



REQUEST FOR BID
FOR
The City of Wilmington
LIONS BRIDGE DEMOLITION
AT
GREENFIELD PARK
DEMO-1224

City of Wilmington
Skyline Center

929 North Front Street, 10th Floor
P O Box 1810
Wilmington, NC 28401
910-341-7830

Date Issued: Tuesday, December 10, 2024

Date Due: Tuesday, January 07, 2025 at 3:00 PM ET

Project Manager: Doug Lewis

Administered By: Christine R. Karem, Sr. Contract Specialist – M/WBE Coordinator



**LIONS BRIDGE DEMOLITION
AT
GREENFIELD PARK
DEMO-1224**

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**PROJECT MANUAL
DEMOLITION PLANS**

ADVERTISEMENT FOR BID
CITY OF WILMINGTON, NC
DEMOLITION – LIONS BRIDGE AT GREENFIELD PARK

ICONTRACT NUMBER: DEMO-1224

Sealed proposals addressed to the Sr. Contract Specialist, P. O. Box 1810, 929 N Front Street, 10th Floor, Wilmington, NC 28402, and marked **"LIONS BRIDGE AT GREENFIELD PARK DEMOLITION"** will be received until **3:00 p.m., Tuesday January 07, 2025**, at which time they will be publicly opened and read at the Purchasing Division, 929 N. Front Street, Room 154-B, Wilmington, NC.

Project Description: Demolition and removal of the Lions Bridge at Greenfield Park.

All firms submitting bids for the proposed work must be properly licensed. The bidder's license number **must** appear on the outside of the envelope.

In accordance with the City of Wilmington's Minority/Disadvantaged Business Policy, the bidder shall make good faith efforts, as defined by the Bid Specifications, to subcontract 14% of the dollar value of the prime contract to businesses which are at least 51% owned and controlled by minority, socially, and/or economically disadvantaged individuals (MWBE/DBE's). A complete copy of the City of Wilmington's MWBE/DBE policy is available for inspection at the Purchasing Manager's Office.

Potential Subcontract opportunities which may exist on this project include, but may not be limited to: Hauling, Suppliers and other items not specifically referenced herein.

A Mandatory Pre-Bid Conference will be held at the site (1750 block of East Lake Shore Drive) Wilmington, NC at 10:00 A.M., Tuesday, December 17, 2024.

Potential subcontractors may secure a list of potential prime contractors from the City's Web Site, www.wilmingtonnc.gov

The City of Wilmington does not discriminate on the basis of race, sex, color, age, national origin, religion or disability in its employment opportunities, programs, services, or activities.

Bids for this project shall be guaranteed by all bidders for a period of 90 calendar days following the bid opening.

THE CITY OF WILMINGTON RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS.

Christine R. Karem
Sr. Contract Specialist -
M/WBE Coordinator
December 10, 2024

STATE OF NORTH CAROLINA

COUNTY OF NEW HANOVER

AFFIDAVIT AND CERTIFICATE OF
NON-COLLUSION, NON-SUSPENSION AND NON-CONVICTION

The undersigned, being first duly sworn, deposes and says:

1. I understand that for the purposes of this affidavit, the term "bidder" shall include the person(s), firm(s), or corporation(s) signing this affidavit, the undersigned's subcontractor(s), subsidiary(ies) and affiliate(s) and any officer, director, employee or agent of the bidder; and the term "conviction" shall include guilty pleas, pleadings of nolo contendere and similar pleas.

2. This Affidavit and Certificate is made in accordance with Article 3 of Chapter 133 of the North Carolina General Statutes; I certify that this proposal is made without prior understanding, agreement, or connection with any person(s), firm(s), or corporation(s) making bids or proposals; I further certify that the bidder has not entered into any agreement with any other bidder or prospective bidder or with any other person(s), firm(s) or corporation(s) relating to the price named in said proposal, nor any agreement or arrangement under which any person(s), firm(s) or corporation(s) is to refrain from bidding, nor any agreement or arrangement for any act or omission in restraint of free competition among bidders; I understand collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards; and I further certify that the bidder will abide by all terms of this bid or proposal.

3. The bidder is not suspended or debarred from bidding by any federal or state governmental agency that is providing funds for this contract.

4. The bidder is not presently charged in an indictment or information with engaging in any conspiracy, combination, or other unlawful act in restraint of trade or any similar charges in any federal court or a court of this or any other state.

5. The bidder, within one year immediately preceding the date of this affidavit, has not been convicted of charges or engaging in any conspiracy, combination, or other unlawful act in restraint of trade or similar charges in any federal court or a court of this or any other state.

6. If, during the time of this proposal, from the date advertised to the date bids are opened, the bidder is indicted or convicted of bid-rigging, I understand this proposal shall be rejected and not considered for award.

7. I hereby affirm that all information contained in this affidavit is true, correct, accurate and complete, and any untrue, incorrect, inaccurate or incomplete statements will result in the disqualification and rejection of this proposal. I certify that I am authorized to sign this bid and to make the representations set forth herein on behalf of myself and the bidder.

(TO BE EXECUTED ON BEHALF OF THE CONTRACTOR)

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public, certify that
(Name)

_____ personally came
(Name of Secretary, Assist. Sec., Cashier, Assist. Cashier)

before me this day and acknowledged that he (she) is the _____
(Secretary, Assist. Sec., Cashier, Assist. Cashier)

of _____, corporation and that by authority duly
(Name of Corporation)

given and as the act of the corporation, the foregoing Affidavit was signed in its name by its

_____ sealed with its corporate seal, and attest by himself
(President, Vice President, Assist. Vice President)

(or herself) as its _____.
(Secretary, Assist. Sec., Cashier, Assist. Cashier)

WITNESS my hand and official seal, this the _____ day of _____, 2025.

Notary Public

My Commission Expires: _____

(NOTARY SEAL)

GENERAL SPECIFICATIONS DEMOLITION WORK

- G-1. Scope: The work covered by these specifications consists of furnishing all labor, equipment, and materials necessary to demolish and remove from the premises the building(s) listed on the attached.
- G-2. Removal of Debris: All debris of all descriptions shall be removed completely, including all materials above ground, all wood, rubbish shall be removed from the site and disposed of by the Contractor **except as may be outlined in the Scope of Work**. All land fill fees or disposal fees of any kind shall be paid for by the Contractor. All materials shall be disposed of in accordance with applicable state and federal law. Disposal by land filling shall be at a landfill that has obtained all permits required by North Carolina law. **The entire site shall also be cleared of any debris, overgrown brush, trash, or other waste material. The Contractor shall leave the site clean and free of all debris whether the debris is associated with the demolition or not. Live trees shall not be damaged or removed as part of the demolition.**
- G-3. Safety Requirements: The Contractor shall secure the area around the buildings by use of signs, fencing, barricades and personnel to assure that only authorized personnel will be on the site from the time of the beginning until completion. The Contractor shall not leave any part of the structure in a hazardous condition overnight or at any time. In addition, all rules and regulations of the Department of Labor, Occupational Safety and Health Administration, shall be abided by. **The Contractor shall leave the site in a safe condition following the completion of demolition activities. Any and all tripping or falling hazards must be mitigated.**
- G-4. Notification of Commencement of Work: The utility companies shall be notified by the Contractor and check made by them as to the location of any underground services on the site, and a proper disposition made prior to commencement of work.
- The Contractor shall notify Duke Energy, Cape Fear Public Utility Authority, Time Warner, Piedmont Natural Gas and any other utility provider as is necessary to disconnect any service and remove any meters and/or lines from the buildings.
- THIS REQUIREMENT IS APPLICABLE TO THIS PROJECT.**
- G-5. Grading of Site: All impervious surfaces are to remain. Contractor shall take care to not to significantly damage the concrete, asphalt and other impervious surfaces on site during demolition. No wood or other construction debris will be allowed in any fill material used. The fill area of the site shall be seeded with an approved grass seed and straw shall be spread over the area after the completion of demolition.
- G-6. Permit: The Contractor shall obtain, all necessary construction permits and approvals prior to commencing work.

G-7. Salvage: All fixtures, construction and components which are shown on the contract drawings to be removed shall be removed and disposed of off facility property, unless otherwise noted in the drawings. See specifications for more information. .

G-8. Commencement and Completion of Work: The commencement of this work for this pier shall begin not later than ten (10) days after written notification to proceed is received from the Purchasing Manager. When work is started, it shall be continuous until completed. Payment shall be made after completion and acceptance of the work for this structure and a purchase order shall be issued for this structure.

G-9. Insurance: Before commencing work, Contractor shall obtain at his own expense, and agrees to keep in effect during the life of this contract as a minimum requirement, the following insurance in a company or companies acceptable to the City.

- A. **Workmen's Compensation and Occupational Disease Insurance** meeting the statutory requirements of the State in which work is to be performed and Employer's Liability Insurance in an amount of at least \$3,000,000. The U.S. Longshoremen and Harbor Workers' Compensation Act endorsement shall be attached to the policy when the services will be on or in close proximity to navigable waterways. The Maritime Coverage endorsement (WC 00 02 01) shall be attached to the policy when the contracted services involve the use of watercraft
- B. **Commercial General Liability Insurance** that provides coverage for Demolition Liability Insurance and if necessary, Commercial Umbrella Liability insurance with a total limit of not less than \$3,000,000 each occurrence for bodily injury and property damage. If such CGL insurance contains a general aggregate limit, it shall apply separately to this project/ location or the general aggregate shall be twice the required limit. This insurance shall be on an occurrence basis and shall protect the Contractor against liability arising from his operations, operations by subcontractors, elevators, products, completed operations, and contractual liability assumed under the indemnity provisions above insured. XCU exclusions must be deleted when applicable to operations performed by Contractor or his subcontractors.
- C. **Automobile Liability** on an occurrence basis covering all owned, non-owned, and hired automobiles for limits equal to those in B above.

NOTE: If contract requires higher limits, they will apply.

- G-10. Insurance, Proof of Carriage: The Contractor shall furnish a schedule of insurance carried under this contract in the form of a document attested by the insurance carrier, stating and itemizing the several coverages as provided above. The insurance carriers shall also certify on these documents that they will notify the City by registered mail at least ten (10) days prior to any change, cancellation or lapse of these policies. This schedule shall be in six counterparts and when the contract is signed by the Contractor a copy thereof shall be inserted in each copy of the contract documents and, upon insertion, such shall become a part of such documents.
- G-11. Subletting: The Contractor shall keep all work under his own control and shall not assign, by power of attorney or otherwise, nor sublet the work or any part thereof without the written consent of the City. Written consent by the City to sublet or assign any portion of the contract shall not relieve the Contractor of any responsibility for the fulfillment of the contract.
- G-12. Release and Indemnity: To the fullest extent permitted by law, Contractor shall release, indemnify, keep and save harmless the City, its agents, officials and employees, from any and all responsibility or liability for any and all damage or injury of any kind or nature whatever (including death resulting therefrom) to all persons, whether agents, officials or employees of the City or third persons and to all property proximately caused by, incident to, resulting from, arising out of, occurring in connection with, directly or indirectly, the performance or nonperformance by Contractor (or by any person acting for the Contractor or for whom the Contractor is or is alleged to be in any way responsible), whether such claim may be based in whole or in part upon contract, tort (including alleged active or passive negligence or participation in the wrong), or upon any alleged breach of and duty or obligation on the part of the Contractor, its agents, officials and employees or otherwise. The provisions of the Section shall include any claims for equitable relief of for damages (compensatory or punitive) against the City, its agents, officials, and employees including alleged injury to the business of any claimant and shall include any all losses, damages, injuries, settlements, judgments, decrees, awards, fines, penalties, claims, costs and expenses. Expenses as used herein shall include without limitation the costs incurred by the City, its agents, officials and employees, in connection with investigating any claim or defending any action and shall also include reasonable attorney's fees by reason of the assertion of any such claim against the City, its agents, officials or employees. The Contractor expressly understands and agree that any performance bond or insurance protection required by this agreement, or otherwise provided by the Contractor, shall in no way limit the Contractor's responsibility to release indemnify keep and save harmless and defend the City as herein provided. The intention of the parties is to apply and construe broadly in favor of the City the foregoing provisions subject to the limitations, if any, set forth in N.C.G.S. 22B-1.
- G-13. Guarantee: The Contractor hereby agrees to guarantee, for a period of one year after date of final payment, the work accomplished under this contract to the extent that he will repair any defects due to faulty workmanship or materials which may appear in his work during this period.
- G-14. Termination: In the event that review of the Contractor's performance shows non-conformance to the attached terms and conditions contained herein as a result of the Contractor's errors, omissions or negligent acts, the Contractor shall be in breach of this agreement and the City may take corrective action as it deems necessary including, but not limited to, withholding or reduction of payment. The City shall also have the right to suspend this agreement upon five (5) calendar days written notice to the Contractor. Such written notice shall state the reasons for suspension and allow for a review period of ten (10) days during which the Contractor shall be provided with an opportunity to respond with an explanation or justification and/or shall undertake any reasonable remedial action required by the City. If, in the opinion of the City, the

Contractor remains in violation of this agreement at the completion of the five (5) day suspension period, the City shall have the right to terminate this agreement whereupon all obligations of the City to the Contractor shall cease. In the event this project is terminated prior to completion of the services by the Contractor, the Contractor shall be paid for services performed to the date of termination. In no event will the amount due Contractor in the event of termination exceed that amount set forth in Paragraph 4 of the official contract.

- G-15. Personnel: It is mutually agreed that Contractor is an independent contractor and not an agent of the City, and as such the Contractor shall not be entitled to any City employment benefits, such as, but not limited to, vacation, sick leave, insurance, workmen's compensation, or pension and retirement benefits.
- G-16. Other Laws and Regulations: Contractor will comply with any and all applicable federal, state and local standards, regulations, laws statutes and ordinances regarding toxic, hazardous and solid wastes and any other pollutants; public and private nuisances; health or safety; an zoning, subdivision or other land use controls. Contractor will take all reasonably necessary, proper or required safety, preventative and remedial measures in accordance with any and all relations and directives from the North Carolina Department of Human Resources. The United States Environmental Protection Agency, the North Carolina Department of Environmental Management, Health Departments, and any other federal, state or local agency having jurisdiction, to ensure the prompt prevention or cessation (now or in the future) of violations of either the applicable provisions of such standards, regulations, laws, statutes, and ordinances or any permits or conditions issued thereunder. CONTRACTOR specifically acknowledges and agrees that CONTRACTOR, and any subcontractors it uses, has complied with and shall continue to comply with the provisions of the federal E-Verify program in compliance with Article 2 of Chapter 64 of the North Carolina General Statutes. CONTRACTOR shall maintain adequate safeguards with respect to sensitive customer information in conformance with and pursuant to 16 C.F.R. §681.1 and in accordance with N.C. Gen. Stat. §132-1.10 and §75-65.
- G-17. Non-Discrimination: Contractor will take affirmative action not to discriminate against any employee or applicant for employment or otherwise illegally deny any person participation in or the benefits of the program which is the subject of this agreement because of race, creed, color, sex, age, disability or national origin. To the extent applicable, Contractor will comply with all provisions of Executive Order No. 11246 the Civil Rights Act of 1964, (P.L. 88-352) and 1968 (P.L. 90-284), and all applicable federal, state and local laws, ordinances, rules, regulations, orders, instructions, designations and other directives promulgated to prohibit discrimination. Violation of this provision, after notice, shall be a material breach of this agreement in whole or in part.

NEW HANOVER COUNTY

CONTRACT FOR DEMOLITION SERVICES

THIS CONTRACT, made and entered into on the date executed by all parties by and between the CITY OF WILMINGTON, NORTH CAROLINA, a Municipal Corporation located in New Hanover County (hereinafter called "CITY"), and _____, a corporation organized under the laws of the State of _____; (hereinafter called "CONTRACTOR").

W I T N E S S E T H:

1. Purpose. The CITY hereby employs the CONTRACTOR to furnish all labor, materials and equipment to perform all work in manner and form as specified by the attached plans, specifications and documents consisting of, but not limited to: Proposal, Contract, any plans or drawings which are made a part hereof as if fully contained herein for the demolition of the structures which are incorporated as if fully set out, for the following:

Lions Bridge at Greenfield Park Demolition as specified herein
and on the plans, specifications, contract documents, drawings,
addenda and change orders (if any).
2. Term of Contract/Liquidated Damages. The CONTRACTOR shall commence demolition activities to be performed under this contract within **ten (10) days** of receipt of a written Notice to Proceed from the Purchasing Manager and shall complete all work hereunder within **ninety (90) calendar days** of the date of beginning. The CONTRACTOR further agrees to pay, as liquidated damages, the sum of **\$230.00** for each consecutive calendar day thereafter.
3. Permits. CONTRACTOR shall obtain the required permits prior to commencing work.
4. Notification of Commencement of Work. The utility companies shall be notified by CONTRACTOR to check as to the location of any underground services on the site, and a proper disposition made prior to commencement of work. The CONTRACTOR shall notify electric, water, natural gas, telephone, cable, and other utilities as necessary to disconnect any service and remove any meters and lines from the buildings.

5. Safety Requirements. CONTRACTOR shall secure the area around the buildings by use of signs, barricades, and personnel to assure that only authorized personnel will be on the site from the time of the beginning until completion. CONTRACTOR shall not leave any part of the structure in a hazardous condition overnight or at any time. In addition, CONTRACTOR shall abide by all rules and regulations of the Department of Labor, Occupational Safety and Health Administration.
6. Removal of Debris. All debris of all descriptions shall be removed completely, including all materials above ground, all wood, electrical, plumbing, and rubbish shall be removed from the premises and disposed of by the CONTRACTOR except as outlined in the Scope of Work. All landfill fees or disposal fees of any kind shall be paid by the Contractor. All materials shall be disposed of in accordance with applicable state and federal law. Disposal by land filling shall be at a landfill that has obtained all permits as required by North Carolina law. The entire site shall also be cleared of any debris, trash, or other waste material. The CONTRACTOR shall leave the site clean and free of all debris whether the debris is associated with the demolition or not. Live trees shall not be damaged or removed as part of the demolition.
7. Removal of Hazardous Materials. Removal and disposal of any hazardous materials, such as asbestos and lead paint, must be handled in accordance with established Federal, State, and Local regulations. Asbestos removal must be performed in accordance with OSHA asbestos regulations, 29 CFR 1910 & 1926, and NESHAP asbestos regulations 40 CFR 61, subpart M, and any other applicable Federal, State, and Local regulations. North Carolina regulations require the accreditation of personnel who work in the asbestos field and notification and permitting fees for asbestos removal projects such as the CONTRACTOR must utilize an accredited firm for the removal and disposal of all asbestos materials. Hazardous materials shall be disposed of at the County landfill or other site approved for the disposal of such materials as approved by the EPA.
8. Salvage and Historic Architectural Components. Any materials that the CONTRACTOR considers to be of value will become the property of the CONTRACTOR, with the exceptions noted herein and in the Scope of Work. CONTRACTOR shall make all reasonable efforts to preserve historic architectural components for sale or donation. The CONTRACTOR shall not sell, give away, or otherwise distribute any hazardous material, including, but not limited to, wood coated with lead-based paint and chemicals.
9. Grading of Site. All impervious surfaces are to remain. Contractor shall take care to not to significantly damage the concrete, asphalt and other impervious surfaces on site during demolition. No wood or other construction debris will be allowed in any fill material used. The fill area of the site shall be seeded with an approved grass seed and straw shall be spread over the area after the completion of demolition.

10. Extra Work. In the event extra work is necessary, not set forth or contemplated in this contract, the CONTRACTOR agrees to faithfully perform all such work under a written change order from the CITY, setting forth and describing fully the work to be done, payment terms, and additional time to complete demolition, if appropriate.
11. Compensation. The CITY hereby agrees to pay to CONTRACTOR the amount not to exceed Ninety-Eight Thousand Dollars 00/100 dollars (\$98,000.00) for services as provided herein. Payment will be made within thirty (30) days after receipt of an approved invoice.
12. Insurance.
 - a. **COMMERCIAL GENERAL LIABILITY:** CONTRACTOR shall maintain Commercial General Liability (CGL) that provides coverage for Demolition Liability and if necessary, Commercial Umbrella Liability insurance with a total limit of not less than \$3,000,000 each occurrence for bodily injury and property damage. If such CGL insurance contains a general aggregate limit, it shall apply separately to this project/ location or the general aggregate shall be twice the required limit. CGL insurance shall be written on Insurance Services Office (ISO) "occurrence" form CG 00 01 covering Commercial General Liability or its equivalent and shall cover the liability arising from premises, operations, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract). Insurance shall be on an occurrence basis and shall protect the CONTRACTOR against liability arising from his operations, operations by subcontractors, elevators, products, completed operations, and contractual liability assumed under the indemnity provisions of this contract. XCU exclusions must be deleted when applicable to operations performed by CONTRACTOR or his subcontractors.

The City of Wilmington, its officers, officials, agents, and employees are to be covered as additional insureds under the CGL by endorsement CG 20 10 or CG 20 33 AND CG 20 37 or an endorsement providing equivalent coverage as respects to liability arising out of activities performed by or on behalf of the contractor products and completed operations of the contractor premises owned, leased or used by the contractor and under the commercial umbrella, if any. The coverage shall contain no special limitations on the scope of protection afforded to the City of Wilmington, its officers, officials, agents, and employees.

There shall be no endorsement or modification of the CGL or Umbrella Liability limiting the scope of coverage for liability arising from explosion, collapse, underground property damage, or damage to the named insured's work, when those exposures exist.

The insurer shall agree to waive all rights of subrogation against the City of Wilmington, its officers, officials, agents and employees for losses arising from work performed by the contractor for the City of Wilmington.

b. **WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY:** Contractor shall maintain Workers' Compensation as required by the general statutes of the State of North Carolina and Employer's Liability Insurance. The Employer's Liability, and if necessary, Commercial Umbrella Liability insurance shall not be less than \$3,000,000 each accident for bodily injury by accident, \$3,000,000 each employee for bodily injury by disease, and \$3,000,000 policy limit.

The insurer shall agree to waive all rights of subrogation against the City of Wilmington, its officers, officials, agents and employees for losses arising from work performed by the contractor for the City of Wilmington.

The U.S. Longshoremen and Harbor Workers' Compensation Act endorsement shall be attached to the policy when the services will be on or in close proximity to navigable waterways. The Maritime Coverage endorsement (WC 00 02 01) shall be attached to the policy when the contracted services involve the use of watercraft.

c. **BUSINESS AUTO LIABILITY:** Contractor shall maintain Business Auto Liability and, if necessary, Commercial Umbrella Liability insurance with a limit of not less than \$3,000,000 each accident. Such insurance shall cover liability arising out of any auto, including owned, hired, and non-owned autos. Business Auto coverage shall be written on ISO form CA 00 01, or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in ISO form CA 00 01. Pollution liability coverage equivalent to that provided under the ISO pollution liability-broadened coverage for covered autos endorsement (CA 99 48) shall be provided, and the Motor Carrier Act endorsement (MCS 90) shall be attached when those exposures exist.

Contractor waives all rights against the City of Wilmington, its officers, officials, agents and employees for recovery of damages to the extent these damage are covered by the business auto liability or commercial umbrella liability insurance obtained by Contractor.

The contractor's Business Auto Liability insurance shall be primary as respects the City of Wilmington, its officers, officials, agents, and employees. Any other insurance or self-insurance maintained by the City of Wilmington, its officers, officials, and employees shall be excess of and not contribute with the contractor's insurance.

13. Guarantee. CONTRACTOR hereby agrees to guarantee, for a period of one year after date of final payment, the work accomplished under this Contract. CONTRACTOR agrees to repair at no cost to the CITY any defects due to faulty workmanship or materials which may appear in his work during this period.
14. Release and Indemnity. To the fullest extent permitted by law, the CONTRACTOR shall release, indemnify, keep and save harmless the CITY, its agents, officials and employees, from any and all responsibility or liability for any and all damage or injury of any kind or nature whatever (including death resulting therefrom) to all persons, whether agents, officials or employees of the CITY or third persons, and to all property proximately caused by, incident to, resulting from, arising out of, or occurring in connection with, directly or indirectly, the performance or nonperformance by CONTRACTOR (or by any person acting for the CONTRACTOR or for whom the CONTRACTOR is or is alleged to be in any way responsible), whether such claim may be based in whole or in part upon contract, tort (including alleged active or passive negligence or participation in the wrong), or upon any alleged breach of any duty or obligation on the part of the CONTRACTOR, its agents, officials and employees or otherwise. The provisions of this Section shall include any claims for equitable relief or for damages (compensatory or punitive) against the CITY, its agents, officials, and employees including alleged injury to the business of any claimant and shall include any and all losses, damages, injuries, settlements, judgments, decrees, awards, fines, penalties, claims, costs and expenses. Expenses as used herein shall include without limitation the costs incurred by the CITY, its agents, officials and employees, in connection with investigating any claim or defending any action, and shall also include reasonable attorneys' fees by reason of the assertion of any such claim against the CITY, its agents, officials or employees. The CONTRACTOR expressly understands and agrees that any performance bond or insurance protection required by this agreement, or otherwise provided by the CONTRACTOR, shall in no way limit the CONTRACTOR'S responsibility to release, indemnify, keep and save harmless and defend the CITY as herein provided. The intention of the parties is to apply and construe broadly in favor of the CITY the foregoing provisions subject to the limitations, if any, set forth in N.C.G.S. 22B-1.

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15. Personnel. It is mutually agreed that CONTRACTOR is an independent contractor and not an agent of the CITY, and as such the CONTRACTOR shall not be entitled to any CITY employment benefits, such as, but not limited to, vacation, sick leave, insurance, workmen's compensation, or pension and retirement benefits.
16. Conflict of Interest. No paid employee of the CITY shall have a personal or financial interest, direct or indirect, as a contracting party or otherwise, in the performance of this agreement.
17. Non-Waiver of Rights. It is agreed that the CITY'S failure to insist upon the strict performance of any provision of this agreement, or to exercise any right based upon a breach thereof, or the acceptance of any performance during such breach, shall not constitute a waiver of any rights under this agreement.
18. Suspension or Termination of Agreement
 - a. In the event that review of CONTRACTOR's performance shows non-conformance to the attached scope of service or other terms or conditions contained herein as a result of the CONTRACTOR's errors, omissions, or negligent acts, the CONTRACTOR shall be in breach of this contract and the CITY may take corrective action as it deems necessary including, but not limited to, withholding or reduction of payment.
 - b. CITY shall also have the right to suspend this contract upon written notice to the CONTRACTOR. Such suspension may be made for any of the following reasons: (i) violations or non-compliance with the contract terms, (ii) violations of OSHA laws or regulations, (iii) violations of Federal or State environmental and health laws or regulations, (iv) operating CITY valves without permission, (v) moving CITY supplied water meters without permission, (vi) failure to adequately plan for the protection of underground utilities during construction, (vii) violation of any CITY ordinances or regulations, or (viii) verbal abuse of any CITY employees or others. In addition, any such violations may result in the CONTRACTOR being disqualified from bidding on future CITY projects. The written notice of suspension shall state the reasons for suspension and allow for a review period of ten (10) days during which the CONTRACTOR shall be provided with an opportunity to respond with an explanation or a justification, and/or shall undertake any reasonable remedial action required by the CITY. If, in the opinion of the CITY, the CONTRACTOR has not addressed the reasons for suspension at the completion of the ten (10) day suspension period, the CITY shall have a right to terminate this contract whereupon all obligations of the CITY to the CONTRACTOR shall cease.
 - c. CITY may, at any time, terminate this contract for the convenience and without cause. Upon receipt of written notice from the CITY of such termination, CONTRACTOR shall (i) cease operations as directed by CITY in the notice; (ii) take actions necessary,

or that the CITY may direct, for the protection and preservation of the work; and (iii) except for work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing sub-contracts and purchase orders and enter into no further sub-contracts and purchase orders. CONTRACTOR shall be paid for services performed to the date of termination and costs incurred by reason of such termination, but such costs shall not include anticipated profit on unperformed work. In no event will the amount due CONTRACTOR in the event of termination for convenience exceed that amount set forth in Paragraph 11 of this contract.

- d. Nothing contained herein shall prevent the CITY from pursuing any other remedy which it may have against the CONTRACTOR, including claims for damages.
19. Contract Disputes. In accordance with N.C.G.S. § 143-128.1(8) the parties agree to mediate contract disputes in excess of \$15,000.00. Within ten (10) days of such contract disputes, the parties shall select a mediator that is certified pursuant to all of the parties involved in the dispute. If the parties cannot agree on a mediator or do not timely select a mediator, the CITY shall select the mediator. The parties and the mediator shall agree upon the mediator's rate of compensation. The parties to the dispute shall share in the payment of the mediator's compensation with the CITY paying a minimum of one-third of the compensation if the CITY is a party to the dispute.
20. Assignment. No party shall sell or assign any interest in or obligation under this Agreement without the prior express written consent of all the parties, such consent shall not be unreasonably withheld. Provided, however, that this Agreement may be assigned by the Company to a wholly owned subsidiary of the Company, without the consent of all other parties, provided that the Company will guarantee the performance by the Subsidiary of the obligations due under this Agreement.
21. Subcontracts. The CONTRACTOR shall utilize no subcontracts for carrying out the services to be performed under this agreement without the written approval of the CITY.
22. Entire Agreement. This Agreement, including any Exhibits attached, which are incorporated herein and made a part hereof, constitutes the entire contract between the parties, and no warranties, inducements, considerations, promises or other inferences shall be implied or impressed upon this agreement that are not set forth herein. This Agreement shall not be altered or amended except in writing signed by all Parties.
23. Binding Effect. The agreement shall be binding upon the heirs, successors, assigns, agents, officials, employees, independent contractors, and subcontractors of the parties.
24. Continuing Obligation. The parties will make and execute all further instruments and documents required to carry out the purposes and intent of the agreement.

25. Reference. Use of the masculine includes feminine and neuter, singular includes plural; and captions and headings are inserted for convenience of reference and do not define, describe, extend or limit the scope of intent of the agreement.
26. Interpretation. All of the terms and conditions contained herein shall be interpreted in accordance with the laws of the State of North Carolina. In the event of a conflict between the various terms and conditions contained herein or between these terms and other applicable provisions, then the more particular shall prevail over the general and the more stringent or higher standard shall prevail over the less stringent or lower standard.
27. Saving Clause. If any section, subsection, paragraph, sentence, clause, phrase or portion of this contract is for any reason held invalid, unlawful, or unconstitutional by any court of competent jurisdiction, such portion shall be deemed severable and such holding shall not affect the validity of the remaining portions hereof.
28. Other Laws and Regulations. CONTRACTOR will comply with any and all applicable federal, state and local standards, regulations, laws, statutes and ordinances including those regarding toxic, hazardous and solid wastes and any pollutants; public and private nuisances; health or safety; and zoning, subdivision or other land use controls. CONTRACTOR will take all reasonably necessary, proper or required safety, preventative and remedial measures in accordance with any and all relations and directives from the North Carolina Department of Human Resources, the United States Environmental Protection Agency, the North Carolina Department of Environmental Quality, Health Departments, and any other federal, state or local agency having jurisdiction, to insure the prompt prevention or cessation (now or in the future) of violations of either the applicable provisions of such standards, regulations, laws, statutes, and ordinances or any permits or conditions issued thereunder. CONTRACTOR specifically acknowledges and agrees that CONTRACTOR, and any subcontractors it uses, has complied with and shall continue to comply with the provisions of the federal E-Verify program in compliance with Article 2 of Chapter 64 of the North Carolina General Statutes. CONTRACTOR shall maintain adequate safeguards with respect to sensitive customer information in conformance with and pursuant to 16 C.F.R. § 681.1 and in accordance with N.C.G.S. § 132-1.10 and § 75-65.
29. Interpretation/Governing Law. All of the terms and conditions contained herein shall be interpreted in accordance with the laws of the State of North Carolina without regard to any conflicts of law principles and subject to the exclusive jurisdiction of federal or state courts within the State of North Carolina. In the event of a conflict between the various terms and conditions contained herein or between these terms and other applicable provisions, then the more particular shall prevail over the general and the more stringent or higher standard shall prevail over the less stringent or lower standard. The place of this Agreement, its situs and forum, shall be Wilmington, New Hanover County, North Carolina, and in said County and State shall all matters, whether sounding in contract or tort relating to the validity, construction, interpretation, or enforcement of this Agreement be determined.

30. Non-Discrimination. CONTRACTOR will take affirmative action not to discriminate against any employee or applicant for employment or otherwise illegally deny any person participation in or the benefits of the program which is the subject of this agreement because of race, creed, color, sex, age, disability or national origin. To the extent applicable, CONTRACTOR will comply with all provisions of Executive Order No. 11246, the Civil Rights Act of 1964, (P.L. 88-352) and 1968 (P.L. 90-284), and all applicable federal, state and local laws, ordinances, rules, regulations, orders, instructions, designations and other directives promulgated to prohibit discrimination. Violation of this provision, after notice, shall be a material breach of this agreement and may result, at CITY'S option, in a termination or suspension of this agreement in whole or in part.
31. Authority to Act. Each of the persons executing this Agreement on behalf of CONTRACTOR does hereby covenant, warrant and represent that the CONTRACTOR is a duly organized and validly existing legal entity authorized to transact business within the State of North Carolina, that the CONTRACTOR has full right and authority to enter into this Agreement, and that each and all persons signing on behalf of the CONTRACTOR were authorized to do so.
32. Counterparts. This Agreement may be executed in several counterparts, including separate counterparts. Each shall be an original, but all of them together constitute the same instrument.

IN WITNESS WHEREOF, the CITY has caused this agreement to be duly executed in its name and behalf and the CONTRACTOR has caused this agreement to be duly executed in its name and behalf and its corporate seal to be hereunto affixed, and attested to.

CITY OF WILMINGTON, NORTH CAROLINA

BY: _____
Anthony N. Caudle, City Manager

Date: _____

WITNESS:

Daryle L. Parker, Purchasing Manager

APPROVED AS TO FORM:

Gina Essey, Assistant City Attorney

FINANCE OFFICER'S CERTIFICATION STATEMENT

This instrument has been pre-audited in the manner required by the Local Government

Budget and Fiscal Control Act this the _____ day of _____, 2025.

Martha Wayne, Director of Finance

Project String: _____
Org & Obj Number: _____
Amount of Contract: _____
Req. No.: _____
Federal ID Number: 56-6000239

COMPANY

BY: _____

TITLE: _____

DATE: _____

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public, in said State and County, do hereby certify that, _____ personally appeared before me this day and acknowledged that he (she) is the _____ of _____ and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and official seal, this the _____ day of _____, 2025

Notary Public

[SEAL}

My Commission expires: _____

INSURANCE CERTIFICATES

(Staple Insurance Certificates as required in the contract to this sheet)

CITY OF WILMINGTON
DEMOLITION

PROPOSAL NAME: Lions Bridge at Greenfield Park Demolition

CONTRACT NO. DEMO-1224

SUBMIT BIDS TO: CHRISTINE R. KAREM,
SR. CONTRACT SPECIALIST
P.O. BOX 1810
929 N FRONT STREET 10TH FLOOR
WILMINGTON, NC 28402-1810

COMPANY NAME: _____

ADDRESS: _____

TELEPHONE: _____

PROPOSAL SHEET
Lions Bridge at Greenfield Park - Demolition

Company: _____

Address: _____

Telephone: _____

Email: _____

Representative: _____

Title: _____

Potential bidders should attend a Mandatory Pre-Bid meeting at at the block of 1750 East Lake Shore Drive, Wilmington, NC, on **December 17, 2024, @ 10:00 AM** to review and to better understand the nature of this work.

The City has the right to reject any and all bids.

Bids are due by 3:00 PM on Tuesday, January 07, 2025.

Submitted, this the _____ day of _____ 2025.

Company Name: _____

Signed by: _____ Title: _____

Total Bid amount, including all aspects of the demolition, removal of concrete, debris, asbestos and other items referenced in the bid document.

\$ _____

Completion time (Calendar days) _____ (Not to exceed 90 days)

BIDDERS ARE ADVISED TO CAREFULLY REVIEW ALL DOCUMENTS ATTACHED

If awarded, demolition must be coordinated with the Project Manager, Doug Lewis at douglas.lewis@wilmingtonnc.gov, (910) 341-0071. The contractor must contact the Project Manager prior to beginning demolition.

The undersigned acknowledges receipt of any issued Addendum's to this Project by recording the Addendum number and date acknowledged below:

Addendum #1: _____ Dated: _____

Addendum #2: _____ Dated: _____

Addendum #3: _____ Dated: _____

PROJECT MANUAL
GREENFIELD LAKE LIONS BRIDGE DEMOLITION

CITY OF WILMINGTON
Wilmington, North Carolina

November 2024

BID DOCUMENTS



ANDREW CONSULTING ENGINEERS, P.C.

NC PE Firm License C-2461

3811 Peachtree Avenue
Suite 300
Wilmington, North Carolina 28403

(910) 202-5555
(910) 202-5558 (Fax)

E-Mail: ktaylor@andrewengineers.com

ACE Project No. 24040

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LIONS BRIDGE DEMOLITION STRUCTURE DEMOLITION

CITY OF WILMINGTON, NC

SECTION 024116 - STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. The Work of this Section Includes:

1. Demolition and removal of buildings or structures.
2. Removing below-grade construction.

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site.

1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.4 COORDINATION

A. Arrange demolition schedule so as not to interfere with Owner's on-site operations.

1.5 PREDEMOLITION MEETINGS

- A. Predemolition Conference: Conduct conference at Project Site.
 1. Observe and discuss condition of construction to be demolished.
 2. Review structural load limitations of existing structures.
 3. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Review and finalize protection requirements.

1.6 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property for environmental protection. Indicate proposed locations and construction of barriers.

Signed by:



DocuSigned by:

11/7/2024

Neal Andrew

330AAE236A904CC...

LIONS BRIDGE DEMOLITION STRUCTURE DEMOLITION CITY OF WILMINGTON, NC

B. Schedule of Building or Structure Demolition Activities: Indicate the following:

1. Detailed sequence of demolition work, with starting and ending dates for each activity.

1.7 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

1.8 FIELD CONDITIONS

- A. Structures to be demolished will be vacated and their use discontinued before start of the Work.
- B. On-site sale of removed items or materials is not permitted.
- C. Project site is within a public park that will remain open to the public during project.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Existing Facilities: Protect adjacent walkways during demolition operations.
- B. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated.
 1. Protect existing site improvements, appurtenances, and landscaping to remain.
 2. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 3. Provide a debris boom around site if piles will be pulled.
 4. Provide a debris boom and a turbidity curtain around site if piles will be jetted prior to pulling.
 5. Provide a debris boom and a turbidity curtain around site if required by regulatory agencies.

LIONS BRIDGE DEMOLITION STRUCTURE DEMOLITION CITY OF WILMINGTON, NC

3.2 DEMOLITION, GENERAL

- A. General: Demolish indicated structures completely. Use methods required to complete the Work within limitations of governing regulations and as follows:
- B. Site Access and Temporary Controls: Conduct demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed trafficways if required by authorities having jurisdiction.
- C. Explosives: Use of explosives is not permitted.

3.3 DEMOLITION BY MECHANICAL MEANS

- A. Proceed with demolition of structural framing members systematically, from higher to lower level. Complete building demolition operations above each floor or tier before disturbing supporting members on the next lower level.
- B. Remove debris from elevated portions of the building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 - 1. Remove structural framing members and lower to ground by method suitable to minimize ground impact and dust generation.
- C. Below-Grade Construction:
 - 1. Demolish foundation systems and other below-grade construction.

3.4 SITE RESTORATION

- A. Site Grading: Uniformly rough grade area of demolished construction to a smooth surface, free from irregular surface changes. Provide a smooth transition between adjacent existing grades and new grades.

3.5 REPAIRS

- A. Promptly repair damage to adjacent structures, walks, and landscape caused by demolition operations.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.

LIONS BRIDGE DEMOLITION STRUCTURE DEMOLITION CITY OF WILMINGTON, NC

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Do not burn demolished materials.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before demolition operations began.

1. Clean roadways of debris caused by debris transport.

END OF SECTION 024116



Geotechnical Engineering Report
Greenfield Lake – Lions Bridge
Wilmington, North Carolina
S&ME Project No. 24060028

PREPARED FOR:

**Andrew Consulting Engineers, P.C.
3811 Peachtree Avenue, Suite 300
Wilmington, North Carolina 28403**

PREPARED BY:

**S&ME, Inc.
3006 Hall Waters Drive
Wilmington, North Carolina 28405**

May 6, 2024



May 6, 2024

Andrew Consulting Engineers, P.C. (ACE)
3811 Peachtree Avenue, Suite 300
Wilmington, North Carolina 28405

Attention: Neal Andrew, P.E., SECB

Reference: **Geotechnical Engineering Report
Greenfield Lake – Lions Bridge**
Wilmington, North Carolina
S&ME Project No. 24060028
NC PE Firm License No. F-0176

Dear Mr. Andrew:

We are pleased to submit our Geotechnical Engineering Report for the referenced project. These services were performed in accordance with Option 2 as presented in our S&ME Proposal No. 24060028, dated February 21, 2024, as directed by the client. The purpose of this exploration was to evaluate subsurface conditions at each end of the existing bridge as they relate to structural timber pile foundation support. This report presents our understanding of the proposed construction, the site and subsurface conditions encountered, and our geotechnical conclusions and recommendations.

◆ Project Information

Project information was provided in an email from Mr. Kevin Taylor (Andrew Consulting Engineers (ACE)) to Nate Buffum (S&ME) on February 13, 2024.

We understand that the existing pedestrian bridge (Lions Bridge) located at Greenfield Lake Park in Wilmington, North Carolina, is being structurally evaluated and will likely be reconstructed. The new bridge will likely be similar to the existing bridge, which consists of wood framing supported on tapered timber piles and is approximately 120 feet in length, crossing a pond of unknown depth. We assume that 8-inch tip diameter driven tapered timber piles will be utilized for support of the new bridge.

Project plans are unavailable at this time and design loads for the proposed timber piles were not provided. Based on similar projects, we assume that loads will be relatively light, and on the order of 2 kips (axial), 0.85 kips (uplift), and 0.25 kips (lateral).

◆ Exploration Procedures

Our exploration included a site reconnaissance by a project professional and the performance of two (2) standard penetration test (SPT) soil borings in general accordance with ASTM D1586 procedures. As presented in Option 2 of our proposal, borings B-1 and B-2 were performed on land at each end of the existing bridge to a depth of about 50 feet below the existing ground surface. Test locations were established in the field using a handheld GPS unit and/or landmark features of the site.



Borings were advanced using mud-rotary drilling methods and samples were collected using the split-spoon method at regular depth intervals of every 2 ½ feet within the upper 10 feet, and every 5 feet thereafter. The recovered soil samples were transported back to our laboratory and classified in general accordance with the visual-manual method described in ASTM D2488, "Standard Practice for Description and Identification of Soils (Visual-Manual Method)."

A Soil Test Boring Location Sketch which illustrates the approximate boring locations is attached as Figure 1 in the Appendix, along with a soil classification legend and the SPT boring logs.

◆ Site and Subsurface Conditions

Area Geology

The site is located within the Coastal Plain Physiographic Province of North Carolina. The Coastal Plain Province is typically characterized by marine, alluvial, and aeolian sediments that were deposited during periods of fluctuating sea levels and moving shorelines. The soils and basal formations in the North Carolina Coastal Plain Physiographic Province are typical of those laid down in a shallow sloping sea bottom; interbedded sands and clays with irregular deposits of shells and layers of limestone and cemented sands. Alluvial sands, silts, and clays are typically present near rivers and creeks. Deposits of peat, organic silt, and organic clay are also typically present in or near current or former tidal marsh areas in the outer portion of the Coastal Plain.

Based on the *1985 Geologic Map of North Carolina*, thin surficial deposits at the site are likely underlain by the Pee Dee Formation, member of the Upper Cretaceous series and Cretaceous System. Sediments of the Pee Dee Formation consist of fine to medium-grained sand, interbedded with gray to black clay and silt deposited under marine conditions. Sand beds are gray to greenish-gray in color. Shells are common throughout the formation. Thin beds of calcareous sandstone and impure limestone are interlayered in the sand beds.

Surface Conditions and Groundwater Levels

Topsoil was encountered at each test location and was measured to be approximately 8 inches in thickness. Groundwater was measured within boring B-2 at a depth of approximately 4 feet at the time of drilling. Within boring B-1, borehole casing was installed to maintain borehole stability. Upon boring termination and removal of the casing, the borehole collapsed at a depth of 12 feet.

Due to the use of drilling fluid additives, the time of boring water level readings recorded in the soil borings performed with mud rotary methods may not accurately reflect the groundwater conditions at the site. The boreholes were backfilled after completion of groundwater measurements, prior to leaving the site. Groundwater levels may fluctuate seasonally at the site, being influenced by rainfall variation and other factors. Site construction activities can also influence water elevations.

Subsurface Conditions

Details of the subsurface conditions encountered by the borings are shown on the logs attached in the Appendix. These logs represent our interpretation of the subsurface conditions based upon the field data. Stratification lines on the logs represent approximate boundaries between soil behavior types; however, the actual transition may be gradual.



Beneath the topsoil, Coastal Plain soils consisting mostly of poorly graded sands (SP), poorly graded sands with silt (SP-SM), silty sands (SM) and clayey sands (SC) were encountered. A layer of sandy clay (CL) was observed between depths of 18.5 to 23.5 feet in boring B-1, and in both borings at depths of 43.5 and 48.5, extending to boring termination depths of 50 feet. A zone of weathered limestone, sampled as cemented fragments, was encountered within boring B-1 from about 28.5 to 33.5 feet. Samples in both borings recovered below depths of about 28.5 feet contained some cemented fragments.

N-value measurements within the upper 28 feet of borings typically ranged from about 2 to 6 blows per foot (bpf), indicating very loose to loose relative density for the sands and a stiff consistency within the upper clay layer. At greater depths, N-value measurements ranged from about 14 to greater than 100 bpf, indicating a medium dense to very dense relative density for the sands and a very stiff to very hard consistency for the clays.

◆ Conclusions and Recommendations

The exploration and engineering evaluation indicates the site is adaptable for the proposed construction. The following presents our geotechnical recommendations for pile design and installation. When reviewing these recommendations, recognize that unexpected subsurface conditions may be encountered between boring locations in unexplored areas of proposed construction where borings were not performed. Unexpected conditions can normally be addressed during construction by on-site engineering evaluation.

We note that our exploration was limited to the test locations on land beyond each end of the existing bridge, and our conclusions and recommendations are based on our evaluation of conditions encountered at those locations. Subsurface conditions within the pond were not explored and are therefore unknown.

Driven Timber Piles

As discussed previously, very loose sands were encountered to a depth of about 28.5 feet in the borings. Beneath this depth, very dense weathered limestone was encountered within boring B-1 and medium dense sands with cemented fragments encountered within boring B-2. This is the recommended bearing stratum for the piles and will likely refuse further penetration of driven timber piles.

Total axial resistance for a single pile cannot be estimated since the water depth and subsurface conditions within the pond are unknown. Therefore, we have developed recommended resistance values based on conditions encountered at boring locations. Likewise, the geotechnical response of laterally loaded piles cannot be analyzed without further understanding of the soil profile and boundary conditions applicable to piles installed within the pond. Recommended soil input parameters for lateral analysis are provided based on results obtained at the boring locations.

Axial Pile Resistance

We recommend the following **ultimate** resistance values for axial loading of an 8-inch tip diameter driven tapered timber pile, which we have estimated to depths of about 35 feet based on the results of the borings. Please note these values do not include a factor of safety.

**Table 1 – Ultimate Axial Load Analysis Parameters**

Approximate Depth Interval (ft) *	Ultimate Compression Side Frictional Resistance (ksf)	Ultimate Tension Side Frictional Resistance (ksf)	Ultimate End Bearing Resistance (ksf)
0 - 5	---	--	---
B-1: 5 – 13	0.5	0.3	---
B-2: 5 – 13			
B-1: 13 – 18	0.6	0.4	---
B-2: 13 – 18			
B-1: 18 – 23	0.8	0.5	---
B-2: 18 – 23			
B-1: 23 – 29	0.7	0.5	16
B-2: 23 – 32			
B-1: 29 – 35	1.0	0.7	50
B-2: 32 – 35			

*Depth interval is referenced from existing ground surface at boring locations at the time of exploration.

Lateral Pile Analysis

S&ME developed recommended soil related input parameters for use with Ensoft's LPILE lateral pile analyses program based on the boring data and our experience with these types of materials. The soil parameters necessary to perform lateral pile analyses are principally:

- Effective Unit Weight, γ'
- Internal Friction Angle, ϕ
- Undrained Cohesion or Undrained Shear Strength, c_u or S_u
- Strain Factor, e_{50}
- Soil Modulus Parameter, k

We estimated soil parameters for static, single-pile lateral analyses based on conditions encountered within boring B-2, as summarized in Table 2.

**Table 2 – Soil Parameters for Lateral Pile Analyses**

Approximate Depth Interval (ft) *	LPile p-y Curve Type	Effective Unit Weight (pcf)	S_u (psf)	ϕ (deg)	e_{50}	k (pci)
0 – 18	Sand (Reese)	47.6	n/a	29	n/a	20
18 – 23	Sand (Reese)	57.6	n/a	31	n/a	20
23 – 32	Sand (Reese)	47.6	n/a	28	n/a	20
> 32	Sand (Reese)	57.6	n/a	39	n/a	125

*Depth interval is referenced from pile top, assumed at existing ground surface of boring B-2 at the time of exploration (pile fully embedded). Water level assumed coincident with the ground surface and pile top.

The structural capacity of a pile should be considered in a lateral soil-structure analysis so that the shear and moments calculated with depth do not exceed structural limits. A change in pile-top geometry relative to the ground surface can have a significant effect on pile response. Pile interaction diagrams should be reviewed to confirm the load case (i.e., compression or tension) that controls the structural pile design and capacity. Design of the pile structure is the responsibility of the Structural Engineer.

Installation Depth of Piles

The piles for the project should be driven to the established embedment depth below the existing mudline using the driving criteria that are established at the time of construction based upon the energy of the hammer being used, or to refusal. Piles are not expected to encounter refusal above the weathered limestone layer, based on the borings performed, assuming appropriate pile driving equipment and procedures are utilized.

In areas where piles refuse at less than the established embedment depth, the full allowable capacity may or may not be available depending upon the conditions at termination of driving, and extra piles may become necessary to accommodate the axial, lateral, or uplift loads of the structure. This should be evaluated by the structural engineer and geotechnical engineer on a case-by-case scenario during construction.

Pile Driving Equipment

We recommend that piles be driven with an impact hammer delivering at least 5,000 foot-pounds of driving energy per stroke and not more than about 15,000 foot-pounds of energy per stroke. Ram weight should not exceed 5,000 pounds, and a minimum ram weight of 2,000 pounds is recommended. Project-specific driving criteria must be developed by the engineer based upon the contractor's proposed hammer.

We recommend that vibratory hammers or water jetting not be utilized to advance the piles as these methods will likely result in reduction of pile resistance values and would not allow capacities to be evaluated during installation without the use of an impact hammer.

Driving hammers may be diesel, hydraulic, or air operated. The use of a gravity-drop hammer to drive piles is discouraged, because this type of hammer can produce excessively high and damaging stresses and may not be capable of advancing the pile to the designed depth. Timber piles should be driven with the aid of a metal casting that is designed to securely hold the piles in position during driving and will distribute the load on the head of the pile to reduce splitting or brooming. All timber piles should be clean-peeled and pressure treated in



accordance with the requirements of AWP. Timber pile design stresses should be established in accordance with ASTM D-2899.

Pile Installation Observations During Production

It is recommended that the Geotechnical Engineer, or a qualified representative under his direction, should observe the pile driving operations during production. This allows us to maintain driving records, detect variations in pile installation if they occur, and assess the pile driving operations for variability from the design assumptions so that adjustments can be made in the field at the time of construction, if appropriate.

◆ **Limitations of Report**

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. The conclusions and recommendations in this report are based on the applicable standards of our practice in this geographic area at the time this report was prepared. No other warranty, express or implied, is made.

The analyses and recommendations submitted herein are based, in part, upon the data obtained from the subsurface exploration. The nature and extent of variations of the soils at the site to those encountered at our boring and sounding locations may not become evident until construction. If variations appear evident, then we should be provided the opportunity to re-evaluate the recommendations of this report. In the event that any changes in the nature, design, or location of the structure are planned, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and conclusions modified or verified in writing by the submitting engineers.

Assessment of site environmental conditions; sampling of soils, ground water or other materials for environmental contaminants; identification of jurisdictional wetlands, rare or endangered species, geological hazards or potential air quality and noise impacts were beyond the scope of this geotechnical exploration. Information regarding auxiliary construction items including but not limited to retaining walls, trash dumpster storage pads, curbing, street lights, signage, utilities, fountains, swimming pools, flagpoles, etc. was not provided by the client and therefore has not been addressed as part of the scope of this report. If additional foundation design or construction recommendations are needed with regard to any of these items, please contact us.



Geotechnical Engineering Report

Greenfield Lake – Lions Bridge

Wilmington, North Carolina

S&ME Project No. 24060028

◆ **Closure**

S&ME appreciates the opportunity to be of service to you on this project. Please call if you have questions concerning this report or any of our services.

Sincerely,

S&ME, Inc.

A blue ink signature of Nathan P. Buffum.

Nathan P. Buffum, P.E.
Office Principal / Vice President
NC Registration No. 042575

A blue ink signature of Thomas Still.

Thomas Still, P.E.
Principal Engineer
NC Registration No. 023923

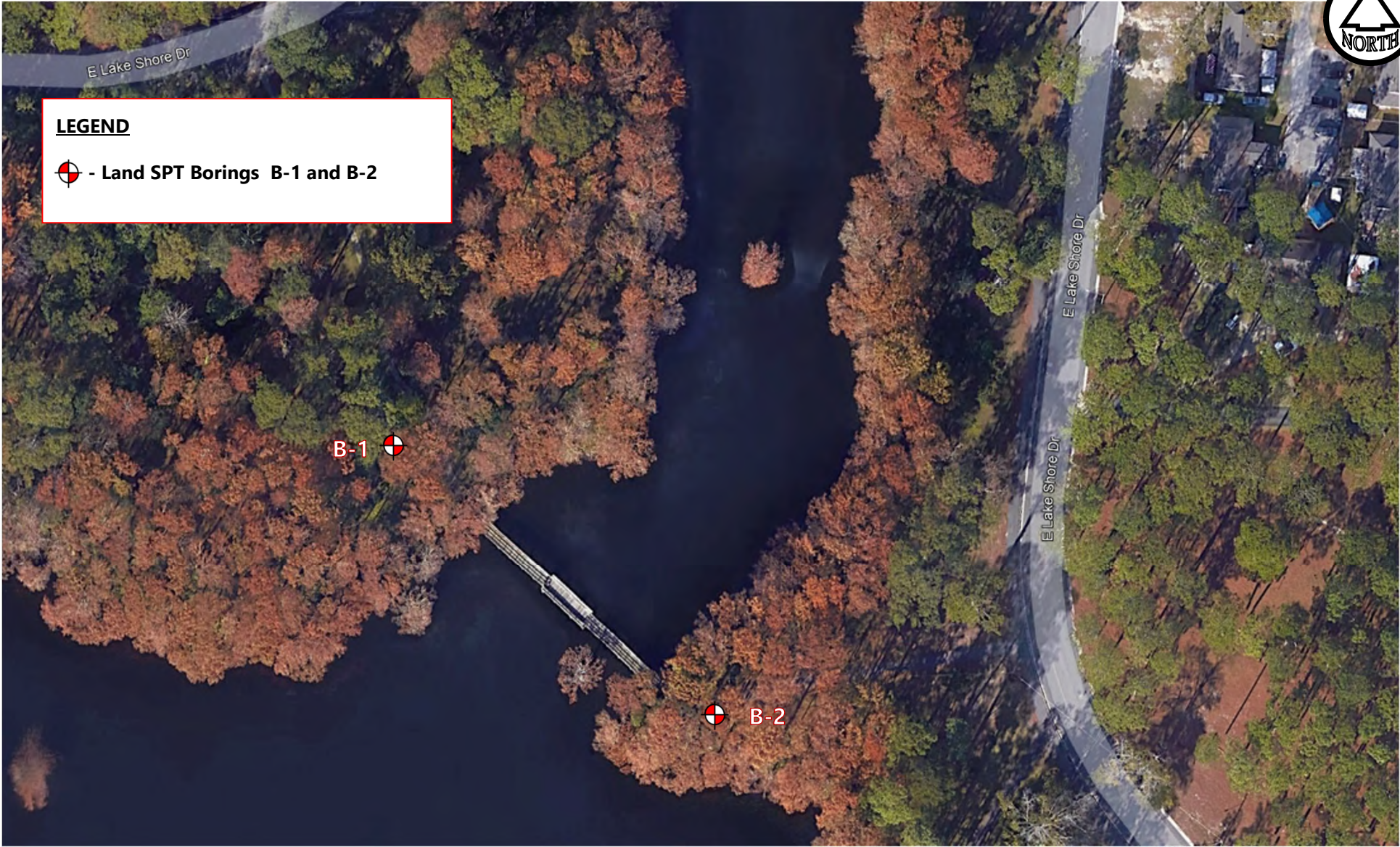


Attachments: Appendix

Appendix

Figure 1: Soil Test Boring Location Sketch

Soil Classification Legend and Boring Logs



Soil Test Boring Location Sketch

Greenfield Lake – Lions Bridge
Wilmington, North Carolina

SCALE: AS SHOWN
DATE: 5/2/2024
PROJECT NUMBER 24060028



FIGURE NO.

1

LEGEND TO SOIL CLASSIFICATION AND SYMBOLS




SOIL TYPES

(Shown in Graphic Log)

	Fill
	Asphalt
	Concrete
	Topsoil
	Gravel
	Sand
	Silt
	Clay
	Organic
	Silty Sand
	Clayey Sand
	Sandy Silt
	Clayey Silt
	Sandy Clay
	Silty Clay
	Partially Weathered Rock
	Cored Rock

WATER LEVELS

(Shown in Water Level Column)

-  = Water Level At Termination of Boring
 = Water Level Taken After 24 Hours
 = Loss of Drilling Water
HC = Hole Cave

CONSISTENCY OF COHESIVE SOILS

<u>CONSISTENCY</u>	<u>STD. PENETRATION RESISTANCE BLOWS/FOOT</u>
Very Soft	0 to 2
Soft	3 to 4
Firm	5 to 8
Stiff	9 to 15
Very Stiff	16 to 30
Hard	31 to 50
Very Hard	Over 50

RELATIVE DENSITY OF COHESIONLESS SOILS

<u>RELATIVE DENSITY</u>	<u>STD. PENETRATION RESISTANCE BLOWS/FOOT</u>
Very Loose	0 to 4
Loose	5 to 10
Medium Dense	11 to 30
Dense	31 to 50
Very Dense	Over 50

SAMPLER TYPES

(Shown in Samples Column)

-  Shelby Tube
 Split Spoon
 Rock Core
 No Recovery

TERMS

- Standard Penetration Resistance** - The Number of Blows of 140 lb. Hammer Falling 30 in. Required to Drive 1.4 in. I.D. Split Spoon Sampler 1 Foot. As Specified in ASTM D-1586.
- REC** - Total Length of Rock Recovered in the Core Barrel Divided by the Total Length of the Core Run Times 100%.
- RQD** - Total Length of Sound Rock Segments Recovered that are Longer Than or Equal to 4" (mechanical breaks excluded) Divided by the Total Length of the Core Run Times 100%.



Greenfield Lake - Lions Bridge
Wilmington, North Carolina
 S&ME Project No. 24060028

BORING LOG B-1

DATE DRILLED: 4/16/24	ELEVATION:
DRILL RIG: CME 45C	BORING DEPTH: 50.0 ft
DRILLER: Mid-Atlantic MW	WATER LEVEL: Hole Caved @12'
HAMMER TYPE: Auto	LOGGED BY: J. Faucette
SAMPLING METHOD: Split spoon	
DRILLING METHOD: Mud Rotary	

NOTES: **Elevation unknown.**
Hole caved @ 12' after casing removal.

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS	N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD		
		TOPSOIL - Approximately 8 inches.									
5		POORLY GRADED SAND (SP) - Very loose, gray, mostly fine to medium sands, trace low plasticity to non-plastic fines, wet.			1	▲	2	2	2		4
					2	▲	2	1	1		2
					3	▲	1	1	3		4
10		--- Loose.			4	▲	3	2	3		5
					5	▲	3	3	3		6
15					6	▲	3	4	5		9
20		SANDY CLAY (CL) - Stiff, tan, mostly low to medium plasticity fines, some fine sands, wet.			7	▲	3	1	1		2
25		SILTY SAND (SM) - Very loose, tan, mostly fine to medium sands, some low plasticity fines, wet.			8	▲	50/2"				50/2"
30		WEATHERED LIMESTONE - Very dense, sampled as cemented fragments.			9	▲	8	11	21		32
35		CLAYEY SAND (SC) - Dense, gray, mostly fine to medium sands, some low to medium plasticity fines, some cemented fragments, wet.			10	▲	6	6	8		14
40		SILTY SAND (SM) - Medium dense, gray, mostly fine to medium sands, some low plasticity fines, wet.			11	▲	33	21	22		43
45		SANDY CLAY (CL) - Hard, gray, mostly low to medium plasticity fines, some fine sands, wet.			12	▲	7	9	14		23
50		--- Very stiff.									
		Boring terminated at 50 ft Target Depth									

NOTES:

- THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
- BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
- STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
- WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.



Greenfield Lake - Lions Bridge
Wilmington, North Carolina
S&ME Project No. 24060028

BORING LOG B-2

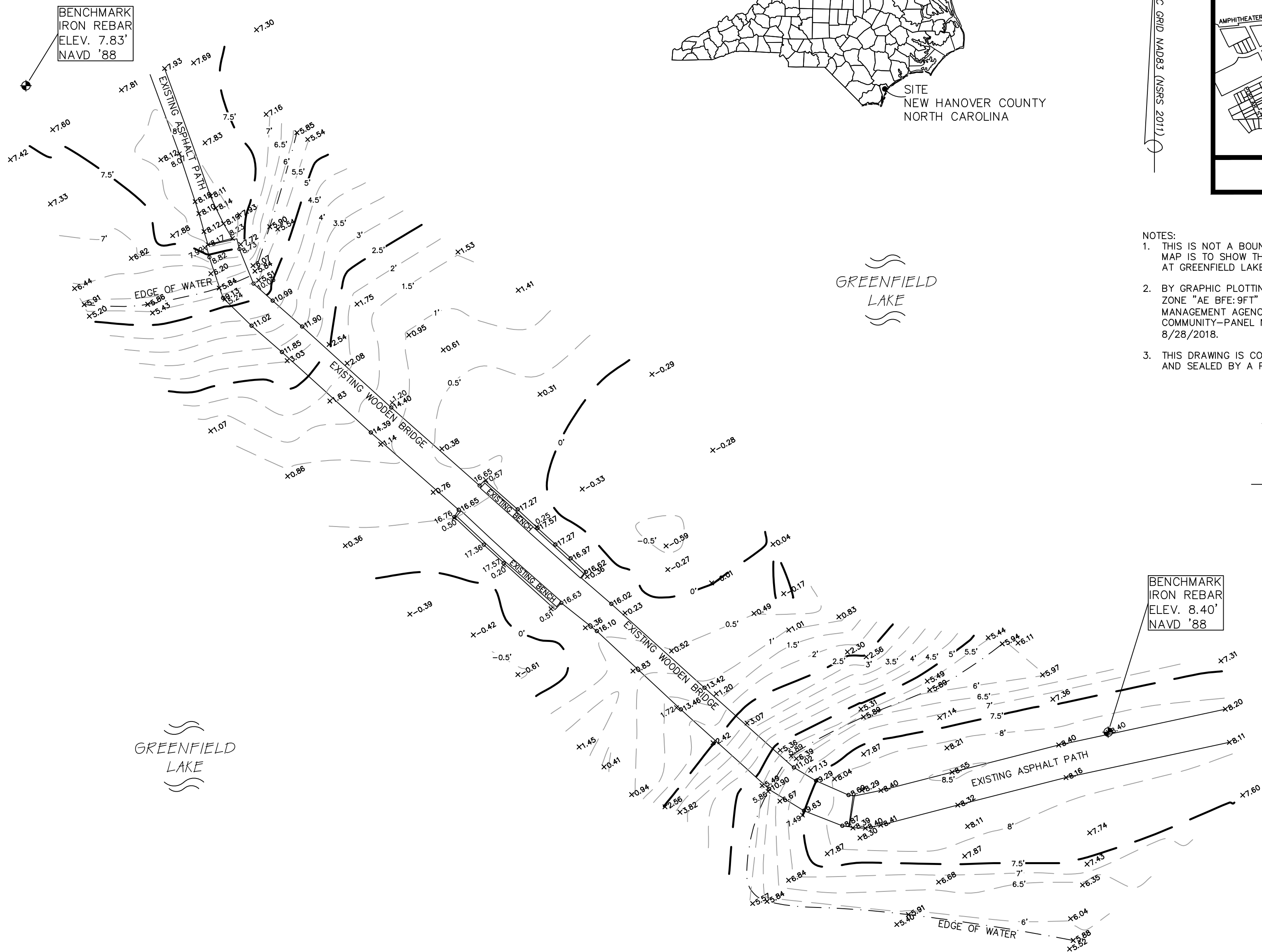
DATE DRILLED: 4/16/24	ELEVATION:	NOTES: Elevation unknown.
DRILL RIG: CME 45C	BORING DEPTH: 50.0 ft	
DRILLER: Mid-Atlantic MW	WATER LEVEL: 4' ATD	
HAMMER TYPE: Auto	LOGGED BY: J. Faucette	
SAMPLING METHOD: Split spoon		
DRILLING METHOD: Mud Rotary		

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) / REMARKS	N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD		
		TOPSOIL - Approximately 8 inches.									
5		POORLY GRADED SAND WITH SILT (SP-SM) - Very loose, gray and brown, mostly fine to medium sands, few low plasticity to non-plastic fines, wet.			1	▲	1	1	3		4
					2	▲	1	2	2		4
					3	▲	3	1	1		2
10		POORLY GRADED SAND (SP) - Loose, gray, mostly fine to medium sands, trace low plasticity to non-plastic fines, wet.			4	▲	2	3	2		5
15		CLAYEY SAND (SC) - Very loose, gray, mostly fine to medium sands, some low to medium plasticity fines, wet.			5	▲	2	2	1		3
20		SILTY SAND (SM) - Medium dense, tan, mostly fine to medium sands, some low plasticity fines, wet.			6	▲	3	5	6		11
25		--- Very loose.			7	▲	2	1	2		3
30		CLAYEY SAND (SC) - Medium dense, gray, mostly fine to medium sands, some low to medium plasticity fines, with cemented fragments, wet.			8	▲	3	10	4		14
35		SILTY SAND (SM) - Dense, gray, mostly fine to medium sands, some low plasticity fines, wet.			9	▲	4	21	23		44
40		--- Very dense.			10	▲	11	21	50/2"		50/2"
45		--- Dense.			11	▲	6	9	40		49
50		SANDY CLAY (CL) - Very hard, gray, mostly low to medium plasticity fines, some fine sands, wet.			12	▲	7	10	43		53
		Boring terminated at 50 ft Target Depth									

NOTES:

- THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
- BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
- STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
- WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.

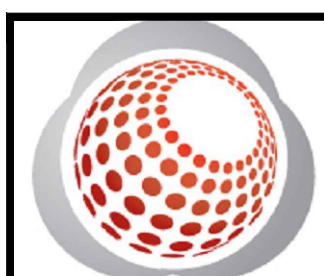
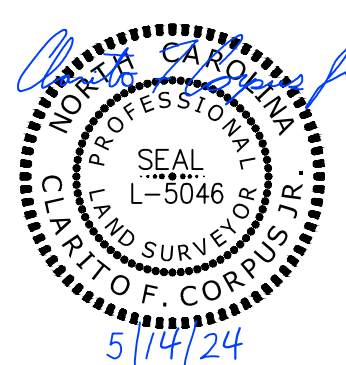




- NOTES:
1. THIS IS NOT A BOUNDARY SURVEY. THE PURPOSE OF THIS MAP IS TO SHOW THE TOPOGRAPHY AROUND LIONS BRIDGE AT GREENFIELD LAKE PARK.
 2. BY GRAPHIC PLOTTING ONLY, THIS TRACT IS LOCATED IN ZONE "AE BFE:9FT" ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 3720312600 K DATED 8/28/2018.
 3. THIS DRAWING IS CONSIDERED PRELIMINARY UNLESS SIGNED AND SEALED BY A PROFESSIONALLY LICENSED SURVEYOR.

LEGEND

+1.23 GROUND ELEV.
+14.56 ELEVATED STRUCTURE ELEV.
— — — EDGE OF WATER



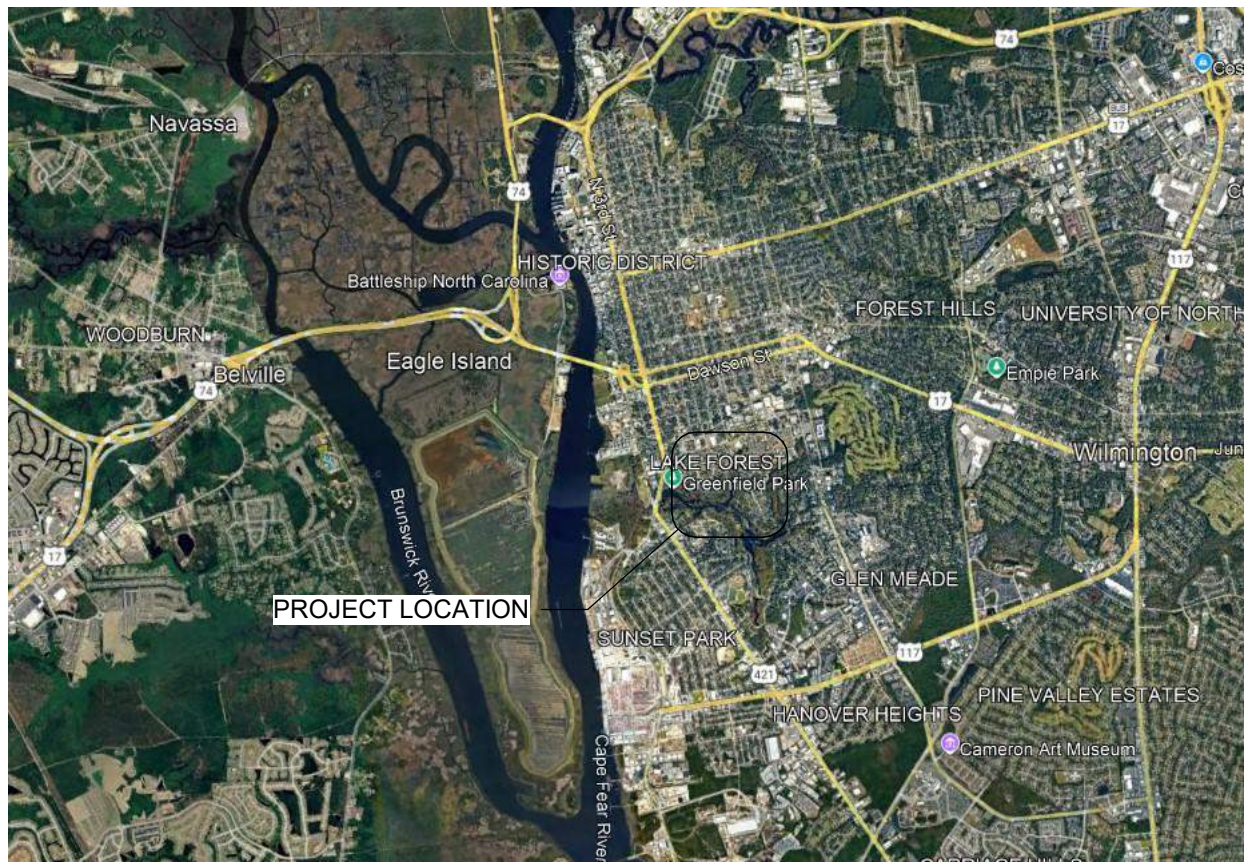
Bateman Civil Survey Company
Engineers • Surveyors • Planners
30 COVIL AVENUE, WILMINGTON, NC 28403
Phone: 910.772.9113 Fax: 910.772.9128
NCBELS FIRM No. C-2378

PARTIAL TOPOGRAPHIC SURVEY
EXCLUSIVELY FOR:
Andrew Consulting Engineers, P.C.
or
Greenfield Lake Park - Lions Bridge
CITY OF WILMINGTON NEW HANOVER COUNTY NORTH CAROLINA
SCALE: 1"=20' May 14, 2024

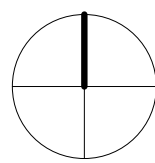
Field By: CC/IS/CW
Drawn By: IS/DBG
Checked By: CFC
Scale: 1"=20'
Project Number: 24W102

S-1

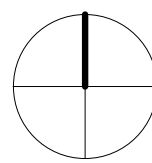
LIONS BRIDGE DEMOLITION
GREENFIELD LAKE PARK
CITY OF WILMINGTON PARKS & RECREATION
WILMINGTON, NC



LOCATION MAP



VICINITY MAP



SHEET INDEX	
SHEET NUMBER	SHEET NAME
G-001	COVER SHEET
D-101	BRIDGE DEMOLITION PLAN AND ELEVATION
D-102	LIMITS OF DEMOLITION PLAN AND SECTIONS
D-701	PHOTOS

BILL SAFFO, MAYOR
TONY CAUDLE, CITY MANAGER
KEVIN SPEARS, COUNCIL MEMBER
SALETTE ANDREWS, COUNCIL MEMBER
DAVID JOYNER, COUNCIL MEMBER
LUKE WADDELL, COUNCIL MEMBER
CHARLES H. RIVENBARK, COUNCIL MEMBER
CLIFFORD D. BARNETT, SR., COUNCIL MEMBER
SALLY THIGPEN, ASSISTANT DIRECTOR OF PARKS & RECREATION
DOUGLAS LEWIS, PARKS SUPERVISOR
RON L. MCMILLAN, PARKS LANDSCAPE AND FORESTRY SUPERINTENDENT

GENERAL DEMOLITION NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CODE OF ORDINANCES OF THE CITY OF WILMINGTON, NORTH CAROLINA, HEREINAFTER REFERRED TO AS THE CODE, AND THE LAWS AND REGULATIONS OF ALL AGENCIES HAVING JURISDICTION.
- ALL FIXTURES, CONSTRUCTION AND COMPONENTS WHICH ARE SHOWN ON THE CONTRACT DRAWINGS TO BE REMOVED SHALL BE REMOVED AND DISPOSED OF OFF FACILITY PROPERTY, UNLESS OTHERWISE NOTED IN THE DRAWINGS. SEE SECTION 024116 OF THE SPECIFICATION FOR MORE INFORMATION.
- ALL AREAS WHICH ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS, SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER. AREAS INCLUDE BUT NOT LIMITED TO STREETS, CURBS, LIGHTS, POLES, HYDRANTS, POWER LINES, CABLES, SANITARY AND STORM DRAINAGE SHALL BE RESTORED AT NO ADDITIONAL COST TO THE FACILITY.
- EXAMINE AND FIELD VERIFY ALL EXISTING GIVEN DIMENSIONS AND CONDITIONS WITH THOSE SHOWN ON THE PLANS.
- OBTAIN ALL NECESSARY CONSTRUCTION PERMITS AND APPROVALS PRIOR TO COMMENCING WORK.
- THE ENGINEER SHALL NOT BE RESPONSIBLE FOR DEMOLITION METHODS AND MEANS FOR COMPLETION OF THE WORK DEPICTED ON THESE PLANS, NOR FOR ANY CONFLICTS AND/OR REVISIONS WHICH SHALL BE RESPONSIBLE FOR DETERMINING METHODS AND MEANS OF COMPLETION OF THE WORK PRIOR TO COMMENCEMENT OF CONSTRUCTION AND NOTIFY THE PROJECT ENGINEER WHEN A CONFLICT IS IDENTIFIED. A SUGGESTED SEQUENCE OF OPERATIONS IS INCLUDED AND SHOULD BE ALTERED OR APPROVED BY THE CONTRACTOR TO MATCH THE INTENDED MEANS AND METHODS FOR THIS PROJECT.
- TAKE APPROPRIATE MEASURES TO ENSURE THE SAFETY OF EMPLOYEES AND GENERAL PUBLIC. STRUCTURAL/SITE FEATURES TO REMAIN, ADJACENT PROPERTIES AND PUBLIC RIGHTS-OF-WAY DURING ALL CONSTRUCTION AND REMOVAL ACTIVITIES IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES AND REGULATIONS. THE OWNER AND PROJECT ENGINEER ASSUME NO RESPONSIBILITIES FOR THE CONTRACTOR'S SAFETY PROGRAM AND PROCEDURES IN CONNECTION WITH THE WORK.
- PERFORM WORK IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH CURRENT SITE ACTIVITIES, INGRESS AND EGRESS LOCATIONS, WALKWAYS, AND ADJACENT PROPERTIES.
- ADEQUATELY BRACE AND PROTECT ALL WORK DURING CONSTRUCTION FROM DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS AND MISALIGNMENT IN ACCORDANCE WITH THE CODE. TEMPORARY SHEETING AND EXCAVATION TRENCH SUPPORT SHALL BE IN ACCORDANCE WITH THE CODE AND SHALL BE DESIGNED, FURNISHED, AND INSTALLED BY THE CONTRACTOR, AND REMOVED BEFORE CLOSING EXCAVATION.
- HOT WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CODE.
- SEQUENCE AND COORDINATION OF CONSTRUCTION IS SOLELY THE CONTRACTOR'S RESPONSIBILITY. AN ALTERNATIVE PLAN MAY BE ACCEPTED IF PRESENTED IN WRITING BY THE CONTRACTOR AND ACCEPTED BY OWNER.
- UNLESS OTHERWISE NOTED, SECURE AND PAY FOR REQUIRED PERMIT(S) FEES AND LICENSES NECESSARY FOR THE PROPER EXECUTION OF THE WORK.
- WHERE MANUFACTURER'S NAMES AND PRODUCT NUMBERS ARE INDICATED ON DRAWINGS, IT SHALL BE CONSTRUED TO MEAN THE ESTABLISHMENT OF QUALITY AND PERFORMANCE STANDARDS OF SUCH ITEMS. ALL OTHER PRODUCTS MUST BE SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL BEFORE THEY SHALL BE DEEMED EQUAL.
- WRITTEN APPROVAL IS REQUIRED PRIOR TO ANY CLOSURE OF THE SIDEWALK BY THE CITY OF WILMINGTON. CONTRACTOR FOR COORDINATING THE REQUEST AND CLOSURE.
- CONTRACTOR SHALL PERFORM WORK WITH MEANS AND METHODOLOGIES TO MINIMIZE THE RISK OF DAMAGE TO ANY STRUCTURES TO NOT BE DEMOLISHED. ANY DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, OR LANDSCAPING SHALL BE REPLACED/REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CLIENT.

GENERAL CONSTRUCTION SEQUENCE

- INSTALL CONSTRUCTION FENCING AND DETOUR ROUTE SIGNAGE FOR GREENFIELD LAKE TRAIL.
- INSTALL DEBRIS BOOM AND/OR TURBIDITY CURTAIN AROUND ENTIRE WORK SITE TO MINIMIZE THE POTENTIAL FOR DEBRIS TO ENTER THE LAKE. DEBRIS BOOM IS NECESSARY IF PILES ARE BEING STRICTLY PULLED. A TURBIDITY CURTAIN IS NECESSARY IF PILES ARE BEING JETTED FOR REMOVAL.

DEMOLITION FROM WATERSIDE:

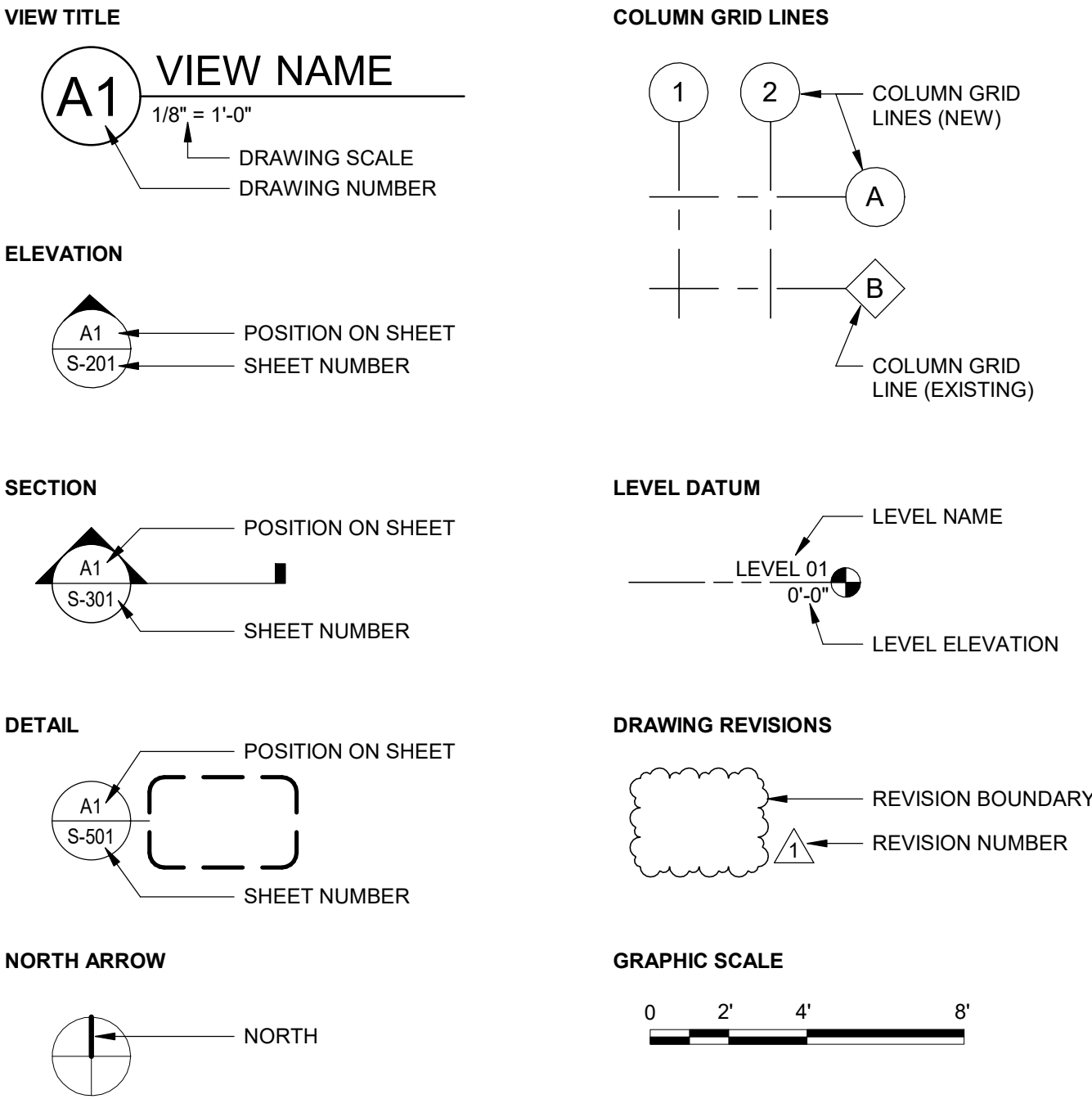
- REMOVE RAILING
- REMOVE DECKING
- REMOVE STRINGERS
- REMOVE GIRDERS
- REMOVE CROSS BRACING
- PULL OUT PILES
 - IF PILES CANNOT BE REMOVED, CONTRACTOR IS REQUIRED TO EXCAVATE AROUND EACH PILE AND CUT OFF 3 FT BELOW THE EXISTING MUDLINE.

MEANS, METHODS, AND DISPOSAL OF ALL MATERIAL IS TO BE FURNISHED BY THE CONTRACTOR AND IS SUBJECT TO APPROVAL BY THE ENGINEER.

CONTRACTOR MAY UTILIZE PILE JETTING AS A MEANS TO REMOVE THE IN WATER PILES, HOWEVER THE CONTRACTOR IS SOLELY RESPONSIBLE FOR TURBIDITY CONTAINMENT METHODS AND COORDINATION/APPROVAL WITH AGENCIES.

IF PILES CANNOT BE REMOVED IN THEIR ENTIRETY, THE CONTRACTOR SHALL CUT THE PILE AT A MINIMUM OF 3 FT BELOW THE EXISTING MUDLINE AT NO ADDITIONAL COST TO THE CLIENT.

GRAPHICAL SYMBOLS LEGEND



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WILMINGTON, NC 28403
P: 910.302.5665
F: 910.302.5666
andrew@andrewce.com

A **C** **E**

BUILDING STRONG COMMUNITIES BLOCK BY BLOCK

ANDREW CONSULTING ENGINEERS, P.C.

SEAL

C-2461

NORTH CAROLINA

NORTH CAROLINA

PROFESSIONAL ENGINEER

SEAL

23591

ANDREW CONSULTING ENGINEERS, P.C.

11/7/2024

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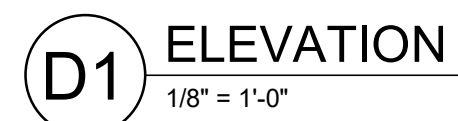
LIONS BRIDGE DEMOLITION
GREENFIELD LAKE PARK
CITY OF WILMINGTON PARKS & RECREATION

BID DOCUMENTS	
MARK	DESCRIPTION
BD	11/06/24
DATE	
ISSUE BLOCK	


PROJECT NUMBER: 24040
DESIGNED BY: GPC
CHECKED BY: NWA
DRAWN BY: RTW

COVER SHEET

G-001



SURVEY INFORMATION PROVIDED BY BATEMAN
CIVIL SURVEY COMPANY DATED MAY 14, 2024.
ELEVATIONS AND RELATIVE TO NAVD88.



LIONS BRIDGE DEMOLITION
GREENFIELD LAKE PARK
CITY OF WILMINGTON PARKS & RECREATION

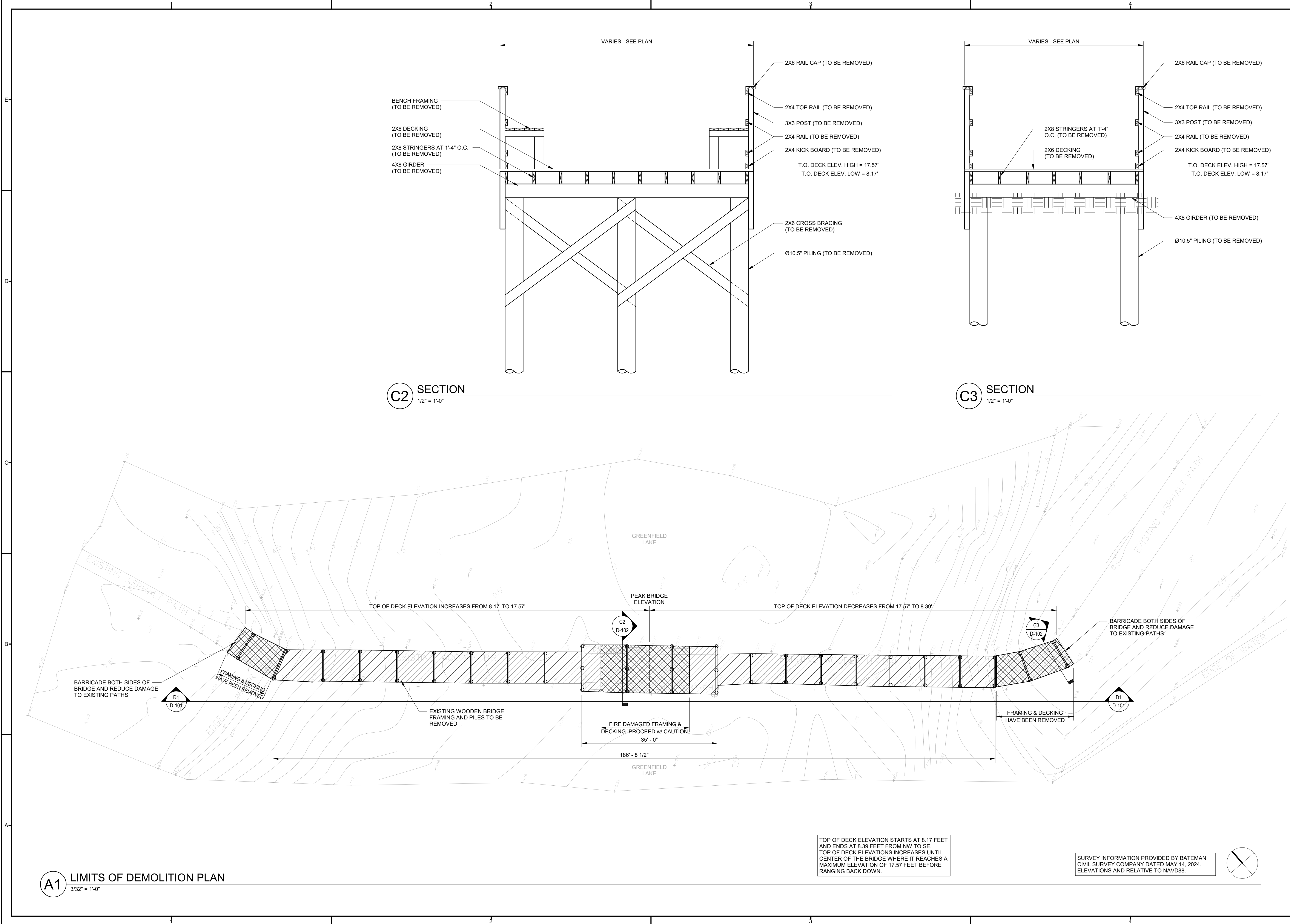
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PROJECT NUMBER:	24040
DESIGNED BY:	GPC
CHECKED BY:	NWA
DRAWN BY:	RTW

BRIDGE DEMOLITION PLAN AND ELEVATION

D-101

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PROFESSIONAL
SEAL
23591
ENGINEER
DECLARED BY: ANDREW
Real A. H. 11/7/2024
330AAE23E4844CC

LIONS BRIDGE DEMOLITION
GREENFIELD LAKE PARK
CITY OF WILMINGTON PARKS & RECREATION

BID DOCUMENTS		DESCRIPTION	
BD	11/06/24	MARK	DATE
ISSUE BLOCK			

PROJECT NUMBER: 24040
DESIGNED BY: GPC
CHECKED BY: NWA
DRAWN BY: RTW

LIMITS OF DEMOLITION
PLAN AND SECTIONS

D-102



C1 GIRDER TO PILE CONNECTION
NOT TO SCALE



C2 WALKWAY VIEW
NOT TO SCALE



C3 TERMINATION AT SE END (SEE PLAN VIEW A1/D-102)
NOT TO SCALE



A1 GUARDRAIL TO PILE CONNECTION
NOT TO SCALE



A2 TERMINATION AT NW END (SEE PLAN VIEW A1/D-102)
NOT TO SCALE



A3 SIDE ELEVATION VIEW
NOT TO SCALE

ISSUE BLOCK		BID DOCUMENTS	
MARK	DATE	MARK	DESCRIPTION
BD	11/06/24		

PROJECT NUMBER:	24040
DESIGNED BY:	GPC
CHECKED BY:	NWA
DRAWN BY:	RTW

PHOTOS