractor) Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Signature

**CONTRACTOR TO SUBMIT WITH EACH REQUEST FOR PAYMENT & REQUEST FOR FINAL PAYMENT**

COLUMBUS COUNTY  
 PERIODIC PAYMENT TAX CERTIFICATION  
 COUNTY SALES AND USE TAX

CONTRACTOR: \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_

PROJECT: \_\_\_\_\_ FOR PERIOD: \_\_\_\_\_

TOTAL FOR COUNTY OF:	TOTAL ALL COUNTIES				
CONTRACTOR					
SUBCONTRACTOR(S)*					
COUNTY TOTAL					

\* Attach subcontractor(s) report(s)  
 NOTE: Totals above must balance with Detail Sheet(s)

I certify that the above figures include only tax paid on supplies, materials, fixtures, and equipment that actually became a part of or annexed to the constructed facilities. I certify that, to the best of my knowledge, the information provided here is true, correct, and complete.

Sworn to and subscribed before me,

This the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
 Signed

\_\_\_\_\_  
 Notary Public

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
 Print or Type Name of Above

Seal

NOTE:  
 This certified statement may be subject to audit





*Certificate of Substantial Completion  
Columbus County*

**Date:** \_\_\_\_\_ **Project Name:** \_\_\_\_\_.

**Designer:** \_\_\_\_\_ **Contractor:** \_\_\_\_\_.

**This Certificate of Substantial Completion Applies to:**

All work under the Contract Documents:       The following specific portions:


Date of Substantial Completion

The Work performed under this Contract has been reviewed and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared.

A list of items to be completed or corrected is attached hereto. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance, and warranties shall be provided in the Contract Documents except as amended as follows:

Amended Responsibilities       Not Amended

Owner's Responsibilities:


Contractor's Responsibilities:


The following documents are attached to and made part of this certificate:


This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer	Date
Contractor	Date
Owner	Date

*Contractor's Affidavit of Release of Liens  
Columbus County*

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, (Name), \_\_\_\_\_ (Title)

of \_\_\_\_\_, being first duly sworn, deposes and says that:

1. The undersigned is authorized to execute this Affidavit, Release, and Waiver of Claim on behalf of the Contractor and has personal knowledge of all facts set forth herein;
2. This Affidavit, Release, and Waiver of Claim is made concerning the construction of the following project \_\_\_\_\_;
3. All payrolls, material bills, sales tax, social security, state and federal unemployment insurance, and all other liabilities and taxes owed by the Contractor and arising in any manner from the above-described Project have been paid in full;
4. No claim or lien exists in favor of any supplier of materials or labor or in favor of any Subcontractor furnishing materials or labor on the above-described Project;
5. Notwithstanding the foregoing, if the Owner or property of the Owner is subjected to any claim or lien which arises in any manner from the failure of the Contractor to pay any liability described above, the Contractor will indemnify and hold the Owner harmless for any amount which the Owner is required to pay to discharge such lien or settle such claim and further will pay the Owner's expenses, costs, and attorney fees incurred in connection therewith;
6. All claims, suits, and proceedings of every name, description, or nature as arising out of the Project against the Owner, its officers, employees, and agents have been settled;
7. The Contractor releases and waives any and all claims of every type and description which the Contractor may have against the Owner arising in any manner from the construction of the above-described Project.

\_\_\_\_\_

\_\_\_\_\_

Title \_\_\_\_\_

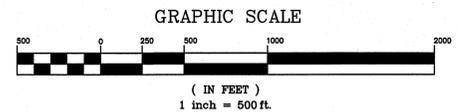
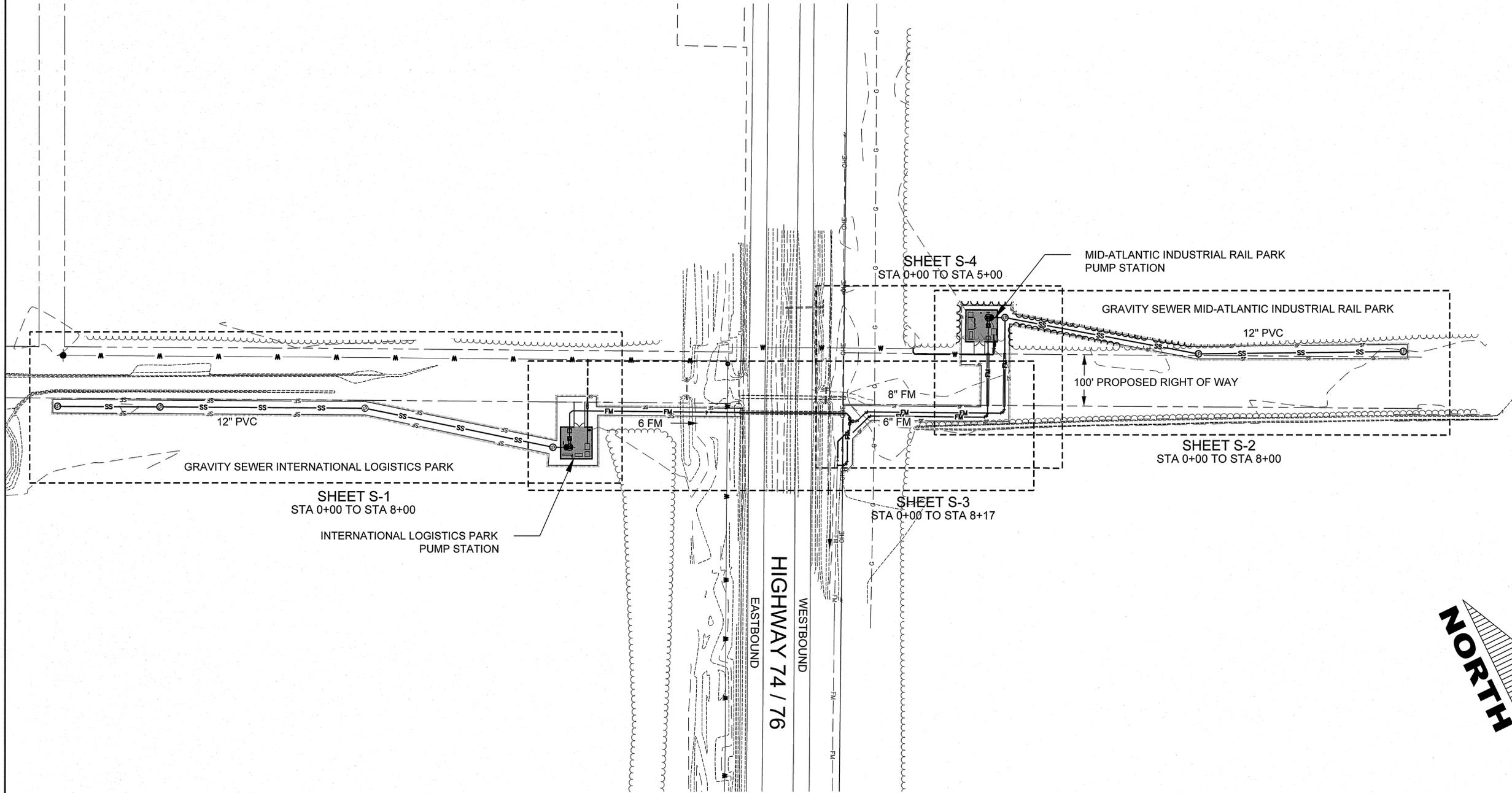
Date \_\_\_\_\_

Sworn to and subscribed before me this the

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

My Commission expires: \_\_\_\_\_



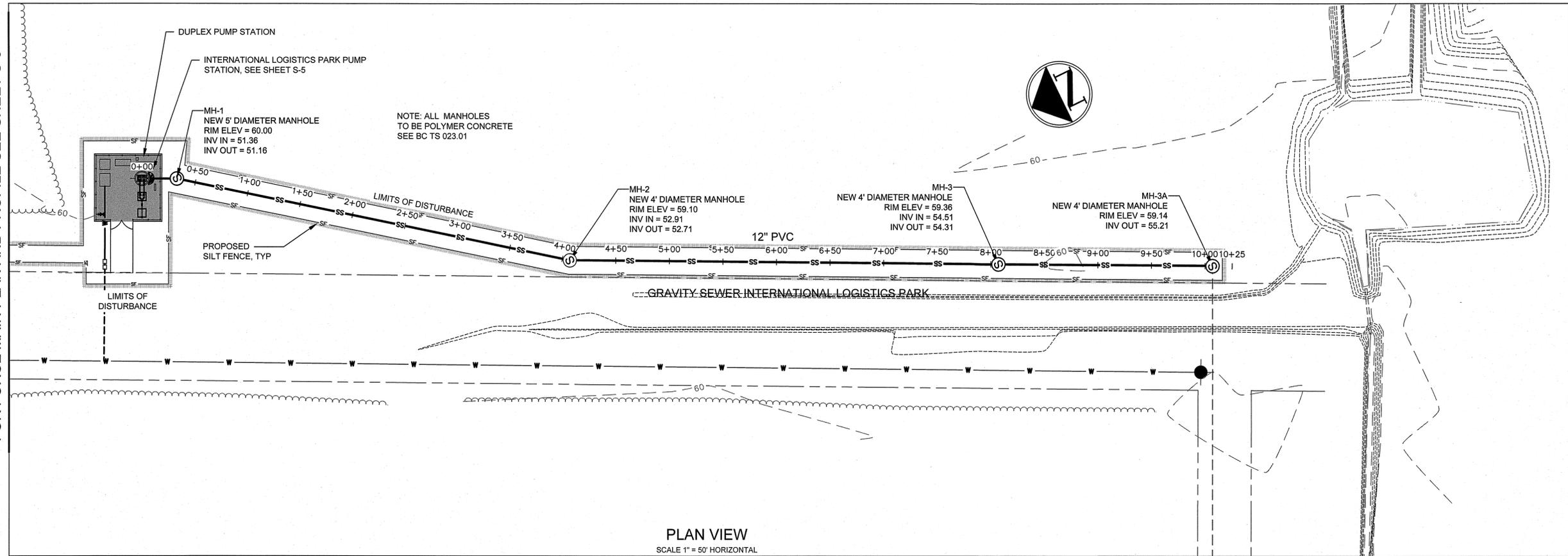
**MUNICIPAL ENGINEERING SERVICES COMPANY, P.A.**  
 68 SHIPWASH DRIVE, GARNER, NC 27529 · PHONE: 919-772-5393  
 P.O. BOX 349, BOONE, NC 28607 · PHONE: 828-262-1767  
 LICENSE NUMBER: C-0281



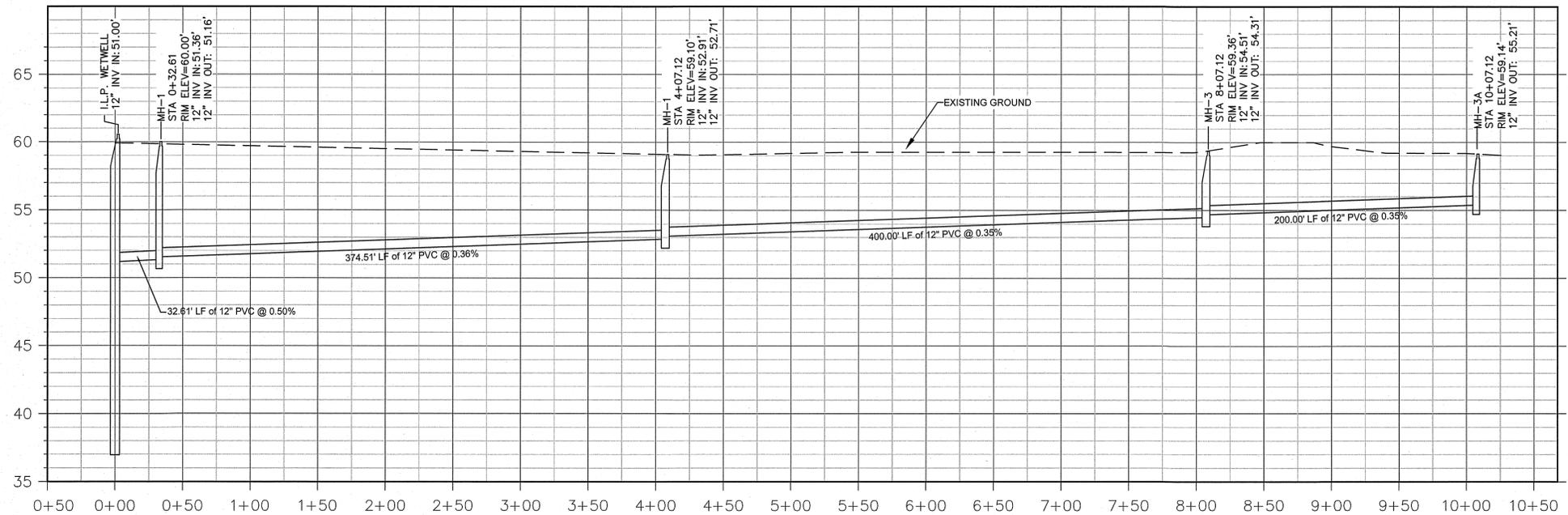
**INTERNATIONAL LOGISTICS PARK AND MID-ATLANTIC INDUSTRIAL RAIL PARK  
 BRUNSWICK-COLUMBUS COUNTY  
 COLUMBUS COUNTY, NC**

10/21/19	RAJ	2	REVISED FORCE MAIN LAYOUT AT CASING	DESCRIPTION
				OVERALL PLAN SEWER
SCALE: AS INDICATED				
DATE: 8/28/19				
ENGINEER: B CLAWSON				
DRWN. BY: RAJ				
CHKD. BY: B CLAWSON				
PROJECT NUMBER G17125				
DRAWING NO. C-1	SHEET NO. 3 OF 25			

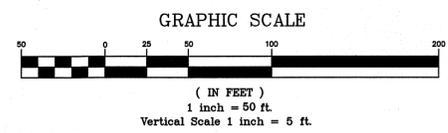
FOR FORCE MAIN PLAN AND PROFILE SEE SHEET S-3



PLAN VIEW  
SCALE 1" = 50' HORIZONTAL



PROFILE VIEW  
SCALE 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



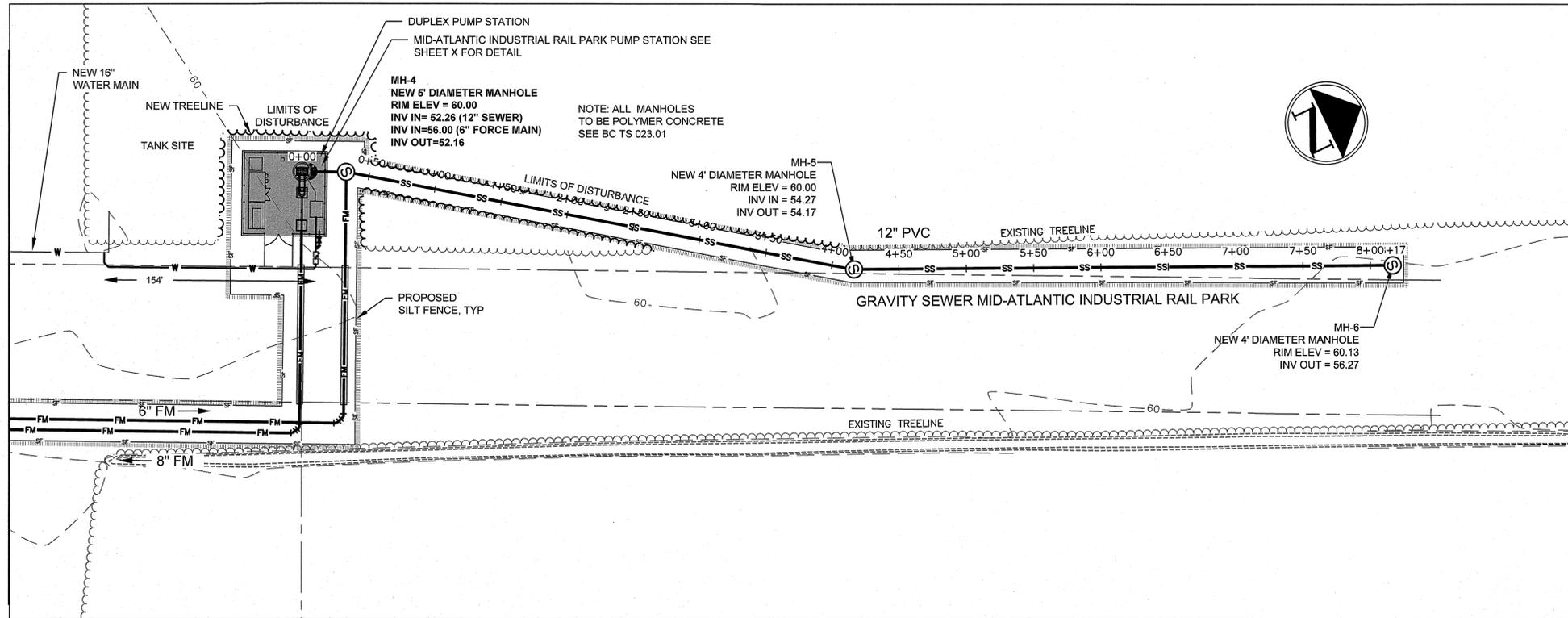
**MUNICIPAL ENGINEERING SERVICES COMPANY, P.A.**  
68 SHIPWASH DRIVE, GARNER, NC 27529 - PHONE: 919-772-5393  
P.O. BOX 349, BOONE, NC 28607 - PHONE: 828-262-1767  
LICENSE NUMBER: C-0281



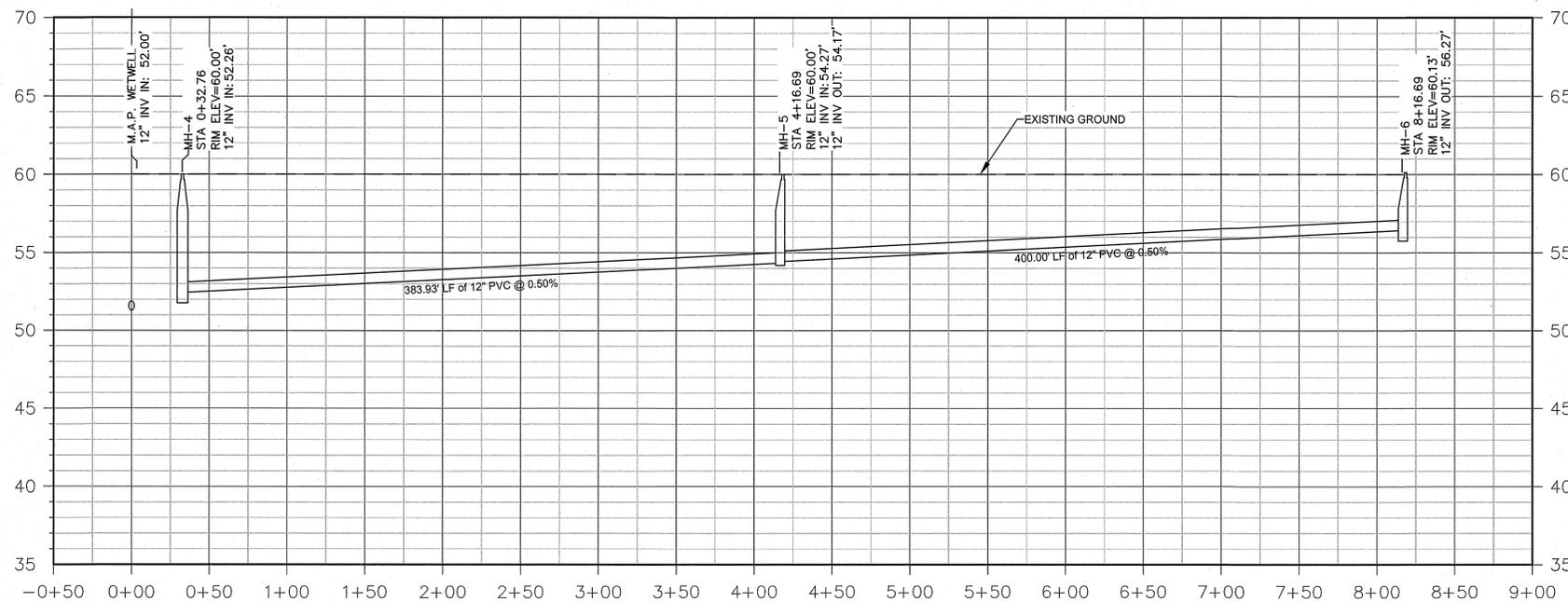
**INTERNATIONAL LOGISTICS PARK AND MID-ATLANTIC INDUSTRIAL RAIL PARK  
BRUNSWICK-COLUMBUS COUNTY  
COLUMBUS COUNTY, NC**

10/21/19	RAJ	2	REVISED FORCE MAIN LAYOUT AT CASING
DATE	BY	REV.	DESCRIPTION
			SEWER PLAN AND PROFILE
SCALE: AS INDICATED			
DATE: 8/28/19			
ENGINEER: B CLAWSON			
DRWN. BY: RAJ			
CHKD. BY: B CLAWSON			
PROJECT NUMBER			
G17125			
DRAWING NO.	SHEET NO.		
C-2	4 OF 25		

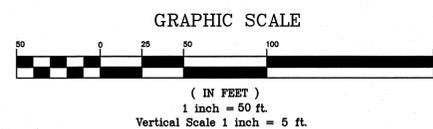
FOR FORCE MAIN PLAN AND PROFILE SEE SHEET S-3



PLAN VIEW  
SCALE 1" = 50' HORIZONTAL



PROFILE VIEW  
SCALE 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



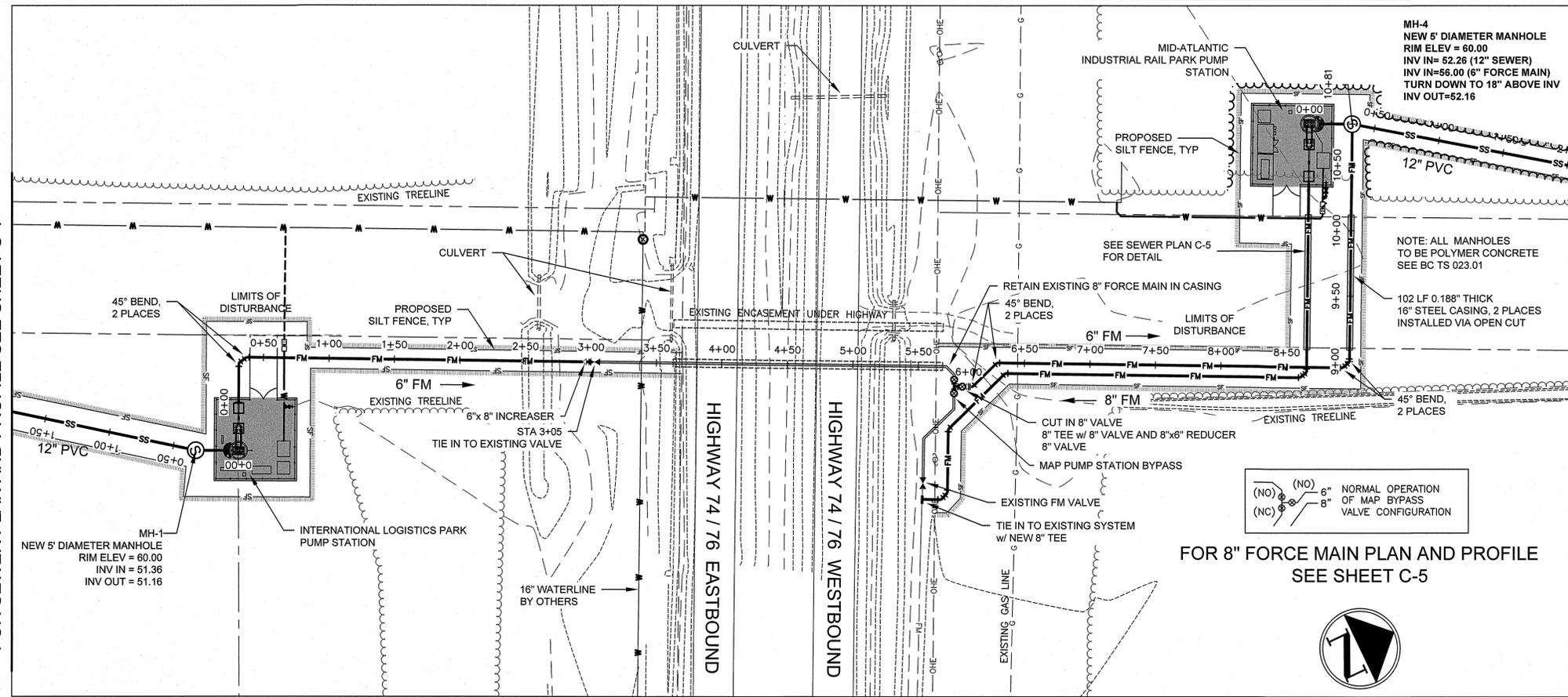
**MUNICIPAL ENGINEERING SERVICES COMPANY, P.A.**  
68 SHIPWASH DRIVE, GARNER, NC 27529 · PHONE: 919-772-5393  
P.O. BOX 349, BOONE, NC 28607 · PHONE: 828-262-1767  
LICENSE NUMBER: C-0281



**INTERNATIONAL LOGISTICS PARK AND MID-ATLANTIC INDUSTRIAL RAIL PARK BRUNSWICK-COLUMBUS COUNTY COLUMBUS COUNTY, NC**

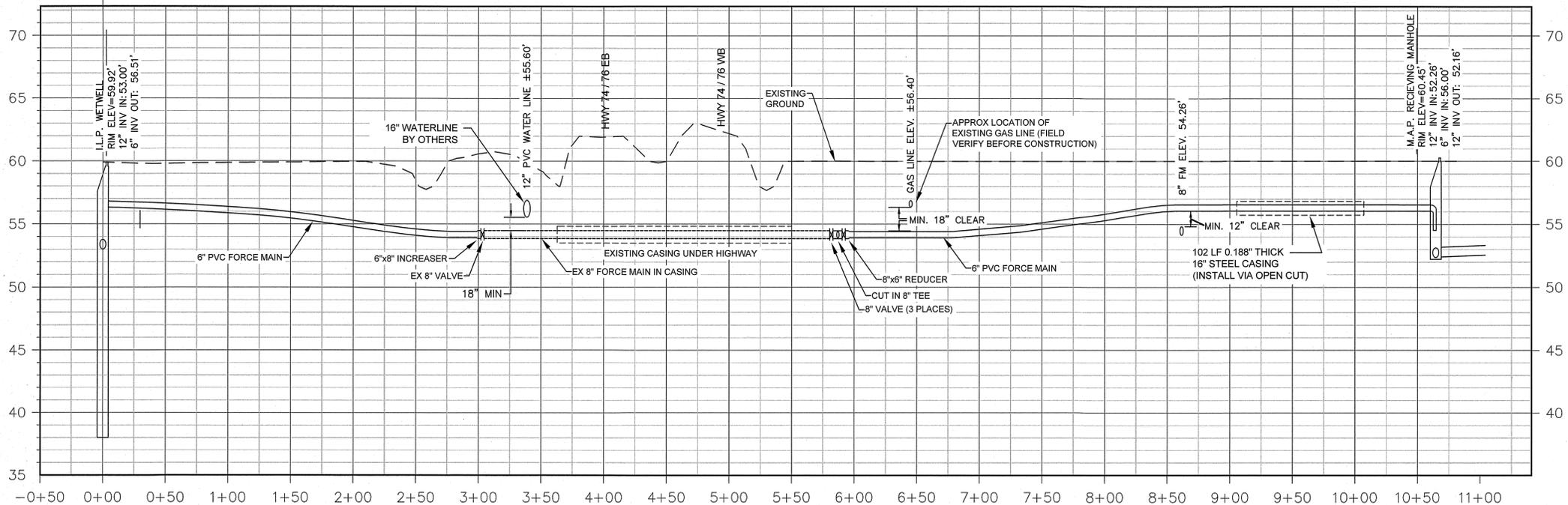
10/21/19	RAJ	2	REVISED FORCE MAIN LAYOUT AT CASING
DATE	BY	REV.	DESCRIPTION
SEWER PLAN AND PROFILE			
SCALE: AS INDICATED			
DATE: 8/28/19			
ENGINEER: B CLAWSON			
DRWN. BY: RAJ			
CHKD. BY: B CLAWSON			
PROJECT NUMBER: G17125			
DRAWING NO. C-3	SHEET NO. 5 OF 25		

FOR SEWER PLAN AND PROFILE SEE SHEET S-1

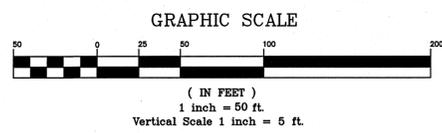


FOR SEWER PLAN AND PROFILE SEE SHEET S-2

PLAN VIEW  
SCALE 1" = 50' HORIZONTAL



PROFILE VIEW  
SCALE 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



**MUNICIPAL ENGINEERING SERVICES COMPANY, P.A.**  
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LICENSE NUMBER: C-0281



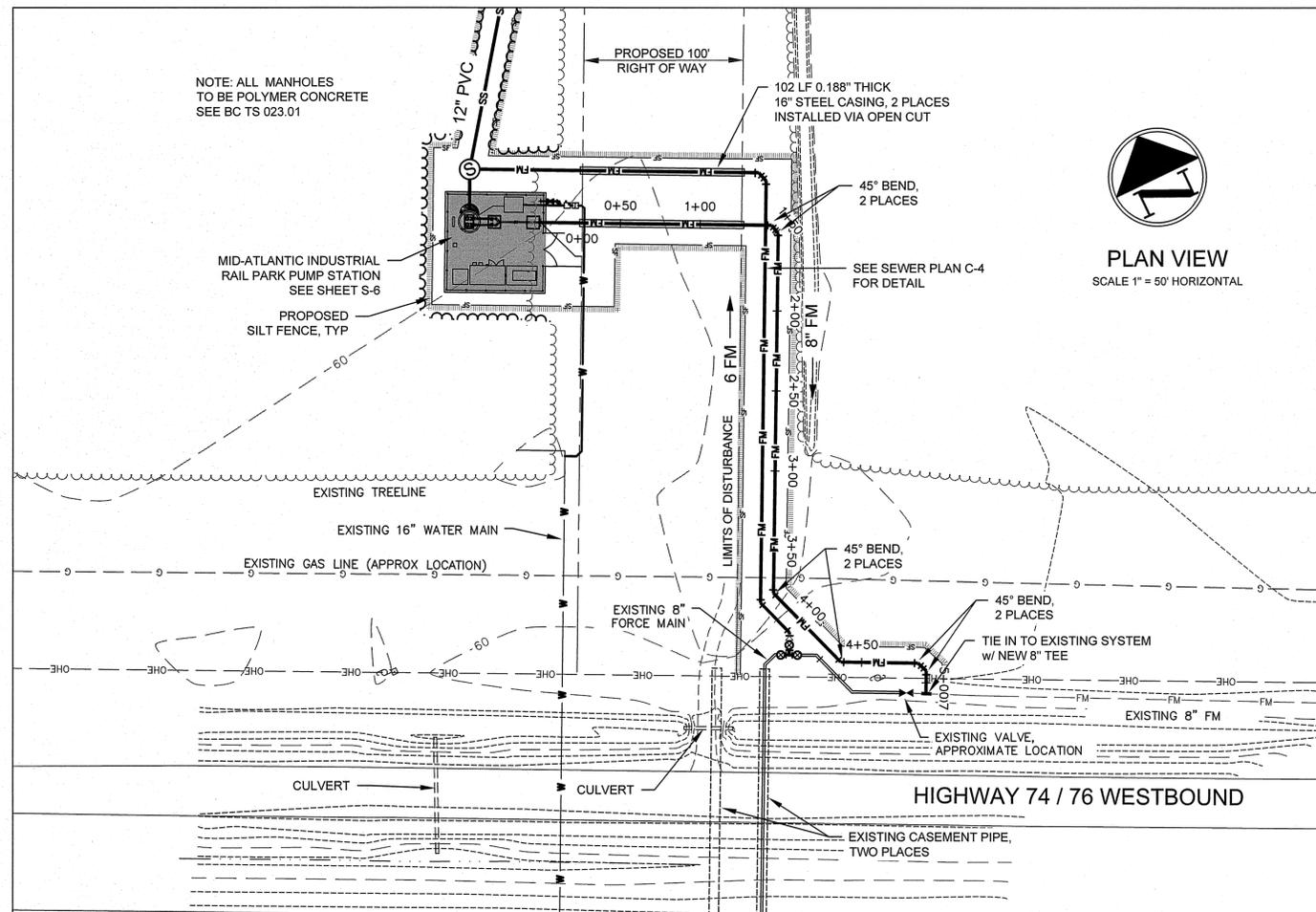
**INTERNATIONAL LOGISTICS PARK AND MID-ATLANTIC INDUSTRIAL RAIL PARK  
BRUNSWICK-COLUMBUS COUNTY  
COLUMBUS COUNTY, NC**

DATE	BY	DESCRIPTION
10/01/19	RAJ	REVISED FORCE MAIN LAYOUT AT CASING
10/21/19	RAJ	REV

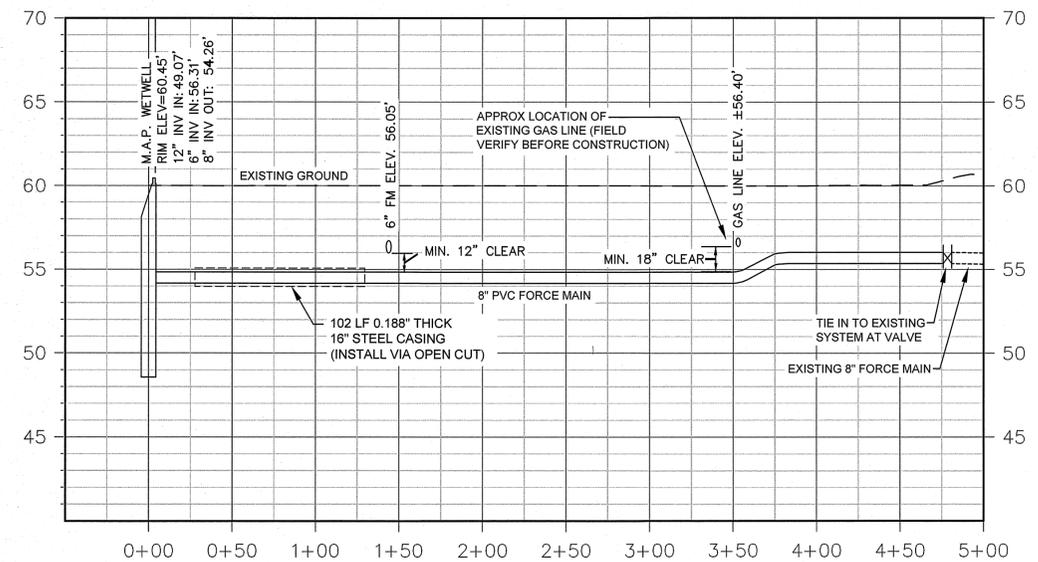
SCALE:	AS INDICATED
DATE:	8/28/19
ENGINEER:	B CLAWSON
DRWN. BY:	RAJ
CHKD. BY:	B CLAWSON
PROJECT NUMBER:	G17125
DRAWING NO.:	C-4
SHEET NO.:	6 OF 25



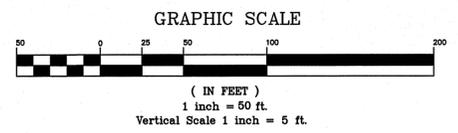


PLAN VIEW  
SCALE 1" = 50' HORIZONTAL

FOR 6" FORCE MAIN PLAN AND PROFILE SEE SHEET C-4



PROFILE VIEW  
SCALE 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



**MUNICIPAL ENGINEERING SERVICES COMPANY, P.A.**  
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P.O. BOX 349, BOONE, NC 28607 · PHONE: 828-262-1767  
LICENSE NUMBER: C-0281

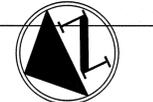
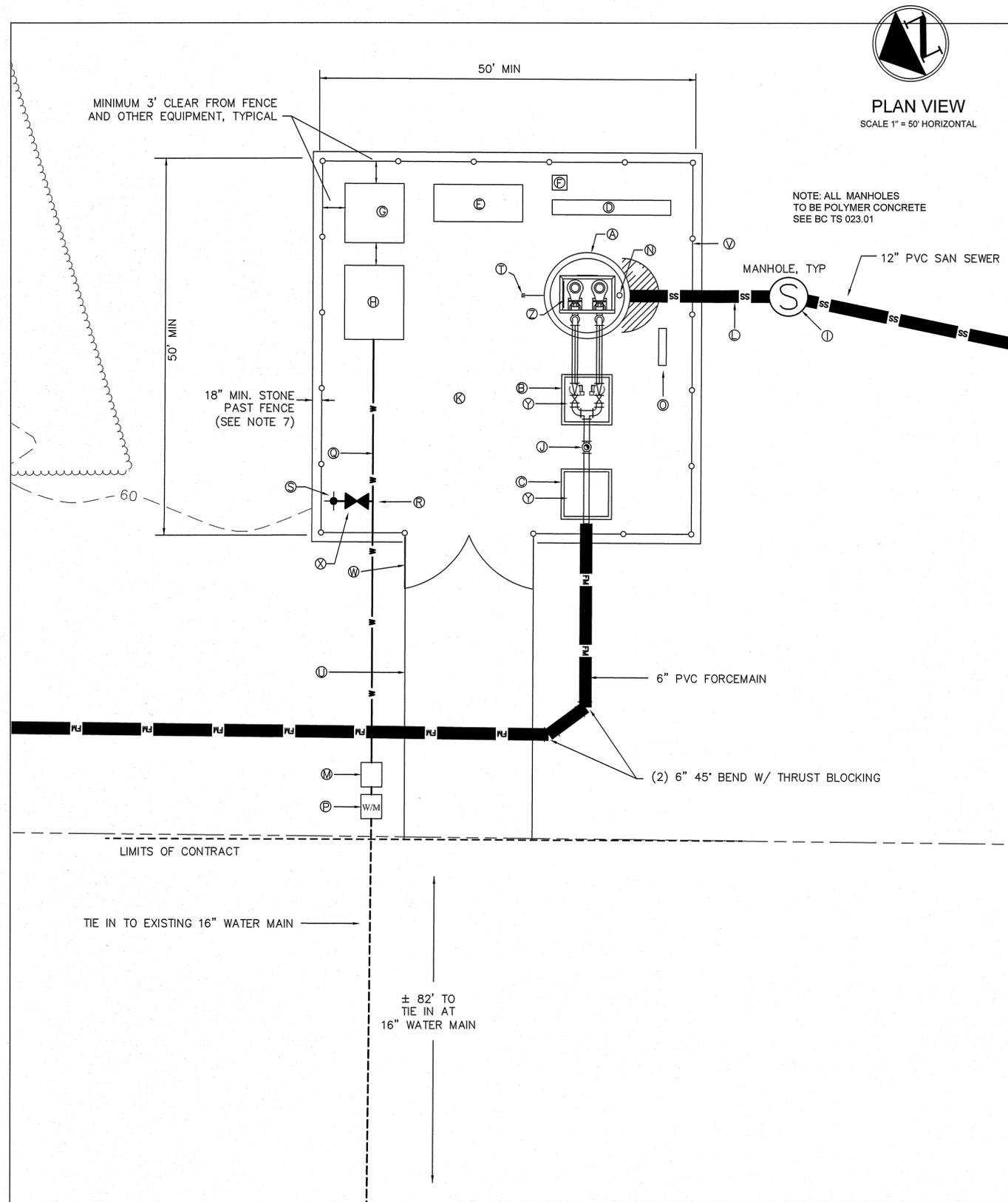


**INTERNATIONAL LOGISTICS PARK AND MID-ATLANTIC INDUSTRIAL RAIL PARK  
BRUNSWICK-COLUMBUS COUNTY  
COLUMBUS COUNTY, NC**

DATE	BY	REV.	DESCRIPTION
10/01/19	RAJ	1	REVISED FORCE MAIN / MH #4 DIAMETER
10/21/19	RAJ	2	REVISED FORCE MAIN LAYOUT AT CASING

SEWER PLAN AND PROFILE

SCALE: AS INDICATED  
DATE: 8/28/19  
ENGINEER: B CLAWSON  
DRWN. BY: RAJ  
CHKD. BY: B CLAWSON  
PROJECT NUMBER: G17125  
DRAWING NO. C-5 SHEET NO. 7 OF 25



PLAN VIEW  
SCALE 1" = 50' HORIZONTAL

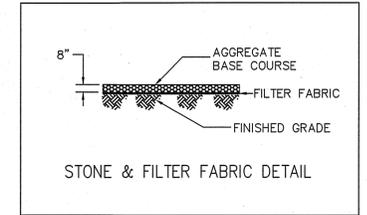
NOTE: ALL MANHOLES TO BE POLYMER CONCRETE SEE BC TS 023.01

NOTES:

1. WET WELL TO BE POLYCRETE OR INTERIOR TO RECEIVE MIN 120 MILS RAVEN 405 HIGH SOLIDS EPOXY OR APPROVED EQUAL.
2. WET WELL VENT OUTLET TO HAVE ODORHOG CHARCOAL FILTER OR APPROVED EQUAL.
3. THE PUMP STATION SITE SHALL BE A MINIMUM OF 50 FEET BY 50 FEET. THE PLAN HEREIN SHOWS A RECOMMENDED 20 FOOT BUFFER FROM THE PROPERTY LINE TO THE FENCED AREA. SEE APPLICABLE JURISDICTION'S ZONING ORDINANCE FOR REQUIRED BUFFERS.
4. THE PUMP STATION SITE SHALL BE GRADED TO PROMOTE POSITIVE DRAINAGE AWAY FROM THE WET WELL. NO STORM DRAINAGE SHALL ENTER PUMP STATION SITE.
5. THE ACCESS ROAD SHALL BE ABC STONE AT A MINIMUM 8" THICK. THE ROAD SHALL BE A MINIMUM OF 16' WIDE.
6. THE ACCESS ROAD AND ENTIRE AREA WITHIN PUMP STATION FENCE SHALL BE A MINIMUM OF 2 FEET ABOVE THE 100 YEAR WATER SURFACE ELEVATION.
7. THE PUMP STATION SHALL HAVE STONE EXTENDING 18" PAST THE FENCE LINE IN ALL DIRECTIONS.
8. THE PUMP CONTROL PANEL MUST BE INSTALLED SUCH THAT IT FACES THE WET WELL.
9. SEE ROHN ANTENNA DETAIL SHEET FOR ANTENNA DETAILS.
10. VALVE VAULT MINIMUM SIZE IS 6'X6'6". ACTUAL REQUIRED MINIMUM SIZE DEPENDS ON ACTUAL DISCHARGE PIPING SIZES. ALL PIPING CONNECTIONS INSIDE VALVE VAULT SHALL BE EASILY ACCESSIBLE FOR MAINTENANCE AND REPAIR.
11. NUT OPERATED PLUG VALVES IN VAULT MUST BE POSITIONED SO THAT THEY CAN BE OPERATED FROM ABOVE THE VAULT THROUGH THE HATCH WITH A STANDARD VALVE WRENCH.
12. IF REQUIRED, METERING VAULT MINIMUM SIZE IS 6'X6'6". ACTUAL REQUIRED MINIMUM SIZE DEPENDS ON ACTUAL DISCHARGE PIPING SIZES. ALL PIPING CONNECTIONS INSIDE METERING VAULT SHALL BE EASILY ACCESSIBLE FOR MAINTENANCE AND REPAIR. IF A METERING VAULT IS REQUIRED, A SEPARATE METERING ENCLOSURE WILL BE REQUIRED. A DRAIN LINE WITH BACK FLOW TO THE WET WELL WILL BE REQUIRED.
13. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ELECTRIC POWER COMPANY FOR PLACEMENT OF POWER COMPANY EQUIPMENT AND ANY REQUIRED CONCRETE SLABS, CONDUIT, ETC., NEEDED TO SERVE PUMP STATION. ELECTRIC COMPANY EQUIPMENT PLACEMENT SHALL NOT OBSTRUCT ACCESS DRIVE, GATES, GRAVITY SEWER MAIN, MANHOLES, DISCHARGE FORCE MAIN, OR ANY OTHER PUMP STATION EQUIPMENT.
15. IF APPLICABLE, ODOR CONTROL UNIT REQUIREMENTS:
  - A) CONCRETE SLAB - 10'X8'X2". TO BE INSTALLED SO THAT 12" OF SLAB ARE ABOVE FINISHED GRADE.
  - B) INLET PIPE THROUGH WET WELL - 8" PVC MINIMUM
  - C) CORE AND BOOT WET WELL FOR 8" PVC VENT PIPE TO ODOR CONTROL UNIT.
  - D) SIEMENS WATER TECHNOLOGIES, ZABOCS MODEL 5000/6000 - CONTACT BRUNSWICK COUNTY PUBLIC UTILITIES FOR DETAILS
- E) ELECTRICAL POWER TO UNIT IS REQUIRED FROM ELECTRICAL RACK.
- F) WET WELL VENT IS CAPPED IF ODOR CONTROL UNIT IS UTILIZED.
16. ODOR CONTROL - SEE 'NOTE FOR ALL PUMP STATIONS' THIS SHEET.
17. ALL PUMP STATION WORK BY CONTRACTOR SHALL BE OF ADEQUATE QUALITY AND WORKMANSHIP FOR ACCEPTANCE BY BRUNSWICK COUNTY.
18. GENERATOR TO HAVE ENGINE EXHAUST SILENCER, WEATHER PROTECTIVE ENCLOSURE, AND SOUND ATTENUATION. REFER TO STANDBY EMERGENCY GENERATOR TECHNICAL SPECIFICATIONS FOR FURTHER DETAILS.
19. PROVIDE A MINIMUM OF 3 (THREE), 10' LONG, 3" DIAMETER, COPPER CLAD GROUND RODS SPACED A MINIMUM OF 20' APART, EXOTHERMICALLY WELDED AND BONDED TOGETHER WITH INSPECTION WELLS AT EACH CONNECTION. ONE GROUND ROD AT:
  - A) ANTENNA TOWER
  - B) ELECTRIC METER
  - C) GENERATOR

PUMP STATION COMPONENTS

A	WET WELL
B	VALVE VAULT - 6'X6'X6" MIN. (SEE NOTE 10)
C	METERING VAULT - 6'X6'X6" MIN. (SEE NOTE 12 & 19)
D	CONTROL PANEL (SEE DETAIL SHEET 3)
E	GENERATOR PAD AND STANDBY GENERATOR
F	AREA LIGHT ON POLE
G	ANTENNA PAD (SEE BRUNSWICK COUNTY STANDARD DETAILS)
H	ODOR CONTROL PAD AND UNIT (SEE NOTE 15 & 16)
I	5' DIAMETER RECEIVING MANHOLE POLYMER CONCRETE
J	EMERGENCY PUMP OUT
K	8" ABC (SEE STONE & FILTER FABRIC DETAIL THIS SHEET)
L	INFLUENT SANITARY SEWER LINE
M	APPROVED BACKFLOW PREVENTION DEVICE
N	6" VENT
O	JUNCTION BOX RACK ASSEMBLY (SEE DETAIL ELECTRICAL DRAWINGS)
P	3/4" IRRIGATION METER
Q	1" WATER SERVICE TO ODOR CONTROL UNIT
R	1" WATER SERVICE TO YARD HYDRANT
S	1" FREEZE-PROOF YARD HYDRANT
T	STUB OUT AND CAPPED VENT PIPE TO ODOR CONTROL UNIT (SEE NOTE 15)
U	16' ALL-WEATHER GRAVEL DRIVE (SEE NOTE 5)
V	CHAIN LINK FENCE (SEE DETAIL SHEET 11)
W	DOUBLE SWING GATES 2 @ 7', TOTAL 14' (SEE DETAIL SHEET 11)
X	1" BALL VALVE IN C.I. VALVE BOX
Y	VAULT COVER ACCESS HATCH - 4'x4'
Z	WETWELL COVER PUMP ACCESS HATCH - 30"x42"

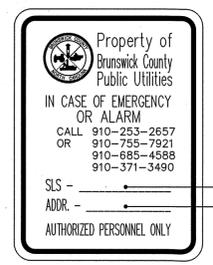


	REQUIRED	NOT REQUIRED
ODOR CONTROL UNIT		X
METERING VAULT	X	

NOTE FOR ALL PUMP STATIONS:  
THE ODOR CONTROL SLAB, VENT PIPING FROM WETWELL AS SHOWN ON THE DETAIL SHEET, WATER SERVICE, AND ELECTRICAL CONDUIT FROM BUILDING OR ELECTRICAL RACK IS REQUIRED EVEN IF THE ODOR CONTROL UNIT IS NOT.

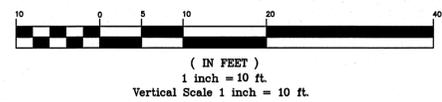
BCPU PUMP STATION SIGN SPECIFICATIONS

MATERIAL: ANODIZED ALUMINUM, #5052 .080 THICK  
SIZE: 18" WIDE X 24" HIGH WITH 1.5" RADIUS ON ALL CORNERS  
BACKGROUND: 3-M ENGINEER GRADE SCOTCHLITE REFLECTIVE FILM  
ALL COPY AND BORDER IS 3-M SCOTCHCAL VINYL FILM, SAPPHIRE BLUE WITH THE EXCEPTION OF THE PHONE NUMBER AND "AUTHORIZED PERSONNEL ONLY" WHICH ARE 3-M SCOTCHCAL CARDINAL RED. THE ENTIRE SIGN IS OVERLAIN WITH FLEXCON EYL 400 VINYL #V-29, LAMINATED AT 40 PSI. ALL LETTERING IS STANDARD BOLD CONDENSED.



PUMP STATION SIGN

GRAPHIC SCALE



INTERNATIONAL LOGISTICS PARK  
PUMP STATION SITE PLAN

NOT TO SCALE

**MUNICIPAL ENGINEERING SERVICES COMPANY, P.A.**  
68 SHIPWASH DRIVE, GARNER, NC 27529 - PHONE: 919-772-5393  
P.O. BOX 349, BOONE, NC 28607 - PHONE: 828-262-1767  
LICENSE NUMBER: C-0281



**INTERNATIONAL LOGISTICS PARK AND MID-ATLANTIC INDUSTRIAL RAIL PARK BRUNSWICK-COLUMBUS COUNTY COLUMBUS COUNTY, NC**

DATE	REVISED	DESCRIPTION
10/04/19	1	REVISED PUMP STATION LAYOUT ADDENDUM 1
10/21/19	2	REVISED FORCE MAIN LAYOUT AT CASING

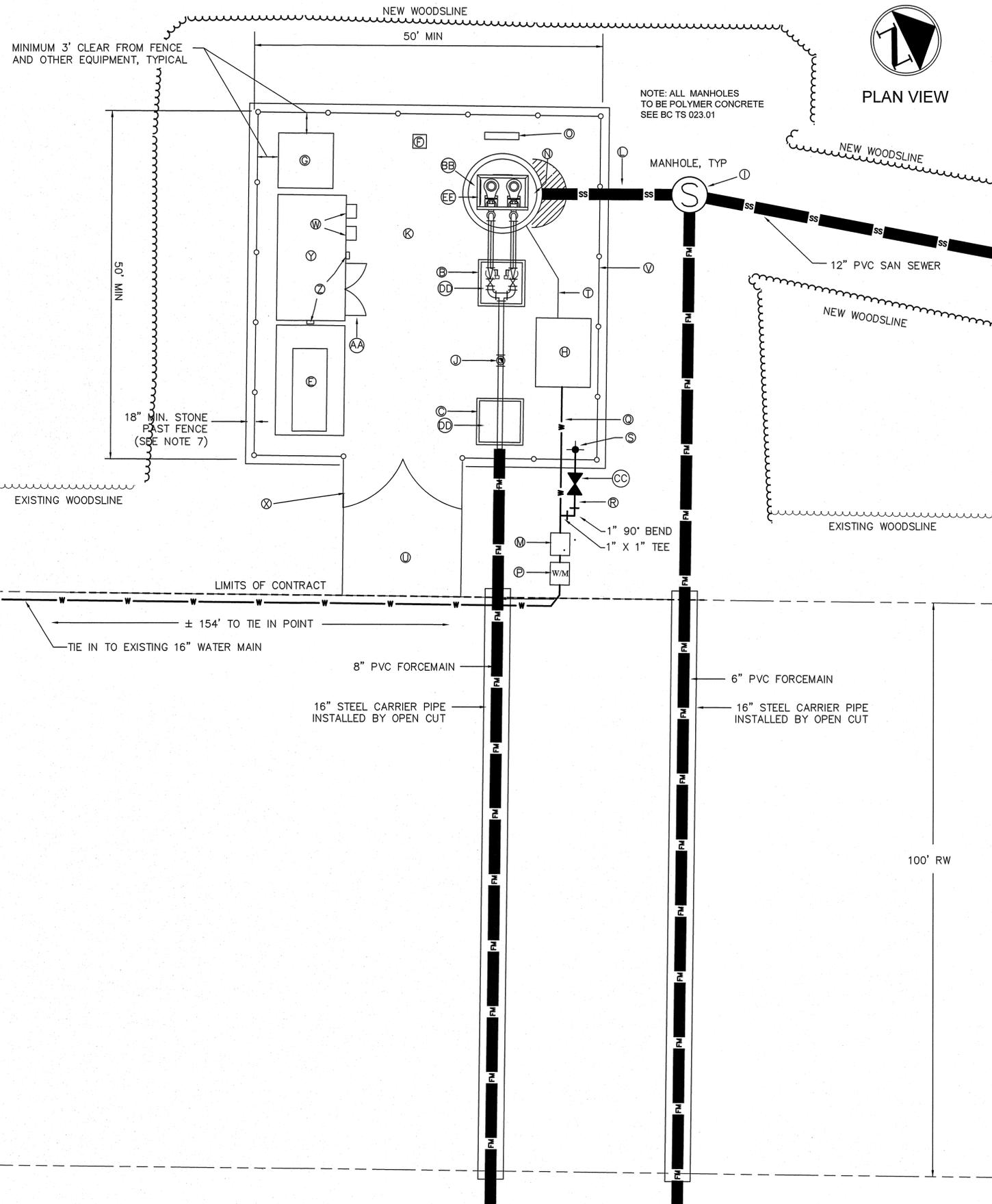
  

DATE	BY	DESCRIPTION
10/04/19	RAJ	INTERNATIONAL LOGISTICS PARK PUMP STATION SITE PLAN

SCALE:	AS INDICATED
DATE:	8/28/19
ENGINEER:	B CLAWSON
DRWN BY:	RAJ
CHKD BY:	B CLAWSON
PROJECT NUMBER:	G17125
DRAWING NO.:	C-6
SHEET NO.:	8 OF 25

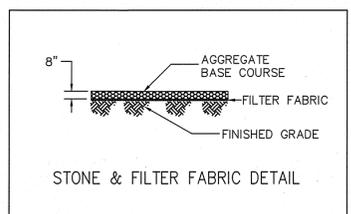




**NOTES:**

1. WET WELL TO BE POLYCRETE OR INTERIOR TO RECEIVE MIN 120 MILS RAVEN 405 HIGH SOLIDS EPOXY OR APPROVED EQUAL.
2. WET WELL VENT OUTLET TO HAVE ODORHOG CHARCOAL FILTER OR APPROVED EQUAL.
3. THE PUMP STATION SITE SHALL BE A MINIMUM OF 50 FEET BY 50 FEET. THE PLAN HEREIN SHOWS A RECOMMENDED 20 FOOT BUFFER FROM THE PROPERTY LINE TO THE FENCED AREA. SEE APPLICABLE JURISDICTION'S ZONING ORDINANCE FOR REQUIRED BUFFERS.
4. THE PUMP STATION SITE SHALL BE GRADED TO PROMOTE POSITIVE DRAINAGE AWAY FROM THE WET WELL. NO STORM DRAINAGE SHALL ENTER PUMP STATION SITE.
5. THE ACCESS ROAD SHALL BE ABC STONE AT A MINIMUM 8" THICK. THE ROAD SHALL BE A MINIMUM OF 16' WIDE.
6. THE ACCESS ROAD AND ENTIRE AREA WITHIN PUMP STATION FENCE SHALL BE A MINIMUM OF 2 FEET ABOVE THE 100 YEAR WATER SURFACE ELEVATION.
7. THE PUMP STATION SHALL HAVE STONE EXTENDING 18" PAST THE FENCE LINE IN ALL DIRECTIONS.
8. WET WELL LEVEL AND ALARMS SHALL BE PRIMARILY CONTROLLED BY AN ULTRASONIC LEVEL TRANSMITTER SYSTEM PER BRUNSWICK COUNTY STANDARD SPECIFICATIONS. IN THE EVENT OF FAILURE OF THE ULTRASONIC LEVEL TRANSMITTER SYSTEM THE WET WELL FLOATS WILL CONTROL THE PUMP STATION. REFER TO BRUNSWICK COUNTY PUMP STATION TECHNICAL SPECIFICATIONS AND SCADA SPECIFICATIONS.
9. LOCAL PUMP DISCONNECTS ARE REQUIRED ON THE BUILDING AS SHOWN.
10. BUILDING PLANS TO BE SUBMITTED TO BRUNSWICK COUNTY ENGINEERING DEPARTMENT AND BUILDING INSPECTIONS DEPARTMENT FOR REVIEW AND PERMITTING.
11. SEE ROHN ANTENNA DETAIL SHEET FOR ANTENNA DETAILS.
12. VALVE VAULT MINIMUM SIZE IS 6'X6'. ACTUAL REQUIRED MINIMUM SIZE DEPENDS UPON ACTUAL DISCHARGE PIPING SIZES. ALL PIPING CONNECTIONS INSIDE VALVE VAULT SHALL BE EASILY ACCESSIBLE FOR MAINTENANCE AND REPAIR.
13. NUT OPERATED PLUG VALVES IN VAULT MUST BE POSITIONED SO THAT THEY CAN BE OPERATED FROM ABOVE THE VAULT THROUGH THE HATCH WITH A STANDARD VALVE WRENCH.
14. IF REQUIRED, METERING VAULT MINIMUM SIZE IS 6'X6'. ACTUAL REQUIRED MINIMUM SIZE DEPENDS UPON ACTUAL DISCHARGE PIPING SIZES. ALL PIPING CONNECTIONS INSIDE VALVE VAULT SHALL BE EASILY ACCESSIBLE FOR MAINTENANCE AND REPAIR. A 4" DRAIN LINE WITH BACK FLOW TO WET WELL SHALL BE REQUIRED.
15. PROVIDE A MINIMUM OF 3 (THREE), 10' LONG, 3/4" DIAMETER, COPPER CLAD GROUND RODS SPACED A MINIMUM OF 20' APART, EXOTHERMICALLY WELDED AND BONDED TOGETHER WITH INSPECTION WELLS AT EACH CONNECTION. ONE GROUND ROD AT:
  - A) ANTENNA TOWER
  - B) ELECTRIC METER
  - C) GENERATOR
16. ODOR CONTROL UNIT REQUIREMENTS:
  - A) CONCRETE SLAB - 10'X8'X2". TO BE INSTALLED SO THAT 12" OF SLAB ARE ABOVE FINISHED GRADE.
  - B) INLET PIPE FROM WET WELL - 8" PVC MINIMUM
  - C) CORE AND BOOT WET WELL FOR 8" PVC VENT PIPE TO ODOR CONTROL UNIT.
  - D) SIEMENS WATER TECHNOLOGIES, ZABOCS MODEL 5000/6000 - CONTACT BRUNSWICK COUNTY PUBLIC UTILITIES FOR DETAILS
  - E) ELECTRICAL POWER TO UNIT IS REQUIRED FROM ELECTRICAL RACK.
  - F) WET WELL VENT IS CAPPED IF ODOR CONTROL UNIT IS UTILIZED
17. ODOR CONTROL - SEE "NOTE FOR ALL PUMP STATIONS" THIS SHEET.
18. MINIMUM ELECTRICAL BUILDING SIZE SHALL BE 10'X22' OR 220 SQ FT.
19. VARIABLE FREQUENCY DRIVES SHALL BE MOUNTED ON INNER WALL OF BUILDING BACK-TO-BACK OF OUTSIDE-MOUNTED PUMP DISCONNECTS.
20. GENERATOR TO HAVE ENGINE EXHAUST SILENCER, WEATHER PROTECTIVE ENCLOSURE AND SOUND ATTENUATION. REFER TO STANDBY EMERGENCY GENERATOR TECHNICAL SPECIFICATIONS FOR FURTHER DETAILS.

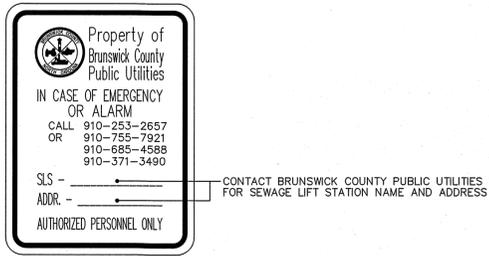
PUMP STATION COMPONENTS	
A	WET WELL
B	VALVE VAULT - 6'X6'X6' MIN. (SEE NOTE 12)
C	METERING VAULT - 6'X6'X6' MIN. INSTALL 8" MAGNETIC FLOW METER
D	NOT USED
E	GENERATOR PAD AND STANDBY GENERATOR
F	AREA LIGHT ON POLE
G	ANTENNA PAD (SEE BRUNSWICK COUNTY STANDARD DETAILS)
H	ODOR CONTROL UNIT AND PAD (SEE NOTE 16 & 17)
I	5' DIAMETER RECEIVING MANHOLE POLYMER CONCRETE
J	EMERGENCY PUMP OUT
K	8" ABC (SEE STONE & FILTER FABRIC DETAIL THIS SHEET)
L	INFLUENT SANITARY SEWER LINE
M	APPROVED BACKFLOW PREVENTION DEVICE
N	6" VENT
O	JUNCTION BOX RACK ASSEMBLY (SEE ELECTRICAL DRAWINGS)
P	3/4" IRRIGATION METER
Q	1" WATER SERVICE TO ODOR CONTROL UNIT
R	1" WATER SERVICE TO YARD HYDRANT
S	4" FREEZE-PROOF YARD HYDRANT WITH 2" REDUCER
T	VENT PIPE TO ODOR CONTROL UNIT (SEE NOTE 16)
U	16' ALL-WEATHER GRAVEL DRIVE
V	CHAIN LINK FENCE (SEE DETAIL - SHEET 11)
W	PUMP DISCONNECTS
X	DOUBLE SWING GATES 2 @ 7', TOTAL 14' (SEE DETAIL SHEET 11)
Y	ELECTRICAL BUILDING 220 SF MIN (BUILDING PERMIT REQ.)
Z	WALL MOUNTED LIGHTS
AA	3' DOUBLE DOORS (OPEN OUTWARD)
BB	ULTRASONIC LEVEL TRANSDUCER WELL
CC	1" BALL VALVE IN C.I. VALVE BOX
DD	VAULT COVER ACCESS HATCH - 4'X4'
EE	WETWELL COVER PUMP ACCESS HATCH - 42"X54"



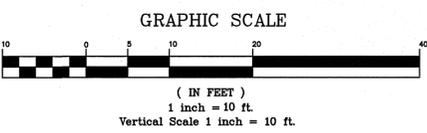
	REQUIRED	NOT REQUIRED
ODOR CONTROL UNIT		X
METERING VAULT	X	

NOTE FOR ALL PUMP STATIONS:  
THE ODOR CONTROL SLAB, VENT PIPING FROM WETWELL, WATER SERVICE, AND ELECTRICAL CONDUIT FROM BUILDING OR ELECTRICAL RACK IS REQUIRED EVEN IF THE ODOR CONTROL UNIT IS NOT.

BCPU PUMP STATION SIGN SPECIFICATIONS  
MATERIAL: ANODIZED ALUMINUM, #5052 .080 THICK  
SIZE: 18" WIDE X 24" HIGH WITH 1.5" RADIUS ON ALL CORNERS  
BACKGROUND: 3-M ENGINEER GRADE STONOLITE REFLECTIVE FILM  
ALL COPY AND BORDER IS 3-M SCOTCHCAL VINYL FILM, SAPPHIRE BLUE WITH THE EXCEPTION OF THE PHONE NUMBER AND "AUTHORIZED PERSONNEL ONLY" WHICH ARE 3-M SCOTCHCAL CARDINAL RED. THE ENTIRE SIGN IS OVERLAID WITH FLEXCON EVL 400 VINYL #V-29, LAMINATED AT 40 PSI. ALL LETTERING IS STANDARD BOLD CONDENSED.



PUMP STATION SIGN



MID-ATLANTIC INDUSTRIAL RAIL PARK  
PUMP STATION SITE PLAN

NOT TO SCALE

**MUNICIPAL ENGINEERING SERVICES COMPANY, P.A.**  
68 SHIPWASH DRIVE, GARNER, NC 27529 - PHONE: 919-772-5393  
P.O. BOX 349, BOONE, NC 28607 - PHONE: 828-262-1767  
LICENSE NUMBER: C-0281



**INTERNATIONAL LOGISTICS PARK AND MID-ATLANTIC INDUSTRIAL RAIL PARK BRUNSWICK-COLUMBUS COUNTY COLUMBUS COUNTY, NC**

DATE	REV.	DESCRIPTION
10/21/19	2	REVISED FORCE MAIN LAYOUT AT CASING
RAJ		

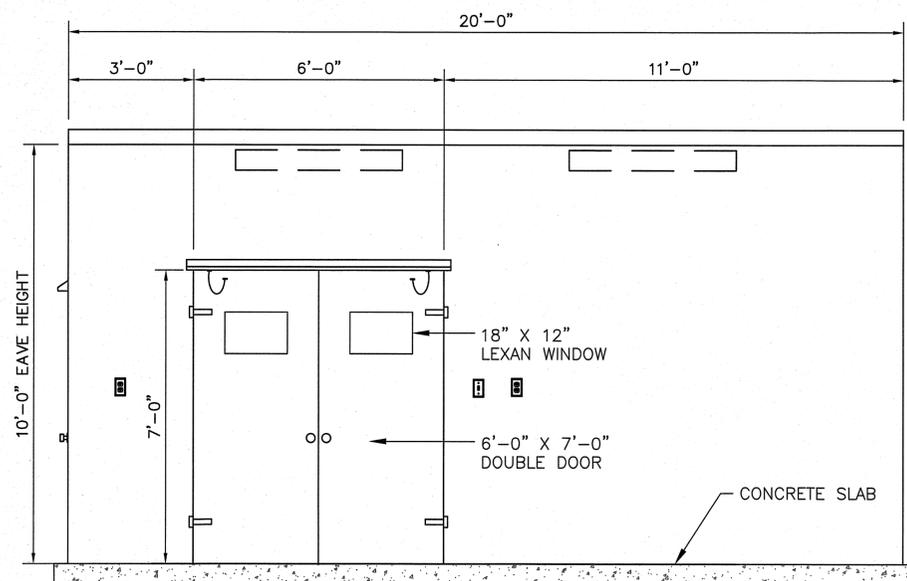
MID-ATLANTIC INDUSTRIAL RAIL PARK  
PUMP STATION SITE PLAN

SCALE: AS INDICATED  
DATE: 8/28/19  
ENGINEER: B CLAWSON  
DRWN. BY: RAJ  
CHKD. BY: B CLAWSON  
PROJECT NUMBER: G17125  
DRAWING NO.: C-7  
SHEET NO.: 9 OF 25

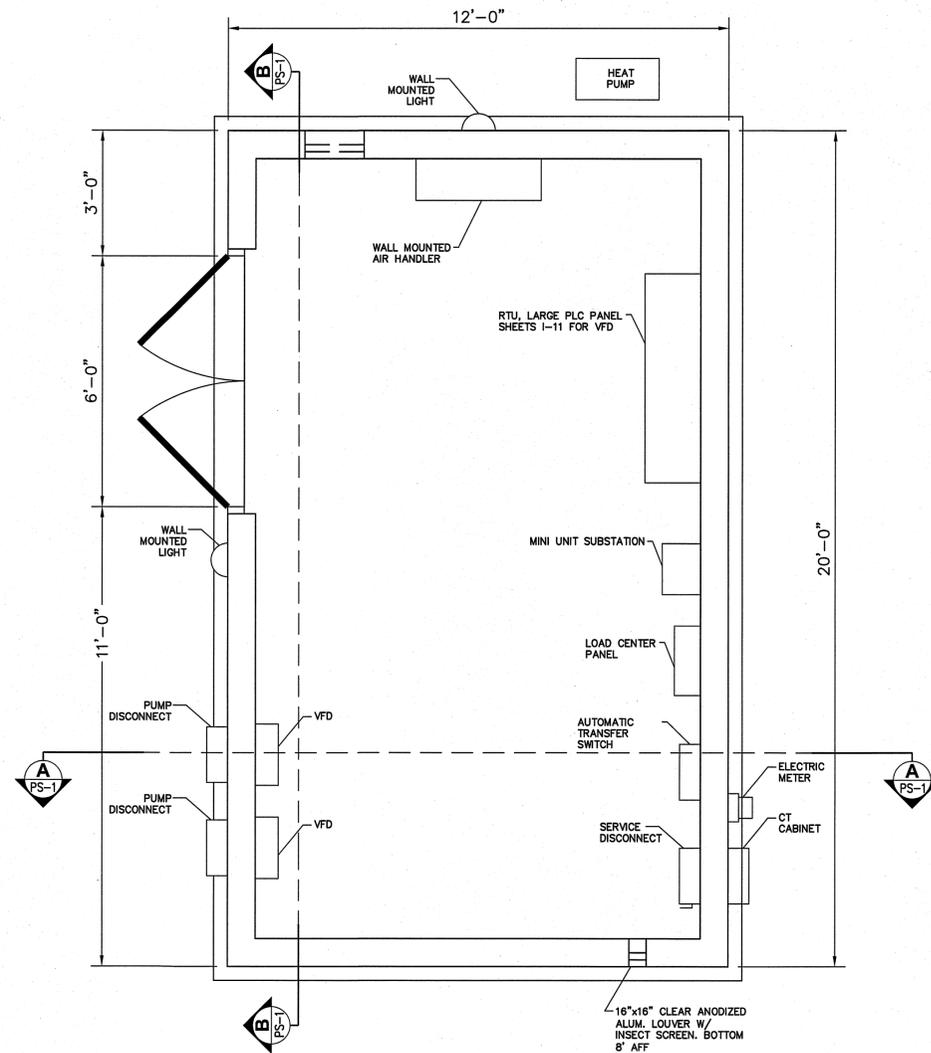


**NOTE:**

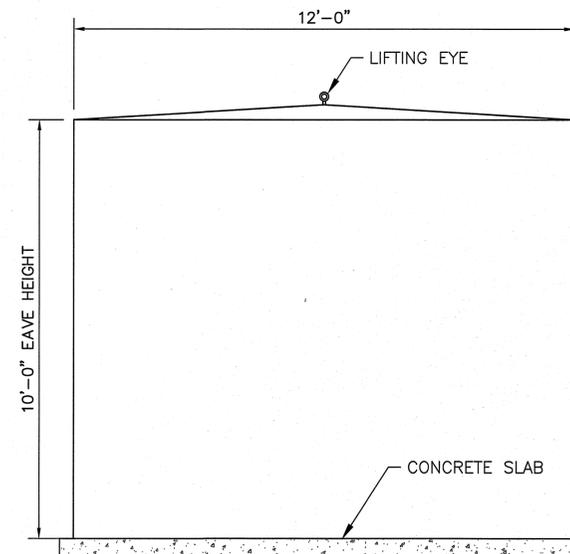
BUILDING SUPPLIED W/LIGHTING, EXHAUST FAN, LOUVER, UNIT HEATER, BREAKER PANEL & WIRING FROM FACTORY.



**BUILDING FRONT ELEVATION** **B**  
SCALE: 1/2" = 1'-0"



**BOOSTER PUMP STATION FLOOR PLAN**  
SCALE: 1/2" = 1'-0"



**BUILDING SIDE ELEVATION** **A**  
SCALE: 1/2" = 1'-0"



**MUNICIPAL ENGINEERING SERVICES COMPANY, P.A.**  
68 SHIPWASH DRIVE, GARNER, NC 27529 - PHONE: 919-772-5393  
P.O. BOX 349, BOONE, NC 28607 - PHONE: 828-262-1767  
LICENSE NUMBER: C-0281

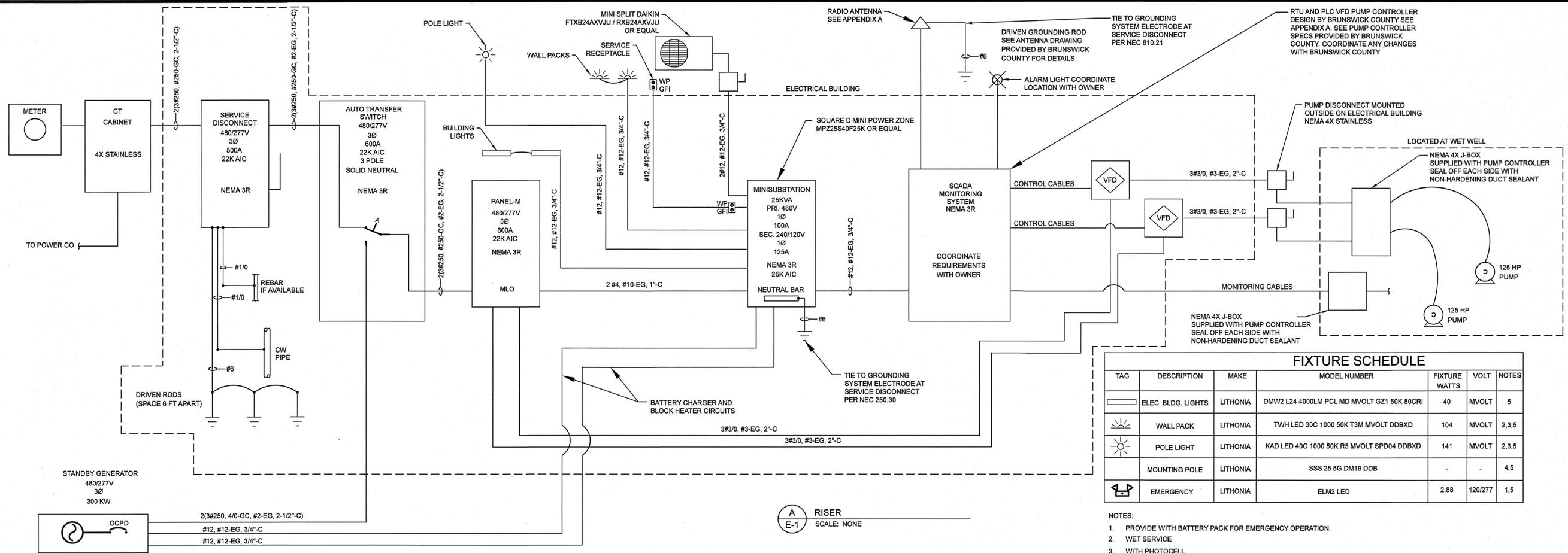


**INTERNATIONAL LOGISTICS PARK AND MID-ATLANTIC INDUSTRIAL RAIL PARK BRUNSWICK-COLUMBUS COUNTY COLUMBUS COUNTY, NC**

DATE	BY	REV.	DESCRIPTION
10/03/19	RAJ	1	REVISED BUILDING LAYOUT ADDENDUM 1
10/21/19	RAJ	2	REVISED FORCE MAIN LAYOUT AT CASING

SCALE: AS INDICATED  
DATE: 8/28/19  
ENGINEER: B CLAWSON  
DRWN BY: R MOSS  
CHKD BY: B CLAWSON  
PROJECT NUMBER: G17125  
DRAWING NO. C-11 SHEET NO. 13 OF 25

FLOOR PLAN AND ELEVATIONS  
ELECTRICAL / CONTROL BUILDING



FIXTURE SCHEDULE						
TAG	DESCRIPTION	MAKE	MODEL NUMBER	FIXTURE WATTS	VOLT	NOTES
	ELEC. BLDG. LIGHTS	LITHONIA	DMW2 L24 4000LM PCL MD MVOLT GZ1 50K 80CRI	40	MVOLT	5
	WALL PACK	LITHONIA	TWH LED 30C 1000 50K T3M MVOLT DDBXD	104	MVOLT	2,3,5
	POLE LIGHT	LITHONIA	KAD LED 40C 1000 50K R5 MVOLT SPD04 DDBXD	141	MVOLT	2,3,5
	MOUNTING POLE	LITHONIA	SSS 25 5G DM19 DDB	-	-	4,5
	EMERGENCY	LITHONIA	ELM2 LED	2.88	120/277	1,5

- NOTES:
1. PROVIDE WITH BATTERY PACK FOR EMERGENCY OPERATION.
  2. WET SERVICE
  3. WITH PHOTOCELL
  4. 25' MOUNTING HEIGHT
  5. OR EQUAL BY OTHERS

PANEL: MINI UNIT										RATING: 240 / 120 V 1 PHASE 125 AMPS		
CIRCUIT	LOAD SERVED	BKR	WIRE SIZE	VA	LEG	VA	WIRE SIZE	BKR	LOAD SERVED	CIRCUIT		
1	RTU	20-1P	12	1,000	A	1,000	12	20-1P	TRANSUDER	2		
3	RECEPTACLE	20-1P	12	500	B	1,944	12	20-2P	MINI SPLIT	4		
5	BATTERY CHARGER	20-1P	12	1,500	A	1,944	12			8		
7	BLOCK HEATER	20-1P	12	1,000	B					8		
9	RPZ HEAT TRACE	20-1P	12	1,500	A					10		
11	ODOR HEAT TRACE	20-1P	12	1,500	B					12		
13	POLE LIGHT	20-1P	12	141	A					14		
15	WALL PAKS	20-1P	12	208	B					16		
17	BUILDING LIGHT	20-1P	12	80	A					18		
19					B					20		
21					A					22		
23					B					24		
				LEG	A	B	C	TOTAL CONNECTED LOAD				
LOAD BALANCE AMPS				30	21			51 AMPS				
C/B TEMP 75 C										AIC 25 KAMPS		
MOUNTING SURFACE												
MAIN CIRCUIT BREAKER PRI 100A SEC 125A												

PANEL: M										RATING: 480 / 277 V 3 PHASE 600 AMPS		
CIRCUIT	LOAD SERVED	BKR	WIRE SIZE	VA	LEG	VA	WIRE SIZE	BKR	LOAD SERVED	CIRCUIT		
1	MINI UNIT SUBSTATION	100-2P	2	6,159	A	43,231	3/0	350-3P	VFD PUMP 1	2		
3			2	6,159	B	43,231	3/0			4		
5					C	43,231	3/0			6		
7					A	43,231	3/0			8		
9					B	43,231	3/0	350-3P	VFD PUMP 2	10		
11					C	43,231	3/0			12		
13					A					14		
15					B					16		
17					C					18		
				LEG	A	B	C	TOTAL CONNECTED LOAD				
LOAD BALANCE AMPS				111	111	104		327 AMPS				
C/B TEMP 75 C										AIC 22 KAMPS		
MOUNTING SURFACE NEMA 4X												
MAIN CIRCUIT BREAKER MLO												

VERIFY C/B SIZE AND CONDUCTOR SIZE WITH EQUIPMENT NAME PLATE BEFORE INSTALLATION.  
COPPER BUS WITH BOLT ON BREAKERS  
COPPER GROUNDING BAR

**ELECTRICAL NOTES:**

1. ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC). WORKMANSHIP SHALL MEET OR EXCEED INDUSTRY STANDARDS.
2. ALL WIRING, PANEL BOARDS, DEVICES AND OTHER LIKE MATERIALS SHALL BE U.L. LISTED & LABELED. ALL MATERIALS SHALL MEET THE NEC FOR THE INTENDED USE AND INSTALLED IN ACCORDANCE WITH THE NEC.
3. ALL WIRE TERMINATIONS AND EQUIPMENT TO BE RATED FOR 75 DEGREES C MINIMUM UNLESS OTHERWISE NOTED ON PLANS.
4. PROVIDE THHN/THWN COPPER WIRE. PROVIDE A MINIMUM WIRE SIZE OF #12. ALL WIRE #8 AND LARGER SHALL BE STRANDED.
5. ELECTRICAL CONTRACTOR TO COORDINATE MOUNTING OF ALL DEVICES WITH OWNER AND GC.
6. ALL CONDUIT SHALL BE SCH 80 PVC
7. BUS BARS SHALL BE COPPER AND BREAKERS SHALL BE BOLT ON TYPE
8. VERIFY CIRCUIT BREAKER AND CONDUCTOR SIZE WITH EQUIPMENT NAME PLATE BEFORE INSTALLATION
9. CONTRACTOR MAY USE NON HARDENING SEALANT IN PLACE OF SEAL OFF SHOWN ON DRAWINGS. CHECK WITH OWNER TO CONFIRM WHICH VAPOR SEAL SYSTEM TO INSTALL.

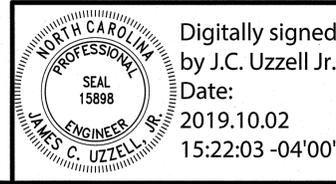
**ENGINEER'S NOTE:**  
DESIGN BY BRUNSWICK COUNTY  
REVIEWED AND SEALED FOR NEC  
COMPLIANCE ONLY.

VERIFY C/B SIZE AND CONDUCTOR SIZE WITH EQUIPMENT NAME PLATE BEFORE INSTALLATION.  
COPPER BUS WITH BOLT ON BREAKERS  
COPPER GROUNDING BAR

PANEL M		Brunswick PS		480 / 277 V			3 Ø				
TAG	Description	HP	Voltage	Phase	FLA	VA	Notes	Conductor Length	Wire Size	EG	OCPD
	MINI UNIT 25KVA		480	1		12,317	ESTIMATE		4	10	60
	125HP PUMP	125	480	3	156.0	129,692			3/0	3	350
	125HP PUMP	125	480	3	156.0	129,692			3/0	3	350
	Connected Load					271,701					
	1/4 Largest Motor					32,423					
Total VA =						304,124					
Demand Load AMPS =						366					

AVAILABLE FAULT CURRENT FIELD MARKINGS BASED ON 480/277V 225KVA OVERHEAD BANK TRANSFORMER. CONTACT ENGINEER IF DIFFERENT.  
CONTRACTOR TO MARK PANELS WITH MAXIMUM AVAILABLE FAULT CURRENT AND DATE OF CALCULATIONS PER NEC 2017 110.24.  
VOLT: 480 PHASE 3 AVAILABLE FAULT CURRENT: 16,100 A  
Date: AUGUST 2019

- Service Grounding and Bonding Requirements**
1. Grounding and Bonding must follow all NEC 250 requirements.
  2. Main Bonding Jumper to be installed by item a or b as follows:
    - a. Use Green head screw supplied with panel to ground the neutral bar to the service disconnect enclosure.
    - b. Connect neutral bar with bonding jumper sized per table NEC 250.120(C)(1) to the service disconnect enclosure. If the grounding electrode conductor is terminated on the equipment grounding bar, the bonding jumper must also terminate on the same grounding bar. NEC 250.28
  3. The neutral conductor (grounded conductor) to be connected to ground at the service disconnect only for the electrical system (one point of connection to ground only for the complete electrical system). Separately derived systems will be grounded and bonded per NEC requirements.
  4. The grounding electrode conductor to be terminated on the neutral bar. OK to terminate the grounded electrode conductor on the equipment grounding bar if the bonding jumper is installed per item 2b above.
  5. All Grounding electrodes in or on the building / structure must be bonded together per NEC 250.58
  6. The equipment grounding conductor (green wire or bare copper) to be terminated on the enclosure or equipment grounding bar. If the conduit is used as the equipment ground conductor install bonding jumper around concentric or eccentric knockouts.
  7. If the service conductors entering the service panel in metal conduit use a bonding jumper sized per table 250.58 at the service panel end (bonding jumper not required at meter base enclosure). With nonmetallic conduit bonding not required (neutral conductor serves as ground fault current path).
  8. If drive rods are used as part of the grounding electrode system use a minimum of three 5/8" diameter 10 ft long rod spaced 6 foot apart. Use only copper clad steel rods.
  9. Follow NEC requirements for bonding the equipment grounding conductors to all electrical devices and enclosures in the electrical system.



Digitally signed by J.C. Uzzell Jr.  
Date: 2019.10.02 15:22:03 -04'00'  
J.C. Uzzell, Jr., Ph.D.  
PROFESSIONAL ENGINEER  
135 Lake Wackena Road  
Goldsboro, NC 27534  
Phone (919) 751-3947  
Matt J Uzzell  
ENGINEER IN TRAINING

**Engineering Company, P.A.**  
P.O. BOX 346 BOONE, N.C. 28607  
(828) 292-1757  
LICENSE NUMBER: C-0281

**Municipal Services**  
P.O. BOX 57 GARNER, N.C. 27529  
(919) 772-5983

**BRUNSWICK PS  
BRUNSWICK COUNTY  
NORTH CAROLINA**

DATE	BY	REV.	DESCRIPTION

SCALE: AS SHOWN  
DATE: 8/22/19  
DRWN. BY:  
CHKD. BY:  
PROJECT NUMBER:  
DRAWING NO. SHEET NO.  
E-1