



AGENDA
COMMUNITY REDEVELOPMENT AGENCY MEETING
OCTOBER 15, 2024
5:00 PM
CITY HALL COMMISSION CHAMBERS
204 ASH STREET
FERNANDINA BEACH, FL 32034

- 1. CALL TO ORDER**
- 2. ROLL CALL**
- 3. PLEDGE OF ALLEGIANCE**
- 4. PRESENTATION**
 - 4.1 WATERFRONT RESILIENCY DESIGN PROJECT UPDATE** - *Kimley-Horn Structural Engineering Analyst Cory Salt, P.E. will provide a presentation and answer any questions.*
- 5. PUBLIC COMMENT**
- 6. ADJOURNMENT**

ANY PERSON WISHING TO APPEAL ANY DECISION MADE BY THE COMMISSION WITH RESPECT TO ANY MATTER CONSIDERED AT SUCH MEETING OR HEARING WILL NEED A RECORD OF THE PROCEEDINGS, AND, FOR SUCH PURPOSES, MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS MADE.

Persons with disabilities requiring accommodations in order to participate should contact the City Clerk at (904) 310-3115 or TTY/TDD 711 (for the hearing or speech impaired).

CITY COMMISSION AGENDA ITEM
City of Fernandina Beach



SUBJECT: Discussion
Waterfront Resiliency Design Project Update

ITEM TYPE: Discussion

REQUESTED ACTION: Consider presentation.

SYNOPSIS: This item is placed on the agenda at the request of City Commissioners. Kimley-Horn Structural Engineering Analyst Cory Salt, P.E. will provide a presentation and be available to answer any questions.

FISCAL IMPACT: Fiscal impact will be based on City Commission direction.

CITY ATTORNEY COMMENTS: N/A

CITY MANAGER RECOMMENDATION(S): N/A

Jeremiah Glisson, Interim City Manager 9/30/2024

Tammi E. Bach, City Attorney 10/7/2024

Date: October 23, 2023

Submitted By: Agnes White, Administrative Services Manager

COMMISSION ACTION:

RESOLUTION 2023-108

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF FERNANDINA BEACH, FLORIDA, APPROVING AN AGREEMENT WITH KIMLEY-HORN AND ASSOCIATES, INC., FOR ENGINEERING, DESIGN, AND PERMITTING FOR THE WATERFRONT RESILIENCY PROJECT; AUTHORIZING EXECUTION; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, due to its location on a barrier island, the City of Fernandina Beach faces challenges dealing with flooding. The City applied for and received a grant from the State of Florida for the Fernandina Beach Downtown Flooding Protection Project; and

WHEREAS, subsequently, the City issued Request for Qualifications 23-05 for the Engineering, Design, and Permitting for the City's Waterfront Resiliency Project on the Amelia River; and

WHEREAS, the City staff evaluated the 11 submittals received and, based on the scoring criteria, determined that Kimley Horn and Associates, Inc., provided the most responsive submittal; and

WHEREAS, the City Commission, at its April 18, 2023, regular meeting, approved Resolution 2023-61, authorizing negotiations for a professional services agreement with Kimley Horn and Associates, Inc; and

WHEREAS, Kimley Horn and Associates, Inc., has submitted a proposal of \$724,700.00, and City staff recommends acceptance of this proposal; and

WHEREAS, funding is available from the Florida Department of Environmental Protection Grant, agreement number LPA0286, award #LPGAA LI 1665A, FY 22-23 GR awarded to the City, in the Capital Improvements Fund, Parks Improvement account, 3007210 56300, Project numbers 23036, 23037, 23038, 23039 and 20340.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF FERNANDINA BEACH, FLORIDA, THAT:

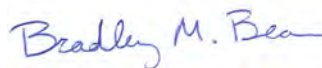
SECTION 1. The City Commission approves the agreement with Kimley Horn and Associates, Inc., attached hereto as Exhibit 1, for the Engineering, Design & Permitting for the Waterfront Resiliency Design project.

SECTION 2. The Interim City Manager and City Clerk, upon review and approval by the City Attorney, are hereby authorized to execute Exhibit 1.

SECTION 3. This Resolution is effective immediately upon passage.

ADOPTED this 20th day of June, 2023.

CITY OF FERNANDINA BEACH



BRADLEY M. BEAN
Commissioner - Mayor

ATTEST:



CAROLINE BEST
City Clerk

APPROVED AS TO FORM AND LEGALITY:



TAMMI E. BACH
City Attorney

AGREEMENT TO FURNISH PROFESSIONAL SERVICES TO THE CITY OF FERNANDINA BEACH, FLORIDA

This AGREEMENT made on the 20th day of June, 2023, between the **City of Fernandina Beach**, a municipal corporation whose address at 204 Ash Street, Fernandina Beach, Florida 32034 ("CITY") and the consultant, **Kimley Horn and Associates, Inc.** whose address is 12740 Gran Bay Parkway West, Suite 2350, Jacksonville, FL 32258, ("CONSULTANT").

For the consideration hereinafter set forth, Kimley Horn and Associates, Inc, hereinafter referred to as the CONSULTANT, agrees to provide professional services to the City of Fernandina Beach, as follows:

ARTICLE 1 - SCOPE OF SERVICES

The parties hereto agree that under this Agreement, the CONSULTANT will provide professional services for the Engineering, Design, and Permitting for the Resiliency Waterfront Bulkhead System on the Amelia River in Fernandina Beach, Florida as described in their proposal dated May 19, 2023, attached hereto as Exhibit "A." All documents relate to City of Fernandina Beach RFQ 23-05 and CONSULTANT'S submittal are also incorporated as if fully set forth to provide such services.

ARTICLE 2 - TERM OF AGREEMENT

This Agreement shall commence on the 20th Day of June, 2023. The Agreement shall terminate upon completion of the assigned Scope of Services or as may be warranted by additional services required beyond the initial Scope of Services.

A. Fees

As consideration for providing the services enumerated in Article I, the City of Fernandina Beach shall pay the CONSULTANT fees totaling \$724,700.00 as defined in the purchase or task order. The CONSULTANT's fees shall be based on the following as requested by the City of Fernandina Beach and as determined in the purchase order.

1. Lump Sum Method - Wherein the City of Fernandina Beach shall pay the CONSULTANT an agreed upon lump sum amount, which includes all of the CONSULTANT's Direct Salary, Overhead Costs, Direct Expenses, Sub-contractors, and Profit.

B. Direct Project Expenses

Charges for printing, reproduction, field equipment, and any laboratory analysis performed by the CONSULTANT are included in the Lump Sum Fee for the project.

C. Additional Costs

In no case shall the CONSULTANT bill the City of Fernandina Beach for more than one hundred (100) percent of the previously agreed upon purchase order or task order fee, unless authorized by the City of Fernandina Beach in writing.



ARTICLE 3 - TERMS OF PAYMENT

A. Monthly Invoices

The CONSULTANT shall submit invoices once each month to the City of Fernandina Beach for the services performed and the expenses and other charges accounted for under this agreement during the preceding month. Payment as prescribed in Article 2 for services rendered by the CONSULTANT during the previous billing period shall be processed in accordance with the Florida Prompt Payment Act, Section 218.70, Florida Statutes.

B. Payment of Expenses

There will be no additional invoicing payments on account for expenses unless otherwise authorized by the City Manager.

C. Sales Tax

The CONSULTANT shall pay all applicable sales taxes; or the City of Fernandina Beach shall provide to the CONSULTANT the tax exemption information, where appropriate.

ARTICLE 4 - TERMS OF PERFORMANCE

It is further mutually agreed by the parties hereto that:

A. Starting Work

The CONSULTANT will not begin work on any of the services listed in Article I and Exhibit "A" until issuance of a Notice to Proceed and Purchase Order by the City.

B. Information Provided by Owner

The City of Fernandina Beach shall make available to the CONSULTANT all technical data in the City of Fernandina Beach's possession, including previous plans, studies, analytical data, maps, surveys, borings, and other information required by the CONSULTANT. The City shall not be liable for the accuracy of information supplied to the CONSULTANT.

C. Cost Estimating

The estimates of project or construction cost for any task(s) provided for herein are to be prepared by the CONSULTANT through exercise of their experience and judgment in applying presently available cost data, but it is recognized that the CONSULTANT has no control over the cost of labor and materials or over competitive bidding procedures and market conditions, so that the CONSULTANT cannot warrant that the project or construction costs will not vary from the CONSULTANT's cost estimates.

D. Suspension of Work

If any services covered by this agreement to be carried out by the CONSULTANT shall be suspended, abated, or abandoned at the direction of the City of Fernandina Beach for reasons unrelated to the quality of work provided by the CONSULTANT, the City of Fernandina Beach shall pay the CONSULTANT for services actually rendered for such suspended, abated, or abandoned work, and any reasonable additional documented costs incurred in an orderly closing of its activities, with the payment to be based on the fees as established in this agreement.

E. Adjustment for Extended Services

Unless otherwise provided in a task order or purchase order issued under this agreement, if the services covered under this agreement have not been completed upon the expiration of a fourteen (14) month period from the date of execution of any purchase order or task order, the CONSULTANT may, upon, written notice, if as a result of the City, request a renegotiation for the fee compensation for services rendered to allow for changes in the cost of service.

F. Services in Connection with Claims and Litigation

The scope and extent of services to be provided under a purchase order or task order does not include personnel time of the CONSULTANT or time of personnel working under subagreements and related expenses required or requested to support, document, bring, defend, or assist in litigation and/or claims undertaken by or defended by the City of Fernandina Beach. All such services required or requested of the CONSULTANT shall be considered additional services entitling the CONSULTANT to additional compensation under this agreement. The amount of such additional compensation shall be set forth in a separate task order as reviewed and approved by the City. The CONSULTANT shall be entitled to such additional compensation until and unless there is a finding by a court of competent jurisdiction that the CONSULTANT is liable for damages to the City of Fernandina Beach for the acts giving rise to and requiring the requested services and expenses.

G. Ownership of Documents

If applicable, the drawings, specifications, reports, calculations, supporting documents, or other work products which are listed as deliverables in a purchase order or task order shall become the property of the City of Fernandina Beach upon delivery. The CONSULTANT may keep copies or samples thereof and shall have the right to use such drawings, specifications, calculations, supporting documents, or other documents. The City of Fernandina Beach Accepts sole responsibility for the City's reuse of any such documents in a manner other than as initially intended, or for any use of incomplete documents unless prior written approval is obtained from the CONSULTANT.

H. Account Records

The CONSULTANT's accounting records, insofar as they pertain to invoicing the City of Fernandina Beach or to disbursements made from the CONSULTANT's account for work under this agreement, shall be open to City of Fernandina Beach's inspection and audit at the CONSULTANT's office upon reasonable prior notice and during normal business hours. Backup documentation for out-of-pocket expenses exceeding Twenty-Five and 00/100 Dollars (\$25.00) each shall be available at the CONSULTANT's office. These records will be retained by the CONSULTANT for three (3) years after the calendar year in which the services to which they pertain were rendered or the disbursements were made.

I. Force Majeure

Neither party hereto shall be liable for its failure to perform hereunder due to any circumstances beyond its reasonable control, such as acts of God, wars, riots, national emergencies, sabotage, strikes, labor disputes, accidents, and governmental laws, ordinances, rules, or regulations. The CONSULTANT or City of Fernandina Beach may suspend its performance on any assignment because of a force majeure without being in default of this agreement, but upon the removal of such force majeure, the CONSULTANT or City of Fernandina Beach shall resume its performance as soon as is reasonably possible.

J. Approval of Changes

The City of Fernandina Beach must approve in writing prior to any changes in the scope, specifications, or other conditions under which the services specified or referred to herein are to be performed which result in

additional costs or expenses to the City of Fernandina Beach or which would change the purpose of the purchase or task order. Changes include, but are not limited to: issuing additional instructions, requesting additional work, direct omission of work previously ordered, or changes in time of performance.

K. Authorized Representative

Before starting work the CONSULTANT shall designate an authorized representative acceptable to the City of Fernandina Beach to represent and act for the CONSULTANT and shall inform the City of Fernandina Beach in writing of the name and address of such representative together with a clear definition of the scope of their authority. The CONSULTANT shall keep the City of Fernandina Beach informed of any subsequent changes in the foregoing. All notices, determinations, instructions, and other communications given to the authorized representative by the City of Fernandina Beach shall be binding upon the CONSULTANT and City of Fernandina Beach. The authorized representative of the City of Fernandina Beach shall be the City Manager, City Engineer, or his designee.

L. Construction Phase Services (if applicable)

Visits to construction sites and observations made by the CONSULTANT as part of a construction phase services authorized by purchase order or task order, if any, shall not relieve the construction contractor(s) of obligation to conduct comprehensive inspections of the work sufficient to insure conformance with the intent of the contract documents, and shall not relieve the construction contractor(s) of full responsibility for all construction means, methods, techniques, sequences, and procedures necessary for coordinating and completing all portions of the work under the construction contract(s) and for all safety precautions incidental thereto. Safety precautions administered by the CONSULTANT shall meet or exceed those policies enacted by the City.

If on-site Resident Project Representative (RPR) services are provided by the CONSULTANT pursuant to a specific purchase order or task order issued hereunder, such RPR shall endeavor to make reasonable efforts to guard the City of Fernandina Beach against defects and deficiencies in the work of the contractor(s) and to help determine if the provisions of the contract documents prepared by the CONSULTANT are being fulfilled. The obligations of the RPR shall be set forth in the purchase order or task order which authorizes RPR services. Construction phase services by the CONSULTANT will not, however, cause the CONSULTANT to be responsible for those duties and responsibilities which belong to the construction contractor(s) and which include, but are not limited to, the obligations set forth above. This paragraph does not, however, release the CONSULTANT from any liability which might be attributable to negligent acts, errors, or omissions, including but not limited to design, construction phase services, or other work efforts as defined in the Scope of Services. The City of Fernandina Beach reserves the right to request replacement of any RPR personnel furnished by the CONSULTANT.

M. Termination

The City of Fernandina Beach or the CONSULTANT may terminate, suspend, or delay this agreement for any reason by giving at least thirty (30) days written notice to the other party of their intent to terminate, suspend, or delay. In the event the agreement is terminated, suspended or delayed by the City of Fernandina Beach for reasons unrelated to the quality of work provided by the CONSULTANT, the City of Fernandina Beach shall forthwith pay the CONSULTANT in full for all work previously authorized and actually performed prior to the Notice of Termination, Suspension or Delay. This payment shall be the sole financial obligation or responsibility of the City of Fernandina Beach for compensation hereunder in the event of termination, suspension or delay in accordance with the provisions of this paragraph. This agreement shall continue in effect until a Notice of Termination, Suspension or Delay is given by either party as set forth above. Upon termination, suspension or delay, at the City of Fernandina Beach's request, the CONSULTANT shall turn over to the City of Fernandina Beach all work products and deliverables completed or partially completed up to the date of termination, suspension or delay, including but not limited to, subcontractor work products, reports, surveys, drawings, model results, and specifications. The City of Fernandina Beach shall have full rights to use all such work products and deliverables for any project, and in any manner, in the sole discretion of the City. The City of Fernandina Beach accepts sole responsibility for the use of the above-referenced work

products and deliverables unless prior written approval is obtained from the CONSULTANT.

N. CONSULTANT understands that the funding for this project is provided by the Florida Department of Environmental Protection, and as such, CONSULTANTS agrees to comply with all applicable Federal, State, and local laws, regulations, and ordinances, including, but not necessarily limited to, the following:

- Title VI of the 1964 Civil Rights Act.
- Title VII of the 1964 Civil Rights Act, as amended by the Equal Employment Opportunity Act which prohibits discrimination in employment.
- Age Discrimination Act of 1973.
- Contract Work Hours and Safety Standards Act.
- Section 504 of the Rehabilitation Act prohibiting discrimination in the employment of the handicapped.
- Fair Labor Standards Act.
- Chapter 112, Florida Statutes, prohibiting conflicts of interest in the procurement of contracts with a governmental agency.
- Trench Excavation System & Shoring standards as adopted by the Department of Labor and Employment Security and related trenching regulations.
- Construction Work Hours and Safety Act (Construction Safety Act)

ARTICLE 5 - ADDITIONAL COSTS

The parties agree that any additional costs for work or services to be provided under a purchase or task order issued pursuant to this agreement, or pursuant to any other method or manner utilized by the parties for determining the cost of services or work to be provided by the CONSULTANT, must be approved in writing by the City of Fernandina Beach. If such additional costs are not authorized by the City of Fernandina Beach in writing, no payment for such additional costs shall be made.

ARTICLE 6 - CITY OF FERNANDINA BEACH'S RESPONSIBILITIES

A. Criteria

Provide all criteria and full information concerning the City of Fernandina Beach's requirements of the purchase order or task order, including objectives and constraints, performance requirements, and any budgetary limitations; and furnish copies of all design and construction standards which the City of Fernandina Beach will require to be included in the drawings and specifications.

B. Available Information

Assist the CONSULTANT by placing at their disposal all pertinent available information including previous reports and data relevant to the CONSULTANT's services.

C. Service of Others

Furnish to the CONSULTANT, as required for performance of the CONSULTANT's services, those services identified as City responsibilities in the Scope of Services.

D. Examine Work of the CONSULTANT

Examine all studies, reports, sketches, drawings, specifications, proposals, and other documents presented by the CONSULTANT, obtain advice of an attorney, insurance counselor, and other Consultant's as the City of Fernandina Beach deems appropriate for such examination, and render, in writing, decisions pertaining thereto within a reasonable time so as not to delay the services of the CONSULTANT.

E. Approvals and Permits

Unless otherwise provided in a purchase or task order, furnish and submit all required permit applications and approvals to all governmental authorities having jurisdiction over the project(s) and such approvals and consents from others as may be necessary for completion of the project(s).

F. Costs

Bear all costs incidental to compliance with the requirements of this Article.

ARTICLE 7 INSURANCE AND INDEMNIFICATION

A. Indemnification

The parties recognize that the CONSULTANT is an independent contractor. The CONSULTANT agrees to indemnify and hold harmless the City, its commissioners, mayor, officers and employees, from and against liability and reasonable expense, including reasonable attorney's fees, in connection with claims, demands, damages, actions, causes of action, and suits, including claims for personal injury, property damage, equitable relief, or loss of use, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of the CONSULTANT, its agents, officers, contractors, subcontractors, employees, or anyone else employed by the CONSULTANT in the performance of this Agreement. This includes claims made by the employees of the CONSULTANT against the City and the CONSULTANT hereby waives its entitlement, if any, to immunity under Section 440.11, Florida Statutes. The obligations contained in this provision shall survive termination of this Agreement and shall not be limited by the amount of any insurance required to be obtained or maintained under this Agreement.

It is the specific intent of the parties hereto that the foregoing indemnification complies with Section 725.08, Florida Statutes, as amended. CONSULTANT expressly agrees that it will not claim, and waives any claim, that this indemnification violates Section 725.08, Florida Statutes, as amended. Nothing contained in the foregoing indemnification shall be construed as a waiver of any immunity or limitation of liability the City may have under the doctrine of sovereign immunity or Section 768.28, Florida Statutes.

B. CONSULTANT's Status as an Independent Contractor

That status of the CONSULTANT under this agreement is that of an independent contractor. Nothing in this agreement shall create or be construed as creating a partnership between the City of Fernandina Beach and the CONSULTANT, nor shall the CONSULTANT be an agent of the City of Fernandina Beach.

C. Waiver of Subrogation

The City of Fernandina Beach and the CONSULTANT waive all rights against each other for damages caused by perils covered by insurance provided under this agreement to the extent covered by such insurance, except such rights as they may have to the proceeds of such insurance held by the City of Fernandina Beach and the CONSULTANT as trustees. The CONSULTANT shall require similar waivers from all subCONSULTANTS and their subcontractors and suppliers.

The City of Fernandina Beach and the CONSULTANT waive all rights against each other for loss or damage to any equipment used in connection with performance under this agreement and covered by any property insurance. The CONSULTANT shall require similar waivers from all subCONSULTANTS and their subcontractors and suppliers.

If the insurance policies referred to in this article require an endorsement to provide for continued coverage where there is a waiver of subrogation, the owner of such policies will cause them to be so endorsed; failure to obtain endorsement nullifies the waiver of subrogation.

D. CONSULTANT's Insurance

The CONSULTANT shall not commence any work in connection with this agreement until he has obtained all of the following types of insurance and such insurance has been approved by the City of Fernandina Beach, and has named the City of Fernandina Beach as an additional insured, except for Worker's Compensation Coverage and Professional Liability, nor shall the CONSULTANT allow any SubCONSULTANT to commence work under this agreement until all similar insurance required of the SubCONSULTANT has been so obtained.

Such insurer shall have a currently valid Certificate of Authority issued by the State of Florida, Department of Insurance authorizing it to write insurance policies in the State of Florida and be doing business in the State of Florida. Insurers shall have at least a Policy Holders Rating of A-, and Financial Rating of Class IV as identified in the latest issue of "Bests Key Rating Guide" unless otherwise accepted by the City of Fernandina Beach in writing.

The CONSULTANT's insurance, and the insurance of any other party bound to the CONSULTANT shall be considered primary for the additional insureds stated above. The City of Fernandina Beach's insurance, if any, shall be considered excess, as may be applicable to claims which arise out of indemnifications, insurance, certificates of insurance and any additional insurance provisions of this agreement.

E. Loss Deductible

The City of Fernandina Beach shall be exempt from, and in no way liable for, any sums of money which may represent a deductible in any insurance policy. The payment of deductibles shall be the sole responsibility of the CONSULTANT.

F. SubCONSULTANT's Insurance

The CONSULTANT shall require each of his SubCONSULTANTS to procure and maintain, during the life of the subcontract, insurance of the types specified in this Article or insure the activities of his subCONSULTANTS in his policy as required in this Article.

G. Certificate of Insurance

The City of Fernandina Beach shall be furnished proof of insurance coverage as follows:

- The name of the insured, the name of the insurer, the number of the policy, its effective date, and its termination date;
- Statement that the insurer will endeavor to mail notice to the City of Fernandina Beach and will mail a copy to the CONSULTANT at least thirty (30) days prior to any cancellation, or non-renewal of the policy, a 10-day notice applies in the event of cancellation due to non-payment of premium;
- Certificate of Insurance shall be in the form as approved by the City of Fernandina Beach and such Certificate shall clearly state all the coverage required in this Article;
- If requested by the City of Fernandina Beach, the CONSULTANT and all subcontractors/subCONSULTANTS shall furnish complete copies of all insurance policies, forms and endorsements; and
- Receipt of certificates or other documentation of insurance or policies or copies of policies by the City of Fernandina Beach or by any of its representatives which indicate less coverage than required by this agreement does not constitute a waiver of the CONSULTANT's obligations to fulfill the requirements of this Article.

H. Workers' Compensation Insurance

The CONSULTANT shall have in full force, during the life of this agreement, Workers' Compensation and Employer's Liability Insurance for all their employees connected with work under this agreement, and in the event any work is subcontracted, the CONSULTANT shall require the SubCONSULTANT similarly to provide

Workers' Compensation Insurance for all of the latter's employees, unless such employees are covered by the protection afforded by the CONSULTANT. The CONSULTANT may provide a workers' compensation waiver in lieu of workers' compensation insurance where such waiver is properly approved by the Florida Department of Labor and Employment Security and accepted by the City of Fernandina Beach in writing. Such insurance or waiver shall comply with the Florida Workers' Compensation Law. In case any class of work conducted under this agreement is not protected under the Workers' Compensation statute, the CONSULTANT shall provide adequate insurance, satisfactory to the City of Fernandina Beach, for the protection of employees not otherwise protected.

I. Liability Insurance

The CONSULTANT shall have in full force, during the life of this agreement, Commercial General Liability and Commercial Automobile Liability Insurance and the amount of such insurance shall be minimum limits as follows:

- Commercial General Liability:
 - Minimum Coverage is \$1,000,000 per occurrence
 - Coverage shall include premises, operations, products, completed operations, independent contractors, Insured Contracts coverage, broad form property damage coverage, personal injury and bodily injury.
 - If Umbrella or Excess liability coverage is used to satisfy the requirements of this Article, it shall not be more restrictive than the underlying insurance policy coverage.
- Commercial Automobile Liability:
 - Minimum Coverage is \$1,000,000 per occurrence
 - Coverage shall include bodily injury and property damage arising out of ownership, maintenance or use of any auto, including owned, non-owned and hired automobiles and employee non-ownership use.

J. Professional Liability Insurance

During the term of this agreement and if specifically requested by City, the CONSULTANT will carry Errors and Omission insurance which will cover liability for negligent acts, errors or omissions, caused by the CONSULTANT. The amount of insurance shall not be less than \$1,000,000 per occurrence and aggregate. The City of Fernandina Beach may require a higher limit as mutually agreed with the CONSULTANT for specific task orders.

ARTICLE 8 - SUCCESSORS AND ASSIGNS

The City of Fernandina Beach and CONSULTANT each binds themselves and their partners, successors, executors, administrators, and assigns to the other party of this agreement and to the partners, successors, executors, administrators, and assignees of such other party in respect to all covenants of this agreement. Neither the City of Fernandina Beach nor the CONSULTANT shall assign, sublet, or transfer any interest in this agreement without the written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any elected official, officer, employee or agent of the City of Fernandina Beach, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the City of Fernandina Beach and CONSULTANT.

ARTICLE 9 - REMEDIES

A. Claims, Counter-Claims, Disputes, Etc.

All claims, counter-claims, disputes, and other matters in questions between the CONSULTANT and the City of Fernandina Beach will be first reviewed by authorized representatives of both parties for a recommended solution. If no solution or resolution is forthcoming, such disputes will be decided by a court of competent jurisdiction convened in the State of Florida.

B. Governing Laws

This agreement shall be governed by the laws of the State of Florida.

C: Venue

This Agreement shall be governed by and construed and interpreted in accordance with the laws of the State of Florida. Each of the parties hereto (a) irrevocably submits itself to the exclusive jurisdiction of the Fourth Judicial Circuit Court, in and for Nassau County, Florida, and the jurisdiction of the United States District Court for the Middle District of Florida, Jacksonville Division, for the purposes of any suit, action or other proceeding arising out of, or relating to, this Agreement; (b) waives and agrees not to assert against any party hereto, by way of motion, as a defense or otherwise in any suit, action or other proceeding, (i) any claim that it is not personally subject to the jurisdiction of the above-named courts for any reason whatsoever, and (ii) to the extent permitted by applicable law, any claim that such suit, action or proceeding by any party hereto is brought in an inconvenient forum, or that the venue of such suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such courts.

D. Attorney's Fees and Costs

In the event of any action brought by either party against the other to enforce any of the obligations hereunder or arising out of any dispute concerning the terms and conditions hereby created, the losing party shall pay the prevailing party such reasonable amounts for fees, costs, and expenses, including attorney's fees, as may be set by the Court.

ARTICLE 10 - NONEXCLUSIVE AGREEMENT

This Agreement is not intended to be and shall not be construed as an exclusive contract, and the City of Fernandina Beach may employ additional or other professional consulting firms to perform work contemplated by this agreement without liability to the City of Fernandina Beach.

ARTICLE 11- PUBLIC RECORDS LAW AND OBLIGATIONS

Pursuant to Section 119.0701, Florida Statutes, Contractor shall: (a) keep and maintain all public records as that term is defined in Chapter 119, Florida Statutes ("Public Records"), that ordinarily and necessarily would be required by the City in order to perform the work contemplated by this Agreement; (b) provide the public with access to Public Records, on the same terms and conditions that the City would provide the records and at a cost that does not exceed the costs provided in Chapter 119, Florida Statutes, or as otherwise provided by law; (c) ensure that Public Records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; (d) meet all requirements for retaining Public Records and transfer, at no cost to the City, all public records in possession of Contractor within thirty (30) days after termination of this Agreement, however terminated, and destroy any duplicate Public Records that are exempt or confidential and exempt from public records disclosure requirements and provide the City with a letter confirming that this has been done within thirty (30) days of the termination of this Agreement. All Public Records stored electronically must be provided to the City in a format that is compatible with the information technology of the City. If Contractor does not comply with a public records request, the City may pursue any and all remedies available in law or equity, including but not limited to specific performance.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT,

**CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 904-310-3115,
CBEST@FBFL.ORG, 204 ASH STREET, FERNANDINA BEACH, FL.**

ARTICLE 12 - CLOSING

A. Validity, Severability and Reformation

The validity, interpretation, construction, and effect of this agreement shall be in accordance with and be governed by the laws of the State of Florida. Any provision or part of this agreement held to be void or unenforceable under any law shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the parties. The parties agree that this agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision which comes as close as possible to expressing the intention of the stricken provision.

B. Headings

The headings of the sections of this agreement and capitalizations are for the purpose of convenience only and shall not be deemed to expand or limit the provisions contained in such sections.

C. Entire Agreement

This agreement, including the exhibits hereto, constitutes the entire agreement between the parties hereto and supersedes any prior negotiations, representations, agreements, and understandings, either written or oral.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement on the day and date first above written:

CITY OF FERNANDINA BEACH, FLORIDA,
a municipal corporation

Charles L. George 6/20/23

Charles L. George, P.E., Interim City Manager

Approved as to Form and Legality:

Tammi E. Bach

Tammi E. Bach, City Attorney

ATTEST:

Caroline Best

Caroline Best, City Clerk

KIMLEY-HORN AND ASSOCIATES, INC.
CONSULTANT

By: *[Signature]*

Title: *S.V.P.*

Name: *Joseph P. Mecca, PE (FL+GA)*

Witness: *[Signature]*

Signature

Print Name:

Kirk F. Drost



19 May 2023

Charles L. George, P.E.
City Engineer
City of Fernandina Beach
1180 S 5th Street
Fernandina Beach, Florida 32034

Re: Professional Services Agreement for Resiliency Waterfront Bulkhead System Engineering & Design

Dear Charles,

Kimley-Horn and Associates, Inc. ("Kimley-Horn" or "Consultant") is pleased to submit this letter agreement (the "Agreement") to the City of Fernandina Beach ("Client") for providing professional engineering services.

Project Understanding

Based on the project description in your request for a proposal, received 19 April 2023, and a site visit performed with you on 28 April 2023, we understand that you would like Kimley-Horn to perform engineering, design, permitting, and development of construction documents for approximately 1,790 linear feet of a waterfront resiliency system and replacement of an existing boat ramp in downtown Fernandina Beach. We understand the waterfront resiliency system will be comprised of 5 segments along the Amelia River. Segment 1 will be constructed on the west side of S Front Street and generally consist of a sheet pile wall encased in an earthen berm fortified with rip rap or other erosion control measures. Segment 2 will start at the north end of the existing bulkhead / boardwalk adjacent to Parking Lot C & D and extend to the north side of the existing boat ramp. Segment 2 will generally consist of a sheet pile wall and boardwalk. Segment 3 will begin at the north side of the existing boat ramp and extend to the north side of the existing Brett's Waterway Café. Segment 3 will generally consist of a sheet pile wall and boardwalk. Segment 4 will begin on the north side of Brett's Waterway Café and end in approximately the same location as the existing bulkhead wall and boardwalk in that area. Segment 4 will generally consist of a sheet pile wall and boardwalk. Segment 5 will be along the western property line of the private property which is located immediately north of the parcel of land adjacent to the City's property next to Segment 4. Segment 5 will generally consist of a sheet pile wall and will be constructed in the water. The area on the east side of Segment 5 will be backfilled and graded to match the elevation of the existing grades on the eastern side of this parcel of land. All segments will be designed to be constructed up to elevation 9.0 per the City's requirement as provided in the RFP. This scope of services will not include any coastal or wave modeling. We also understand that you would like the design of the entire project completed as one project with the construction documents set up to be bid and constructed in up to five separate phases.

Scope of Services

Kimley-Horn will provide the services specifically set forth below.

TASK 1 – PRE-DESIGN PHASE

TASK 1A – Basis of Design Development

Kimley-Horn will work with the City staff to develop and finalize a Basis of Design document for this project which addresses the use of relevant codes and standards, layout, design features and constraints, regulatory issues, and requirements. To gather input from the City regarding the requirements for this project, Kimley-Horn will attend one (1) in-person meeting at the City office lasting up to three (3) hours. After the meeting, Kimley-Horn will prepare a draft Basis of Design report and submit it to the City for their review. Upon receipt of comments from the City regarding the draft Basis of Design report, Kimley-Horn will complete the final report. The completed Basis of Design document will be used and incorporated in the final design documents.

TASK 1B – Meetings, Support, and Project Coordination

Kimley-Horn will provide project management, quality assurance and quality control (QA/QC) and coordination throughout the pre-design phase of the project. Kimley-Horn will coordinate with the Client, their consultants, and our subconsultants during this phase of the project. Consultants and subconsultants may include, but are not limited to, the surveyor, geotechnical engineer, and environmental biologist. The extent of our project coordination under this Task will be to provide the necessary, but limited exchange of information to the Client and subconsultants sufficient to perform our design and permitting responsibilities for this project.

This Task also consists of management of the design services and supporting activities associated with the various scope tasks for the duration of the project. Kimley-Horn will prepare and administer subconsultant contracts. Kimley-Horn will coordinate the activities of the Kimley-Horn's staff and subconsultants with those of the Client and administer communications among the project team members and with the Client's staff. Kimley-Horn will prepare for and participate in virtual or in person meetings as described in the scope of services. This includes preparation of agendas and distribution of meeting notes.

Kimley-Horn and applicable representatives from its staff and subconsultant staff will attend the following meetings as part of this task.

1. Kick-off Meeting: Kimley-Horn will attend one (1) meeting at the City of Fernandina Beach office. Kimley-Horn will include time for up to three (3) hours for this meeting. Attended by KH PM, KH designer, Environmental, Geotech, and Surveyor.
2. Storm surge and king tide flooding discussion meeting: Included in Task 1D.
3. Project Status Meetings: Kimley-Horn will attend one (1) meeting every week throughout the twelve (12) week Pre-Design phase of the project, for a total of up to twelve (12) meetings. These meetings will be to discuss the project status with the City Staff. These meetings will be virtual and are estimated to be 30 minutes in duration.

TASK 1C – Field Investigations

1. Topographic and Hydrographic Survey – Kimley-Horn will contract directly with a licensed professional surveyor to perform a topographic and hydrographic survey along the project limits. Existing utilities will be located by Sunshine One-Call and the utility locate sub-consultant. The utility locate sub-consultant will be responsible for marking existing water, wastewater, storm water, electric, fuel, and communication lines within the proposed work areas. The survey scope will consist of the following elements:
 - a. Location of improvements that may interfere with the design or construction of the scope of this project.
 - b. Locate evidence of surface utilities along the alignment of the new waterfront resiliency system, as well as utility marks as delineated by requesting through Sunshine State One Call.
 - c. The survey will cover approximately 50 feet on both sides of the proposed alignment.
 - d. The survey will cover the existing boat ramp from the submerged toe of the ramp to the western edge of pavement of N. Front Street.
 - e. Horizontal and vertical control will be established at approximately 500' intervals along the route.
 - f. Existing monumentation evidence along the alignment will be located.
 - g. Vertical datum will be based on NAVD 88.
 - h. Survey will be done in Florida East State Plane Coordinate System (NAD 83).
2. Wetland Survey – Kimley-Horn will contract directly with a licensed professional surveyor to perform a survey of the jurisdictional wetlands within the project limits. The wetlands will be flagged by our environmental subconsultant.
3. Subsurface Utility Engineering – Kimley-Horn will contract directly with a subsurface utility engineering (SUE) subconsultant to perform Level D, Level C, and Level B locates within the project limits.
4. Geotechnical Investigations – Kimley-Horn will contract directly with a geotechnical subconsultant to collect and test soil borings as noted below within the project limits. The purpose of the borings is to establish soil quality and provide recommendations for the design and construction of the new bulkhead, boardwalk, and resiliency system. Our Geotechnical subconsultant will perform a sunshine 811 dig ticket to identify underground utilities prior to excavation.
 - a. Seven (7) SPT borings on land, outside of the pavement, 20 feet deep / below grade within the limits of Segment 1.
 - b. Two (2) SPT borings on land, 10 feet deep / below grade with pavement cores in the asphalt area of the top of boat ramp.
 - c. Eight (8) SPT borings on land, 40 feet deep / below grade along the proposed alignment of the bulkhead in segments 2, 3, 4, and 5.

- d. Eight (8) SPT borings in the water, 40 feet deep / below the mud line along the proposed alignment of the bulkhead in segments 2, 3, 4, and 5.
5. Environmental Investigations – Kimley-Horn will contract directly with an Environmental subconsultant to complete endangered species, cultural resources, NEPA study, archaeological review, and jurisdictional wetland delineation as required to meet regulatory and permitting requirements with the St Johns River Water Management District, and the US Army Corps of Engineers.

TASK 1D – Storm Surge & King Tide Discussion

Storm Surge & King Tide Discussion Meeting – Kimley-Horn will participate in one (1) meeting lasting up to three (3) hours at the City of Fernandina office to participate in general discussions with the City concerning potential solutions to control storm surge and king tide flooding at the Escambia Creek confluence with the Amelia River downstream of the Fernandina Port adjacent to the WestRock Mill.

This meeting will be attended by Kimley-Horn's project manager, design engineer, and environmental scientist.

This task includes preparation for the meeting as well as writing and submitting meeting notes after the meeting.

TASK 2 – DESIGN & PERMITTING PHASE

TASK 2A – Conceptual Design

Kimley-Horn will develop a conceptual design exhibit to demonstrate the layout of the proposed waterfront resiliency system, bulkhead, and boardwalk / riverwalk system for the five (5) segments of this project. Kimley-Horn will provide this exhibit to the City Staff for their use in a presentation to the City Commission. Kimley-Horn will not attend the City Commission meeting during which the conceptual design is presented.

TASK 2B – Permitting

Kimley-Horn will prepare, submit, and coordinate regulatory permitting for this project with the following agencies:

1. St Johns River Water Management District (SRJWMD):
 - a. Kimley-Horn will attend one (1) pre-application meeting with SJRWMD for this project.
 - b. Kimley-Horn will prepare an environmental resource permit application on behalf of the City for this project and submit it to the SRJWMD.
 - c. As part of this permitting effort, Kimley-Horn will coordinate with the following agencies:
 - i. U.S. Army Corps of Engineers (USACE)
 - ii. Florida Department of Environmental Protection (FDEP)
 - iii. U.S. Fish and Wildlife
 - d. The Client will provide the required application fee.

2. U.S. Army Corps of Engineers (USACE):
 - a. Kimley-Horn will attend one (1) pre-application meeting with FDEP for this project.
 - b. Kimley-Horn will prepare an environmental resource permit application on behalf of the City for this project and submit it to the FDEP.
 - c. The Client will provide the required application fee.
 - d. As part of this permitting effort, Kimley-Horn will coordinate with the following agencies:
 - i. St Johns River Water Management District (SRJWMD)
 - ii. Florida Department of Environmental Protection (FDEP)
 - iii. U.S. Fish and Wildlife

TASK 2C – Engineering Services

1. 30% Engineering Design – Kimley-Horn will develop preliminary design documents for this project including a basis of design report, engineering calculations, an outline of the technical specifications, preliminary construction drawings, and a rough magnitude of our opinion of the probable construction costs. It is anticipated that the preliminary construction documents will consist of a cover sheet, existing conditions, horizontal control, cross sections, and elevations for the 5 segments in the project. Documents submitted for this task will be sent electronically via email or a secure file transfer site. Drawings will be in pdf format and set up to plot to scale on either 22" x 34" or 11" x17" paper. Other documents will also be in pdf format and set to print on 8.5" x 11" paper. After receipt of review comments from the City staff, Kimley-Horn will set up a 30% progress meeting to discuss that input and incorporation of the information into the next phase of the design.
2. 75% Engineering Design - Kimley-Horn will prepare 75% design documents for this project including a basis of design report, engineering calculations, 75% draft technical specifications, 75% construction drawings, and a draft opinion of the probable construction costs (OPCC). It is anticipated that the 75% construction documents will consist of a cover sheet, general and structural and electrical notes, existing conditions, phasing plans, horizontal control, cross sections, elevations, and details for the 5 segments in the project. Documents submitted for this task will be sent electronically via email or a secure file transfer site. Drawings will be in pdf format and set up to plot to scale on either 22" x 34" or 11" x17" paper. Other documents will also be in pdf format and set to print on 8.5" x 11" paper. After receipt of review comments from the City staff, Kimley-Horn will set up a 75% progress meeting to discuss that input and incorporation of the information into the next phase of the design.
3. 90% Engineering Design - Kimley-Horn will prepare 90% construction document submittal for review. The 90% construction documents will consist of components from the 75% construction document set with the incorporation of the Client's comments. The submittal will also incorporate the near final structural, site civil, and electrical details. Kimley-Horn will prepare and submit 90% draft Technical Specifications in accordance with Client's requirements. The 90% construction drawings in this submittal will consist of near final cover sheet, general and structural and electrical notes, existing conditions, phasing plan, horizontal control, cross sections, elevations, and details for the 5 segments in the project. Kimley-Horn will prepare and submit an opinion of probable construction cost (OPCC). Under this subtask, Kimley-Horn

will coordinate and facilitate a 90% review meeting to solicit input and feedback prior to commencing bid document development.

4. **Bid Set Documents** - Kimley-Horn will prepare bid documents for review. Bid documents will consist of the Construction Drawings and the Technical Specifications with the incorporation of the Client's comments from their review of the 90% design submittal. The bid set construction documents will consist of a cover sheet, general and structural and electrical notes, existing conditions, phasing plan, horizontal control, cross sections, elevations, and details for the 5 segments in the project. Kimley-Horn will prepare and submit an opinion of probable construction cost (OPCC), bid form, and the final basis of design report which will include the engineering calculations for the project.

TASK 2D – Bid Phase Services

- A. Kimley-Horn will provide bid support services to the Client during the Project bidding process. Services will consist of:
 - i. Prepare for and conduct with the Client a pre-bid meeting with potential bidders.
 - ii. Provide responses to up to three (3) Requests for Additional Information (RAI) during bid phase to submit to the Client. The Client is responsible for issuance of all bid addenda.
 - iii. Contact references for apparent low bidder to evaluate the contractor's qualifications based on the references provided in the bid.
 - iv. Prepare Bid Tabulation.
 - v. Develop Recommendation of Award letter for lowest responsive and responsible bidder.
 - vi. Prepare a conformed set of plans and technical specifications, which incorporate revisions and addenda information issued during the bid phase.

TASK 2E – Meetings, Support, and Project Coordination

Kimley-Horn will provide project management, quality assurance and quality control (QA/QC) and coordination throughout the pre-design phase of the project. Kimley-Horn will coordinate with the Client, their consultants, and our subconsultants during this phase of the project. Consultants and subconsultants may include, but are not limited to, the surveyor, geotechnical engineer, and environmental biologist. The extent of our project coordination under this Task will be to provide the necessary, but limited exchange of information to the Client, other project consultants, and subconsultants sufficient to perform our design and permitting responsibilities for this project.

This Task also consists of management of the design services and supporting activities associated with the various scope tasks for the duration of the project. Kimley-Horn will prepare and administer subconsultant contracts. Kimley-Horn will coordinate the activities of the Kimley-Horn's staff and subconsultants with those of the Client and administer communications among the project team members and with the Client's staff. Kimley-Horn will prepare for and participate in virtual or in person meetings as described in the scope of services. This includes preparation of agendas and distribution of meeting notes.

Kimley-Horn and applicable representatives from its staff and subconsultant staff will attend the following meetings as part of this task.

1. **Project Status Meetings:** Kimley-Horn will attend one (1) meeting every two weeks throughout the duration of the Design & Permitting phase of the project. These meetings will be to discuss the project status with the City Staff. These meetings will be virtual.

Assumptions and Clarifications:

1. Kimley-Horn is entitled to rely on the completeness and accuracy of all information provided by the Client and other consultants.
2. Kimley-Horn has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Kimley-Horn at this time and represent only the Kimley-Horn's judgment as a design professional familiar with the construction industry. Kimley-Horn cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.
3. Kimley-Horn has no control over the actions of jurisdictional agencies or other parties. Opinions as to the status of permits and entitlements or their suitability for any specific purpose and as to the probability and timeframe for approvals are made solely on the basis of available information and limited research conducted. Kimley-Horn does not guarantee that the outcome of permits and entitlements or their suitability will not vary from its opinions or that all issues affecting the site have been investigated.
4. Kimley-Horn does not guarantee the issuance of permits or approvals. If permits are issued for this project, the conditions and expiration dates are the sole responsibility of the Client. Kimley-Horn is not responsible for extending time limited entitlements or permits. Kimley-Horn can provide services to file for extensions, if applicable, provided the Client issues a direct written request for each requested entitlement, prior to the dates of expiration.
5. The following assumptions were utilized to develop this scope of services:
 - a. All design and permit submittal reviews will be performed in a timely manner
 - b. No easements will be required to construct the proposed bulkhead, boardwalk, and resiliency systems.
 - c. No environmental assessments or permitting is required.
 - d. No hydrographic survey or geotechnical data collection will occur immediately adjacent to or beneath the existing Brett's Waterway Café.

Services Not Included

Any other services, including but not limited to the following, are not included in this Agreement:

- Review of existing electrical systems
- Boundary Survey
- Geotechnical Services beyond those described in the scope of services
- Assessment of site features such as pavement, sidewalks, fencing, recreational equipment, and etc. not specifically included in the scope of services above.
- Easement documentation
- Additional survey
- Coastal and wave modeling
- Landscape Architecture
- Construction Schedule Development

- Demolition design of Brett's Waterway Café
- Demolition design of the existing structures on the south side of the existing boat ramp in the Segment 2 portion of the project.
- Coordination with the property owner for Segment 5
- Construction Phase Services

Additional Services

Any services not specifically provided for in the above scope will be billed as additional services and performed at our then current hourly rates. Additional services we can provide include, but are not limited to, the following:

- ADA Compliance Evaluation
- Limited Construction Phase Services
- Additional Meetings and/or Site Visits not specifically listed in the Scope of Services
- Board Presentations
- Bid Requests
- Any services not specifically identified and described in the above Scope of Services

Information Provided by Client

We shall be entitled to rely on the completeness and accuracy of all information provided by the Client or the Client's consultants or representatives. The Client shall provide all information requested by Kimley-Horn during the project, including but not limited to the following, if available:

- Original or As-Built Plans, including for the existing bulkhead wall and boardwalk adjacent to existing parking lots C & D
- Any condition assessment reports
- Coordination and access to the private property in Segment 5
- Permits from previous improvements
- Any available construction documents for the project site

Responsibilities of Client

In addition to other responsibilities set out in this Agreement, the Client shall provide:

- Site and water access during regular business hours
- Requirements for the level / magnitude of resiliency (i.e. maximum design wave height and/or maximum flood elevation)
- Operational process development, operational staffing, and storage of the stop log style barriers required by the RFP for the design openings in the waterfront resiliency system for this project
- All coordination with the property owner for Segment 5 of this project
- All permit fees

Schedule

Kimley-Horn will commence work within 14 calendar days of receipt of Notice to Proceed (NTP) for this proposal. Kimley-Horn will provide services as expeditiously as practicable with the goal of meeting the following schedule:

TASK	DURATION DAYS	START DAY FROM NTP	COMPLETION DAYS FROM NTP
TASK 1 PRE-DESIGN PHASE	90	14	104
TASK 2 DESIGN & PERMITTING PHASE	270	14	284

Fee and Expenses

Kimley-Horn will perform the services in Tasks 1 and 2 for the total lump sum labor fee in the fee schedule table below.

In addition to the lump sum labor fee, direct reimbursable expenses such as express delivery services, fees, air travel, and other direct expenses will be billed at 1.15 times cost. All permitting, application, and similar project fees will be paid directly by the Client.

Lump sum fees will be invoiced monthly based upon the overall percentage of services performed. Reimbursable expenses will be invoiced based upon expenses incurred. Payment will be due within 25 days of your receipt of the invoice and should include the invoice number and Kimley-Horn project number.

FEE SCHEDULE

Tasks	Task Description	Amount
PHASE 1: PRE-DESIGN		
1A	Basis of Design Development	\$16,800
1B	Meetings, Support, and Project Coordination	\$11,400
1C1 & 1C2	Field Investigations: Survey (Topo, Hydro, and Wetland)	\$37,700
1C3	Field Investigations: Subsurface Utility Engineering	\$24,200
1C4	Field Investigations: Geotechnical Investigations	\$97,500
1C5	Field Investigations: Environmental Investigations	\$14,800
1D	Storm Surge & King Tide Discussion	\$22,500
	Direct Expenses	\$ 700
SUBTOTAL PRE-DESIGN PHASE:		\$231,900
PHASE 2: DESIGN & PERMITTING		
2A	Conceptual Design	\$39,000
2B	Permitting	\$71,400
2C1	Engineering Services: 30% Design	\$91,200
2C2	Engineering Services: 75% Design	\$97,300
2C3	Engineering Services: 90% Design	\$64,100
2C4	Engineering Services: Bid Set	\$53,900
2D	Bid Phase Services	\$25,400
2E	Meetings, Support, and Project Coordination	\$48,400
	Direct Expenses	\$ 1,300
SUBTOTAL DESIGN & PERMITTING PHASE:		\$492,800
TOTAL:		\$724,700

Closure

In addition to the matters set forth herein, our Agreement shall include and be subject to, and only to, the attached Standard Provisions, which are incorporated by reference. As used in the Standard Provisions, "Consultant" shall refer to Kimley-Horn and Associates, Inc., and "Client" shall refer to the City of Fernandina Beach.

Kimley-Horn, in an effort to expedite invoices and reduce paper waste, submits invoices via email in an Adobe PDF format. We can also provide a paper copy via regular mail if requested. Please include the invoice number and Kimley-Horn project number with all payments. Please provide the following information:

____ Please email all invoices to _____

____ Please copy _____

To ensure proper set up of your projects so that we can get started, please complete and return with the signed copy of this Agreement the attached Request for Information. Failure to supply this information could result in delay in starting work on your project.

We appreciate the opportunity to provide these services to you. Please contact me if you have any questions.

Very truly yours,

KIMLEY-HORN AND ASSOCIATES, INC.



By: Kirk Drost, P.E.
Senior Project Manager



George Roland, P.E.
Assistant Secretary

City of Fernandina Beach

By: 

6/20/23

(Date)

Charles L. George, Interim City Manager

(Print or Type Name)

cgeorge@fbfl.org

(Email Address)

Attest:



Caroline Best, City Clerk

(Print or Type Name)

Client's Federal Tax ID: _____

Client's Business License No.: _____

Client's Street Address: _____

Attachment – Request for Information
Attachment – Standard Provisions

APPROVED AS TO FORM AND LEGALITY:



CITY ATTORNEY

Request for Information

Please return this information with your signed contract; failure to provide this information could result in delay in starting your project

Client Identification

Full, Legal Name of Client					
Mailing Address for Invoices					
Contact for Billing Inquiries					
Contact's Phone and e-mail					
Client is (check one)	Owner	☐	Agent for Owner	☐	Unrelated to Owner

Property Identification

	Parcel 1	Parcel 2	Parcel 3	Parcel 4
Street Address				
County in which Property is Located				
Tax Assessor's Number(s)				

Property Owner Identification

	Owner 1	Owner 2	Owner 3	Owner 4
Owner(s) Name				
Owner(s) Mailing Address				
Owner's Phone No.				
Owner of Which Parcel #?				

Project Funding Identification – List Funding Sources for the Project

Attach additional sheets if there are more than 4 parcels or more than 4 owners

KIMLEY-HORN AND ASSOCIATES, INC.
STANDARD PROVISIONS

- 1) **Consultant's Scope of Services and Additional Services.** The Consultant will perform only the services specifically described in this Agreement. If requested by the Client and agreed to by the Consultant, the Consultant will perform Additional Services, which shall be governed by these provisions. Unless otherwise agreed to in writing, the Client shall pay the Consultant for any Additional Services an amount based upon the Consultant's then-current hourly rates plus an amount to cover certain direct expenses including telecommunications, in-house reproduction, postage, supplies, project related computer time, and local mileage. Other direct expenses will be billed at 1.15 times cost.
- 2) **Client's Responsibilities.** In addition to other responsibilities herein or imposed by law, the Client shall:
 - a. Designate in writing a person to act as its representative, such person having complete authority to transmit instructions, receive information, and make or interpret the Client's decisions.
 - b. Provide all information and criteria as to the Client's requirements, objectives, and expectations for the project and all standards of development, design, or construction.
 - c. Provide the Consultant all available studies, plans, or other documents pertaining to the project, such as surveys, engineering data, environmental information, etc., all of which the Consultant may rely upon.
 - d. Arrange for access to the site and other property as required for the Consultant to provide its services.
 - e. Review all documents or reports presented by the Consultant and communicate decisions pertaining thereto within a reasonable time so as not to delay the Consultant.
 - f. Furnish approvals and permits from governmental authorities having jurisdiction over the project and approvals and consents from other parties as may be necessary.
 - g. Obtain any independent accounting, legal, insurance, cost estimating, and feasibility services required by Client.
 - h. Give prompt written notice to the Consultant whenever the Client becomes aware of any development that affects the Consultant's services or any defect or noncompliance in any aspect of the project.
- 3) **Period of Services.** Unless otherwise stated herein, the Consultant will begin work after receipt of a properly executed copy of this Agreement. This Agreement assumes conditions permitting continuous and orderly progress through completion of the services. Times for performance shall be extended as necessary for delays or suspensions due to circumstances that the Consultant does not control. If such delay or suspension extends for more than six months, Consultant's compensation shall be renegotiated.
- 4) **Method of Payment.** Client shall pay Consultant as follows:
 - a. Invoices will be submitted periodically for services performed and expenses incurred. Payment of each invoice will be due within 25 days of receipt in accordance with the Florida Local Government Prompt Payment Act. The Client shall also pay any applicable sales tax. All retainers will be held by the Consultant and applied against the final invoice. Interest will be added to accounts not paid within 25 days in accordance with the Florida Local Government Prompt Payment Act at the maximum rate allowed by law. If the Client fails to make any payment due under this or any other agreement within 30 days after the Consultant's transmittal of its invoice, the Consultant may, after giving notice to the Client, suspend services and withhold deliverables until all amounts due are paid.
 - b. If the Client relies on payment or proceeds from a third party to pay Consultant and Client does not pay Consultant's invoice within 60 days of receipt, Consultant may communicate directly with such third party to secure payment.
 - c. If the Client objects to an invoice, it must advise the Consultant in writing giving its reasons within 14 days of receipt of the invoice or the Client's objections will be waived, and the invoice shall conclusively be deemed due and owing. If the Client objects to only a portion of the invoice, payment for all other portions remains due.
 - d. ~~If the Consultant initiates legal proceedings to collect payment, it may recover, in addition to all amounts due, its reasonable attorneys' fees, reasonable experts' fees, and other expenses related to the proceedings. Such expenses shall include the cost, at the Consultant's normal hourly billing rates, of the time devoted to such proceedings by its employees.~~
 - e. The Client agrees that the payment to the Consultant is not subject to any contingency or condition. The Consultant may negotiate payment of any check tendered by the Client, even if the words "in full satisfaction" or words intended to have similar effect appear on the check without such negotiation being an accord and satisfaction of any disputed debt and without prejudicing any right of the Consultant to collect additional amounts from the Client.
- 5) **Use of Documents.** All documents and data prepared by the Consultant are related exclusively to the services described in this Agreement and may be used only if the Client has satisfied all of its obligations under this Agreement. They are not intended or represented to be suitable for use or reuse by the Client or others on extensions of this project or on any other project. Any modifications by the Client to any of the Consultant's documents, or any reuse of the documents without written authorization by the Consultant will be at the Client's sole risk and without liability to the Consultant, and the Client shall indemnify, defend and hold the Consultant harmless from all claims, damages, losses and expenses, including but not limited to attorneys' fees, resulting therefrom. The Consultant's electronic files and source code remain the property of the Consultant and shall be

provided to the Client only if expressly provided for in this Agreement. Any electronic files not containing an electronic seal are provided only for the convenience of the Client and use of them is at the Client's sole risk. In the case of any defects in the electronic files or any discrepancies between them and the hardcopy of the documents prepared by the Consultant, the hardcopy shall govern.

- 6) **Intellectual Property.** Consultant may use or develop its proprietary software, patents, copyrights, trademarks, trade secrets, and other intellectual property owned by Consultant or its affiliates ("Intellectual Property") in the performance of this Agreement. Unless explicitly agreed to in writing by both parties to the contrary, Consultant maintains all interest in and ownership of its Intellectual Property and conveys no interest, ownership, license to use, or any other rights in the Intellectual Property to Client. Any enhancements of Intellectual Property made during the performance of this Agreement are solely owned by Consultant and its affiliates.
- 7) **Opinions of Cost.** Because the Consultant does not control the cost of labor, materials, equipment or services furnished by others, methods of determining prices, or competitive bidding or market conditions, any opinions rendered as to costs, including but not limited to the costs of construction and materials, are made solely based on its judgment as a professional familiar with the industry. The Consultant cannot and does not guarantee that proposals, bids or actual costs will not vary from its opinions of cost. If the Client wishes greater assurance as to the amount of any cost, it shall employ an independent cost estimator. Consultant's services required to bring costs within any limitation established by the Client will be paid for as Additional Services.
- 8) **Termination.** The obligation to provide further services under this Agreement may be terminated by either party upon seven days' written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof, or upon thirty days' written notice for the convenience of the terminating party. The Consultant shall be paid for all services rendered and expenses incurred to the effective date of termination, and other reasonable expenses incurred by the Consultant as a result of such termination.
- 9) **Standard of Care.** The standard of care applicable to Consultant's services will be the degree of care and skill ordinarily exercised by consultants performing the same or similar services in the same locality at the time the services are provided. No warranty, express or implied, is made or intended by the Consultant's performance of services, and it is agreed that the Consultant is not a fiduciary with respect to the Client.
- 10) **LIMITATION OF LIABILITY.** In recognition of the relative risks and benefits of the Project to the Client and the Consultant, the risks are allocated such that, to the fullest extent allowed by law, and notwithstanding any other provisions of this Agreement or the existence of applicable insurance coverage, that the total liability, in the aggregate, of the Consultant and the Consultant's officers, directors, employees, agents, and subconsultants to the Client or to anyone claiming by, through or under the Client, for any and all claims, losses, costs or damages whatsoever arising out of or in any way related to the services under this Agreement from any causes, including but not limited to, the negligence, professional errors or omissions, strict liability or breach of contract or any warranty, express or implied, of the Consultant or the Consultant's officers, directors, employees, agents, and subconsultants, shall not exceed twice the total compensation received by the Consultant under this Agreement or \$50,000, whichever is greater. Higher limits of liability may be negotiated for additional fee. This Section is intended solely to limit the remedies available to the Client or those claiming by or through the Client, and nothing in this Section shall require the Client to indemnify the Consultant.
- 11) **Mutual Waiver of Consequential Damages.** In no event shall either party be liable to the other for any consequential, incidental, punitive, or indirect damages including but not limited to loss of income or loss of profits.
- 12) **Construction Costs.** Under no circumstances shall the Consultant be liable for extra costs or other consequences due to unknown conditions or related to the failure of contractors to perform work in accordance with the plans and specifications. Consultant shall have no liability whatsoever for any costs arising out of the Client's decision to obtain bids or proceed with construction before the Consultant has issued final, fully approved plans and specifications. The Client acknowledges that all preliminary plans are subject to substantial revision until plans are fully approved and all permits obtained.
- 13) **Certifications.** All requests for the Consultant to execute certificates, lender consents, or other third-party reliance letters must be submitted to the Consultant at least 14 days prior to the requested date of execution. The Consultant shall not be required to execute certificates, consents, or third-party reliance letters that are inaccurate, that relate to facts of which the Consultant does not have actual knowledge, or that would cause the Consultant to violate applicable rules of professional responsibility.
- 14) **Dispute Resolution.** All claims arising out of this Agreement or its breach shall be submitted first to mediation in accordance with ~~the American Arbitration Association~~ Florida statutes and rules governing mediation proceedings as a condition precedent to litigation.

- 15) **Hazardous Substances and Conditions.** Consultant shall not be a custodian, transporter, handler, arranger, contractor, or remediator with respect to hazardous substances and conditions. Consultant's services will be limited to analysis, recommendations, and reporting, including, when agreed to, plans and specifications for isolation, removal, or remediation. The Consultant will notify the Client of unanticipated hazardous substances or conditions of which the Consultant actually becomes aware. The Consultant may stop affected portions of its services until the hazardous substance or condition is eliminated.
- 16) **Construction Phase Services.**
- a. If the Consultant prepares construction documents and the Consultant is not retained to make periodic site visits, the Client assumes all responsibility for interpretation of the documents and for construction observation, and the Client waives any claims against the Consultant in any way connected thereto.
 - b. The Consultant shall have no responsibility for any contractor's means, methods, techniques, equipment choice and usage, sequence, schedule, safety programs, or safety practices, nor shall Consultant have any authority or responsibility to stop or direct the work of any contractor. The Consultant's visits will be for the purpose of endeavoring to provide the Client a greater degree of confidence that the completed work of its contractors will generally conform to the construction documents prepared by the Consultant. Consultant neither guarantees the performance of contractors, nor assumes responsibility for any contractor's failure to perform its work in accordance with the contract documents.
 - c. The Consultant is not responsible for any duties assigned to it in the construction contract that are not expressly provided for in this Agreement. The Client agrees that each contract with any contractor shall state that the contractor shall be solely responsible for job site safety and its means and methods; that the contractor shall indemnify the Client and the Consultant for all claims and liability arising out of job site accidents; and that the Client and the Consultant shall be made additional insureds under the contractor's general liability insurance policy.
- 17) **No Third-Party Beneficiaries; Assignment and Subcontracting.** This Agreement gives no rights or benefits to anyone other than the Client and the Consultant, and all duties and responsibilities undertaken pursuant to this Agreement will be for the sole benefit of the Client and the Consultant. The Client shall not assign or transfer any rights under or interest in this Agreement, or any claim arising out of the performance of services by Consultant, without the written consent of the Consultant. The Consultant reserves the right to augment its staff with subconsultants as it deems appropriate due to project logistics, schedules, or market conditions. If the Consultant exercises this right, the Consultant will maintain the agreed-upon billing rates for services identified in the contract, regardless of whether the services are provided by in-house employees, contract employees, or independent subconsultants.
- 18) **Confidentiality.** The Client consents to the use and dissemination by the Consultant of photographs of the project and to the use by the Consultant of facts, data and information obtained by the Consultant in the performance of its services. If, however, any facts, data or information are specifically identified in writing by the Client as confidential, the Consultant shall use reasonable care to maintain the confidentiality of that material.
- 19) **Miscellaneous Provisions.** This Agreement is to be governed by the law of the State of Florida. This Agreement contains the entire and fully integrated agreement between the parties and supersedes all prior and contemporaneous negotiations, representations, agreements, or understandings, whether written or oral. Except as provided in Section 1, this Agreement can be supplemented or amended only by a written document executed by both parties. Any conflicting or additional terms on any purchase order issued by the Client shall be void and are hereby expressly rejected by the Consultant. If Client requires Consultant to register with or use an online vendor portal for payment or any other purpose, any terms included in the registration or use of the online vendor portal that are inconsistent or in addition to these terms shall be void and shall have no effect on Consultant or this Agreement. Any provision in this Agreement that is unenforceable shall be ineffective to the extent of such unenforceability without invalidating the remaining provisions. The non-enforcement of any provision by either party shall not constitute a waiver of that provision nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

**(20) PURSUANT TO FS 558.0035, EMPLOYEES OF CONSULTANT
MAY NOT BE HELD INDIVIDUALLY LIABLE FOR DAMAGES
RESULTING FROM NEGLIGENCE UNDER THIS
AGREEMENT.**

(21) **Public Records Law and Obligations.** Pursuant to Section 119.0701, Florida Statutes, Consultant shall: (a) keep and maintain all public records as that term is defined in Chapter 119, Florida Statutes ("Public Records"), that ordinarily and necessarily would be required by the Client in order to perform the work contemplated by this Agreement; (b) provide **documents to the Client to provide to the public** ~~with access to Public Records~~, on the same terms and conditions that the Client would provide the records and at a cost that does not exceed the costs provided in Chapter 119, Florida Statutes, or as otherwise provided by law; (c) ensure that Public Records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; (d) meet all requirements for retaining Public Records and transfer, at no cost to the Client, all public records in possession of Consultant within thirty (30) days after termination of this Agreement, however terminated, and destroy any duplicate Public Records that are exempt or confidential and exempt from public records disclosure requirements and provide the Client with a letter confirming that this has been done within thirty (30) days of the termination of this Agreement. All Public Records stored electronically must be provided to the Client in a format that is compatible with the information technology of the Client. If Consultant does not comply with a public records request, the Client may pursue any and all remedies available in law or equity, including but not limited to specific performance.

RESOLUTION 2023-61

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF FERNANDINA BEACH, FLORIDA, ACCEPTING THE STAFF RANKING FOR RFQ 23-05; AUTHORIZING NEGOTIATION; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, The City of Fernandina Beach published RFQ 2023-05 for the City's Waterfront Resiliency Project on the Amelia River, and

WHEREAS, eleven firms submitted a response to this RFQ with qualifications reviewed by City staff; and

WHEREAS, based on the firms' qualifications, staff recommends that the City enter into negotiations with Kimley Horn and Associates to bring forth a pricing proposal for the City Commission's consideration; and

WHEREAS, funding is available in the Capital Improvements Fund Improvements account 3007200 56300 Project # 23036, #23037, #23038, # 23039 and #23040. The project is funded by a grant award from the Florida Department of Environmental Protection Grant, #LPA0286 for \$1,000,000 adopted in Resolution 2022-213.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF FERNANDINA BEACH, FLORIDA, THAT:

SECTION 1. The City Commission accepts the staff's ranking of the submittals for RFQ #2023-05, Resiliency Waterfront Bulkhead System Engineering and Design.

SECTION 2. The Interim City Manager and City Attorney are hereby authorized to negotiate a professional services agreement for engineering and design with Kimley Horn and Associates. Failing that, the City Manager and City Attorney may enter into negotiations with the next best-ranked firm. A professional services agreement will be presented to the City Commission as soon as practicable.

SECTION 3. This Resolution is effective immediately upon passage.

ADOPTED this 18th day of April, 2023.

CITY OF FERNANDINA BEACH



BRADLEY M. BEAN
Commissioner - Mayor

ATTEST:

APPROVED AS TO FORM AND LEGALITY:



CAROLINE BEST
City Clerk



TAMMI E. BACH
City Attorney



ENGINEERING / FEASIBILITY STUDY

Amelia Riverfront Resiliency Phases 1-2

Front Street

Fernandina Beach, FL 32034

Prepared by:

PA PASSERO ASSOCIATES
engineering architecture

October 5, 2020

DRAFT

PROGRAM INFORMATION

Project	Amelia Riverfront - Engineering / Feasibility Resiliency Study
Owner/Client	City of Fernandina Beach, Florida 204 Ash St. Fernandina Beach, FL 32034
Passero Project Numbers	99000047.0090, .0092, .92RR
Design Team	Architectural, Structural and Civil Engineering Passero Associates 4730 Casa Cola Way, Suite 200 St. Augustine, FL 32095 Mechanical, Electrical and Plumbing Engineer: Promus 518 Black Canyon Park Canton, GA 30114 Environmental Permitting: Environmental Resource Solutions <i>a division of SES Energy Services, LLC</i> 3550 St. Johns Bluff Road South Jacksonville, FL 32224 Geo-technical Exploration: ECS Florida, LLC 7064 Davis Creek Road Jacksonville, FL 32256 Topographic Survey: Manzie & Drake Land Surveying 117 South 9th St. Fernandina Beach, FL 32034 Cost Consulting: Thomas May Construction Company 310 College Drive Orange Park, FL 32065 Railway Consultant: Railway Project Consultants, LLC Jacksonville, FL

ACKNOWLEDGMENTS

Core Committee

John Miller, Mayor
Len Kreger, Vice Mayor
Mike Lednovich, City Commissioner
Philip Chapman, City Commissioner
Ronald "Chip" Ross, City Commissioner
Dale Martin, City Manager, City of Fernandina Beach

Consultant Team

Architect: Christopher Nardone, AIA, Passero Associates
Architect: Justin Vollenweider, AIA, CSI-CDT, Passero Associates
Structural Engineer: Patrick Williams, PE, SE, Passero Associates
Civil Engineer: Matt Singletary, PE, Passero Associates
Mechanical, Electrical, Plumbing Engineer: Darin Frick, PE, Promus
Environmental Permitting: Johnathan Summerfield, PWS, ERS
Geo-technical: Robert Clark, PE, ECS Florida, Inc.
Topographic Survey: Michael Manzie, PLS, Manzie & Drake Land Surveying
Cost Consultant: Keith Ward, Thomas May Construction Company
Railway Consultant: Jacob Smith, Railway Project Consultant

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- 1.6 Preferred Solution
- 1.7 Cost Summary
- 1.8 Areas for Further Study

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September 15, 2020
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- K Platipus Earth Anchor Brochure
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Brett's to Front Street (North) (Segments 5-9)



Parking Lots C & D to Brett's (Segments 2-5)



Parking Lots C & D to Rayonier (South) (Segments 1-2)

01 Resiliency Masterplan Along Front Street

1.1 INTRODUCTION

The City of Fernandina Beach is a culturally rich historical city, located on an inland waterway (Amelia River), vulnerable to Storm Surge and Sea-Level Rise experiencing blue-sky flooding several times per year. Recent “near-misses” in 2016 (Hurricane Matthew) and 2017 (Hurricane Irma) caused significant damage to downtown and the marina; solidifying the City’s need to enhance shoreline protection along the Amelia Riverfront.

This report is the culmination of a year-long Resiliency / Hurricane protection study identifying current riverfront protection and proposing a preferred (phase-able) solution to mitigate risk and impact from future natural disasters.



**Above aerial drone image looking south along Front Street*

1.2 BACKGROUND

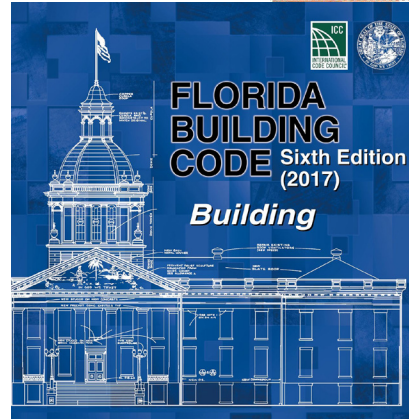
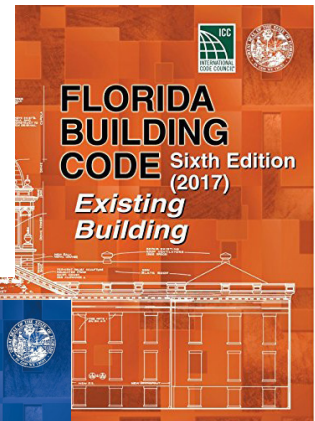
Prompted by concerns of sea-level rise, blue-sky flooding and recent hurricane near-misses, the City began a resiliency master plan assessing vulnerabilities and developing methodologies to protect the historic downtown area. In 2019, the City of Fernandina Beach hired Passero Associates to lead a Resiliency / Hurricane protection study to further understand the City’s risk, impact and provide viable solutions to improve the City’s resilience to rising waters and future natural disasters. This study is a culmination of previous studies with an intent to provide the City a path forward. The following is a brief overview of some of the previous studies:

- In collaboration with DEO and National Oceanic and Atmospheric Administration (NOAA) office for Coastal Management, a study was conducted utilizing NOAA’s Coastal Flood Exposer Mapper and University of Florida’s GeoPlan Sea Level Scenario Sketch Planning Tool (GIS Data: Sea Level Rise (SLR) Inundation Surfaces). This assessment addressed the City’s vulnerability to sea-level rise and impact on City’s infrastructure, over a long period of time. The report predicted sea-level rise of 7” by 2060, 12” by 2080 and 18” by 2100.
- NOAA Technical Report OAR CPO-1; Global Sea Level Rise Scenarios for the United States National Climate Assessment, Dec. 2, 2012 - Historical trends provide valuable data regarding global Sea Level Rise (SLR), this recent study suggests an increase of the rate and magnitude of SLR. Scenarios do not predict future change but describe potential future conditions in a manner that supports planning. The studies predict with confidence that global mean SLR will rise at least 8 inches, and no more than 6.6 feet by the year 2100. The scenarios presented in this report reflect the range of predictions and the impact on the Fernandina Beach Waterfront.
- Additional References concerning climate change impacting sea-levels:
 - o NESDIS 149 - NOAA State Climate Summaries - <https://statesummaries.ncics.org/chapter/fl/>
 - o U.S. Army Corps of Engineers (USACE) Sea-Level Change Curve Calculator (Version 2019.21) - http://corpsmapu.usace.army.mil/rccinfo/slc/slcc_calc.html

1.3 STANDARDS AND RESOURCES

Applicable Codes and Reference Standards include:

- Florida Building Code, 6th edition, 2017 (full series)
- NFPA 72 (2019): National Fire Alarm and Signaling Code
- NFPA 1 (2015): Fire Code and NFPA 101: Life Safety Code
- ASCE 7 (2016) - Minimum Design Loads for Buildings and Other Structures
- ASCE 24 (2014) - Flood Resistant Design and Construction
- FEMA (Federal Emergency Management Agency):
 - Using ASCE 24 for Hazard Mitigation Assistance (January 25, 2018)
 - Guidance for Applying ASCE 24 Engineering Standards to HMA Flood Retrofitting and Reconstruction Projects (November, 2013)
 - Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning (state and local mitigation planning how-to guide, FEMA 386-6, May 2005)
 - Flood Insurance Rate Map (FIRM) August 2, 2017
 - Highlights of ASCE 24-14: Flood Resistant Design and Construction (July, 2015)
 - Flood Insurance Study (FIS) (August 2, 2017)
 - Community Rating System (CRS)
- Fernandina Beach, FL - Municipal Code (March 25, 2020)
- Fernandina Beach, FL - Land Development Code (February 2019)
- Public Project Manual, Engineering ES Services a Genesee & Wyoming Company, Dated: April 2019
- FDOT Standard Plans, Railroad Grade Crossings Traffic Control Devices, Index 509 – 070, Dated: 11/01/17
- US Department of Transportation Federal Highway Administration, Manual on Uniform Traffic Control Devices for Street and Highways, 2009 Edition
- US Department of Transportation Federal Highway Administration, Railroad-Highway Grade Crossing Handbook, Revised Second Edition August 2007
- Florida Administrative Code, Rule Chapter 14-57: Railroad Safety and Clearance Standards, and Public Railroad-Highway Grade Crossings, Effective Date: 10/09/2011
- Florida Statutes (2019)
- Northeast Florida Regional Council (NEFRC)
- National Oceanic and Atmospheric Administration (NOAA)
- U.S. Army Corps of Engineers (USACE) - Hurricane and Storm Damage Risk Reduction System Design Guidelines, New Orleans District Engineering Division with Revisions through June 2012
- Florida Department of Environmental Protection (FDEP)
- Florida Fish and Wildlife Conservation Commission (FWC) - Living Shorelines
- National Park Service (NPS) - Coastal Adaption Strategies Handbook



FEMA

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

1.4 STUDY FINDINGS

The Resiliency Masterplan addresses areas most susceptible to sunny-day flooding during high-tide (flooding resulting from rising water levels) along the Downtown Waterfront Project Area along Front Street. Current flood protection systems provide varying levels of protection ranging from a low point at approximately 3.0' NAVD 88 (at Simmons property) to high points of 8.0' at South Front Street and 8.8' at North Front Street. Existing systems consist primarily of natural features (existing living shorelines and natural grades) and bulkheads. Bulkhead systems utilize various materials including timber, concrete, and steel. Existing steel sheet pile bulkheads are poor condition with significant signs of corrosion and concrete bulkheads are experiencing water intrusion causing settlement on landside of bulkhead.



**Above aerial drone image of Northern portion of project area*

According to the nearest NOAA Tidal Station (Fernandina Beach, Station No. 8720030), the tidal range for the Downtown Waterfront Project Area is approximately 6 vertical feet, meaning sunny-day water elevations vary, on average, by 6 feet vertically.

The Downtown Waterfront Flooding Assessment assumes a critical flood threshold of +5.0 feet (NAVD88) based on the NOAA Sea-level Rise Viewer tool (Intermediate Scenario). The tool shows that water levels at an approximate elevation of +5.0 feet (NAVD88) lead to significant inundation of the Downtown Waterfront Project Area. This elevation is reported to correspond with a 25 percent annual probability of flood event occurrence (four-year return period). Further, this is the current predicted exposure to the critical flood threshold elevation for the Downtown Waterfront Project Area. Exposure of riverfront Area assets to waters at or above the critical flood threshold of +5.0 feet (NAVD88) will increase with sea-level rise.

**Below image of existing timber bulkhead*



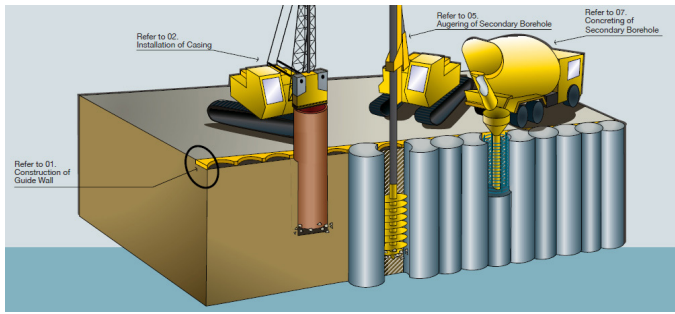
A Shoreline Protection Plan was developed utilizing sea-level rise simulations. These simulations reflect increased flooding due to sea-level rise combined with storm surge and annual high tide events. Each scenario unveiling how downtown Fernandina Beach would be further devastated by rising waters, further reinforcing the need for shoreline resiliency protection.

The Shoreline Protection Plan also provided flood protection methodologies for 7.0' NAVD 88 and 9.0' NAVD 88 through proposed upgrades to Front Street right of ways and City owned property generally consisting of: Living Shorelines, concrete block mat, composite/steel sheet piles with reinforced concrete bulkheads, concrete secant piles, back-flow protection for outflow storm drainage and flood defense systems. The next section (section 1.5) further describes protection methodologies considered.

1.5 ALTERNATIVES

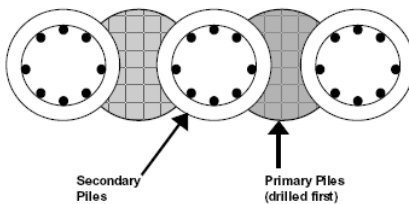
1 Secant Pile Walls

Sources and Images for Secant Wall Systems: railssystem.net



Secant pile walls work by constructing interlocking reinforced concrete piles. Piles are cast-in-situ utilizing steel rebar or beams for reinforcement. Construction begins with female/soft piles followed by male/hard piles intersecting previously cast female/soft piles.

Secant pile walls are usually installed as retaining structures and support systems for deep foundations, retaining elements and load-bearing walls. They can also be designed and constructed to be water resistant and stop water flow.



The primary advantage of secant pile walls is the minimal disturbance they cause to adjacent structures and ability to install in densely populated areas. This would allow existing bulkheads to remain in place and would limit disruptions to existing tidal plants, sidewalks, docks, landscaping and utilities. Other advantages:

- Increased construction alignment flexibility
- Increased wall stiffness compared to sheet piles
- Can be installed in difficult ground (cobbles/ boulders)
- Less noisy construction

The main disadvantage is ability to provide total waterproofing without additional costs. Other disadvantages:

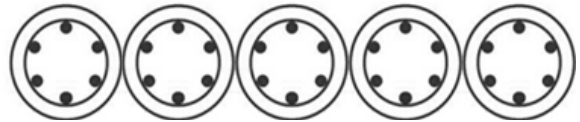
- Vertical tolerances may be hard to achieve for deep piles
- Increased cost compared to sheet pile walls

Secant Pile Wall Variations

1a Tangent Pile Walls are constructed with no overlap and ideally one pile touches the other. Compared to secant pile walls, tangent pile walls offer the following advantages:

- Increased construction alignment flexibility
- Easier and quicker construction

Disadvantage: Can't be used in high groundwater tables without dewatering.



1b Secant Pile Wall - Hard/Soft or Hard/Firm
Where short term water retention is required this system offers the most cost-effective and rapid solution. The wall consists of interlocking bored piles. Primary piles are constructed first using a 'soft' cement-bentonite mix (commonly 1N/mm²) or 'firm' concrete (commonly 10N/mm²). Secondary piles, formed in structural reinforced concrete, are then installed between the primary piles with a typical interlock of 150mm. These walls may need a reinforced concrete lining for permanent works applications, depending on the particular requirements of the project.

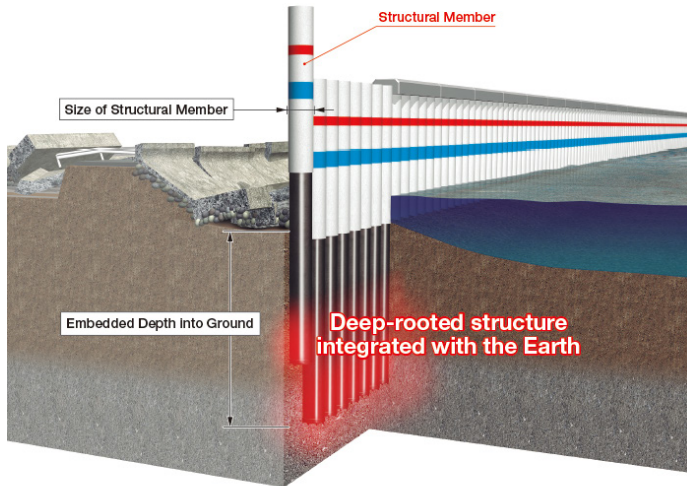


1c Secant Wall - Hard/Hard
Hard/hard wall construction is very similar to a hard/firm wall but in this case the primary piles are constructed in higher strength concrete and may be reinforced. Heavy duty rotary piling rigs, using tools fitted with specially designed cutting heads, are necessary to cut the secondary piles. Since structural concrete is used throughout there may be no need to provide a lining wall. The end product provides a fully concreted face and can be an effective alternative to diaphragm wall construction.



2 Press-in Pile System (Silent Piler by Giken)

Sources and Images: giken.com



Pile penetration methods can be classified as either dynamic penetration or static penetration. Dynamic penetration inevitably generates excessive noise and vibration due to reliance on percussive or vibratory energy. The dynamic penetration method is excluded from this analysis due to the excessive noise and impact to the environment.

Press-in Method: piles are installed with static load generated from hydraulic rams. The reaction for the press-in force is derived from extraction resistance of previously driven piles. This integration with the Earth is why a small press-in machine can generate greater force not requiring traditional percussive or vibratory energy to drive piles. The reduced equipment size lends this method to work conditions on constrained sites.

There are four typical shapes for press-in piles; however, tubular steel sheet piles are preferred due to their high strength and increased durability. Tubular steel piles are also suitable for protection against floods with tidal waves and countermeasures for rivers.

The primary advantage, of press-in piles, is the non-vibratory (with minimal noise) installation which reduces impact on adjacent structures and the environment.

Other advantages:

- **Environmental Protection:** no construction pollution like noise and vibration.
- **Installation Flexibility:** can be installed in locations where space is limited with no need for excavating.
- **Suitable for difficult underground conditions.**
- **No need for temporary platforms or sheet piling cofferdams.**
- **Soil displacement can be minimized** by employing a rotary cutting mechanism with special cutting bits at the pile toe, allowing more environmentally friendly piling work that is not disruptive to existing tidal plants.
- **Various tubular pile diameter sizes, configurations and combinations with better piles** can be used with the Gyro Piler allowing a wide range of economically optimal structure designs.

Implant Structures compared to Traditional Gravity Structures			
Implant Structure	Durability	Resiliency	Footprint
	High	High	Small
	Low	Low	Large

Many of the disadvantages associated with sheet piling are lessened through use of the press-in method; however, some disadvantages remain, as follows:

- Currently limited to sites where the static load capacity of the machine is above the maximum expected resistance.
- Cost, more expensive than other methods.

3 Living Shoreline

Sources and Images: delawarelivingshorelines.org,
floridalivingshorelines.com

A “living” shoreline is a nature-based structure built on the edge of a shoreline using natural materials. Living shoreline systems are environmentally-friendly alternatives to traditional “hardened” structures like rip-rap or sea walls designed to prevent erosion, limit sediment contamination or improve water quality.

Living shorelines mimic natural conditions and adapt to the environment around them. ‘Hard’ systems (bulkheads, pilings, retaining walls) are static, unchanging, often resulting in scouring, structural damage and shoreline erosion downstream.

There are two basic types of living shorelines.

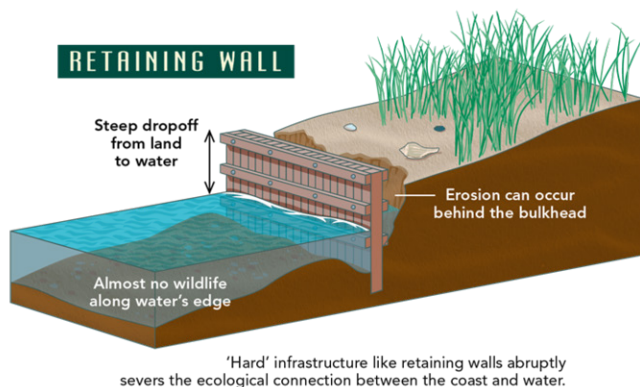
1. Traditional.
2. Hybrid.

Traditional methods utilize only natural materials (logs, and native plants) to stabilize a shoreline. This approach is preferred for quiet areas with little boat traffic and small waves.

Areas exposed to larger waves and winds are best served with a hybrid system that incorporates rock and/or oyster shells with natural materials for additional stabilization.

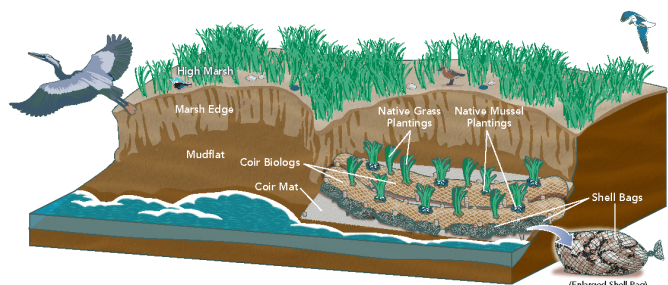
Advantages:

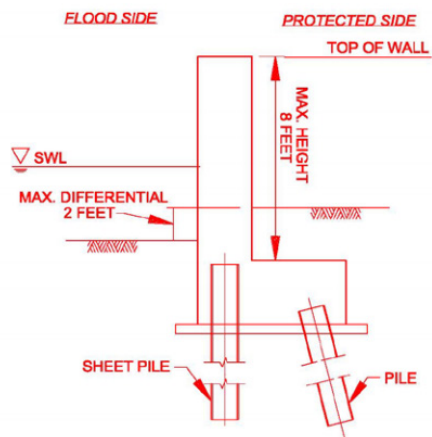
- Tends to cost less than other shoreline stabilization systems.
- Minimal maintenance as living shorelines tend to sustain naturally over time, also help to ensure natural sediment movement along shorelines.
- Improve water quality by filtering pollutants like a living “kidney”.
- Trap carbon to help reduce effects of climate change.
- Improve habitat for animals, fish and birds.
- Enhance waterfront aesthetics compared to ‘hard’ systems.
- The gradual sloping nature of living shorelines help to maintain a plant community that can adapt as sea levels rise.



Disadvantages:

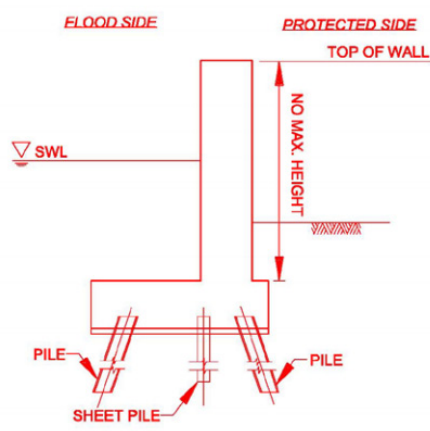
- Limited information available on the effectiveness during tropical storm conditions; therefore other hard non-organic structural approaches might be required.
- Gradual sloping profile, inherent in living shoreline design, would require a large footprint to raise flood line to 9.0' NAVD88.
- The existing conditions along the proposed flood line protection, from the Rayonier Plant to the Port, does not allow for a large footprint due to limits in property ownership, Railroad and Front Street Right-of-Ways, wetland delineation and existing Marine structures.





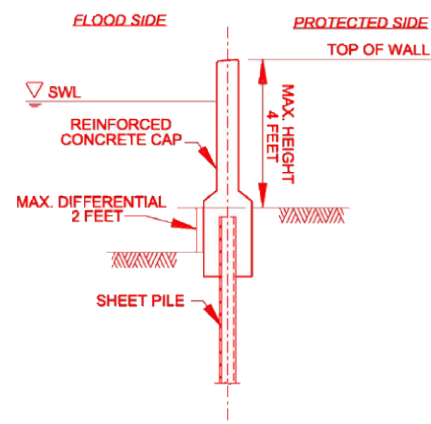
"L"-Wall

Figure 4.1



"T"-Wall

Figure 4.2



"I"-Wall

Figure 4.3

4 "L", "T" and "I"-Wall Configurations

"L", "T" and "I"-Wall (figures 4.1-4.3) configurations are modeled after the "Hurricane and Storm Damage Risk Reduction System Design Guidelines" to provide a comprehensive collection of best practices for hurricane protections by USACE New Orleans District Engineering Division with revisions through June 2012. These walls serve as impact hurricane flood protection, but "T"-Wall system is preferred where there is a potential for boat/barge impact loading. "T"-Walls exhibited the best overall performance during Katrina, being more resilient to over-topping and global instability. All configurations use steel sheet piling to control seepage and provide support.

Advantage:

- One of the preferred designs by the Army Corps of Engineers

Disadvantage:

- Typically the most expensive option
- Requires a large footprint to install
- Installation in front of existing bulkheads would require cofferdams, further disrupting aquatic life, utilities and wood docks, etc.

5 Retaining Walls

For the purposes of this report, Retaining Wall is considered an inland, not waterfront, reinforced concrete wall. Retaining walls would be built along the east-side of Front Street, within the right-of-way and outside required railroad clearances.

As described in the preferred solution (section 1.6), the use of retaining walls could be utilized to provide protection along certain portions of the riverfront to reduce costs and provide necessary protection; however, retaining walls should not be the sole protection measure. Since the retaining wall approach provides protection inland (between Front Street and Railroad), existing riverfront and riverside structures would be left unprotected.

(refer to Appendix B - Drawings, for retaining wall detail)

6 Sheet Piling Seawall

Sources and Images: steelpilinggroup.org

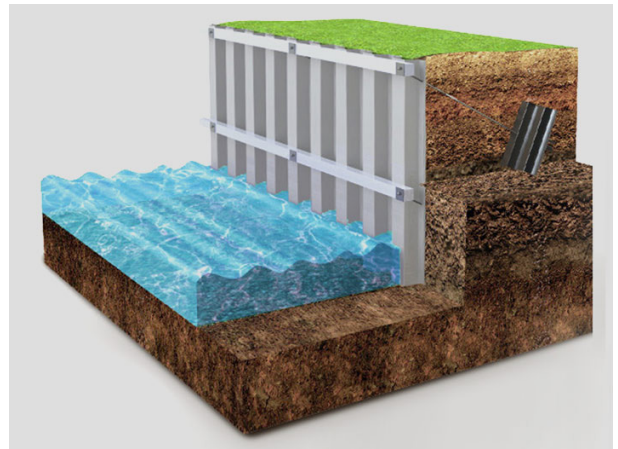
Sheet piles resist soil and water pressures by functioning as a beam spanning vertically between points of support. Sheet piles can help to prevent overtopping, internal seepage, piping of stratum, surface erosion and rodent damage. Basic pile types: Steel, Composite and Vinyl.

Advantages:

- Quick construction compared to reinforced concrete walls.
- Narrow form of construction, which can be installed close to site boundaries, maximizing space.
- Suitable for all soil types.
- No disturbance of existing ground unlike bored concrete pilings.

Disadvantages:

- Increased site disturbances (Noise and Vibration) as compared to other systems.



6b Vinyl Sheet Piles

Vinyl sheet piles offer the same basic advantages in addition to the following:

- UV-Resistant
- Will not corrode
- No toxic coatings or preservatives

Disadvantages:

- Structural limitations compared to Steel and Composite systems

6a Steel Sheet Piles

Steel sheet piles typically come either hot rolled or cold formed. Hot rolled are most common with cold formed primarily used for smaller applications. Advantages are similar to the general advantages listed above.

Disadvantages:

- Eventually corrodes (rust)
- Can be coated with toxic chemicals



**Above corroded steel sheet pile*

6c Composite Sheet Piling Seawall

Composite sheet pilings consist of a special marine-grade resin system that locks in thousands of interwoven rovings and mattings to produce a sheet piling that can withstand the harshest marine environments. Composite sheet piling achieves taller wall heights than vinyl sheet piling, even rivaling those designed and constructed with steel.

The composite sheet pile system could be used throughout the proposed flood line protection in lieu of the retaining wall system including the "I"-Wall and "T"-Wall configurations.

Composite sheet piles offer the same basic advantages in addition to the following:

- UV-Resistant
- Will not corrode
- No toxic coatings or preservatives

Disadvantages:

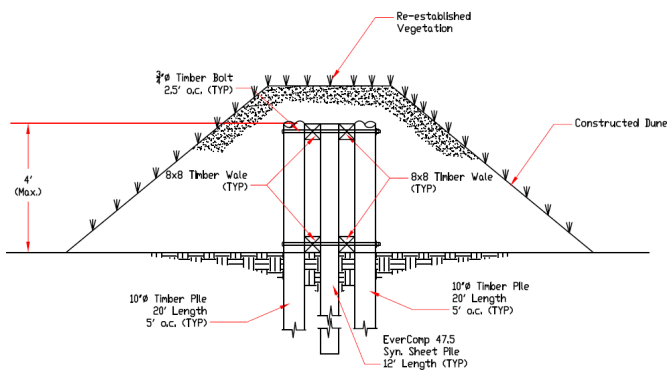
- Structural limitations compared to steel

7 Dune/Berm Systems

Dunes are dynamic structures that are inherently effective at minimizing damage during very large storm events. These systems naturally erode during and recover after severe storm events. Though natural dunes perform well, human modifications strive to enhance the natural features (of dunes) by adding structural components. The following alternatives reflect two basic human modification strategies to enhance dune systems.

7a Earthen Berm (Core Wall)

Source: njseagrant.org



This system is typically utilized to stabilize dunes by incorporating a non-erodible core. The system would generally be landward, not typically exposed to hydro-forces; however, in a storm event would provide necessary flood protection. As part of the masterplan, this approach would be paired with existing living shorelines to combat typical daily forces.

The system would typically be constructed utilizing sheet pilings (at the center) with wale beams and piles on each side of the sheet pile. Refer to image, above.

Advantages:

- Maintains natural environment and appearance.
- Utilizes natural materials to stabilize earth over inner stabilization structure.
- Durable with longevity.
- Suitable for all soil types.

Disadvantages:

- Larger footprint compared to other systems
- Dune/berms must be properly maintained, if not maintained the structural core could accelerate erosion.
- Cost to construct.

7b Earthen Berm (with Revetment Mat)

Sources and Images: landshore.com



This system, also called Articulated Concrete Mats or Flexamat, is used to improve shoreline stability. The system comes in two basic forms: Open-Cell or Closed-Cell.

Open-Cell: Blocks are open to allow vegetation to cover blocks over time. Generally used above design or natural water levels.

Closed-Cell: Heavier than open-cell blocks, the closed-cell blocks are deployed in heavily eroded areas and prone to high volumes of water. Channels and culverts are good examples. Generally used in submerged, below the water level applications.

Advantages:

- Cost effective.
- Maintains natural environment and appearance.
- Utilizes natural materials to stabilize earth over inner stabilization structure.
- Durable with longevity.
- Suitable for all soil types.
- Less maintenance compared to "core walls".

Disadvantages:

- Larger footprint compared to other systems



**Above proposed resiliency protection plan reflecting segments of resiliency masterplan*

1.6 PREFERRED SOLUTION

The preferred solution is based on finding the most economical and feasible mitigation methodology to reduce property damage, business interruption/losses, environmental and historical site damage as a result of rising waters (flooding) and natural disasters. Most importantly the solution must protect against social losses such as death, injury and mitigating impact on first responders, which can be easily overwhelmed in the wake of natural disasters.

The recommendation of the engineering / resiliency study is phased construction approach (identifying 9 potential phases) for responsive mitigation and improvements to the City's waterfront along the Amelia River consisting of living shorelines, new (enhanced) raised bulkheads, improved storm-water systems (with flood protection) and upgrades to boat launch ramp, for a 1.1 mile section, along front street, including the City's historic district. All protection measures are provided to an elevation of +9.0' NAVD 88 to reduce long-term risk to people and property from rising waters and natural disasters. The following provides a brief description of the protection methodologies for each segment.

- 1** STA 09+90 to STA 17+21
 Segment 1, as reflected on Drawing Sheet 2.1, provides protection through use of a retaining wall (or possible berm) along the east side of S. Front Street. This approach accommodates a possible future turn-around to remediate potential deadend. (note: sheet 2 reflects a similar approach minus planned future turn-around)
- 2** STA 17+21 to STA 27+37
 Segment 2, the retaining wall system continues (sheet 2.1), stopping at S. Front Street, where a hydro-defense plank system is utilized to provide protection at the road crossing. This system will remain open, only being closed in preparation of a major storm event. At the west side of S. Front Street, the retaining wall picks back up until it terminates at a trash receptacles. The system then transitions to an earthen berm (with revetment mat) that ties into existing living shorelines (sheet 3.1) at Parking Lots C and D. The last piece of this segment, consists of a composite bulkhead system. (note that this segment is discussed in further detail in Section 3)
- 3** STA 27+37 to STA 27+87
 Segment 3, Boat Launch Ramp (sheet 3.1), consists of several repairs/enhancements while maintaining the existing boat launch ramp elevation and slope. Repairs generally consist of new "I-Wall" at each side of opening with Hydro-defense plank system to protect the actual ramp opening. In addition, new composite bulkhead is proposed in-front of the existing bulkhead.

- | | | |
|----------|------------------------|---|
| 4 | STA 27+87 to STA 30+87 | Segment 4, between boat launch ramp and Brett's Restaurant Structure (sheet 3.1), generally consists of a new concrete secant pile system in front of existing bulkhead to Parking Lot B. The secant pile wall is proposed to continue above existing grade and future landward boardwalk. Access to existing docks will be maintained through use of hydro-defense plank system. |
| 5 | STA 30+87 to STA 31+72 | Segment 5, Brett's Waterway Cafe, is not currently included in this analysis, but will be included in a future report. |
| 6 | STA 31+72 to STA 35+40 | Segment 6, is similar to Segment 4, consisting of a new concrete secant pile system in front of existing bulkheads to Parking Lot A. Access to existing board walk will be maintained through use of hydro-defense plank systems. |
| 7 | STA 35+40 to STA 39+15 | Segment 7 (sheet 4) generally consists of either bulkhead or living shoreline enhancements protecting to 7.0' NAVD88. A new "I-Wall" retaining wall with sheet pile is provided at the flood protection line to bring protection to 9.0' NAVD 88 from Parking Lot A to City Property at 101 N. Front Street. |
| 8 | STA 39+15 to STA 45+25 | Segment 8 (sheets 4 and 5), begins with a hydro-defense plank system providing opening at 101 N. Front Street. Along the east side of N. Front Street, a retaining wall similar to Segment 1, is utilized to provide flood protection. |
| 9 | STA 45+25 to STA 52+52 | Segment 9 (sheet 5) is a continuation of Segment 8, retaining wall protection system between Front Street and the Railroad tracks, ending just before Dade Street and the Port of Fernandina. At Dade Street proposed minor road modifications increase road elevation to match required flood protection elevation. This allows access to/from N. Front Street after hydro-defense systems are in place. |

The proposed preferred shoreline protection plan (above) would increase the city's resilience to major storm events and protect the City's well-preserved historic buildings. Proposed living shorelines, revitalize ecosystem preserving natural resources, non-natural barriers, and modeled after designs provided by the U.S. Army Corps of Engineers (USACE). The riverfront shoreline protection design concepts are based on USACE Hurricane and Storm Damage Risk Reduction System Design Guidelines. These "Design Guidelines" present methods and criteria that shall be used by engineers in the design of hurricane system components and is based on Hurricanes Katrina and Rita that caused tremendous loss of life and destruction of property when they struck coastal Louisiana in 2005.

1.7 COST SUMMARY

The established 1.1 mile flood protection line that makes up the shoreline protection plan is divided into nine logical phased solutions based on existing conditions, site location, property ownership and flood protection methodology types. The riverfront improvements could be completed in phases with a probable total cost of \$16 - \$19 million.
(Refer to Appendix A - Opinion of Probable Costs)

1.8 AREAS FOR FURTHER STUDY

The preferred solution is based on preliminary information gathered for this study. Each segment will require further review, development and permitting to finalize design. Also refer to Section 3 for further study and development at segment 2.

U.S. Army Corps of Engineers (USACE)
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved -
OMB No. 0710-0003
Expires: 01-08-2018

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: <http://dpcl.d.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx>

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
--------------------	----------------------	------------------	------------------------------

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Charles Middle - L Last - George Company - City of Fernandina Beach E-mail Address - cgeorge@fbfl.org	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Havlev Middle - Last - Torkos Company - LG2 Environmental Solutions E-mail Address - HTorkos@oescgroup.com
6. APPLICANT'S ADDRESS: Address- 204 Ash Street City - Fernandina Beach State - FL Zip - 32034 Country - USA	9. AGENT'S ADDRESS: Address- 10475 Fortune Parkway, Ste 201 City - Jacksonville State - FL Zip - 32256 Country - USA
7. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 904.310.3101	10. AGENTS PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 352.208.0038

STATEMENT OF AUTHORIZATION

11. I hereby authorize, Havlev Torkos to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.


SIGNATURE OF APPLICANT

4/18/24
DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions) <u>City of Fernandina Beach Waterfront Resiliency System</u>	
13. NAME OF WATERBODY, IF KNOWN (if applicable) <u>Amelia River</u>	14. PROJECT STREET ADDRESS (if applicable) Address <u>See attached Figures</u>
15. LOCATION OF PROJECT Latitude: °N 30.67031934659109 Longitude: °W -81.46538500971415	City - <u>Fernandina Beach</u> State - <u>FL</u> Zip - <u>32034</u>
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID <u>see attached list of IDs</u> Municipality <u>Nassau County</u> Section - <u>See attached Figures</u> Township - Range -	

17. DIRECTIONS TO THE SITE

See attached figures

18. Nature of Activity (Description of project, include all features)

Approximately 1,790 linear feet of waterfront resiliency bulkhead system on the downtown waterfront along the Amelia River.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The project will consist of development of waterfront protection systems and associated structures along five segments to protect the upland areas from storm surge, high tides, and sea level rise.



USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Waterfront resiliency.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
14,000 fill	dredge 3,200	

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 1.25 acres Surface Water. 0.07 acres wetlands
or
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

See attached.

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- City of Fernandina Beach, 500 S Front Street

City - Fernandina Beach

State - FL

Zip - 32034

b. Address- Amelia Island Development Company, Inc. 251 S Front Street

City - Fernandina Beach

State - FL

Zip - 32034

c. Address- City of Fernandina Beach, 9 S Front Street

City - Fernandina Beach

State - FL

Zip - 32034

d. Address- City of Fernandina Beach, 0 Front Street

City - Fernandina Beach

State - FL

Zip - 32034

e. Address- City of Fernandina Beach, 1 N Front Street

City - Fernandina Beach

State - FL

Zip - 32034

Hayley Tol

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

[Signature] 4/18/24 *Hayley Tol* 4/19/24
SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Parcel Numbers (Nassau County):

17-3N-28-0000-0002-0010

00-00-31-1760-0034-0000

00-00-31-1760-0025-0000

17-3N-28-0000-0002-0000

00-00-31-1760-0001-0010

00-00-31-1760-0002-0000

00-00-31-1760-0003-0000

00-00-31-1760-0004-0000

Additional Addresses

City of Fernandina Beach, 101 N Front Street, Fernandina Beach, FL 32034

Front Street Property, LLC, 105 N Front Street, Fernandina Beach, FL 32034

Kavanaugh Anne R Trust, 121 N Front Street, Fernandina Beach, FL, 32034



Phase 1



Proposed Bulkhead



Mean High Water Line (MHWL)

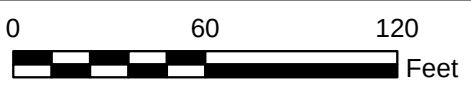
Wetlands to be Impacted by Proposed Bulkhead: ~0.07 acre



FIGURE 5.1
Phase 1 Site Plan
Waterfront Resiliency
Fernandina Beach, Nassau County, FL
April 3, 2024



1 inch = 60 feet



2021 True Color Orthophotos
From Florida DOT



Phase 2

Phase 3

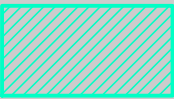
Phase 4

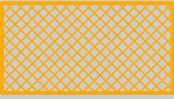


FIGURE 5.2
Phase 2, 3, & 4 Site Plan
Waterfront Resiliency
Fernandina Beach, Nassau County, FL
April 3, 2024

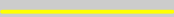


2021 True Color Orthophotos
From Florida DOT


Proposed Bulkhead


Proposed Rip-Rap (~2,300 cubic yards)


Area to be Filled: ~11,700 cubic yards


Mean High Water Line (MHWL)

Surface Water Impact between MHWL and Proposed Bulkhead: ~0.48 acre

Surface Water Impact for Rip-Rap: ~0.77 acre

Total Surface Water Impacts: ~1.25 acres

Area to be Dredged: ~3,200 cubic yards



1 inch = 50 feet

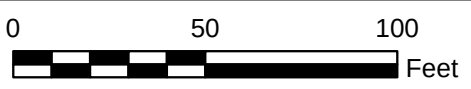


FIGURE 5.3

Phase 5 Site Plan

Waterfront Resiliency

Fernandina Beach, Nassau County, FL

April 3, 2024



2021 True Color Orthophotos
From Florida DOT

Listed Wildlife and Habitat Assessment Report

Fernandina Beach Waterfront Resiliency

Front Street

Jacksonville, Nassau County, Florida

Parcel Identification Number: 00-00-31-1760-0004-0000, 00-00-31-1760-0003-0000, 00-00-31-1760-0002-0000, 00-00-31-1760-0001-0010, 17-3N-28-0000-0002-0000, 00-00-31-1760-0025-0000, 00-00-31-1760-0025-001L, 00-00-31-1760-0029-0010, 00-00-31-1760-0034-0000, 00-00-31-1760-0037-0020, 00-00-31-1760-0039-0000, 00-00-31-1840-0000-0000

Project Number: 322023008

Task Number: 0102

April 24, 2024

Prepared for

Kimley-Horn

12740 Gran Bay Parkway W, Suite 2350
Jacksonville, Florida 32258

Prepared by



LG2 Environmental Solutions

10475 Fortune Parkway, Suite 201
Jacksonville, Florida 32256

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APPENDIX B	FNAI Biodiversity Matrix Report and IPaC Endangered Species List

1.0 Introduction

On July 2, 2023 and April 3, 2024, LG² Environmental Solutions, Inc. (LG2) conducted a listed wildlife and habitat assessment of the subject property in Nassau County, Florida. The purpose of the assessment was to determine the potential presence and extent of wildlife species and their associated habitats listed as endangered, threatened, and/or Species of Special Concern (SSC) by the Florida Fish and Wildlife Conservation Commission (FWC) and U.S. Fish and Wildlife Service (USFWS). Additionally, on-site habitat types, including jurisdictional wetlands, were examined and their approximate extents mapped.

The subject property is in Township 3 North, Range 28 East, Sections 21, 22, and 23 on the U.S. Geological Survey (USGS) 7.5-minute *Fernandina Beach* Topographic Quadrangle map (Appendix A: Figure 1). The subject property is bordered to the north and south by developed shoreline (boat slips, buildings, Etc.), to the east by N Front St, and to the west by the Amelia River (Appendix A: Figure 2).

The applicant proposes to install bulkhead along the shoreline as part of the Fernandina Beach Waterfront Resiliency project (See attached Figures). The installation of these structures will protect the upland areas from storm surge, high tides, and sea level rise. The project will consist of 5 phases. Phase 1 will result in ± 0.07 -acres of jurisdictional wetland impacts for the installation of the bulkhead (Figure 6.1). Phase 2, 3, and 4 will have no impacts to surface waters or jurisdictional wetlands, as they are demolition of existing structures (Figure 6.2). Phase 5 will result in ± 1.25 -acres of surface water impacts for the installation of bulkhead and rip-rap (Figure 6.3).

2.0 Methodology

Prior to the site assessment, aerial orthophoto satellite images, USGS topographic maps, and U.S. Department of Agriculture (USDA) soil survey maps were reviewed for the potential presence of onsite listed wildlife habitats. The soil survey for Nassau County was reviewed to help evaluate suitable habitat for sensitive species depending on substrate requirements (USDA 1987). FWC databases (FWC 2021 and 2024), Florida Land Use, Cover and Forms Classification System (FDOT 1999), FNAI Biodiversity Matrix (FNAI 2024), Audubon EagleWatch Program database (Audubon 2023), USFWS Information for Planning and Consultation (IPaC) Endangered Species List (USFWS 2024), U.S. Army Corps of Engineers (USACE) Jacksonville District, USFWS Wood Stork Programmatic Key (USFWS 2008) and Eastern Indigo Snake Programmatic Effect Determination Key (USFWS 2017), were assessed in order to determine the potential for sensitive wildlife species and their suitable habitats.

During the subject property assessment, meandering pedestrian transects were conducted through accessible areas of each vegetative community. Within each transect, data collection included, but was not limited to, plant species, wildlife species, weather conditions, time of assessment, and anthropogenic activity. Vegetative communities were identified according to the Florida Land Use, Cover Forms

Classification System (FLUCFCS) (FDOT 1999). These methods are consistent with recognized FWC survey guidelines for a general wildlife assessment.

3.0 Database Review of Site Conditions

3.1 USDA Soil Survey

The *Soil Survey of Nassau County* (USDA- Natural Resources Conservation Service 1987) reported six soil types on the subject property. The soil types are described in Table 1 below and depicted in the attached Appendix A: Figures 3.1 – 3.3.

Table 1 – Soil Descriptions

Map Unit	Soil Type	Drainage	Parent Material	Depth to Water Table (inches)	Slope
02	Ardents, Nearly Level	Somewhat poorly drained	Altered marine deposits	18 – 30	0 – 2
17	Urban Land	N/A	No parent material		
20	Ortega Fine Sand	Moderately well drained	Eolian or sandy marine deposits	42 – 60	0 – 5
27	Ridgewood Fine Sand	Somewhat poorly drained	Sandy marine deposits	18 – 42	0 – 5
28	Tisonia Mucky Peat, Tidal	Very poorly drained	Organic material over clayey alluvium	More than 80 inches	0 – 1
99	Water	N/A	N/A		

4.0 Site Visit Summary

On July 5, 2023, LG2 biologists conducted a site visit to assess the onsite habitats with emphasis on the presence of listed wildlife species. The location of natural resource issues of concern and occurrences were recorded using a hand-held global positioning system (GPS) unit for later use in generating report graphics and recommendations. The observed vegetative communities are described in Section 4.1. The weather conditions during the site visit were reported as sunny skies with an average high temperature of 92°F. These conditions, considering the time of day, the season, and the scope of the inspection, may have influenced the wildlife species observed. The presence of specific wildlife species was determined audibly and visually, by evidence of tracks, scat, nests, burrows, and/or dens. Observed wildlife species were recorded and are described in Section 4.2.

4.1 Observed Vegetative Communities

During the site assessment, LG2 biologists conducted a series of pedestrian transects throughout the subject property to categorize the onsite vegetative communities in accordance with FLUCFCS criteria. The vegetative communities observed onsite are described on the following page and are depicted in the attached Appendix A: Figures 4.1 – 4.3.

4.1.1 Uplands

Other Shrubs and Brush (FLUCFCS 329) – This vegetative community consisted primarily of cabbage palm (*Sabal palmetto*), red cedar (*Juniperus virginiana*), bamboo (*Bambusa* sp.), saltwater falsewillow (*Baccharis angustifolia*), and various grass species.

Commercial and Services (FLUCFCS 140) – This land cover classification consisted of a bulkhead, parking areas, and various buildings.

4.1.3 Wetlands

Saltwater Marshes (FLUCFCS 642) – This vegetative community consisted primarily of seaside oxeye daisy (*Borrchia frutescens*) and saltmarsh cordgrass (*Spartina alterniflora*).

Streams and Waterways (FLUCFCS 510) – This land cover classification consisted of the Amelia River.

4.2 Wildlife

During the site assessment, LG2 biologists conducted meandering pedestrian transects and stationary observations to survey the onsite habitat types, with emphasis on those areas with vegetative assemblages, hydrology, and/or soils potentially indicative for the presence of listed wildlife species identified in the desktop review. The scope of this effort was a presence/absence survey for listed wildlife species and the supporting habitats identified for each species. Formal, species-specific, surveys were not within the scope of this site assessment but can be conducted to satisfy any future permitting requirements. Observed wildlife and potentially occurring listed species are detailed in the following sections. The wildlife species observed during the site assessment are listed below in Table 2.

Table 2 – Observed Wildlife Species

Common Name	Scientific Name	Observation	Listing Status*
Fiddler crab	<i>Uca</i> sp.	Visual/Tracks	None
Fish crow	<i>Corvus ossifragus</i>	Auditory	None
Great blue heron	<i>Ardea herodias</i>	Visual	None
Laughing gull	<i>Leucophaeus atricilla</i>	Visual/Auditory	None
Little blue heron	<i>Egretta caerulea</i>	Visual	ST
Osprey	<i>Pandion haliaetus</i>	Visual/Auditory	None

*State-designated threatened (ST).

4.2.1 Sensitive Species and Supporting Habitats

Sensitive species are those species listed as federally endangered (FE), State of Florida and federally threatened (ST and FT), and State of Florida SSC by the FWC and/or USFWS. Prior to conducting the site assessment, LG2 biologists reviewed online databases including, but not limited to; FNAI biodiversity matrix, Audubon EagleWatch Program database, and USFWS IPaC resource list, for known occurrences of listed species and potential suitable habitats within the subject property.

The FNAI biodiversity matrix listed zero “documented”, three “likely”, and six “potential” wildlife species expected to inhabit the surrounding area. The IPaC listed eight additional federally listed wildlife species. The rare wildlife species mentioned in both reports are detailed on the following in Table 3 and are attached as Appendix B.

Table 3 – Listed Wildlife Species

FNAI Biodiversity Matrix Listed Wildlife Species				
Result	Common Name	Taxonomic Name	Observed On-Site	Listing Status*
Likely	Macgillivray’s seaside sparrow	<i>Ammospiza maritima macgillivrayi</i>	No	N
Likely	Worthington’s marsh wren	<i>Cistothorus palustris griseus</i>	No	ST
Likely	Wood stork	<i>Mycteria americana</i>	No	FT
Potential	Atlantic sturgeon	<i>Acipenser oxyrinchus oxyrinchus</i>	No	FE
Potential	Eastern indigo snake	<i>Drymarchon couperi</i>	No	FT
Potential	Gopher tortoise	<i>Gopherus polyphemus</i>	No	ST
Potential	Southern hognose snake	<i>Heterodon simus</i>	No	N
Potential	Atlantic salt marsh mink	<i>Neovison vison lutensis</i>	No	N
Potential	Florida manatee	<i>Trichechus manatus latirostris</i>	No	ST
USFWS IPaC Endangered Species List				
Result	Common Name	Taxonomic Name	Observed On-Site	Listing Status*
Potential	Loggerhead sea turtle	<i>Caretta caretta</i>	No	FT
Potential	Green sea turtle	<i>Chelonia mydas</i>	No	FE
Potential	Leatherback sea turtle	<i>Dermochelys coriacea</i>	No	FE
Potential	Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	No	FE
Potential	Eastern black rail	<i>Laterallus jamaicensis ssp. Jamaicensis</i>	No	FT
Potential	West Indian manatee	<i>Trichechus manatus</i>	No	FT
Potential	Rufa red knot	<i>Calidris canutus rufa</i>	No	FT
Potential	Whooping crane	<i>Grus americana</i>	No	EPN

*Federally-designated endangered (FE); Federally-designated threatened (FT); State-designated threatened (ST); Experimental Non-Essential Population in Florida (EPN); No longer listed (N).

State and federal listed threatened and endangered wildlife species that occurred, or could potentially occur, within the subject property are discussed below. Wildlife species listed in the FNAI report, but no longer classified as threatened or endangered by FWC and/or USFWS, are not included in the discussion below because these species are no longer regulated by State or federal management guidelines.

Gopher Tortoise

The gopher tortoise is classified as a state-threatened species and is protected by Florida's Endangered and Threatened Species Rule (Rule 68A-27, Florida Administrative Code [F.A.C.]). The gopher tortoise is a moderate-sized, terrestrial turtle averaging 9 to 11-inches in length. The species is identified by its stumpy, elephantine hind feet and flattened; shovel-like forelimbs adapted for digging. The shell is oblong and generally tan, brown, or gray in coloration. They prefer upland habitats with open canopy and well drained soils.

Gopher tortoises and/or their burrows were not observed during the site assessment. The soils and vegetation within the upland habitats were poorly suited to support gopher tortoises. Formal, species-specific, surveys were not within the scope of this site assessment but can be conducted to satisfy FWC permitting requirements if gopher tortoises are later identified within the subject property. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Eastern Indigo Snake

The eastern indigo snake is listed as threatened by the federal Endangered Species Act (ESA) and as federally designated threatened by Florida's Endangered and Threatened Species Rule. They are a non-venomous, bluish-black colored snake that can reach lengths of 8-feet. Eastern indigo snakes inhabit a mosaic of habitats including sandhills, pine flatwoods, hardwood forests, moist hammocks, and areas that surround cypress swamps. Especially in their northern range, eastern indigo snakes are closely associated with gopher tortoise whose burrows provide shelter from winter cold and summer heat.

The eastern indigo snake was not observed during the site assessment. The subject property did not contain suitable habitat which could sustain eastern indigo snakes, particularly gopher tortoise burrows in which they tend to cohabitate. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Worthington's Marsh Wren

The Worthington's marsh wren is classified as a state-threatened species and is protected by Florida's Endangered and Threatened Species Rule (Rule 68A-27, Florida Administrative Code [F.A.C.]). This species can reach a length of five inches. They are similar to all marsh wrens in that they have a white band above their eyes and a white-streaked black triangle on their back. Worthington's marsh wrens

inhabit tidal marshes dominated by cordgrass and are found from the St. Mary's/Cumberland Island Sound to the northern edge of the St. Johns River.

Worthington's marsh wren was not observed during the site assessment. The subject property contained minimal potentially suitable marsh habitat to support this species. Additionally, the subject property is located in a highly developed and Worthington's marsh wren presence is unlikely. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Red Knot

The red knot is listed as threatened by the federal ESA and as federally designated threatened by Florida's Endangered and Threatened Species Rule. They are robin-sized shorebirds with reddish breeding plumage and mottled pale grey winter plumage. Red knots do not breed in Florida but winter in the southeastern U.S., to include Florida. Red knot wintering habitats generally consist of coastal marine and estuarine habitats with large areas of exposed intertidal sediments and sandy inlets.

Red knots were not observed during the site assessment. The subject property contained minimal potentially suitable coastal and/or estuarine habitats to support this species. Additionally, the subject property is located in a highly developed area and red knot presence is unlikely. If a federal Clean Water Act Section 404 permit is required for this project, additional coordination may be required to document the status of red knots within the subject property. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Florida Manatee

The Florida manatee is listed as endangered by the federal ESA and as federally endangered by Florida's Endangered and Threatened Species Rule. The West Indian manatee that occurs in Florida is a subspecies known as the Florida manatee. The Florida manatee is a large aquatic mammal reaching nine to ten feet in length and weighs approximately 1,000 pounds. They have gray wrinkled thick leather skin, a wide round edged tail, and two flipper-like forelimbs that have three to four nails. They use their forelimbs for steering movements and to hold their food while eating, while their large tails are used for swimming. They inhabit coastal waters, rivers, and springs. They migrate to warm water in the colder months of the year such as artesian springs or power plant discharge canals. Their diet consists of seagrasses and other aquatic plants, of which they can consume 4 to 9 percent of their body weight daily.

The Florida manatee was not observed during the site assessment. The subject property did contain suitable habitat to support this species. If a federal permit is required for this project, additional coordination may be required to document the status of Florida manatees within the subject property. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Wood Stork

The wood stork is listed as threatened by the federal ESA and as federally designated threatened by Florida's Endangered and Threatened Species Rule. For projects with on-site wetlands, additional consideration must be taken regarding wood storks. They are large wading birds with a long, heavy curved bill and long legs. This species is identified by the scaly appearance of their head due to its lack of feathers. According to the USFWS, wood storks prefer to forage in ponds and marshes with little or no canopy but have been observed in forested wetlands with canopies of less than 20%. Suitable foraging habitat (SFH) for wood storks includes freshwater marshes, cypress depressions, swamp sloughs and tidal creeks and pools.

For counties in Northeast Florida, USFWS has designated a 13-mile core foraging area (CFA) buffer around active nesting wood stork colonies to protect wood stork SFH. The subject property is approximately 7.35 miles from the SNN_243_Gilman Paper wood stork nesting colony in Georgia and is inside of the wood stork CFA (Appendix A: Figure 4).

Wood storks were not observed during the site assessment. The onsite aquatic habitats and saltwater marshes could be considered potential wood stork SFH. If a federal permit is required for this project, and wood stork SFH is proposed to be impacted, additional coordination with may be required to document the status of wood stork SFH within the subject property. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Eastern Black Rail

The eastern black rail is listed as threatened by the federal ESA and as federally designated threatened by Florida's Endangered and Threatened Species Rule. They are 4-6 inches long with a pale to blackish-gray body and bright red eyes. According to the USFWS, Eastern black rails inhabit salt to freshwater marshes with dense cover and upland areas around these marshes.

The eastern black rail was not observed during the site assessment. The subject property did not contain suitable marsh habitat to support this species. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Loggerhead Sea Turtle

The loggerhead sea turtle is listed as threatened by the federal ESA and as federally designated threatened by Florida's Endangered and Threatened Species Rule. These marine-dwelling turtles range in size from 2.4 to 3.5 feet long with a reddish-brown carapace and light to medium yellow plastron. Loggerhead sea turtles inhabit Florida's sandy Atlantic and Gulf of Mexico beaches to nest and forage in oceans, salt marshes, brackish lagoons, and mouths of rivers.

The loggerhead sea turtle was not observed during the site assessment. The subject property did contain potentially suitable aquatic habitat to support this species. If a federal permit is required for this project, and aquatic habitat is proposed to be impacted, additional coordination with may be required to document the status of loggerhead sea turtles within the subject property. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Green Sea Turtle

The green sea turtle is listed as endangered by the federal ESA and as federally designated endangered by Florida's Endangered and Threatened Species Rule. These marine-dwelling turtles are approximately 3.3 feet in length with a brown, olive, gray, or black carapace, yellowish-white plastron, and green body fat. Green sea turtles nest along Florida's Atlantic and Gulf of Mexico beaches and forage nearshore.

The green sea turtle was not observed during the site assessment. The subject property did contain suitable aquatic habitat to support this species. If a federal permit is required for this project, and aquatic habitat is proposed to be impacted, additional coordination with may be required to document the status of green sea turtles within the subject property. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Leatherback Sea Turtle

The leatherback sea turtle is listed as endangered by the federal ESA and as federally designated endangered by Florida's Endangered and Threatened Species Rule. These marine-dwelling turtles are average 6 feet in length with a black carapace accompanied by pink and blue splotches. Leatherback sea turtles primarily inhabit Florida's Atlantic coast, but can be found in the Pacific and Indian oceans. They nest along the Atlantic and Gulf of Mexico beaches and forage along the coast.

The leatherback sea turtle was not observed during the site assessment. The subject property did contain suitable aquatic habitat to support this species. If a federal permit is required for this project, and aquatic habitat is proposed to be impacted, additional coordination with may be required to document the status of leatherback sea turtles within the subject property. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Hawksbill Sea Turtle

The hawksbill sea turtle is listed as endangered by the federal ESA and as federally designated endangered by Florida's Endangered and Threatened Species Rule. These marine-dwelling turtles are approximately 3 feet in length with a brown, yellow, and black blotched or streaked carapace. Hawksbill sea turtles primarily nest along Florida's southeastern Atlantic coast and Florida Keys beaches and forage nearshore.

The hawksbill sea turtle was not observed during the site assessment. The subject property did contain suitable aquatic habitat to support this species. If a federal permit is required for this project, and aquatic habitat is proposed to be impacted, additional coordination with may be required to document the status of hawksbill sea turtles within the subject property. At the time of this assessment, the proposed project is not likely to adversely affect this species.

Bald Eagle

Although the bald eagle is no longer protected under the ESA, it is still afforded protection under the Bald and Gold Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act. In addition to the federal law, the state of Florida protects eagles under the State Eagle Rule (Rule 68A-16.002, F.A.C.).

The bald eagle is a large-bodied raptor. Bald eagles typically nest in forested areas adjacent to large bodies of water, staying away from heavily developed areas when possible. Bald eagles are tolerant of human activity when feeding, and may congregate around fish processing plants, dumps, and below dams where fish concentrate. For perching, bald eagles prefer tall, mature coniferous or deciduous trees that afford a wide view of the surroundings.

Bald eagles and/or their nests were not observed during the site assessment. The subject property did not contain mature pine trees capable of sustaining bald eagles and/or their nests. LG2 searched the Audubon EagleWatch Program database for documented bald eagle nests within the proximity of the property (EagleWatch search results may not be 100% accurate). The search results identified one bald eagle nest (NA005A) located approximately 2.8 miles from the subject property and six nests within five miles of the subject property (Audubon 2023). At the time of this assessment, the proposed project is not likely to adversely affect this species.

5.0 Conclusion and Summary

The Fernandina Beach Waterfront Resiliency property was evaluated for the purpose of assessing on-site habitats and vegetative communities and to identify and document the presence of any state or federally protected wildlife species occurring on-site. During the listed wildlife site assessment, LG2 biologists conducted meandering pedestrian transects and stationary observation posts throughout each on-site habitat type to observe the potential presence of listed wildlife species.

LG2 documented no state or federally listed wildlife species utilizing the property during the on-site assessment. If a USACE, SJRWMD, FDEP and/or local government permits are required for the project, USFWS and/or FWC may be notified and allowed to comment on listed species with the potential to occur on the subject property. During this comment period, additional information may be requested from the applicant to document whether the project proposes to impact any potentially occurring listed wildlife species. This request for additional information may take the form of informal correspondence or formal

consultation. The species that are more likely to trigger a request for additional information will depend on the nature and location of the work being proposed and may include, but are not limited to, gopher tortoise, Worthington's marsh wren, marine turtles, Florida manatee, red knot, and wood stork. If state or federal permits are not required, USFWS and/or FWC consultations regarding listed wildlife species will be at the discretion of the applicant.

6.0 References

- Army Corps of Engineers, Jacksonville District (USACE) & U.S. Fish & Wildlife Service, Jacksonville Ecological Services Field Office (USFWS) September 2013. Wood Stork Key for Central and North Peninsular Florida. Accessed online at: https://www.fws.gov/northflorida/WoodStorks/Documents/20080900_JAXESO_WOST_Key.pdf
- Audubon Center for Bird of Prey (Audubon) 2023. Audubon EagleWatch Program database, updated 2023. Accessed online at: <https://cbop.audubon.org/conservation/about-eaglewatch-program>
- Florida Fish & Wildlife Conservation Commission (FWC) 2021. Florida's Endangered Species, Threatened Species, or Species of Special Concern, updated June 2021 online at <https://myfwc.com/wildlifehabitats/wildlife/>
2024. "Species Profiles" website. Accessed online at <http://myfwc.com/wildlifehabitats/profiles/>
- Florida Natural Areas Inventory (FNAI). 2024. Biodiversity Matrix Search. Accessed online at: <https://www.fnai.org/BiodiversityMatrix/index.html>
- State of Florida Department of Transportation (FDOT), Surveying and Mapping Office Geographic Mapping Section. 1999. Florida Land Use, Cover and Forms Classification System. (FLUCFCS).
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) 1987. Accessed online at: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
- United States Department of the Interior, Fish and Wildlife Service, Eastern Indigo Snake Programmatic Effect Determination Key, updated 2017; online at https://www.saj.usace.army.mil/Portals/44/docs/regulatory/sourcebook/endangered_species/Indigo/20170801_letter_Service%20to%20Corps_Revised%20EIS%20Key.pdf?ver=2017-08-03-145030-510
- United States Fish & Wildlife Service (USFWS) 2024. Information for Planning and Consultation (IPaC). Accessed online at <https://ipac.ecosphere.fws.gov/>

APPENDIX A

Figures 1 – 6



Phase 1

Phase 2

Phase 3

Phase 4

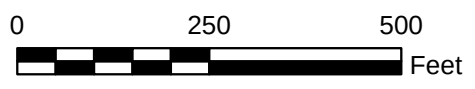
Phase 5



FIGURE 2
Aerial Photograph
Waterfront Resiliency
Fernandina Beach, Nassau County, FL
April 3, 2024



1 inch = 250 feet



2021 True Color Orthophotos
From Florida DOT



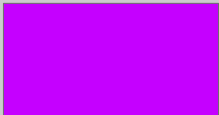


Phase 1

Soils



2 - ARENTS, NEARLY LEVEL



17 - URBAN LAND



27 - RIDGEWOOD FINE SAND, 0 TO 5 PERCENT SLOPES



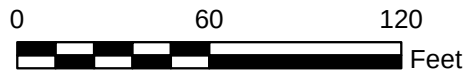
28 - TISONIA MUCKY PEAT, TIDAL



FIGURE 3.1
Phase 1 Soils
Waterfront Resiliency
Fernandina Beach, Nassau County, FL
April 3, 2024



1 inch = 60 feet



2021 True Color Orthophotos
From Florida DOT
USDA NRCS 2021





Phase 2



Phase 3



Phase 4

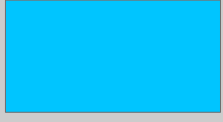
Soils



17 - URBAN LAND



28 - TISONIA MUCKY PEAT, TIDAL



99 - WATER

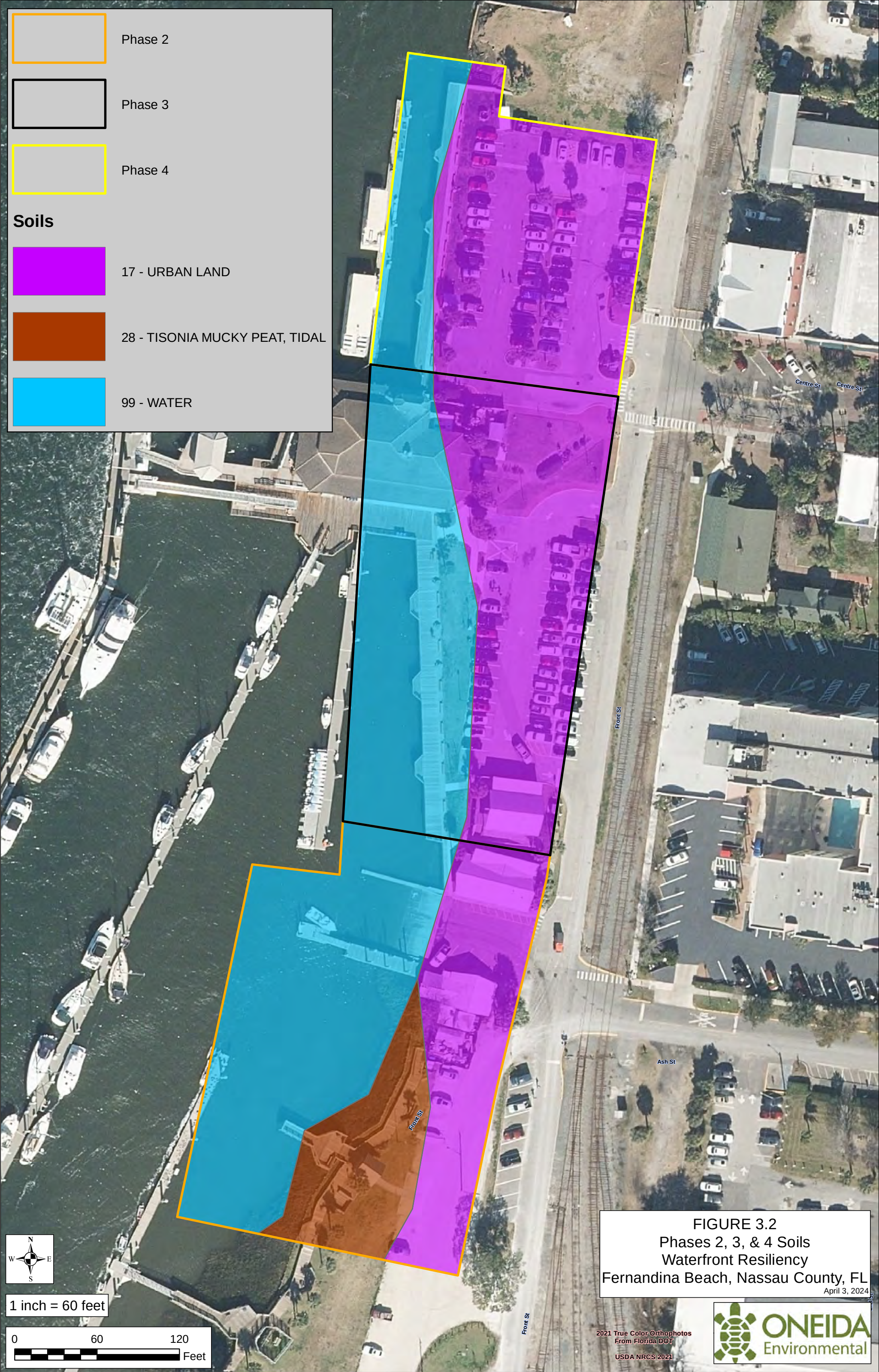


FIGURE 3.2
Phases 2, 3, & 4 Soils
Waterfront Resiliency
Fernandina Beach, Nassau County, FL
April 3, 2024



1 inch = 60 feet



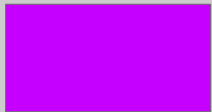
2021 True Color, Orthophotos
From Florida DOT
USDA NRCS 2021





Phase 5

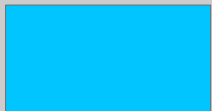
Soils



17 - URBAN LAND



20 - ORTEGA FINE SAND, 0 TO 5 PERCENT SLOPES



99 - WATER



1 inch = 50 feet

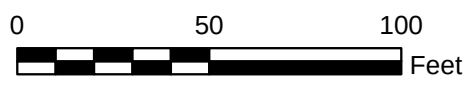


FIGURE 3.3
Phase 5 Soils
Waterfront Resiliency
Fernandina Beach, Nassau County, FL
April 3, 2024

2021 True Color Orthophotos
From Florida DOT
USDA NRCS 2021



Phase 1

FLUCFCS

140 - Commercial and Services

329 - Other Shrubs and Brush

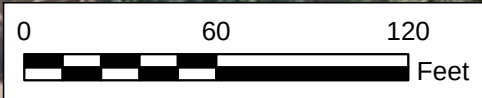
642 - Saltwater Marshes



FIGURE 4.1
 Phase 1 FLUCFCS
 Waterfront Resiliency
 Fernandina Beach, Nassau County, FL
 April 3, 2024



1 inch = 60 feet



2021 True Color Orthophotos
 From Florida DOT





Phase 2



Phase 3

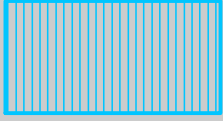


Phase 4

FLUCFCS



140 - Commercial and Services



510 - Streams and Waterways



FIGURE 4.2
Phases 2, 3, & 4 FLUCFCS
Waterfront Resiliency
Fernandina Beach, Nassau County, FL
April 3, 2024



2021 True Color Orthophotos
From Florida DOT

Phase 5

FLUCFCS

140 - Commercial and Services

510 - Streams and Waterways



FIGURE 4.3
Phase 5 FLUCFCS
Waterfront Resiliency
Fernandina Beach, Nassau County, FL
April 3, 2024



2021 True Color Orthophotos
From Florida DOT



Active Wood Stork Nesting Colony (2010 - 2019)



Active Wood Stork Foraging Area (2010 - 2019)

Approximate
Project Area

FIGURE 6
Proximity to Wood Stork Nesting Colonies
Waterfront Resiliency
Fernandina Beach, Nassau County, FL

April 3, 2024



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics,

APPENDIX B

FNAI Biodiversity Matrix Report

IPaC Endangered Species List



FLORIDA
Natural Areas
INVENTORY

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
850-681-9364 fax
www.fnai.org

Florida Natural Areas Inventory

Biodiversity Matrix Query Results

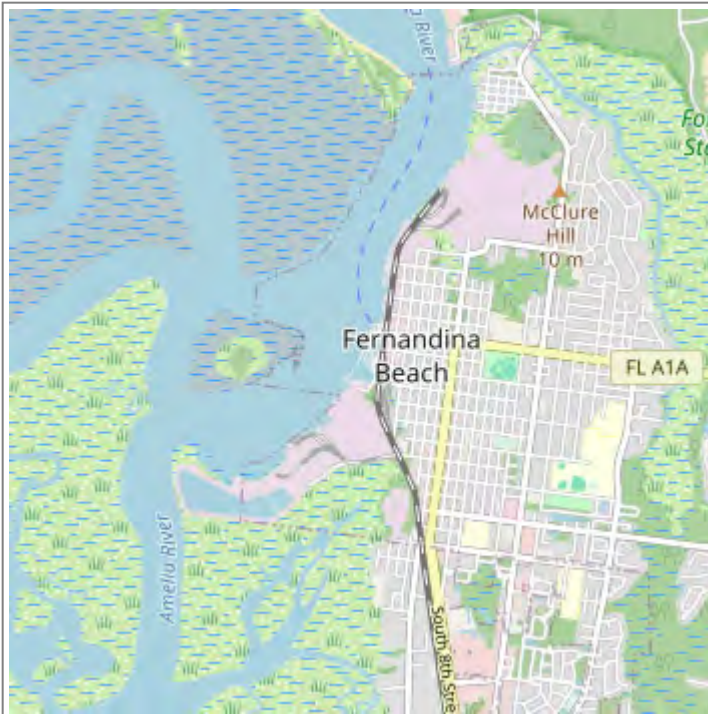
UNOFFICIAL REPORT

Created 3/5/2024

(Contact the FNAI Data Services Coordinator at 850.224.8207 or
kbrinegar@fnai.fsu.edu for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 1 Matrix Unit: 44192



Descriptions

DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.

LIKELY - The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; *or*
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

Matrix Unit ID: 44192

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

4 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Ammodramus maritimus macgillivrayi Macgillivray's Seaside Sparrow	G4T3	S2	N	N
Cistothorus palustris griseus Worthington's Marsh Wren	G5T3	S2	N	ST
Migratory Bird Concentration Area	G3	SNR	N	N
Mycteria americana Wood Stork	G4	S2	T	FT

Matrix Unit ID: 44192**10 Potential** Elements for Matrix Unit 44192

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Acipenser oxyrinchus oxyrinchus</i> Atlantic Sturgeon	G3T3	S1	E	FE
<i>Coreopsis integrifolia</i> ciliate-leaf tickseed	G1G2	S1	N	E
<i>Drymarchon couperi</i> Eastern Indigo Snake	G3	S2?	T	FT
<i>Gopherus polyphemus</i> Gopher Tortoise	G3	S3	C	ST
<i>Heterodon simus</i> Southern Hognose Snake	G2	S2S3	N	N
<i>Matelea floridana</i> Florida spiny-pod	G2	S2	N	E
<i>Neovison vison lutensis</i> Atlantic Salt Marsh Mink	G5T3	S3	N	N
<i>Pteroglossaspis ecristata</i> giant orchid	G2G3	S2	N	T
<i>Rhexia parviflora</i> small-flowered meadowbeauty	G2G3	S2	N	E
<i>Trichechus manatus latirostris</i> Florida Manatee	G2G3T2	S2S3	T	N

Disclaimer

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

Unofficial Report

These results are considered unofficial. FNAI offers a [Standard Data Request](#) option for those needing certifiable data.

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Nassau County, Florida



Local office

Florida Ecological Services Field Office

☎ (352) 448-9151

📅 (772) 562-4288

✉ fw4flesregs@fws.gov

777 37th St
Suite D-101
Vero Beach, FL 32960-3559

<https://www.fws.gov/office/florida-ecological-services>

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
West Indian Manatee <i>Trichechus manatus</i> Wherever found There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/4469	Threatened Marine mammal

Birds

NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477	Threatened
Rufa Red Knot <i>Calidris canutus rufa</i> Wherever found There is proposed critical habitat for this species. https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane <i>Grus americana</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/758	EXPN
Wood Stork <i>Mycteria americana</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8477	Threatened

Reptiles

NAME	STATUS
Eastern Indigo Snake <i>Drymarchon couperi</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/646	Threatened

Green Sea Turtle *Chelonia mydas* Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/6199>

Hawksbill Sea Turtle *Eretmochelys imbricata* Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/3656>

Leatherback Sea Turtle *Dermochelys coriacea* Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/1493>

Loggerhead Sea Turtle *Caretta caretta* Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/1110>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME

TYPE

West Indian Manatee *Trichechus manatus*

Final

<https://ecos.fws.gov/ecp/species/4469#crithab>

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read

["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

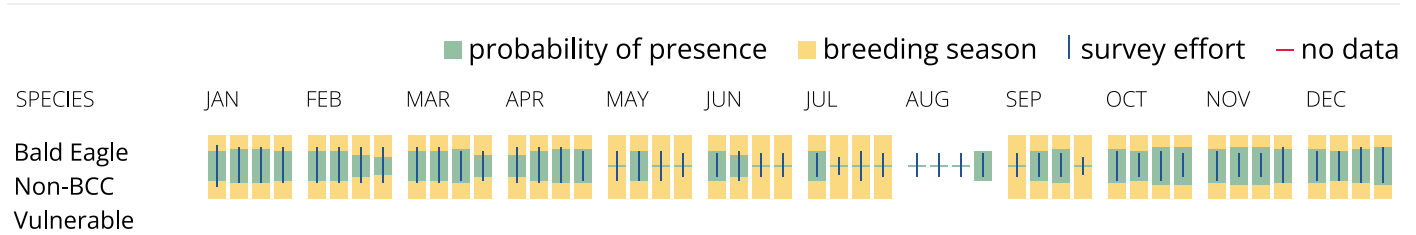
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON

American Kestrel *Falco sparverius paulus*

Breeds Apr 1 to Aug 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9587>

American Oystercatcher *Haematopus palliatus*

Breeds Apr 15 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8935>

Bald Eagle *Haliaeetus leucocephalus*

Breeds Sep 1 to Jul 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Black Skimmer *Rynchops niger*

Breeds May 20 to Sep 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/5234>

Brown-headed Nuthatch *Sitta pusilla*

Breeds Mar 1 to Jul 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Chimney Swift *Chaetura pelagica*

Breeds Mar 15 to Aug 25

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Coastal (wayne's) Black-throated Green Warbler

Breeds May 1 to Aug 15

Setophaga virens waynei

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Gull-billed Tern *Gelochelidon nilotica*

Breeds May 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9501>

King Rail *Rallus elegans*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8936>

Breeds May 1 to Sep 5

Lesser Yellowlegs *Tringa flavipes*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

Breeds elsewhere

Marbled Godwit *Limosa fedoa*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9481>

Breeds elsewhere

Painted Bunting *Passerina ciris*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Apr 25 to Aug 15

Pectoral Sandpiper *Calidris melanotos*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Prothonotary Warbler *Protonotaria citrea*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 1 to Jul 31

Purple Sandpiper *Calidris maritima*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Red-headed Woodpecker *Melanerpes erythrocephalus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Sep 10

Ruddy Turnstone *Arenaria interpres morinella*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds elsewhere

Short-billed Dowitcher *Limnodromus griseus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Swallow-tailed Kite *Elanoides forficatus*

Breeds Mar 10 to Jun 30

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8938>

Willet *Tringa semipalmata*

Breeds Apr 20 to Aug 5

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wilson's Plover *Charadrius wilsonia*

Breeds Apr 1 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush *Hylocichla mustelina*

Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted

Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

- To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

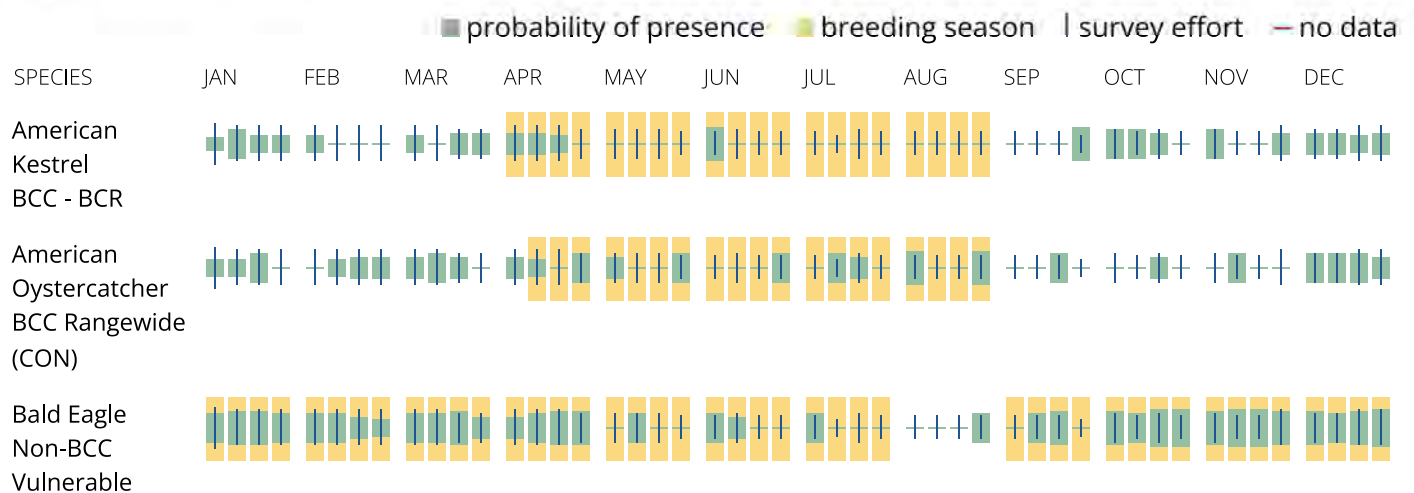
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

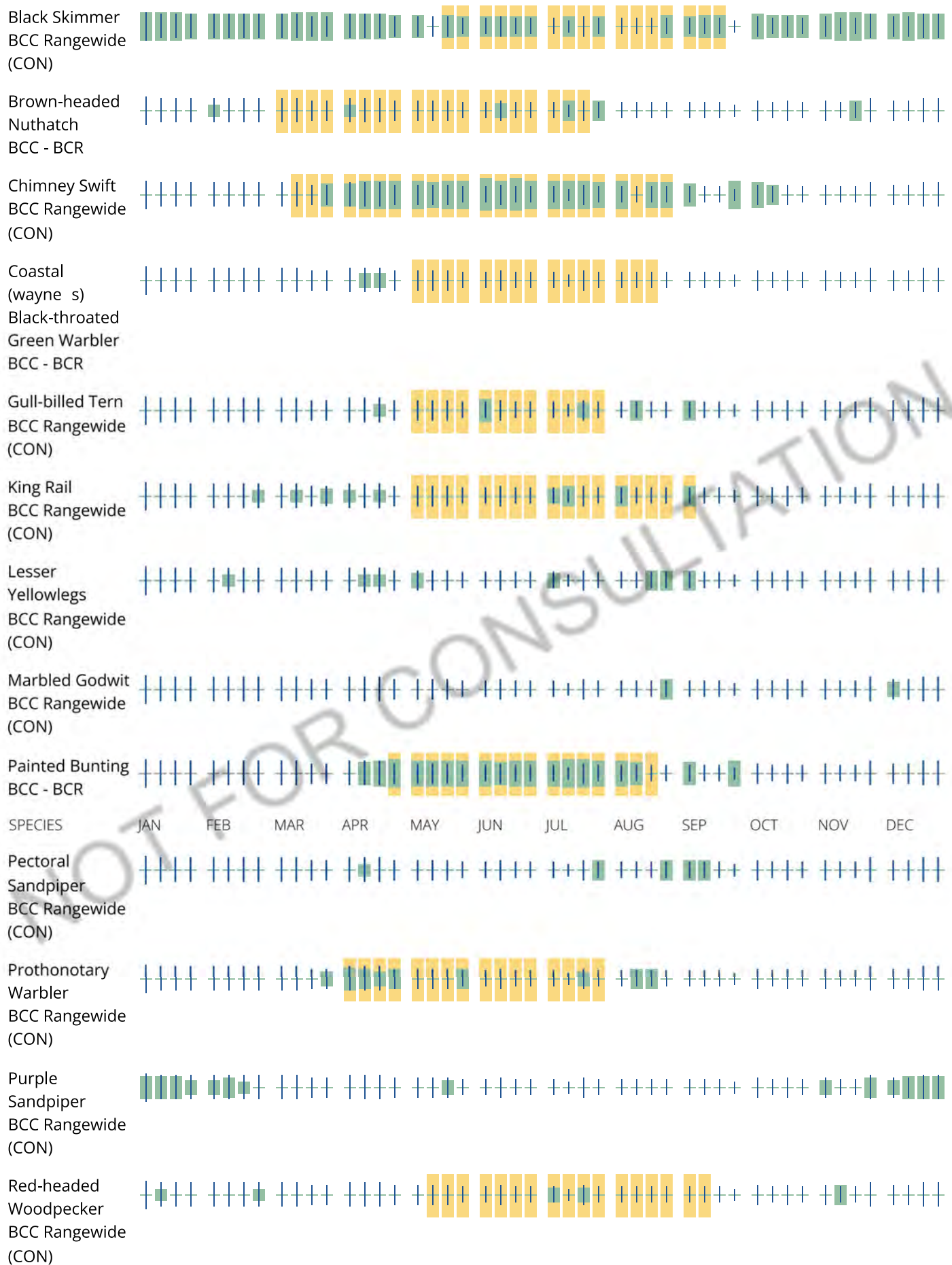
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

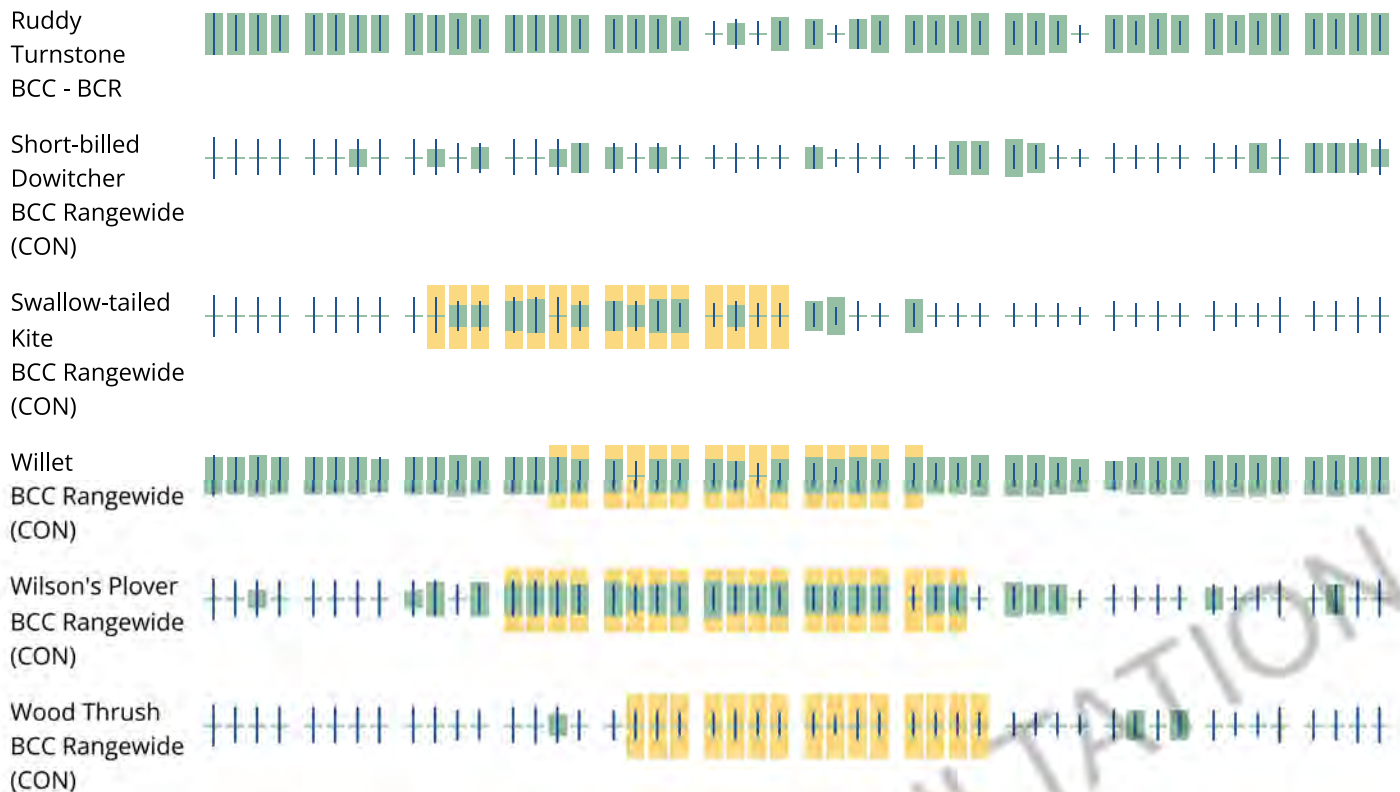
No Data (—)

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact

[Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Marine mammals

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries³ [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the [Marine Mammals](#) page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The [Endangered Species Act](#) (ESA) of 1973.
2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

West Indian Manatee *Trichechus manatus*
<https://ecos.fws.gov/ecp/species/4469>

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

[E1UBL](#)

ESTUARINE AND MARINE WETLAND

[E2EM1N](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

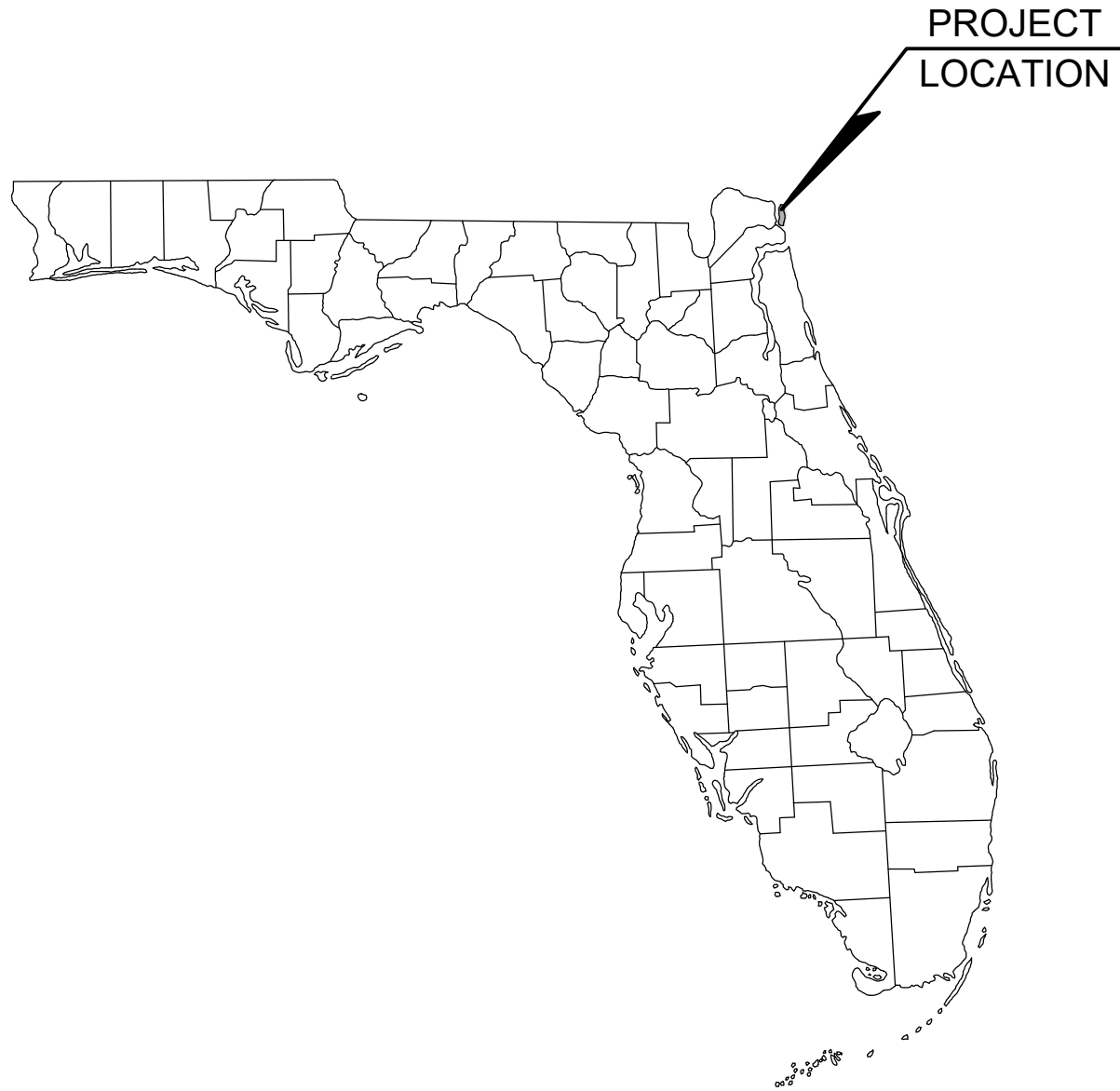
Plotted By: Solt, Cory. Sheet: Sct-CofFB Waterfront Resiliency - Layout-G-001 COVER SHEET April 12, 2024 12:15:07pm K:\JAX_WaterResources\142806004 - FBEL Waterfront Resiliency\Cadd\PlanSheets\G-001 COVER SHEET.dwg
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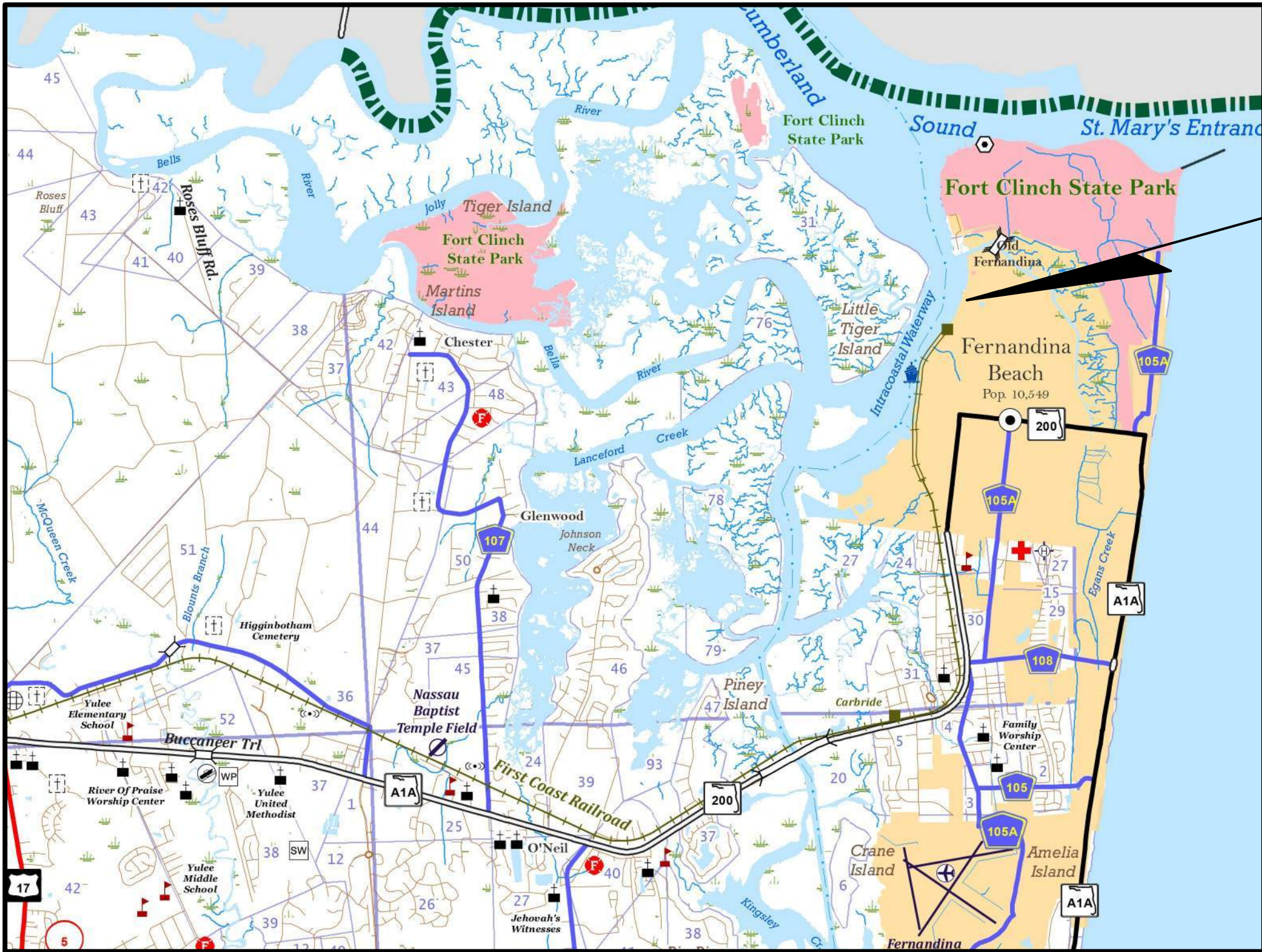
CITY OF FERNANDINA BEACH WATERFRONT RESILIENCY SYSTEM

FERNANDINA BEACH, FLORIDA
SECTION 17, TOWNSHIP 03 N, RANGE 28 E

APRIL 2024



PROJECT
LOCATION



Project
Location

LOCATION MAP

PROJECT OWNER AND CONSULTANTS:

OWNER:
THE CITY OF FERNANDINA BEACH
204 ASH STREET
FERNANDINA BEACH, FL 32034
(904) 277-7300

CIVIL ENGINEERING CONSULTANT:
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STRUCTURAL ENGINEERING CONSULTANT:
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JACKSONVILLE, FL 32258
(904) 828-3900

ELECTRICAL ENGINEERING CONSULTANT:
KIMLEY-HORN AND ASSOCIATES, INC.
201 N FRANKLIN STREET, SUITE 1400
TAMPA, FL 33602
(813) 620-1460

SURVEYOR:
OLIN HYDROGRAPHIC SOLUTIONS, INC.
2900 CALUSA STREET
MIAMI, FL 33133
(305) 619-2800

SUBSURFACE UTILITY SURVEY
DRMP INC.
8001 BELFORT PARKWAY, SUITE 200
JACKSONVILLE, FL 32256
(904) 641-0123

GEOTECHNICAL ENGINEERING CONSULTANT:
MESKEL & ASSOCIATES ENGINEERING,
3728 PHILIPS HIGHWAY, SUITE 208
JACKSONVILLE, FL 32207
(904) 519-6990

QUALITY CONTROL CONSULTANT:
ENGENUITY INFRASTRUCTURE,
2 BRIDGE AVENUE, SUITE 323
RED BANK, NJ 07701
(732) 741-3176

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PRE-FINAL

PRELIMINARY
NOT FOR CONSTRUCTION

PROJECT DATUMS:

HORIZONTAL: NAD83/2011

(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)

VERTICAL: NAVD '88

Always call 811 two full business days before you dig to have
underground utilities located and marked.



COVER SHEET

WATERFRONT RESILIENCY SYSTEM

PREPARED FOR

CITY OF FERNANDINA BEACH

CITY OF FERNANDINA BEACH FLORIDA

SHEET NUMBER
G-001

LICENSED PROFESSIONAL

KIRK F. DROST, P.E.

FLORIDA LICENSE NUMBER

51910

KHA PROJECT

142806004

DATE

APRIL 2024

SCALE: AS SHOWN

DESIGNED BY: _____

DRAWN BY: _____

CHECKED BY: _____

COVER SHEET

WATERFRONT RESILIENCY SYSTEM

PREPARED FOR

CITY OF FERNANDINA BEACH

CITY OF FERNANDINA BEACH FLORIDA

SHEET NUMBER
G-001

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Plotted By: Sait, Cory Sheet: Sait-Cor-FEB Waterfront Resiliency Layout: G-002 GENERAL NOTES Layout: G-002 GENERAL NOTES Date: April 12, 2024 12:15:13pm K:\JAX-WaterResources\142806004-FBFL Waterfront Resiliency\Cadd\BldgSheets\G-002 GENERAL NOTES.dwg

GENERAL NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED FOR THE WORK.
- CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION OF THE SITE PRIOR TO THE BEGINNING OF THE WORK. CONTRACTOR SHALL INFORM THE OWNER AT LEAST 48 HOURS PRIOR TO THE SCHEDULED INSPECTION.
- THE LOCATION OF UTILITIES SHOWN ON THE DRAWINGS ARE FROM THE SURVEYS PROVIDED BY OLIN HYDROGRAPHIC SOLUTIONS, INC. AND DRMP, INC. (JAN 12, 2024) IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM, IN THE FIELD, THE LOCATION AND ELEVATION OF ALL UTILITIES WITHIN PROJECT LIMITS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SHOULD CONDITIONS VARY FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD PRIOR TO CONTINUING CONSTRUCTION.
- CONTRACTOR SHALL LOCATE, VERIFY AND IDENTIFY ALL EXISTING UNDERGROUND UTILITIES SHOWN, OR NOT SHOWN, ON THE PLANS PRIOR TO ANY EXCAVATING ACTIVITIES.
- CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT EXISTING AND NEWLY CONSTRUCTED UTILITIES DURING THE CONSTRUCTION. SHOULD ANY UTILITY LINE OR COMPONENT BECOME DAMAGED OR REQUIRE RELOCATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY THEIR OPERATIONS.
- CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH OTHER WORK WHICH MAY BE ONGOING ADJACENT TO, OR AFFECTING, THIS CONSTRUCTION. CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS AND ALL AFFECTED UTILITY COMPANIES.
- CONTRACTOR SHALL NOTIFY ALL APPLICABLE UTILITY COMPANIES, THE COMPANY REPRESENTATIVE 48 HOURS PRIOR TO THE INITIATING OF ANY EXCAVATION ACTIVITIES, OR AS SPECIFIED BY THE UTILITY COMPANY AND ANY PERMITS REQUIRED FOR THE WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL/DISPOSAL OF ANY UNSUITABLE MATERIAL FROM THE CONSTRUCTION OPERATION, FURNISHING AND COMPACTING SUITABLE REPLACEMENT BACKFILL MATERIAL. DISPOSAL OF UNSUITABLE MATERIAL SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
- THE EXISTING STORMWATER DRAINAGE SYSTEM SHALL REMAIN FUNCTIONAL AND BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE EROSION AND SEDIMENT CONTROL AND SHALL SUBMIT THE EROSION AND SEDIMENT CONTROL PLAN TO THE ENGINEER PRIOR TO MOBILIZING TO THE SITE.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE EROSION AND TURBIDITY CONTROLS IN ACCORDANCE WITH FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION DURING AND FOLLOWING CONSTRUCTION, UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED TO AVOID ADVERSE ENVIRONMENTAL IMPACTS TO OFF-SITE PROPERTY AND DRAINAGE SYSTEMS.
- CONSTRUCTION WARNING SIGNS SHALL BE MOUNTED AND ERECTED BEFORE CONSTRUCTION CAN COMMENCE. THESE, AND ALL TRAFFIC CONTROL DEVICES, SHALL FOLLOW THE STANDARDS SET FORTH BY THE MANUAL OF UNIFORM TRAFFIC DEVICES AND FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD INDEX.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARLY IDENTIFYING THE AREA OF CONSTRUCTION AND SAFELY ROUTING ALL VEHICULAR AND PEDESTRIAN TRAFFIC AROUND THE CONSTRUCTION AREA. THE CONSTRUCTION AREA SHALL BE CLEARLY MARKED AT ALL TIMES.
- CONTRACTOR SHALL RECORD EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION AND RESTORE SITE TO EXISTING CONDITIONS PRIOR TO FINAL COMPLETION.
- CONTRACTOR SHALL COORDINATE WITH CITY OF FERNANDINA BEACH TO HAVE PROJECT AREA, RIGHT OF WAY, AND ETC. CLEARED OF ALL VEHICLES AND WATERCRAFT PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL SEED AND MULCH ALL AREAS DISTURBED BY THE CONSTRUCTION ACCORDING TO LOCAL REGULATIONS. USE SOD ON ANY AREAS WITH SLOPES GREATER THAN 6:1.
- CONTRACTOR SHALL MAINTAIN "AS-BUILT" INFORMATION ON A REGULAR BASIS. CONTRACTOR SHALL EMPLOY THE SERVICES OF A SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO DETERMINE ALL "AS-BUILT" INFORMATION. WITHIN 14 DAYS OF THE COMPLETION OF THE WORK, CONTRACTOR SHALL PROVIDE SIGNED AND SEALED COPIES AND THE DIGITAL CAD FILE OF THE "AS-BUILT" DRAWINGS AND SUPPORTING SURVEY RECORDS TO THE COMPANY REPRESENTATIVE. CAD FILES SHALL BE IN THE AUTOCAD FORMAT.
- CONTRACTOR SHALL HAVE RED LINED AS-BUILT PLANS AND SPECIFICATIONS AVAILABLE ON SITE DURING CONSTRUCTION. RED LINE DRAWINGS SHALL BE UPDATED DAILY.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PRODUCE, SUBMIT, AND OBTAIN APPROVAL OF THE REPRODUCIBLE AS-BUILT DRAWINGS FOR ANY JURISDICTIONAL AGENCIES AS MAY BE REQUIRED.
- CONTRACTOR SHALL GIVE THE ENGINEER A MINIMUM OF 48 HOURS NOTICE OF ALL MEETINGS OR TESTING MEASURES REQUIRED TO BE WITNESSED BY THE ENGINEER ACTIVITIES RELATED TO THE WORK.
- CONTRACTOR SHALL GIVE THE ENGINEER A MINIMUM OF THREE (3) BUSINESS DAYS NOTICE FOR ANY FINAL INSPECTION. THE ENGINEER WILL SCHEDULE INSPECTIONS FOR SUBSTANTIAL AND FINAL COMPLETION.
- A BUILDING PERMIT MUST BE OBTAINED FROM THE CITY OF FERNANDINA BEACH BUILDING DEPARTMENT PRIOR TO COMMENCEMENT OF ANY WORK.
- A RIGHT OF WAY PERMIT MUST BE OBTAINED FROM THE CITY, COUNTY, AND/OR FDOT AS APPLICABLE PRIOR TO COMMENCEMENT OF ANY WORK WITHIN THE RIGHT OF WAY.
- CONTRACTOR RESPONSIBLE TO SECURE ACCESS TO AREAS OF THE PROJECT SITE AS REQUIRED FOR STAGING AND STORAGE.
- THE CONTRACTOR SHALL TAKE PICTURES AND VIDEO RECORDINGS OF THE ENTIRE PROJECT LIMITS PRIOR TO MOBILIZING FOR CONSTRUCTION TO DOCUMENT THE EXISTING CONDITIONS. COPIES OF THESE IMAGES AND VIDEOS SHALL BE SUBMITTED TO THE CITY WITHIN ONE WEEK OF THE INFORMATION BEING COLLECTED VIA THUMB DRIVE OR FILE TRANSFER SITE.
- THE CONTRACTOR SHALL TAKE PICTURES OF THE PROJECT LIMITS AT LEAST ONCE PER WEEK THROUGHOUT THE DURATION OF THE CONSTRUCTION WORK. COPIES OF THESE IMAGES SHALL BE SUBMITTED TO THE CITY WITHIN ONE WEEK OF THE INFORMATION BEING COLLECTED VIA THUMB DRIVE OR FILE TRANSFER SITE.

PAVING, GRADING AND DRAINAGE NOTES

- ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OR FDOT SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.
- ALL UNPAVED AREAS IN THE PROJECT AREA AND EXISTING RIGHTS-OF-WAY DISTURBED BY CONSTRUCTION SHALL BE REGRADED AND SODDED.
- TRAFFIC CONTROL ON ALL FDOT, LOCAL AND COUNTY RIGHTS-OF-WAY SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (U.S. DOT/FHA) AND THE REQUIREMENTS OF THE STATE AND ANY LOCAL AGENCY HAVING JURISDICTION. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
- THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL A GRASS STAND IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.
- ALL OPEN AREAS WITHIN THE PROJECT SITE SHALL BE SODDED UNLESS INDICATED OTHERWISE ON THE LANDSCAPE PLAN.
- ALL AREAS INDICATED AS PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL PAVEMENT SECTIONS AS INDICATED ON THE DRAWINGS.
- WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL SAW CUT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND REPLACE THE PAVEMENT WITH THE SAME TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS INDICATED.
- THE CONTRACTOR SHALL INSTALL FILTER FABRIC OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.
- IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE DESIGN ENGINEER PRIOR TO ANY EXCAVATION.
- STRIP TOPSOIL AND ORGANIC MATTER FROM ALL AREAS OF THE SITE AS REQUIRED. IN SOME CASES TOPSOIL MAY BE STOCKPILED ON SITE FOR PLACEMENT WITHIN LANDSCAPED AREAS BUT ONLY AS DIRECTED BY THE OWNER.
- FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY OR TO FDOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
- ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED AS SHOWN ON THE LANDSCAPING PLAN.
- ALL CUT OR FILL SLOPES SHALL BE 4 (HORIZONTAL) :1 (VERTICAL) OR FLATTER UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
- THE CONTRACTOR SHALL TAKE ALL REQUIRED MEASURES TO CONTROL TURBIDITY, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF TURBIDITY BARRIERS AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO THE PROPOSED WORK. TURBIDITY BARRIERS MUST BE MAINTAINED IN EFFECTIVE CONDITION AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THEREAFTER, THE CONTRACTOR MUST REMOVE THE BARRIERS. AT NO TIME SHALL THERE BE ANY OFF-SITE DISCHARGE WHICH VIOLATES THE WATER QUALITY STANDARDS IN CHAPTER 17-302, FLORIDA ADMINISTRATIVE CODE.
- SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.
- THE CONTRACTOR MUST REVIEW AND MAINTAIN A COPY OF THE ENVIRONMENTAL RESOURCE PERMIT COMPLETE WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS, AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY WATER MANAGEMENT DISTRICT REPRESENTATIVES.

NORTH ATLANTIC RIGHT WHALE INFORMATION

1. DISTURBANCE IS IDENTIFIED IN THE FINAL RECOVERY PLAN FOR THE NORTHERN RIGHT WHALE (RECOVERY PLAN) AS AMONG THE PRINCIPAL HUMAN-INDUCED FACTORS IMPEDING RECOVERY OF THE NORTHERN RIGHT WHALE (EUBALAENA GLACIALIS) (NMFS, 1991). nmfs IS ISSUING THIS INTERIM FINAL RULE TO RESTRICT APPROACHES WITHIN 500 YARDS (460 M) OF A RIGHT WHALE, WHETHER BY VESSEL, AIRCRAFT OR OTHER MEANS, IN AN ATTEMPT TO REDUCE THE CURRENT LEVEL OF DISTURBANCE AND THE POTENTIAL FOR VESSEL INTERACTION AND INJURY. THIS RULE REQUIRES RIGHT WHALE AVOIDANCE MEASURES IF A VESSEL OR AIRCRAFT IS WITHIN THE 500-YARD (460 M) RESTRICTED AREA. GENERALLY, VESSELS ARE REQUIRED TO IMMEDIATELY DEPART FROM THE AREA AT A SLOW, SAFE SPEED IN A DIRECTION AWAY FROM THE WHALE. EXCEPTIONS ARE PROVIDED FOR EMERGENCY SITUATIONS, WHERE CERTAIN AUTHORIZATIONS ARE PROVIDED FOR AIRCRAFT OPERATIONS (UNLESS THE AIRCRAFT IS CONDUCTING WHALE WATCH ACTIVITIES), FOR CERTAIN RIGHT WHALE DISENTANGLEMENT/RESCUE EFFORTS AND INVESTIGATIONS, AND FOR A VESSEL RESTRICTED IN ITS ABILITY TO MANEUVER AND UNABLE TO COMPLY WITH THE RIGHT WHALE AVOIDANCE MEASURES.

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

- ALL PERSONNEL ASSOCIATED WITH THE PROJECT SHALL BE INSTRUCTED ABOUT THE PRESENCE OF MANATEES AND MANATEE SPEED ZONES, AND THE NEED TO AVOID COLLISIONS WITH AND INJURY TO MANATEES. THE PERMITTEE SHALL ADVISE ALL CONSTRUCTION PERSONNEL THAT THERE ARE CIVIL AND CRIMINAL PENALTIES FOR HARMING, HARASSING, OR KILLING MANATEES WHICH ARE PROTECTED UNDER THE MARINE MAMMAL PROTECTION ACT, THE ENDANGERED SPECIES ACT, AND THE FLORIDA MANATEE SANCTUARY ACT.
- ALL VESSELS ASSOCIATED WITH THE CONSTRUCTION PROJECT SHALL OPERATE AT "IDLE SPEED/NO WAKE" AT ALL TIMES WHILE IN THE IMMEDIATE AREA AND WHILE IN WATER WHERE THE DRAFT OF THE VESSEL PROVIDES LESS THAN A FOUR-FOOT CLEARANCE FROM THE BOTTOM. ALL VESSELS WILL FOLLOW ROUTES OF DEEP WATER WHENEVER POSSIBLE.
- SILTATION OR TURBIDITY BARRIERS SHALL BE MADE OF MATERIAL IN WHICH MANATEES CANNOT BECOME ENTANGLED, SHALL BE PROPERLY SECURED, AND SAHLL BE REGULARLY MONITORED TO AVOID MANATEE ENTANGLEMENT OR ENTRAPMENT. BARRIERS MUST NOT IMPEDE MANATEE MOVEMENT.
- ALL ON-SITE PROJECT PERSONNEL ARE RESPONSIBLE FOR OBSERVING WATER-RELATED ACTIVITIES FOR THE PRESENCE OF MANATEE(S). ALL IN-WATER OPERATIONS, INCLUDING VESSELS, MUST BE SHUTDOWN IF A MANATEE(S) COMES WITHIN 50 FEET OF THE OPERATION. ACTIVITIES WILL NOT RESUME UNTIL THE MANATEE(S) HAS MOVED BEYOND THE 50-FOOT RADIUS OF THE PROJECT OPERATION, OR UNTIL 30 MINUTES ELAPSES IF THE MANATEE(S) HAS NOT REAPPEARED WITHIN 50 FEET OF THE OPERATION. ANIMALS MUST NOT BE HERDED AWAY OR HARASSED INTO LEAVING.
- ANY COLLISION WITH OR INJURY TO A MANATEE SHALL BE REPORTED IMMEDIATELY TO THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC) HOTLINE AT 1-888-404-3922. COLLISION AND/OR INJURY SHOULD ALSO BE REPORTED TO THE U.S. FISH AND WILDLIFE SERVICE IN JACKSONVILLE (1-9040731-3336) FOR NORTH FLORIDA OR VERO BEACH (1-772-562-3909) FOR SOUTH FLORIDA, AND TO FWC AT IMPERILEDSPECIES@MYFWC.COM
- TEMPORARY SIGNS CONCERNING MANATEES SHALL BE POSTED PRIOR TO AND DURING ALL IN-WATER PROJECT ACTIVITIES. ALL SIGNS ARE TO BE REMOVED BY THE PERMITTEE UPON COMPLETION OF THE PROJECT. TEMPORARY SIGNS THAT HAVE ALREADY BEEN APPROVED FOR THIS USE BY THE FWC MUST BE USED; ONE SIGN WHICH READS: *CAUTION: BOATERS* MUST BE POSTED. A SECOND SIGN MEASURING AT LEAST 8 1/2" BY 11" EXPLAINING THE REQUIREMENTS FOR "IDLE SPEED/NO WAKE" AND THE SHUT DOWN OF IN-WATER OPERATIONS MUST BE POSTED IN A LOCATION PROMINENTLY VISIBLE TO ALL PERSONNEL ENGAGED IN WATER-RELATED ACTIVITIES. THESE SIGNS CAN BE VIEWED AT MYFWC.COM/MANATEE. QUESTIONS CONCERNING THESE SIGNS CAN BE SENT TO THE EMAIL ADDRESS LISTED ABOVE.



SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

- THE PERMITTEE SHALL INSTRUCT ALL PERSONNEL ASSOCIATED WITH THE PROJECT OF THE POTENTIAL PRESENCE OF THESE SPECIES AND THE NEED TO AVOID COLLISIONS WITH SEA TURTLES AND SMALLTOOTH SAWFISH. ALL CONSTRUCTION PERSONNEL ARE RESPONSIBLE FOR OBSERVING WATER-RELATED ACTIVITIES FOR THE PRESENCE OF THESE SPECIES.
- THE PERMITTEE SHALL ADVISE ALL CONSTRUCTION PERSONNEL THAT THERE ARE CIVIL AND CRIMINAL PENALTIES FOR HARMING, HARASSING, OR KILLING SEA TURTLES OR SMALLTOOTH SAWFISH, WHICH ARE PROTECTED UNDER THE ENDANGERED SPECIES ACT OF 1973.
- SILTATION BARRIERS SHALL BE MADE OF MATERIAL IN WHICH A SEA TURTLE OR SMALLTOOTH SAWFISH CANNOT BECOME ENTANGLED, BE PROPERLY SECURED, AND BE REGULARLY MONITORED TO AVOID PROTECTED SPECIES ENTRAPMENT. BARRIERS MAY NOT BLOCK SEA TURTLE OR SMALLTOOTH SAWFISH ENTRY TO OR EXIT FROM DESIGNATED CRITICAL HABITAT WITHOUT PRIOR AGREEMENT FROM THE NATIONAL MARINE FISHERIES SERVICE'S PROTECTED RESOURCES DIVISION, ST. PETERSBURG, FLORIDA.
- ALL VESSELS ASSOCIATED WITH THE CONSTRUCTION PROJECT SHALL OPERATE AT "NO WAKE"/"IDLE" SPEEDS AT ALL TIMES WHILE IN THE CONSTRUCTION AREA AND WHILE IN WATER DEPTHS WHERE THE DRAFT OF THE VESSEL PROVIDES LESS THAN A FOUR-FOOT CLEARANCE FROM THE BOTTOM. ALL VESSELS WILL PREFERENTIALLY FOLLOW DEEP-WATER ROUTES (E.G., MARKED CHANNELS) WHENEVER POSSIBLE.
- IF A SEA TURTLE OR SMALLTOOTH SAWFISH IS SEEN WITHIN 100 YARDS OF THE ACTIVE DAILY CONSTRUCTION/DREDGING OPERATION OR VESSEL MOVEMENT, ALL APPROPRIATE PRECAUTIONS SHALL BE IMPLEMENTED TO ENSURE ITS PROTECTION. THESE PRECAUTIONS SHALL INCLUDE CESSATION OF OPERATION OF ANY MOVING EQUIPMENT CLOSER THAN 50 FEET OF A SEA TURTLE OR SMALLTOOTH SAWFISH. OPERATION OF ANY MECHANICAL CONSTRUCTION EQUIPMENT SHALL CEASE IMMEDIATELY IF A SEA TURTLE OR SMALLTOOTH SAWFISH IS SEEN WITHIN A 50-FEET RADIUS OF THE EQUIPMENT. ACTIVITIES MAY NOT RESUME UNTIL THE PROTECTED SPECIES HAS DEPARTED THE PROJECT AREA OF ITS OWN VOLITION.
- ANY COLLISION WITH AND/OR INJURY TO A SEA TURTLE OR SMALLTOOTH SAWFISH SHALL BE REPORTED IMMEDIATELY TO THE NATIONAL MARINE FISHERIES SERVICE'S PROTECTED RESOURCES DIVISION (727-824-5312) AND THE LOCAL AUTHORIZED SEA TURTLE STRANDING/RESCUE ORGANIZATION.
- ANY SPECIAL CONSTRUCTION CONDITIONS, REQUIRED OF YOUR SPECIFIC PROJECT, OUTSIDE THESE GENERAL CONDITIONS, IF APPLICABLE, WILL BE ADDRESSED IN THE PRIMARY CONSULTATION.

PRE-FINAL

PRELIMINARY
NOT FOR CONSTRUCTION

PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

GENERAL NOTES

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

SHEET NUMBER
G-002

KHA PROJECT
142806004

DATE
APRIL 2024

SCALE: AS SHOWN

DESIGNED BY: _____

DRAWN BY: _____

CHECKED BY: _____

LICENSED PROFESSIONAL
KIRK F. DROST, P.E.

FLORIDA LICENSE NUMBER
51910

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AND SEALED BY _____

ON THE DATE ADJACENT TO THE SEAL

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JACKSONVILLE, FLORIDA 32258

PHONE: 904-828-3900
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

CITY OF FERNANDINA BEACH

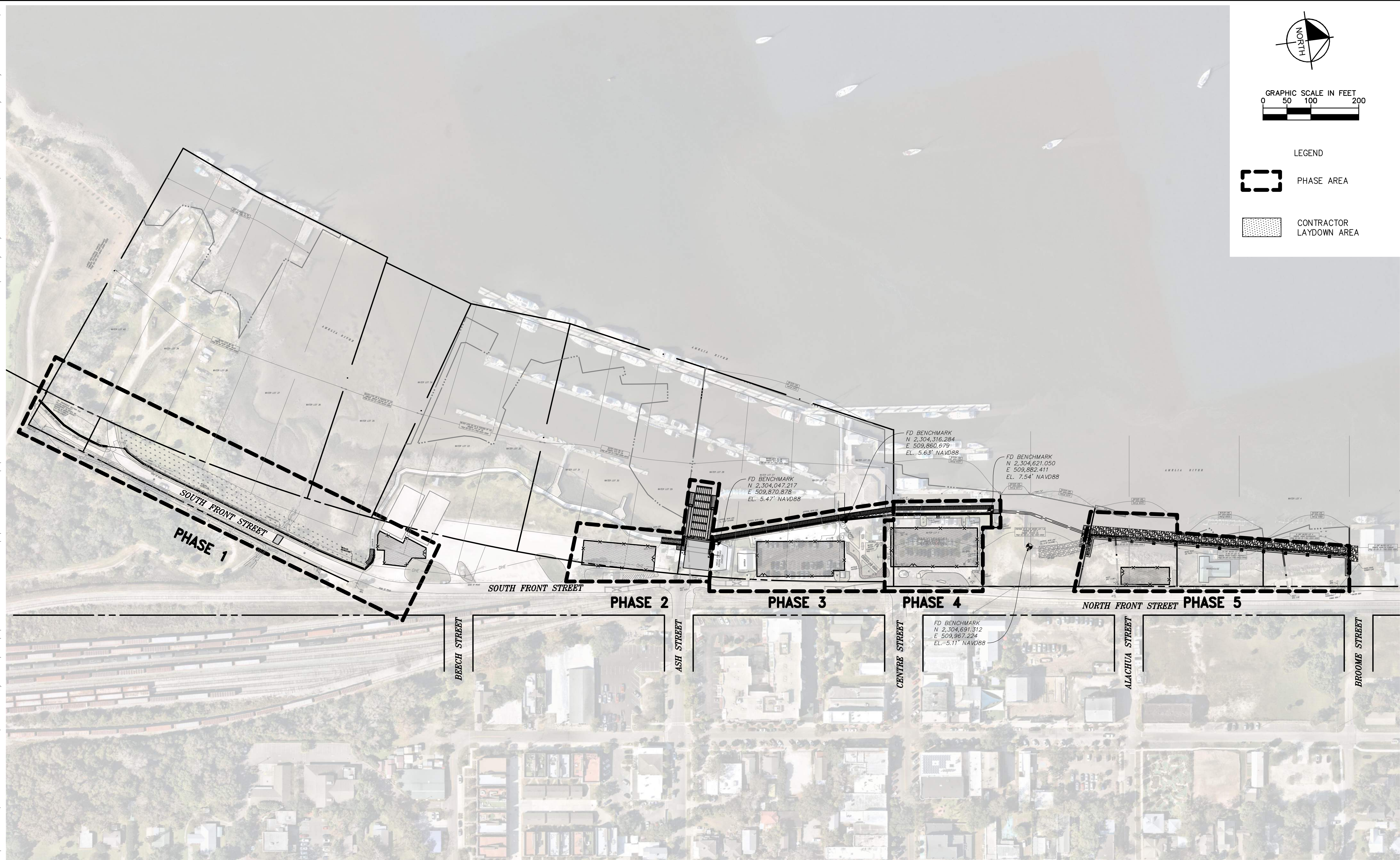
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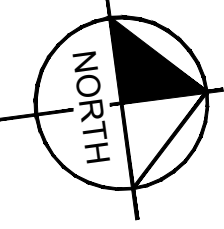
REVISIONS

DATE

BY

Plotted: By:Salt_Corv_Sheet_Sat:CoFE Waterfront Resiliency_Layout:01_April 12, 2024, 12:15:25pm_K:\JAX_WaterResources\142806004_-_EBEL_Waterfront_Resiliency\Cadd\PlanSheets\C-001_OVERALL_SITE_PLAN.dwg
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NORTH

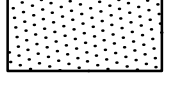
GRAPHIC SCALE IN FEET

0 50 100 200

LEGEND



PHASE AREA



CONTRACTOR LAYDOWN AREA

OVERALL SITE PLAN		KHA PROJECT 142806004	DATE APRIL 2024	LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910		 © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3500 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	No.	REVISIONS	DATE	BY
WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH		SCALE: AS SHOWN DESIGNED BY: KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL		THIS SEAL HAS BEEN DIGITALLY SIGNED AND SEALED BY: KIRK F. DROST, P.E. PRINTED COPIES OF THIS DOCUMENT MAY BE REPRODUCED AND COPIES MADE, BUT THE SEAL AND SIGNATURE MUST BE SEALED ON ANY ELECTRONIC COPIES						
CITY OF FERNANDINA BEACH		DRAWN BY:		CHECKED BY:						
CITY OF FERNANDINA BEACH		FLORIDA								
SHEET NUMBER										
C-001										

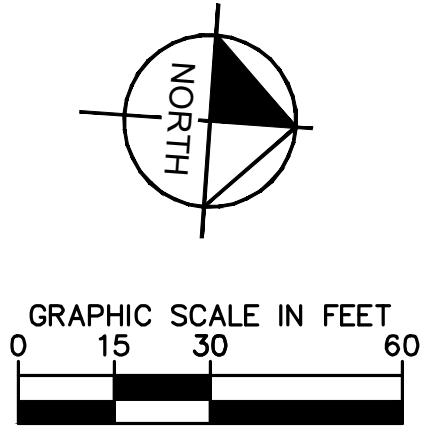
PRE-FINAL

PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

PRELIMINARY
NOT FOR CONSTRUCTION

Always call 811 two full business days before you dig to have
underground utilities located and marked.





<u>LEGEND:</u>	
	UNDERGROUND
	UNKNOWN UTILITY
	WETLAND DELINEATION
	OVERHEAD ELECTRIC
	FENCE LINE
	WETLAND DELINEATION LINE
	BUTLER LINE
	WATER LOT LINE
	PROPERTY LINE
	RIGHT OF WAY
	HYDRANT
	GAS VALVE
	FUEL MAN-HOLE
	SANITARY MAN-HOLE
	BENCHMARK
	PILE
	INLET
	POWER POLE

**PRELIMINARY
NOT FOR CONSTRUCTION**

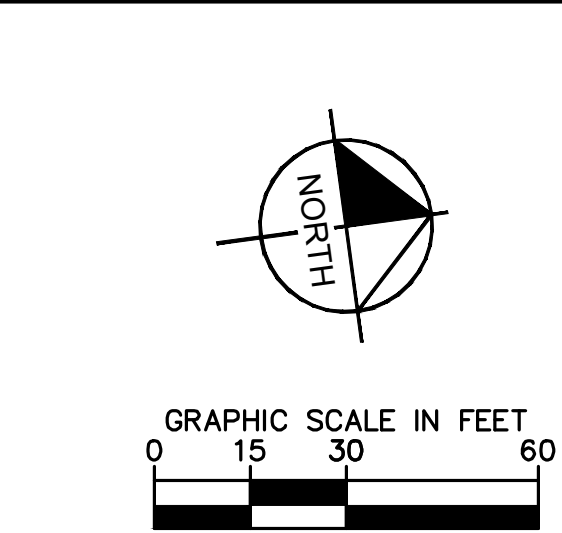
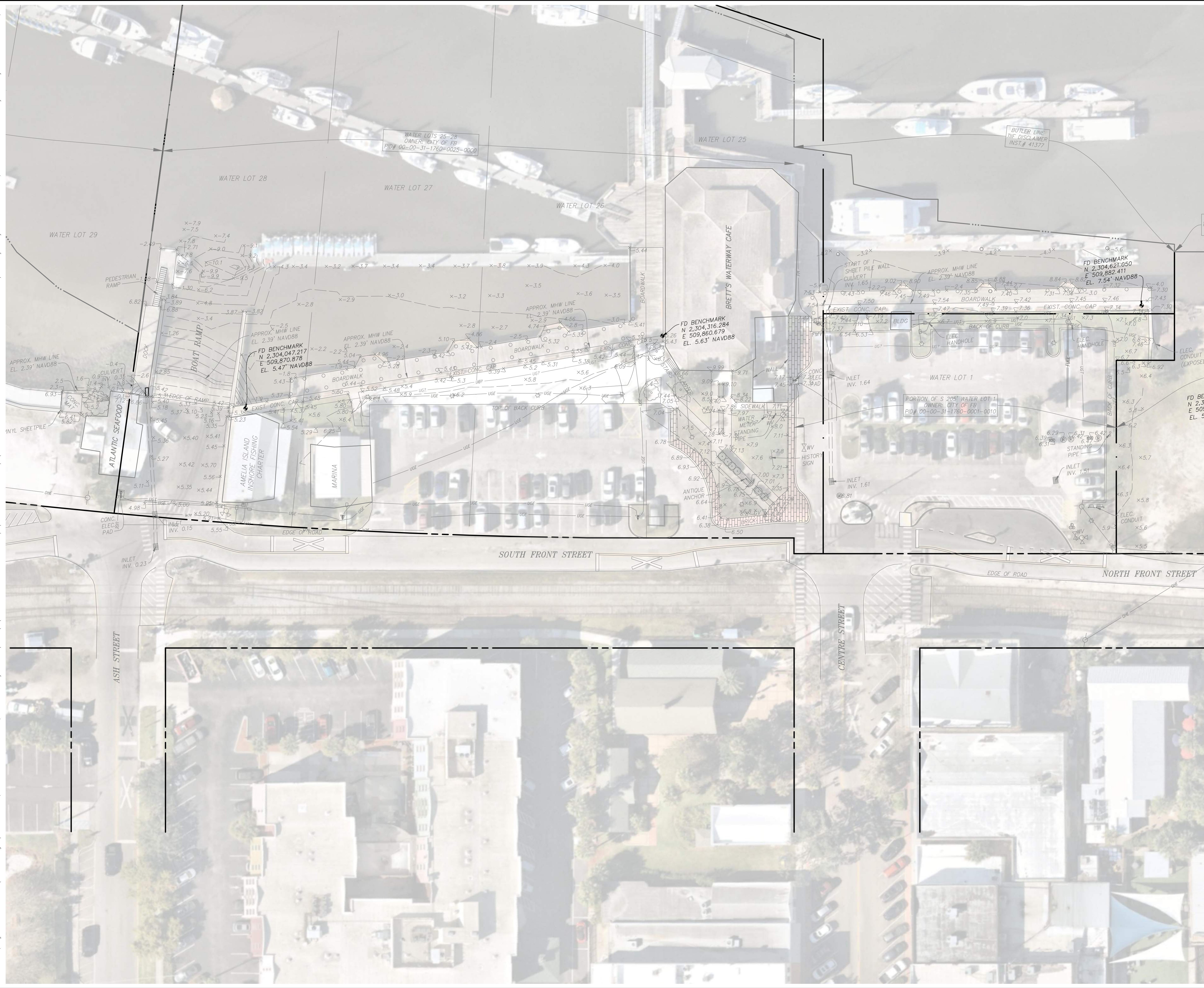
PRE-FINAL

PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

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[illegible]

Plotted By: Solt, Cory. Sheet: Sct.CofEL Waterfront Resiliency - Layout.01 April 12, 2024, 12:15:49pm K:\JAX WaterResources\142806004 - FBEL Waterfront Resiliency\Cadd\PlanSheets\C-003 EXISTING CONDITIONS - SEGMENTS 2-4.dwg
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- LEGEND:**
- UG7 UNDERGROUND UNKNOWN UTILITY
 - WM UNDERGROUND WATERMAIN
 - DNE UNDERGROUND ELECTRIC
 - UGT UNDERGROUND TELEPHONE
 - FO BURIED FIBER OPTIC
 - FM SANITARY FORCE MAIN
 - FUEL UNDERGROUND FUEL
 - DNE OVERHEAD ELECTRIC
 - X-X-X-X FENCE LINE
 - JD WETLAND DELINEATION LINE
 - BUTLER LINE
 - WATER LOT LINE
 - PROPERTY LINE
 - RIGHT OF WAY
 - HYDRANT
 - GAS VALVE
 - SANITARY FORCE MAIN VALVE
 - WATERMAIN VALVE
 - FUEL MAN-HOLE
 - SANITARY MAN-HOLE
 - BENCHMARK
 - PILE
 - INLET
 - POWER POLE

PRELIMINARY
NOT FOR CONSTRUCTION

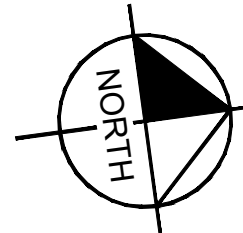
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PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

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EXISTING CONDITIONS - SEGMENTS 2-4		KHA PROJECT 142806004		LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910		KIMLEY-HORN AND ASSOCIATES, INC. 12740 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM	
WATERFRONT RESILIENCY SYSTEM		DATE APRIL 2024		THIS PLAN HAS BEEN DIGITALLY SIGNED AND SEALED BY: KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL		© 2024 KIMLEY-HORN AND ASSOCIATES, INC.	
CITY OF FERNANDINA BEACH		DESIGNED BY: _____		PRINTED COPIES OF THIS DOCUMENT MUST BE SIGNED AND SEALED BY THE DESIGNER AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES		12740 JACKSONVILLE, FLORIDA 32258	
CITY OF FERNANDINA BEACH		DRAWN BY: _____		CHECKED BY: _____		REGISTRY No. 35106	
SHEET NUMBER C-003		FLORIDA		REVISIONS		DATE	
						BY	



GRAPHIC SCALE IN FEET



LEGEND:

- | | |
|--|-----------------------------|
| | UNDERGROUND UNKNOWN UTILITY |
| | UNDERGROUND WATERMAIN |
| | UNDERGROUND ELECTRIC |
| | UNDERGROUND TELEPHONE |
| | BURIED FIBER OPTIC |
| | SANITARY FORCE MAIN |
| | UNDERGROUND FUEL |
| | OVERHEAD ELECTRIC |
| | FENCE LINE |
| | WETLAND DELINEATION LINE |
| | BUTLER LINE |
| | WATER LOT LINE |
| | PROPERTY LINE |
| | RIGHT OF WAY |
| | HYDRANT |
| | GAS VALVE |
| | SANITARY FORCE MAIN VALVE |
| | WATERMAIN VALVE |
| | FUEL MAN-HOLE |
| | SANITARY MAN-HOLE |
| | BENCHMARK |
| | PILE |
| | INLET |
| | POWER POLE |

**PRELIMINARY
NOT FOR CONSTRUCTION**

PRE-FINAL

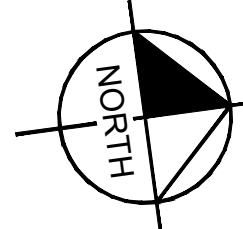
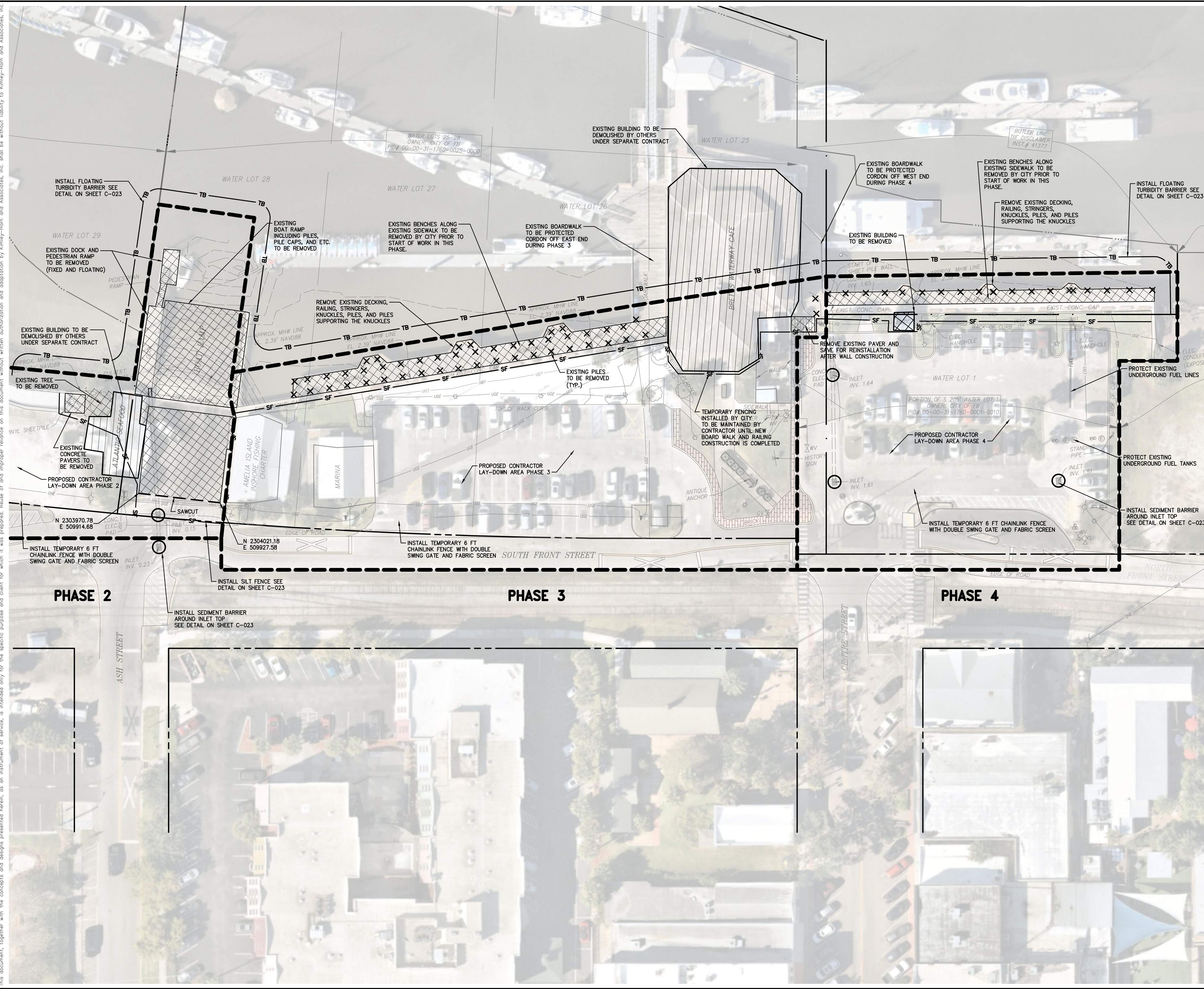
PROJECT DATUMS:

HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)

VERTICAL: NAVD '88

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[illegible]



GRAPHIC SCALE IN FEET

A horizontal line with vertical tick marks at 0, 15, 30, and 60. The segments between 0 and 15, 15 and 30, and 30 and 60 are shaded black. The segment between 0 and 15 is divided into three equal parts by two small tick marks. The segment between 15 and 30 is divided into two equal parts by one small tick mark. The segment between 30 and 60 is divided into four equal parts by three small tick marks.

LEGEND:

- | | |
|-----------------------------|-----------------------------|
| UGT | UNDERGROUND UNKNOWN UTILITY |
| WM | UNDERGROUND WATERMAIN |
| OHE | UNDERGROUND ELECTRIC |
| UGT | UNDERGROUND TELEPHONE |
| FO | BURIED FIBER OPTIC |
| FM | SANITARY FORCE MAIN |
| FUEL | UNDERGROUND FUEL |
| OHE | OVERHEAD ELECTRIC |
| X X X X X X X X | FENCE LINE |
| JD | WETLAND DELINEATION LINE |
| ... | BUTLER LINE |
| . | WATER LOT LINE |
| . | PROPERTY LINE |
| - - - - - | RIGHT OF WAY |
| | HYDRANT |
| | GAS VALVE |
| | SANITARY FORCE MAIN VALVE |
| | WATERMAIN VALVE |
| | FUEL MAN-HOLE |
| | SANITARY MAN-HOLE |
| | BENCHMARK |
| | PILE |
| | INLET |
| | POWER POLE |
| SF | SILT FENCE |
| TB | FLOATING TURBIDITY BARRIER |
| X X X X X X X X X X X X X X | DEMOLITION LINE |
| / / / / / / / / / / / / / / | RELOCATION LINE |
| | INLET PROTECTION |
| | PAVEMENT REMOVAL |
| | CLEARING LIMITS |
| | CONTRACTOR LAY-DOWN AREA |

NOTES:

1. FOR PROJECT BENCHMARKS REFER TO SHEET C-001

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PRE-FINAL

PROJECT DATUMS:

HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
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VERTICAL: NAVD '88

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CLEARING AND DEMOLITION PLAN - SEGMENTS 2-4		KHA PROJECT 142806004 DATE APRIL 2024		LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910		 © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106		No.	REVISIONS	DATE	BY
WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH		SCALE: AS SHOWN ON THE DATE ADJACENT TO THE SEAL KIRK F. DROST, P.E.		THIS ITEM HAS BEEN DIGITALLY SIGNED ON THE DATE ADJACENT TO THE SEAL KIRK F. DROST, P.E.							
CITY OF FERNANDINA BEACH FLORIDA		DESIGNED BY: _____		PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND THEIR VALIDITY CANNOT BE VERIFIED ON ANY ELECTRONIC COPIES							
CITY OF FERNANDINA BEACH FLORIDA		DRAWN BY: _____									
CITY OF FERNANDINA BEACH FLORIDA		CHECKED BY: _____									

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WWW.KIMLEY-HORN.COM REGISTRY No. 35106

KHA PROJECT 142806004	LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER
DATE	

DATE	APRIL 2024
FLORIDA LICENSE NUMBER	51910

SALE: AS SHOWN	THIS ITEM HAS BEEN DIGITALLY SIGNED
DESIGNED BY:	AND SEALED BY KIRK F. DROST, P.E.
DRAWN BY:	ON THE DATE ADJACENT TO THE SEAL
CHECKED BY:	PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES

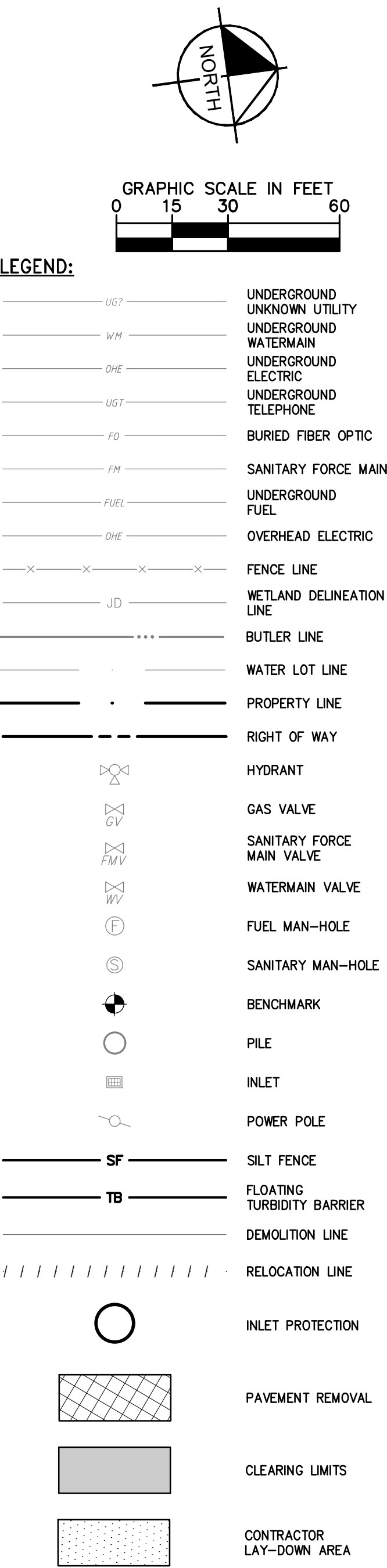
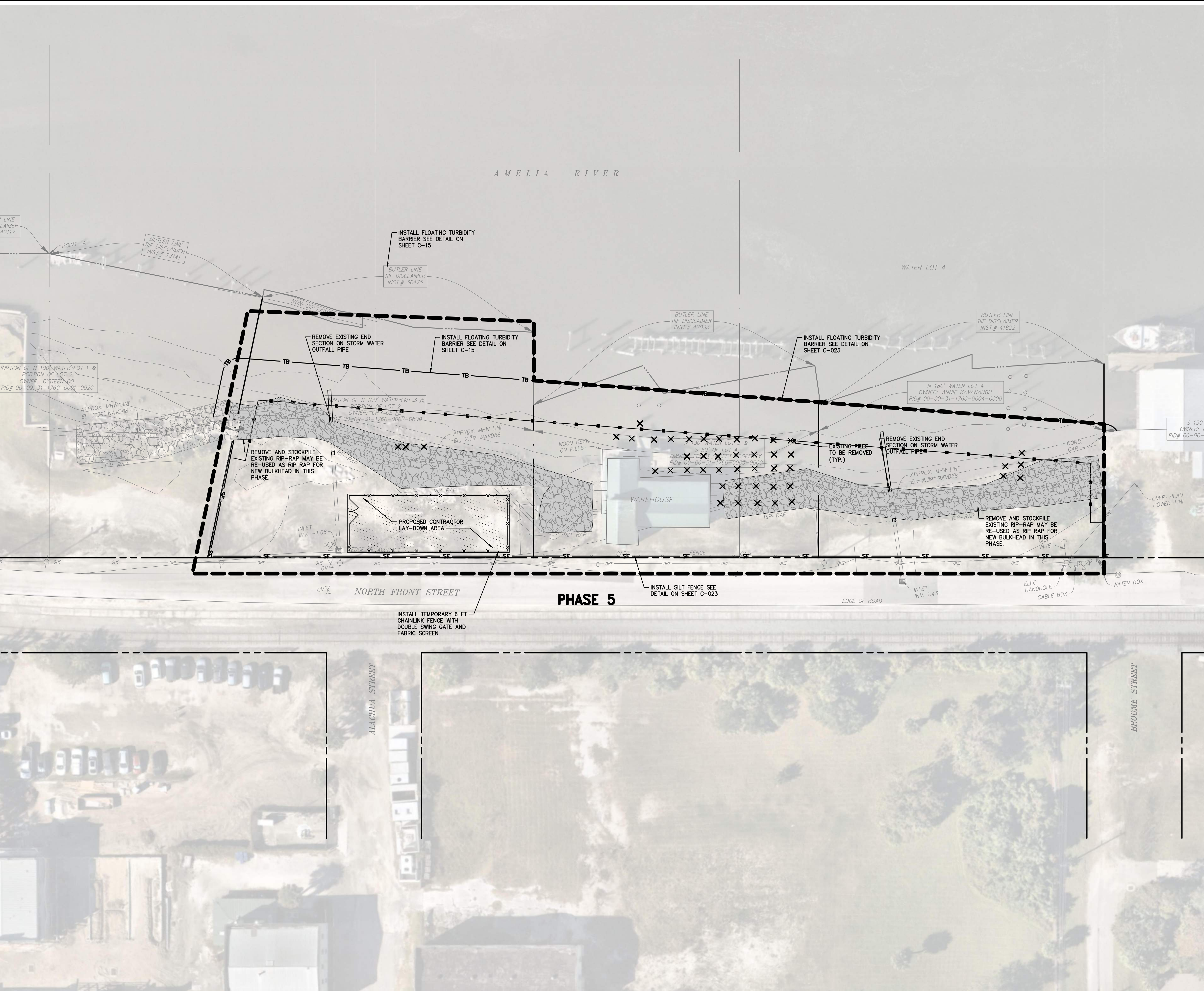
CLEARING AND DEMOLITION PLAN - SEGMENTS 2-4

WATERFRONT RESILIENCY SYSTEM

PREPARED FOR
CITY OF FERNANDINA BEACH

CITY OF FERNANDINA BEACH
FLORIDA

SHEET NUMBER
C-006



1. FOR PROJECT BENCHMARKS REFER TO SHEET C-001

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PROJECT DATUMS:

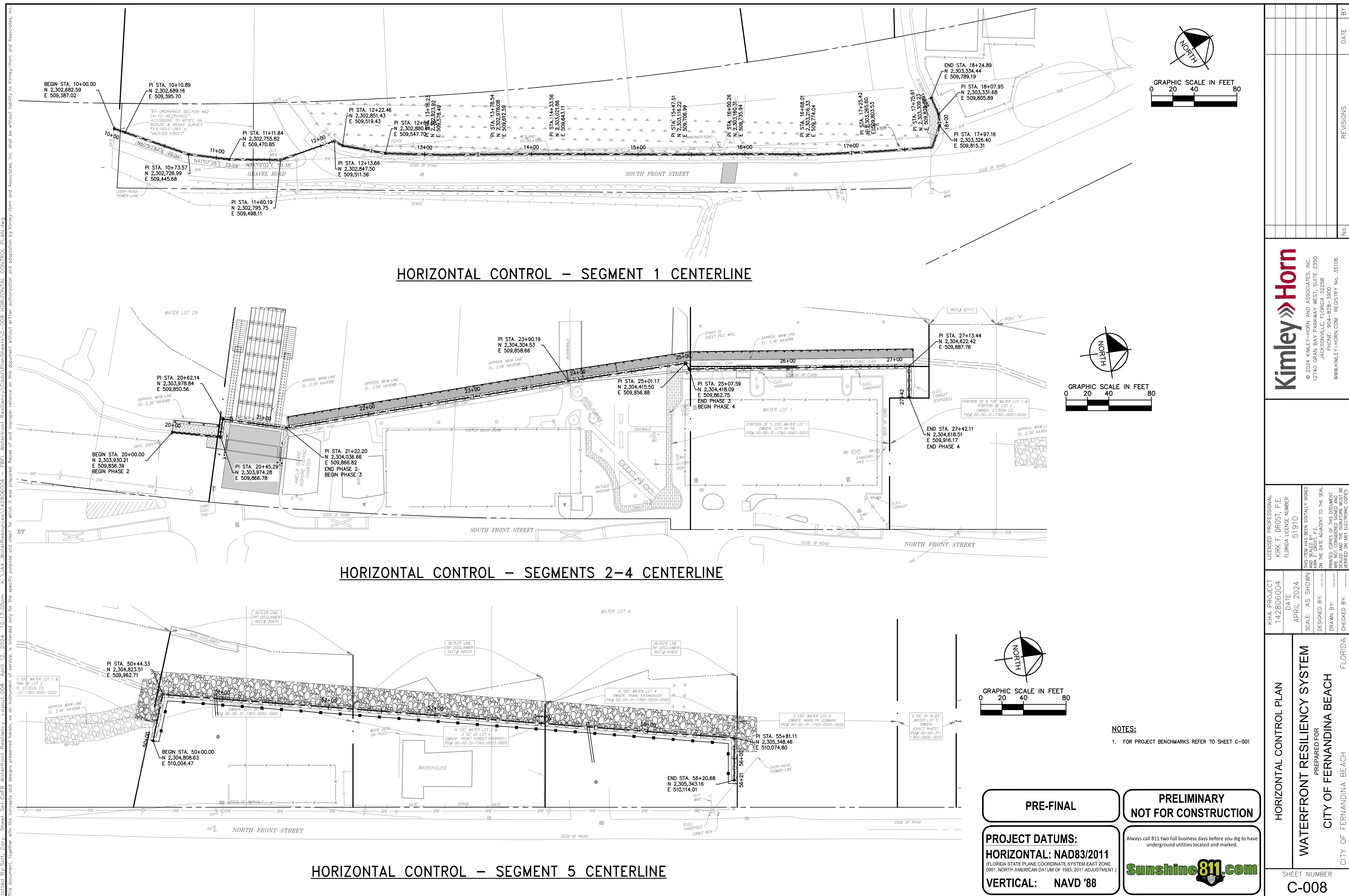
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(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
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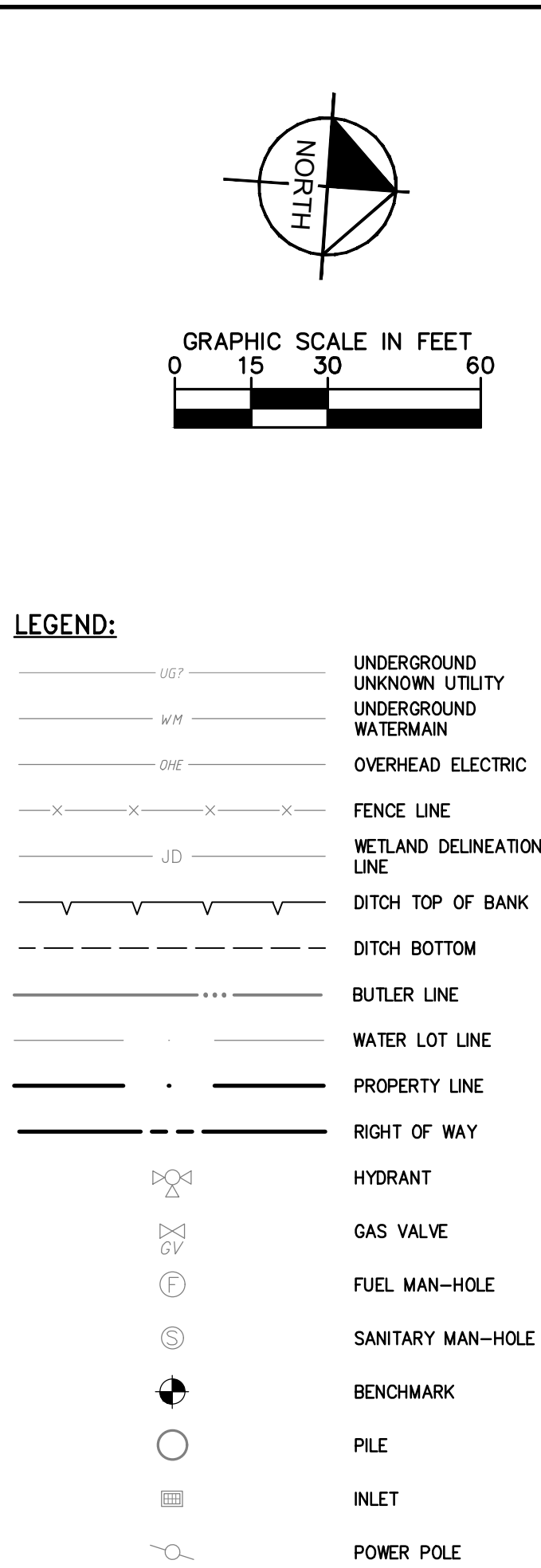
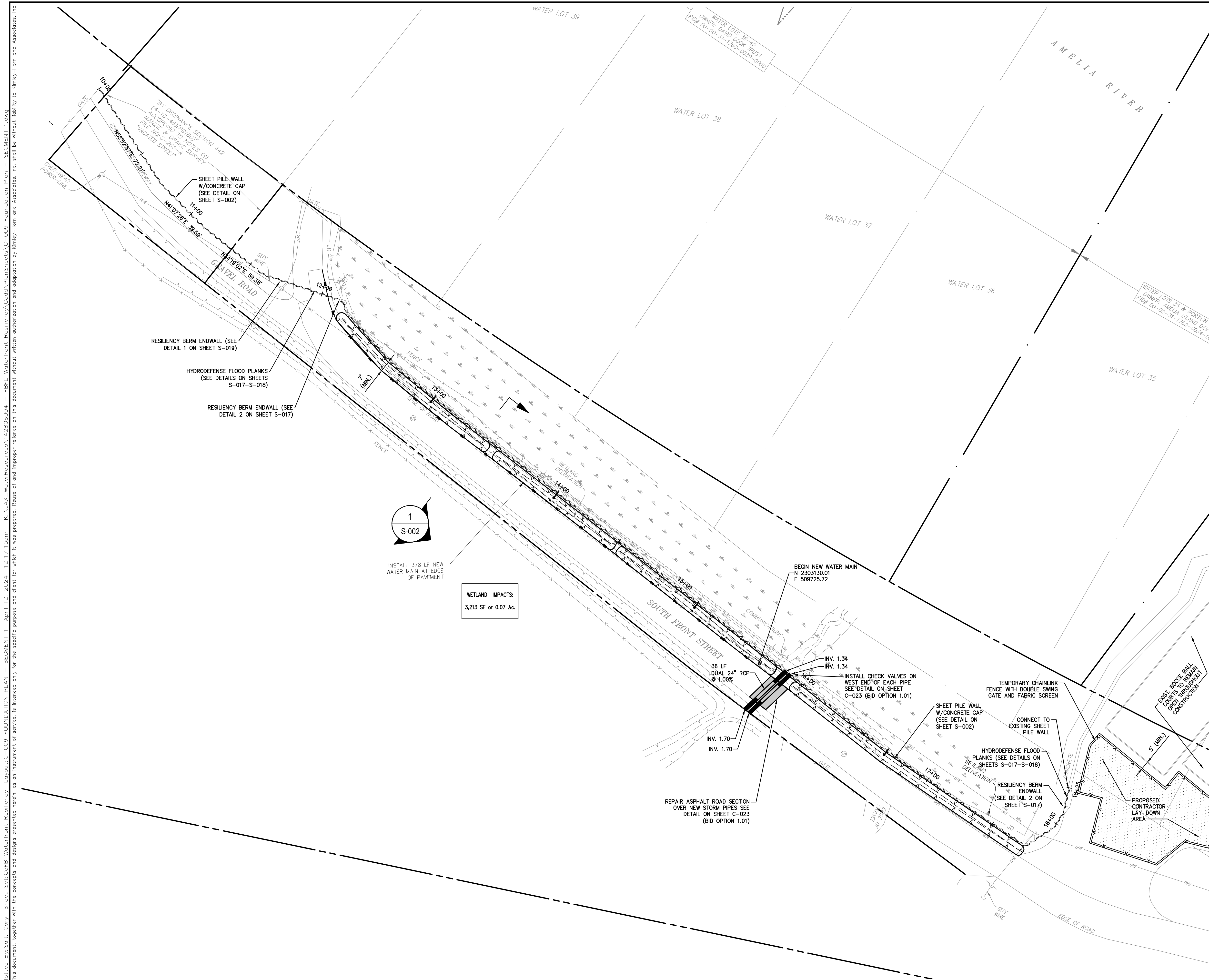
VERTICAL: NAVD '88

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[illegible]





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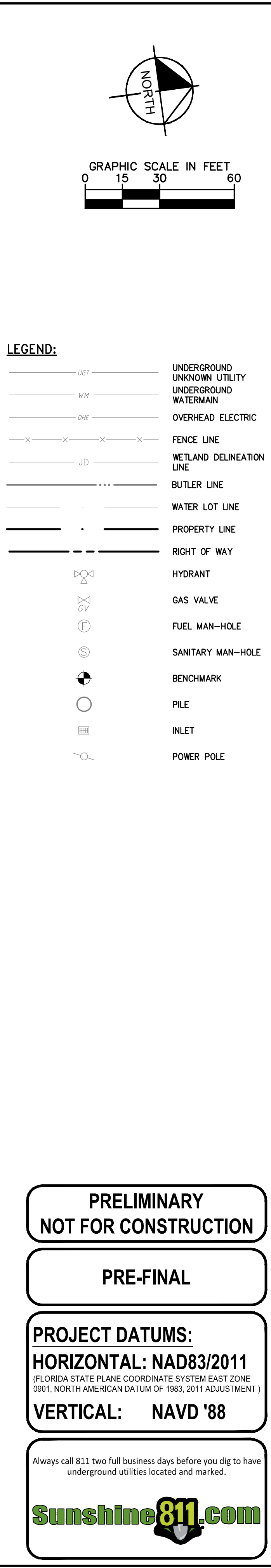
PRE-FINAL

PROJECT DATUMS:
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 (FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

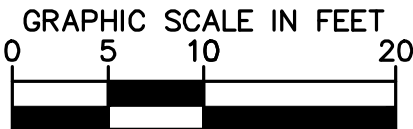
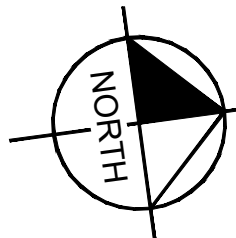
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SHEET NUMBER C-009	FOUNDATION PLAN - SEGMENT 1		KHA PROJECT 142806004	LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910	 © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-928-5900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	No.	REVISIONS	DATE	BY
	WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH		SCALE: AS SHOWN	THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY: KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL.					
			DATE: APRIL 2024	PRINTED COPIES OF THIS DOCUMENT MAY BE REPRODUCED FOR OFFICIAL USE ONLY. ANY OTHER REPRODUCTION OF THIS DOCUMENT WITHOUT THE SEAL AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES					
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Plotted By: Sait, Cory. Sheet: Sait-CofEL Waterfront Resiliency Layout-C-011 DETAILED FOUNDATION PLAN - SEGMENT 2 April 12, 2024 12:17:28pm K:\JAX WaterResources\142806004 - EFEL Waterfront Resiliency\Cadd\PlanSheets\C-011 DETAILED FOUNDATION PLAN - SEGMENT 2.dwg
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(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

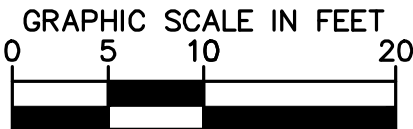
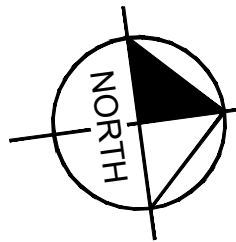
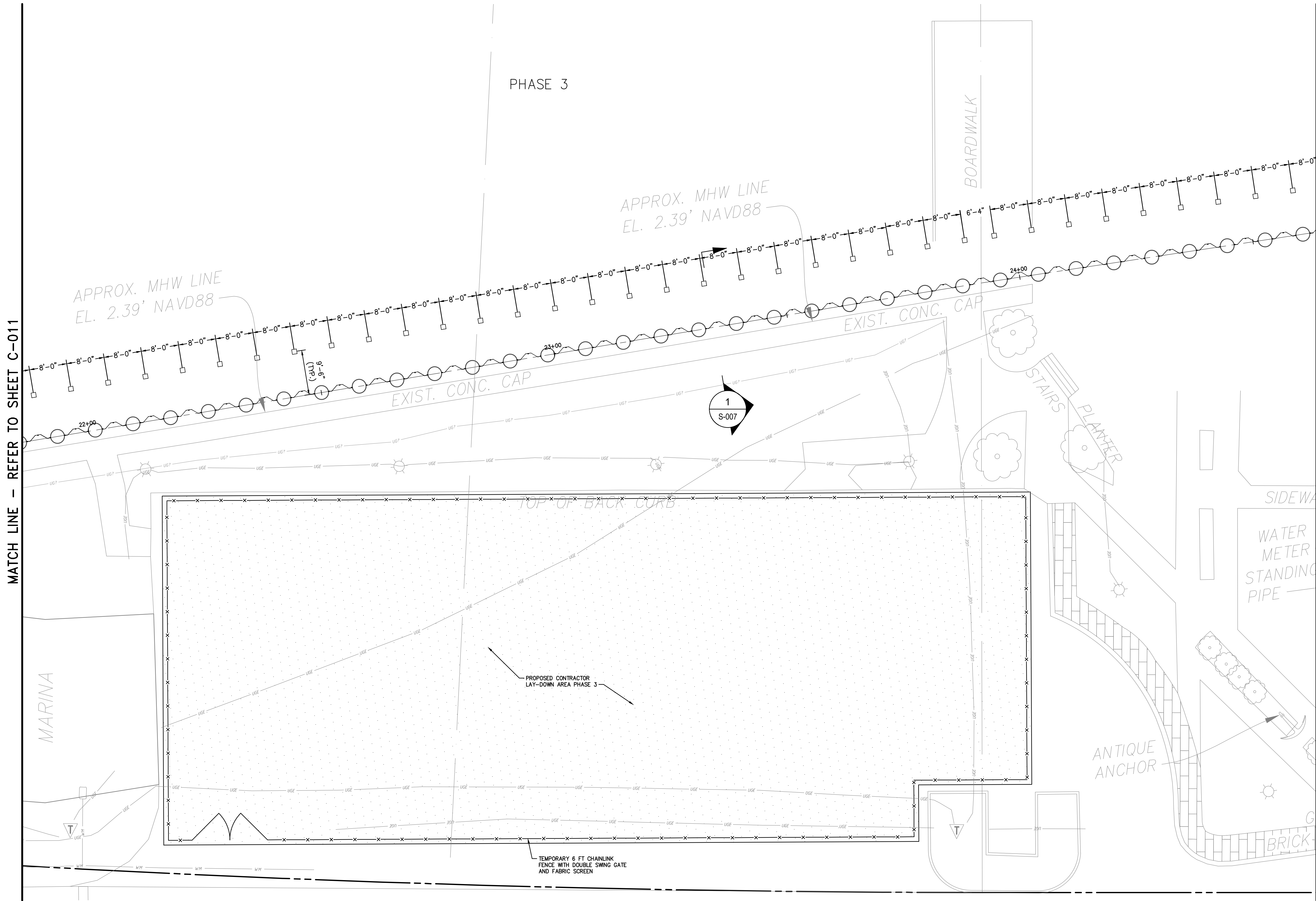
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MATCH LINE - REFER TO SHEET C-012

DETAILED FOUNDATION PLAN - SEGMENT 2		KHA PROJECT 142806004	LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910	© 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	
WATERFRONT RESILIENCY SYSTEM		DATE APRIL 2024	THIS PLAN HAS BEEN DIGITALLY SIGNED AND SEALED BY: KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL		
CITY OF FERNANDINA BEACH		SCALE: AS SHOWN	PRINTED COPIES OF THIS DOCUMENT MAY BE USED FOR CONSTRUCTION ONLY IF THE SIGNATURE MUST BE SEALED ON ANY ELECTRONIC COPIES		
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SHEET NUMBER C-011				REVISIONS	BY
				No.	DATE

Plotted By: Solt, Cory. Sheet: Sct-CofEL Waterfront Resiliency Layout-012. April 12, 2024. 12:17:34pm. K:\JAX_WaterResources\142806004 - FBEL Waterfront Resiliency\Cadd\PlanSheets\C-011.DETAILED FOUNDATION PLAN - SEGMENT 2.dwg
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VERTICAL: NAVD '88

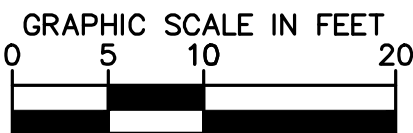
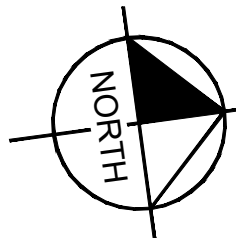
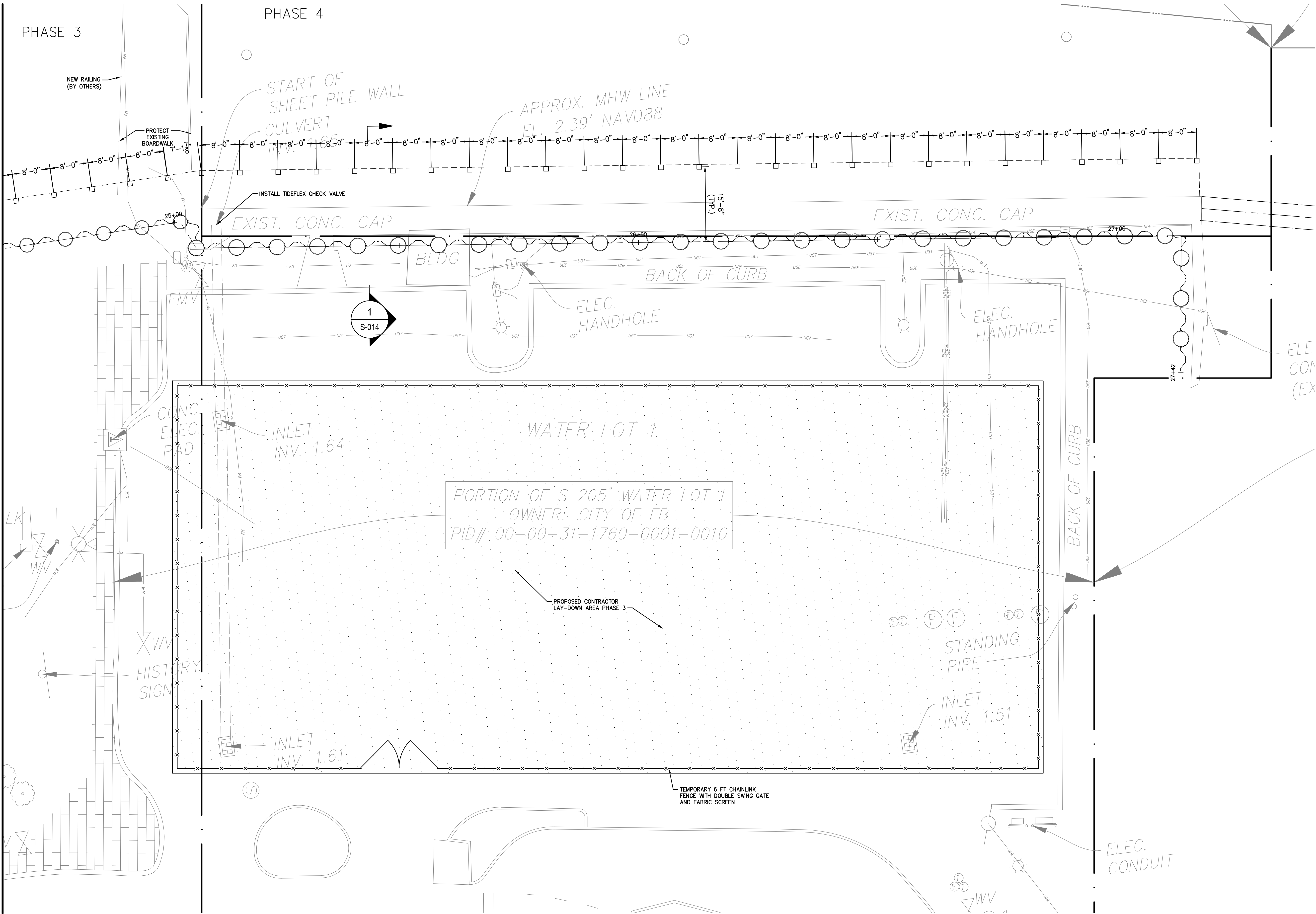
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KHA PROJECT 142806004		LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910	Kimley»Horn © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106		
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DRAWN BY: _____		No.			
CHECKED BY: _____		DATE			
CITY OF FERNANDINA BEACH		BY			
FLORIDA					
CITY OF FERNANDINA BEACH					
PREPARED FOR					
CITY OF FERNANDINA BEACH					
DETAILED FOUNDATION PLAN - SEGMENT 3					
WATERFRONT RESILIENCY SYSTEM					
SHEET NUMBER					
C-012					

Plotted By: Salt, Cory. Sheet: Sheet: WaterFront Resiliency - Layout: 013. April 12, 2024. 12:17:39pm. K:\AX_WaterResources\142806004 - FBEL WaterFront Resiliency\Codes\PlanSheets\C-011 DETAILED FOUNDATION PLAN - SEGMENT 2.dwg
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MATCH LINE - REFER TO SHEET C-012



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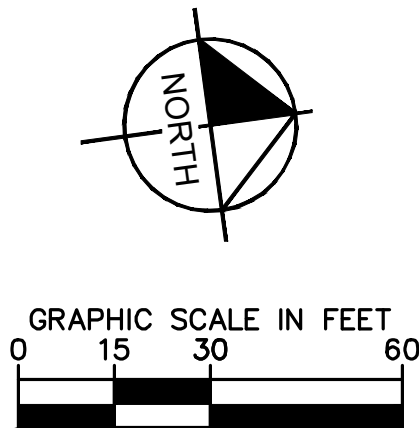
PRE-FINAL

PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

Always call 811 two full business days before you dig to have
underground utilities located and marked.

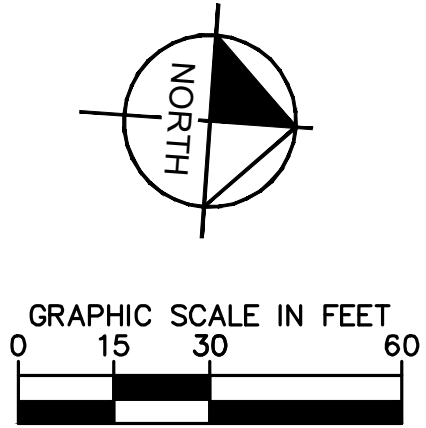
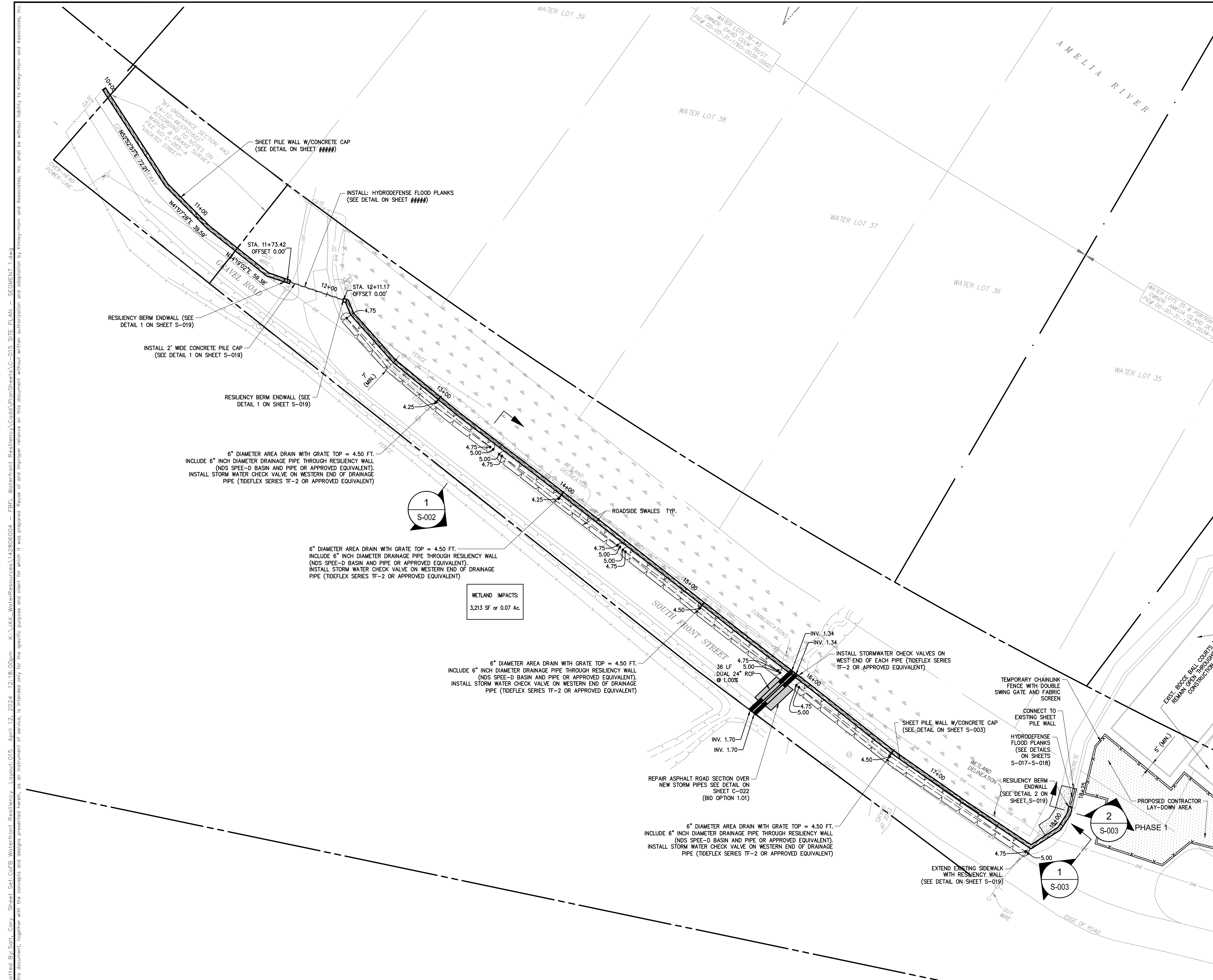
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DETAILED FOUNDATION PLAN - SEGMENT 4		KHA PROJECT 142806004		LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910		© 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	
WATERFRONT RESILIENCY SYSTEM		DATE APRIL 2024		KIRK F. DROST, P.E. SCALE: AS SHOWN		NO. OF SHEETS 1	
PREPARED FOR CITY OF FERNANDINA BEACH		DESIGNED BY: DRAWN BY:		ON THE DATE ADJACENT TO THE SEAL PRINTED COPIES OF THIS DOCUMENT MUST BE SIGNED AND SEALED BY THE DESIGNER AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES		NO.	
CITY OF FERNANDINA BEACH		CHECKED BY:		FLORIDA		REVISIONS	
SHEET NUMBER C-013		DATE		BY			



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FOUNDATION PLAN - SEGMENT 5		KHA PROJECT 142806004	LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910	 © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY NO. 35106	No.	REVISIONS	DATE	BY
		DATE APRIL 2024	THIS SEAL HAS BEEN DIGITALLY SIGNED AND SEALED BY: KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL PRINTED COPIES OF THIS DOCUMENT NOT CONSIDERED SIGNED AND SEALED UNLESS THE SIGNATURE HAS BEEN VERIFIED ON ANY ELECTRONIC COPIES					
WATERFRONT RESILIENCY SYSTEM PREPARED FOR								
CITY OF FERNANDINA BEACH								
CITY OF FERNANDINA BEACH		FLORIDA						
SHEET NUMBER								
C-014								



<u>LEGEND:</u>	
_____UG?	UNDERGROUND UNKNOWN UTILITY
_____WM	UNDERGROUND WATERMAIN
_____OHE	OVERHEAD ELECTRIC
_____X_____X_____X_____X	FENCE LINE
_____JD	WETLAND DELINEATION LINE
_____***	BUTLER LINE
_____.	WATER LOT LINE
_____.	PROPERTY LINE
_____ - - -	RIGHT OF WAY
	HYDRANT
	GAS VALVE
	FUEL MAN-HOLE
	SANITARY MAN-HOLE
	BENCHMARK
	PILE
	INLET
	POWER POLE

Kimley»Horn

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12740 GRAN BAY PARKWAY WEST, SUITE 2350
JACKSONVILLE, FLORIDA 32258
PHONE: 904-628-3900
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

KHA PROJECT
142806004
DATE
APRIL 2024
LICENSED PROFESSIONAL
KIRK F. DROST, P.E.
FLORIDA LICENSE NUMBER
51910
THIS ITEM HAS BEEN DIGITALLY SIGNED
AND SEALED BY
KIRK F. DROST, P.E.
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SITE PLAN - SEGMENT 1

WATERFRONT RESILIENCY
PREPARED FOR
CITY OF FERNANDINA BEACH
CITY OF FERNANDINA BEACH

SHEET NUMBER
C-015

**PRELIMINARY
NOT FOR CONSTRUCTION**

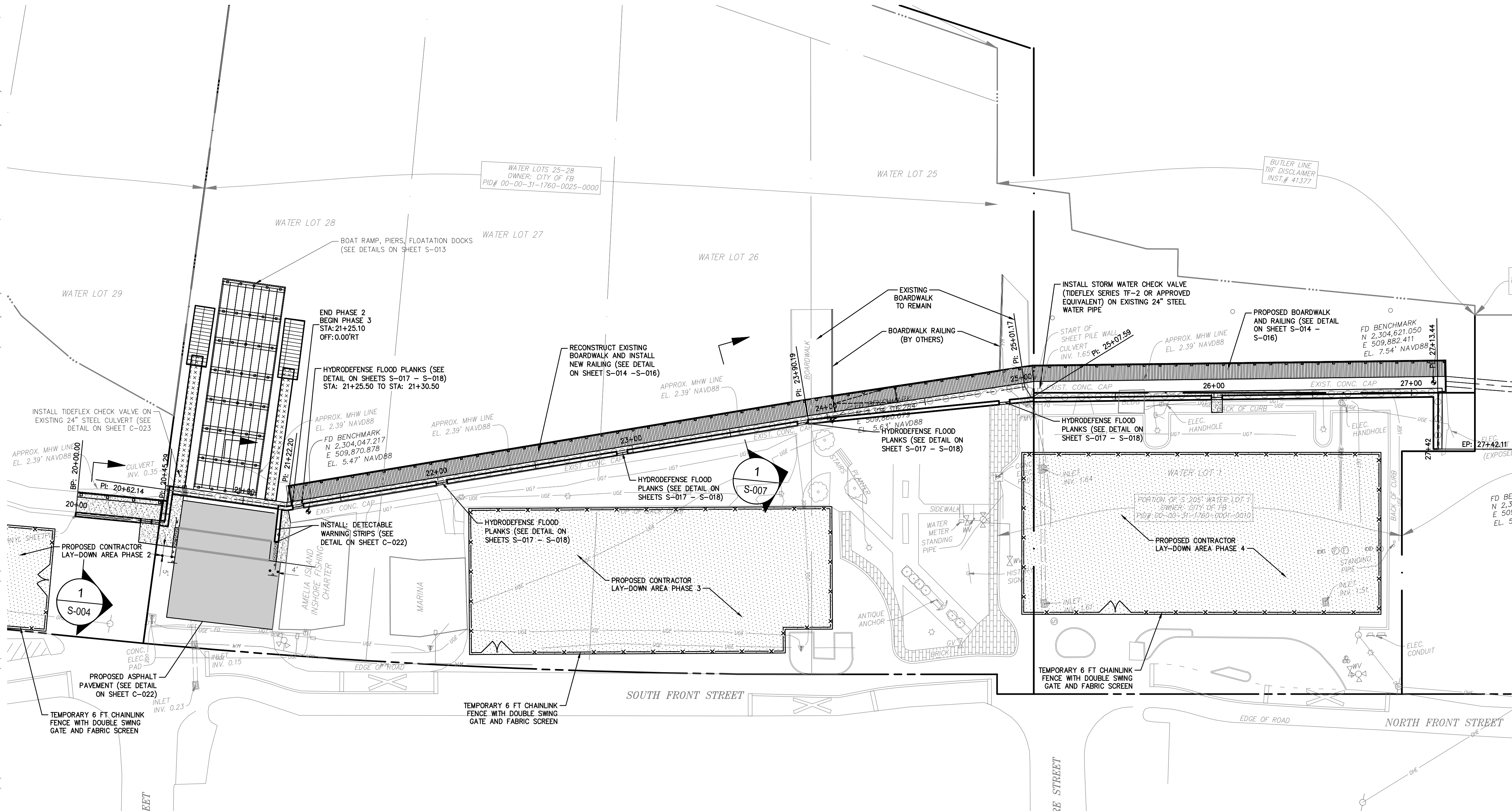
PRE-FINAL

PROJECT DATUMS:
HORIZONTAL: NAD83/2011
 (FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

Always call 811 two full business days before you dig to have underground utilities located and marked.



Plotted By: Salt_Corv_Sheet_Sat: CofE: Waterfront Resiliency Layout: 16 April 12, 2024, 12:18:11pm K:\JAX_WaterResources\142806004 - EBEL Waterfront Resiliency\Code\PlanSheets\C-016 SITE PLAN - SEGMENTS 2-4.dwg
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LEGEND:

UG7	UNDERGROUND UNKNOWN UTILITY
WM	UNDERGROUND WATERMAIN
OHE	OVERHEAD ELECTRIC
FX	FENCE LINE
WD	WETLAND DELINEATION LINE
BL	BUTLER LINE
WL	WATER LOT LINE
PL	PROPERTY LINE
RL	RIGHT OF WAY
HY	HYDRANT
GV	GAS VALVE
FMH	FUEL MAN-HOLE
SMH	SANITARY MAN-HOLE
BM	BENCHMARK
P	PILE
I	INLET
PP	POWER POLE

PRELIMINARY
NOT FOR CONSTRUCTION

PRE-FINAL

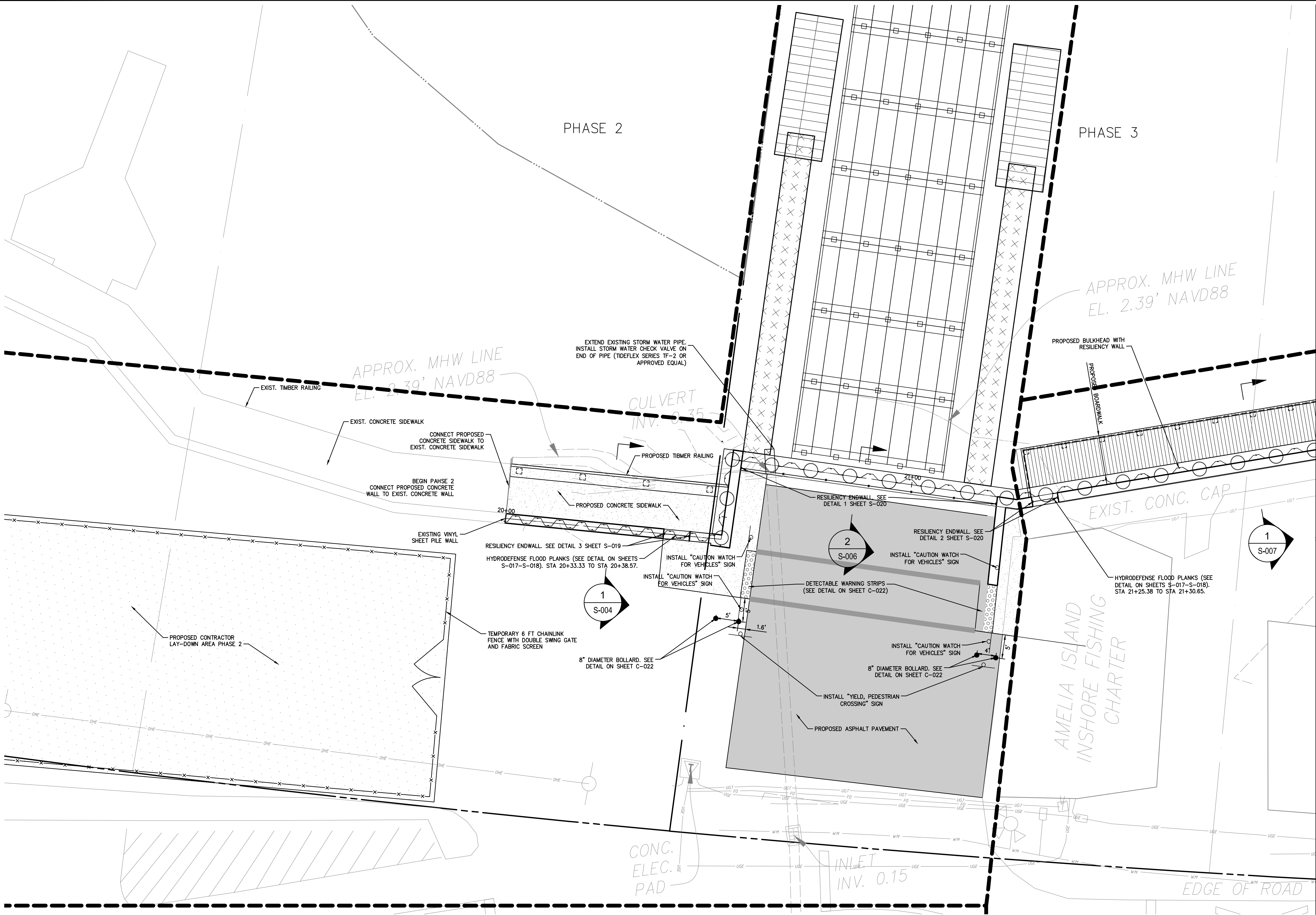
PROJECT DATUMS:
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(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

Always call 811 two full business days before you dig to have underground utilities located and marked.

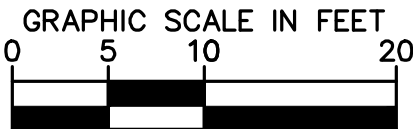
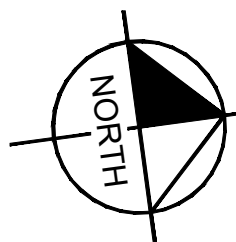
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KHA PROJECT 142806004		DATE APRIL 2024		SIGNED KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910		KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM	
SITE PLAN - SEGMENTS 2-4		WATERFRONT RESILIENCY SYSTEM		CITY OF FERNANDINA BEACH		CITY OF FERNANDINA BEACH	
SHEET NUMBER C-016		PREPARED FOR CITY OF FERNANDINA BEACH		FLORIDA		REVISIONS	
						DATE	
						BY	

Plotted By: Soil_Corr_Sheet_Sat-CofE Waterfront Resiliency - Layout-C-017 April 12, 2024 12:18:22pm K:\JAX-WaterResources\142806004 - EBEI Waterfront Resiliency\Cadd\PlanSheets\C-018 DETAILED SITE PLAN - SEGMENT 2.dwg
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NOTE:
CONTRACTOR SHALL REGRADE THE LIMITS OF THE PROJECT SITE TO RESTORE THE EXISTING SLOPES AND DRAINAGE PATTERNS AFTER INSTALLATION OF THE BULKHEAD, RESILIENCY SYSTEM, AND BOARDWALK.



PRELIMINARY
NOT FOR CONSTRUCTION

PRE-FINAL

PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

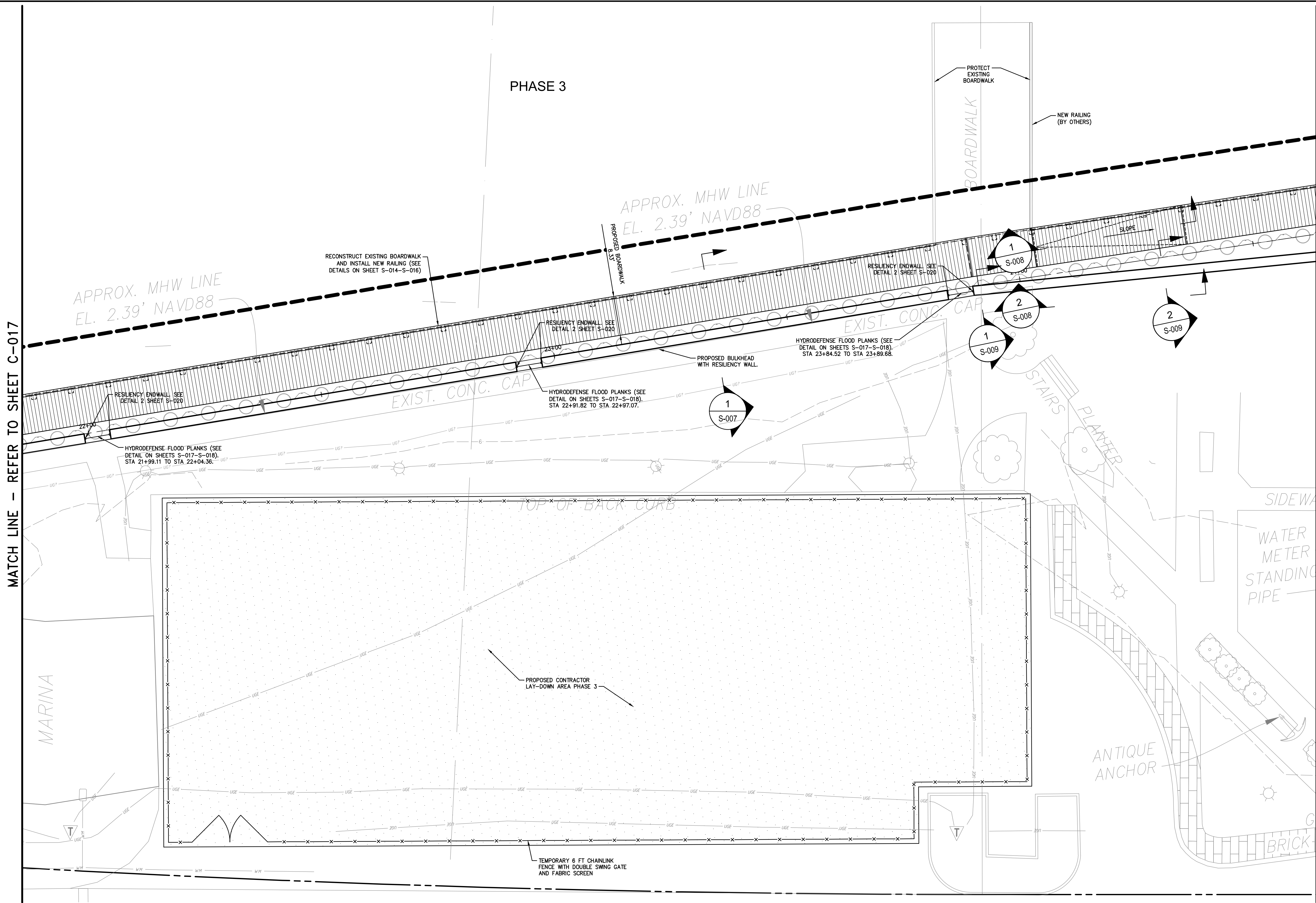
Always call 811 two full business days before you dig to have underground utilities located and marked.



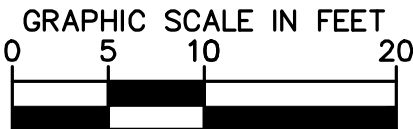
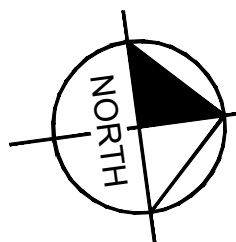
MATCH LINE - REFER TO SHEET C-018

KHA PROJECT 142806004		LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910		© 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	
DATE APRIL 2024		DESIGNED BY: KIRK F. DROST, P.E.		DRAWN BY: KIMLEY-HORN	
SCALE: AS SHOWN		CHECKED BY: KIMLEY-HORN		REVISIONS	
SHEET NUMBER C-017		CITY OF FERNANDINA BEACH		DATE	
DETAILED SITE PLAN - SEGMENT 2		WATERFRONT RESILIENCY SYSTEM		BY	
PREPARED FOR CITY OF FERNANDINA BEACH		FLORIDA			

Plotted By: Soil_Corv_Sheet_Sat-CofE Waterfront Resiliency Layout-018 April 12, 2024 12:18:29pm K:\JAX_WaterResources\142806004 - FBEL Waterfront Resiliency\Cadd\PlanSheets\C-018 DETAILED SITE PLAN - SEGMENT 2.dwg
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NOTE:
CONTRACTOR SHALL REGRADE THE LIMITS OF THE PROJECT SITE TO RESTORE THE EXISTING SLOPES AND DRAINAGE PATTERNS AFTER INSTALLATION OF THE BULKHEAD, RESILIENCY SYSTEM, AND BOARDWALK.



PRELIMINARY
NOT FOR CONSTRUCTION

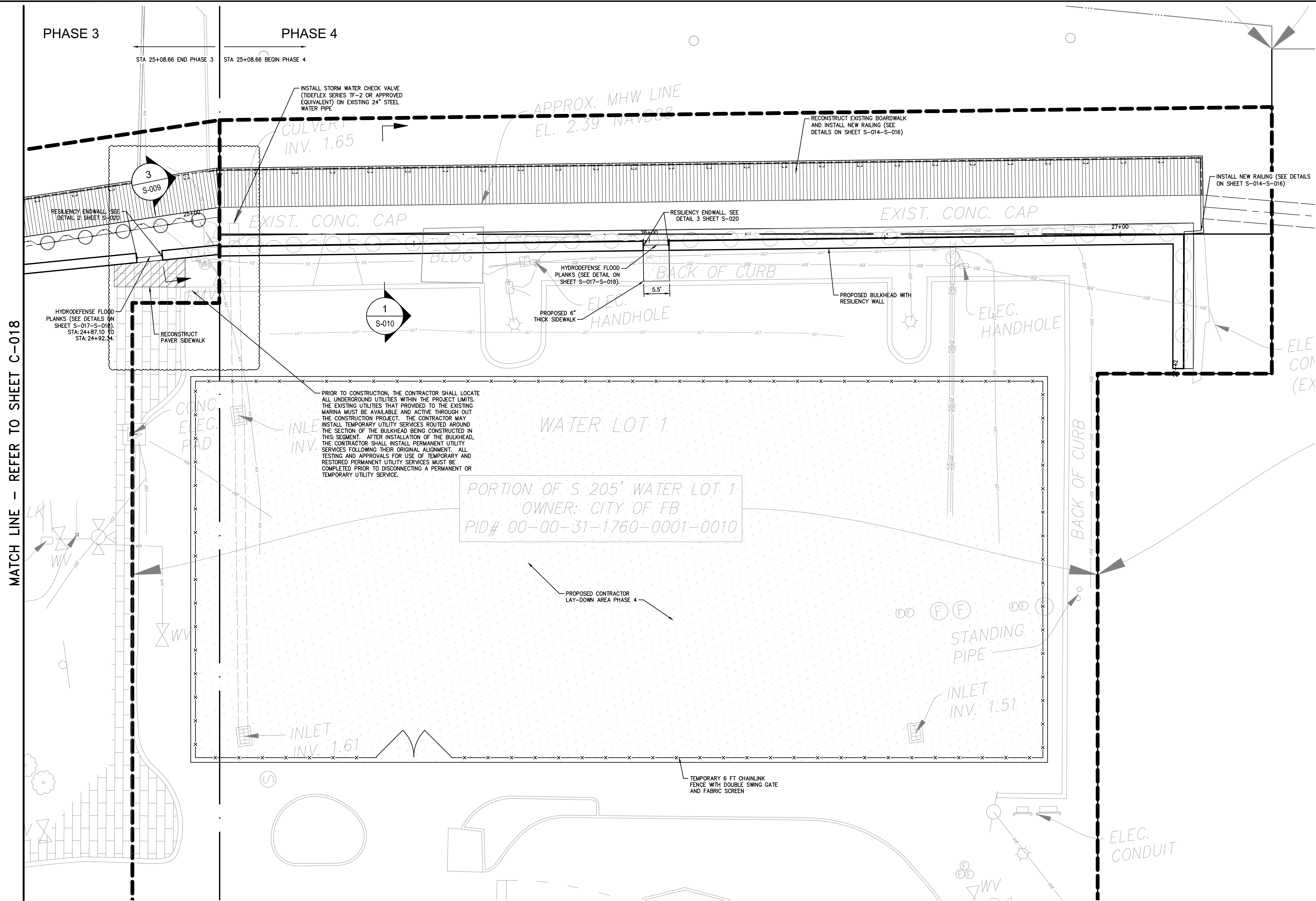
PRE-FINAL

PROJECT DATUMS:
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(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

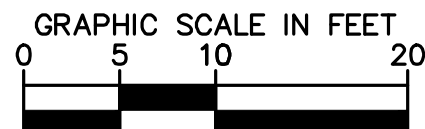
Always call 811 two full business days before you dig to have underground utilities located and marked.



DETAILED SITE PLAN - SEGMENT 3		KHA PROJECT 142806004	LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910	KIMLEY»Horn © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106		
WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH		DATE APRIL 2024	DESIGNED BY: AS SHOWN	DRAWN BY:	CHECKED BY:	REVISIONS
CITY OF FERNANDINA BEACH FLORIDA		SHEET NUMBER C-018		DATE		BY



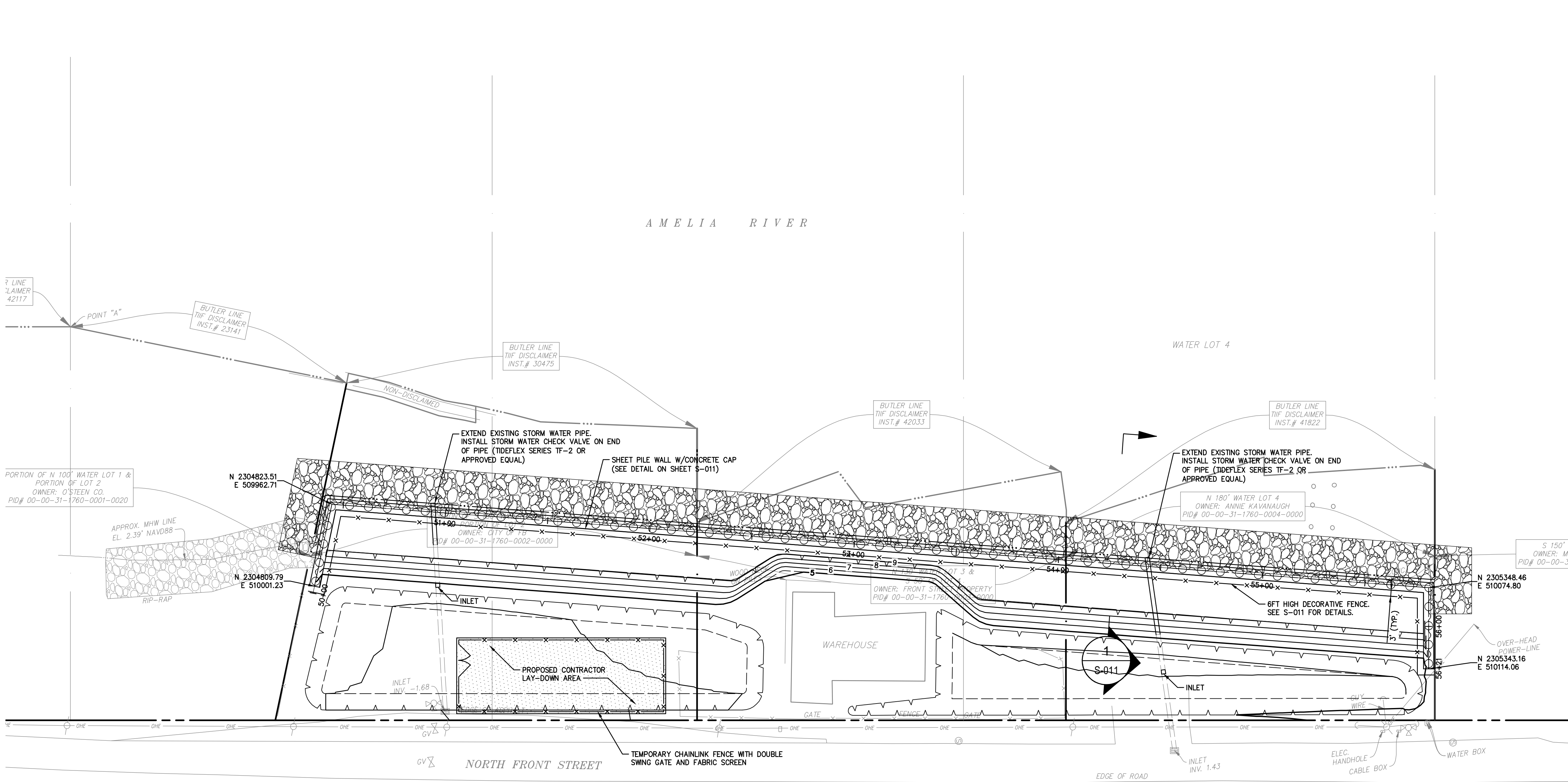
NOTE:
CONTRACTOR SHALL REGRADE THE LIMITS OF THE PROJECT
SITE TO RESTORE THE EXISTING SLOPES AND DRAINAGE
PATTERNS AFTER INSTALLATION OF THE BULKHEAD, RESILIENCY
SYSTEM, AND BOARDWALK.



PROJECT DATUMS:
HORIZONTAL: NAD83/2011
 (FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

SHEET NUMBER C-019	DETAILED SITE PLAN - SEGMENT 4		KHA PROJECT 142806004	LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910	 © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	No.	REVISIONS	DATE	BY
	WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH CITY OF FERNANDINA BEACH		DATE APRIL 2024	THIS ITEM HAS BEEN DIGITALLY SIGNED BY KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____					

Plotted: Bu:Salt_Corr_Sheet_Sat:City WaterFront Resiliency Layout:020 April 12, 2024 12:18:41pm K:\JAX_WaterResources\142806004 - FBEL Waterfront Resiliency\Cadd\PlanSheets\C-020 SITE PLAN - SEGMENT 5.dwg
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- LEGEND:**
- UG7 UNDERGROUND UNKNOWN UTILITY
 - W/M UNDERGROUND WATERMAIN
 - DHE OVERHEAD ELECTRIC
 - JD FENCE LINE
 - BUTLER LINE WETLAND DELINEATION LINE
 - WATER LOT LINE
 - PROPERTY LINE
 - RIGHT OF WAY
 - HYDRANT
 - GAS VALVE
 - FUEL MAN-HOLE
 - SANITARY MAN-HOLE
 - BENCHMARK
 - PILE
 - INLET
 - POWER POLE

SHEET NOTES:

- THE CONTRACTOR SHALL DREDGE AND REMOVE ALL EXISTING SOIL TO AN ELEVATION OF (-) 7.0 FT ON THE EAST SIDE OF THE NEW SHEET PILE WALL BETWEEN THE WALL AND THE EXISTING MEAN HIGH WATER (MHW) LINE. DREDGING AND SOIL REMOVAL SHALL OCCUR AFTER REMOVAL / RELOCATION OF THE EXISTING RIP RAP. THE CONTRACTOR IS RESPONSIBLE FOR TESTING THE SOIL MATERIAL AND DISPOSING OF IT AT AN APPROVED FACILITY. NONE OF THIS MATERIAL MAY BE RE-USED ON SITE FOR THIS PROJECT. DREDGED SOIL MAY BE TEMPORARILY STOCKPILED ON SITE WITHIN THE LIMITS OF SEGMENT 5 FOR UP TO ONE WEEK AFTER REMOVAL FROM THE WATER. THE CONTRACTOR SHALL SUBMIT TRUCK HAULING ROUTES TO THE CITY FOR PRIOR APPROVAL BEFORE MOBILIZING TO THE SITE. THE CONTRACTOR WILL NOT BE ALLOWED TO USE CENTRE STREET, ASH STREET, OR ALACHUA STREET AS A HAUL ROUTE FOR THIS PROJECT.
- THE CONTRACTOR SHALL COMPLETE A STRUCTURAL EVALUATION OF THE EXISTING BUILDING(S) IN THIS SEGMENT BEFORE WORKING ADJACENT TO AND/OR UNDER THE BUILDING(S). THE STRUCTURAL EVALUATION SHALL INCLUDE A DETERMINATION OF THE IMPACT OF THE PILE DRIVING ACTIVITIES FOR THIS PROJECT ON THE EXISTING BUILDING(S). CONTRACTOR TO SHORE, BRACE, OR OTHERWISE REINFORCE THE EXISTING BUILDING(S) FOR ALL CONSTRUCTION ACTIVITIES AND WORK BELOW AND ADJACENT TO THE EXISTING STRUCTURE(S).
- THE CONTRACTOR SHALL PLACE AND COMPACT BACKFILL UNDER THE EXISTING BUILDING(S) IN THE SEGMENT OF THE PROJECT TO THE HIGHEST EXTENT SAFELY POSSIBLE, INCLUDING USING WALK BEHIND COMPACTION EQUIPMENT, IF APPLICABLE. AFTER BACKFILL HAS BEEN PLACED AND COMPACTED TO THE HIGHEST ELEVATION, THE CONTRACTOR SHALL FILL THE REMAINING SPACE BELOW THE EXISTING BUILDING(S) UP TO THE UNDERSIDE OF THE EXISTING BUILDING(S) FOUNDATIONS / FLOOR WITH FLOWABLE FILL.
- ALL FUTURE BUILDING CONSTRUCTION ON THE AREA WITHIN SEGMENT 5 SHALL BE ON DEEP FOUNDATIONS BASED ON GEOTECHNICAL INVESTIGATIONS AND RECOMMENDATIONS AND STRUCTURAL DESIGN COMPLETED FOR THOSE PROJECTS. FUTURE PROJECTS SHALL EVALUATE THE BULKHEAD WALL SYSTEM AT THAT TIME AND DETERMINE THE STRUCTURAL IMPACTS TO THE BULKHEAD DUE TO PROPOSED FACILITIES, CONSTRUCTION, AND DEVELOPMENT ACTIVITIES.

**PRELIMINARY
NOT FOR CONSTRUCTION**

PRE-FINAL

PROJECT DATUMS:

HORIZONTAL: NAD83/2011

(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)

VERTICAL: NAVD '88

Always call 811 two full business days before you dig to have
underground utilities located and marked.

Sunshine811.com

SITE PLAN - SEGMENT 5

WATERFRONT RESILIENCY SYSTEM

PREPARED FOR

CITY OF FERNANDINA BEACH

CITY OF FERNANDINA BEACH FLORIDA

KHA PROJECT

142806004

DATE

APRIL 2024

LICENSED PROFESSIONAL

KIRK F. DROST, P.E.

FLORIDA LICENSE NUMBER

51910

THIS PLAN HAS BEEN DIGITALLY SIGNED

AND SEALED BY:

KIRK F. DROST, P.E.

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT

SHALL BE SIGNED AND THE SIGNATURE MUST BE

VERIFIED ON ANY ELECTRONIC COPIES

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JACKSONVILLE, FLORIDA 32258
PHONE: 904-828-3900

WWW.KIMLEY-HORN.COM REGISTRY No. 35106

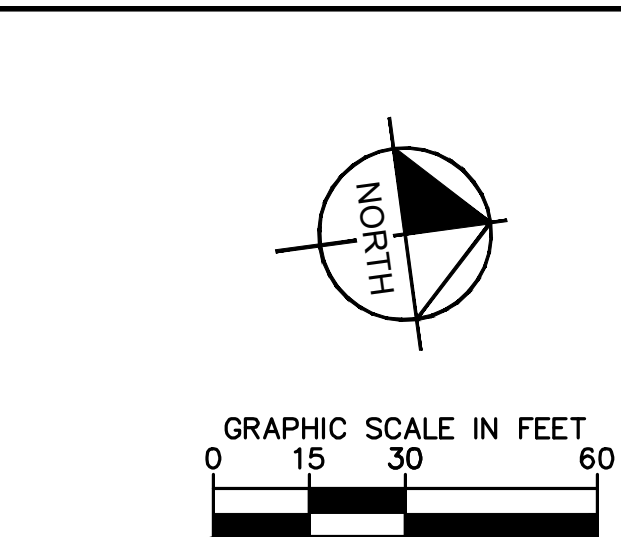
REVISIONS

No.

DATE

BY

SHEET NUMBER
C-020



	UGT	UNDERGROUND UNKNOWN UTILITY
	WM	WETLAND DELINEATION WATERMAIN
	OHE	OVERHEAD ELECTRIC
		FENCE LINE
	JD	WETLAND DELINEATION JUNCTION
		BUTLER LINE
		WATER LOT LINE
		PROPERTY LINE
		RIGHT OF WAY
		HYDRANT
		GAS VALVE
		FUEL MAN-HOLE
		SANITARY MAN-HOLE
		BENCHMARK
		PILE
		INLET
		POWER POLE

A. THE CONTRACTOR SHALL DREDGE AND REMOVE ALL EXISTING SOIL TO AN ELEVATION OF (-) 7.0 FT ON THE EAST SIDE OF THE NEW SHEET PILE WALL BETWEEN THE WALL AND THE EXISTING MEAN HIGH WATER (MHW) LINE. DREDGING AND SOIL REMOVAL SHALL OCCUR AFTER REMOVAL / RELOCATION OF THE EXISTING RIP RAP. THE CONTRACTOR IS RESPONSIBLE FOR TESTING THE SOIL MATERIAL AND DISPOSING OF IT AT AN APPROVED FACILITY. NONE OF THIS MATERIAL MAY BE RE-USED ON SITE FOR THIS PROJECT. DREDGED SOIL MAY BE TEMPORARILY STOCKPILED ON SITE WITHIN THE LIMITS OF SEGMENT 5 FOR UP TO ONE WEEK AFTER REMOVAL FROM THE WATER. THE CONTRACTOR SHALL SUBMIT TRUCK HAULING ROUTES TO THE CITY FOR PRIOR APPROVAL BEFORE MOBILIZING TO THE SITE. THE CONTRACTOR WILL NOT BE ALLOW TO USE CENTRE STREET, ASH STREET, OR ALACHUA STREET AS A HAUL ROUTE FOR THIS PROJECT.

B. THE CONTRACTOR SHALL COMPLETE A STRUCTURAL EVALUATION OF THE EXISTING BUILDING(S) IN THIS SEGMENT BEFORE WORKING ADJACENT TO AND/OR UNDER THE BUILDING(S). THE STRUCTURAL EVALUATION SHALL INCLUDE A DETERMINATION OF THE IMPACT OF THE EXISTING DRIVING ACTIVITIES FOR THIS PROJECT ON THE EXISTING BUILDING(S). CONTRACTOR TO SHORE, BRACE, OR OTHERWISE REINFORCE THE EXISTING BUILDING(S) FOR ALL CONSTRUCTION ACTIVITIES AND WORK BELOW AND ADJACENT TO THE EXISTING STRUCTURE(S).

C. THE CONTRACTOR SHALL PLACE AND COMPACT BACKFILL UNDER THE EXISTING BUILDING(S) IN THE SEGMENT OF THE PROJECT TO THE HIGHEST EXTENT PRACTICALLY POSSIBLE, INCLUDING USING WALK BEHIND COMPACTION EQUIPMENT, IF APPLICABLE. AFTER BACKFILL HAS BEEN PLACED AND COMPACTED TO THE HIGHEST ELEVATION, THE CONTRACTOR SHALL FILL THE REMAINING SPACE BELOW THE EXISTING BUILDING(S) UP TO THE UNDERSIDE OF THE EXISTING BUILDING(S) FOUNDATIONS / FLOOR WITH FLOWABLE FILL.

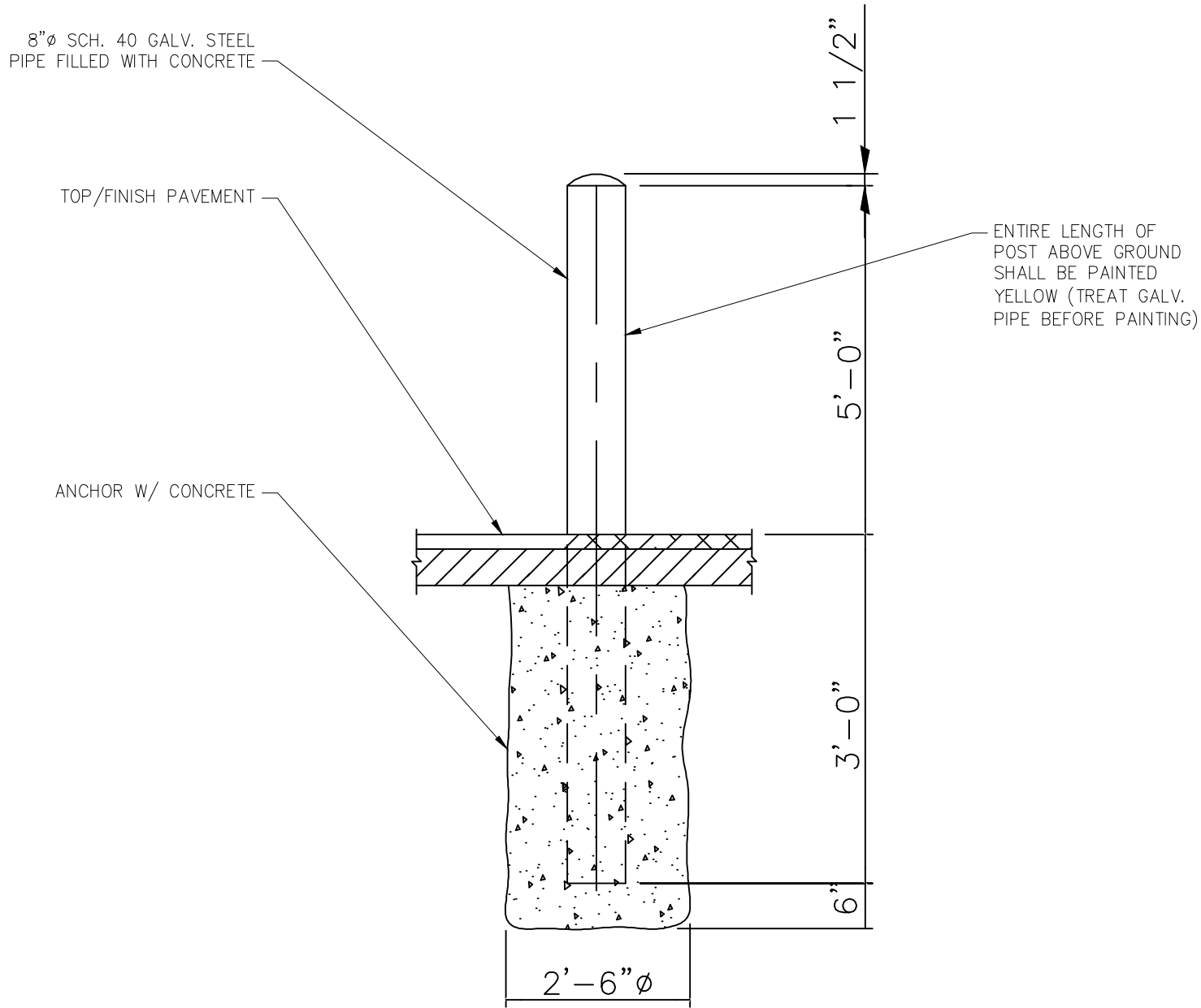
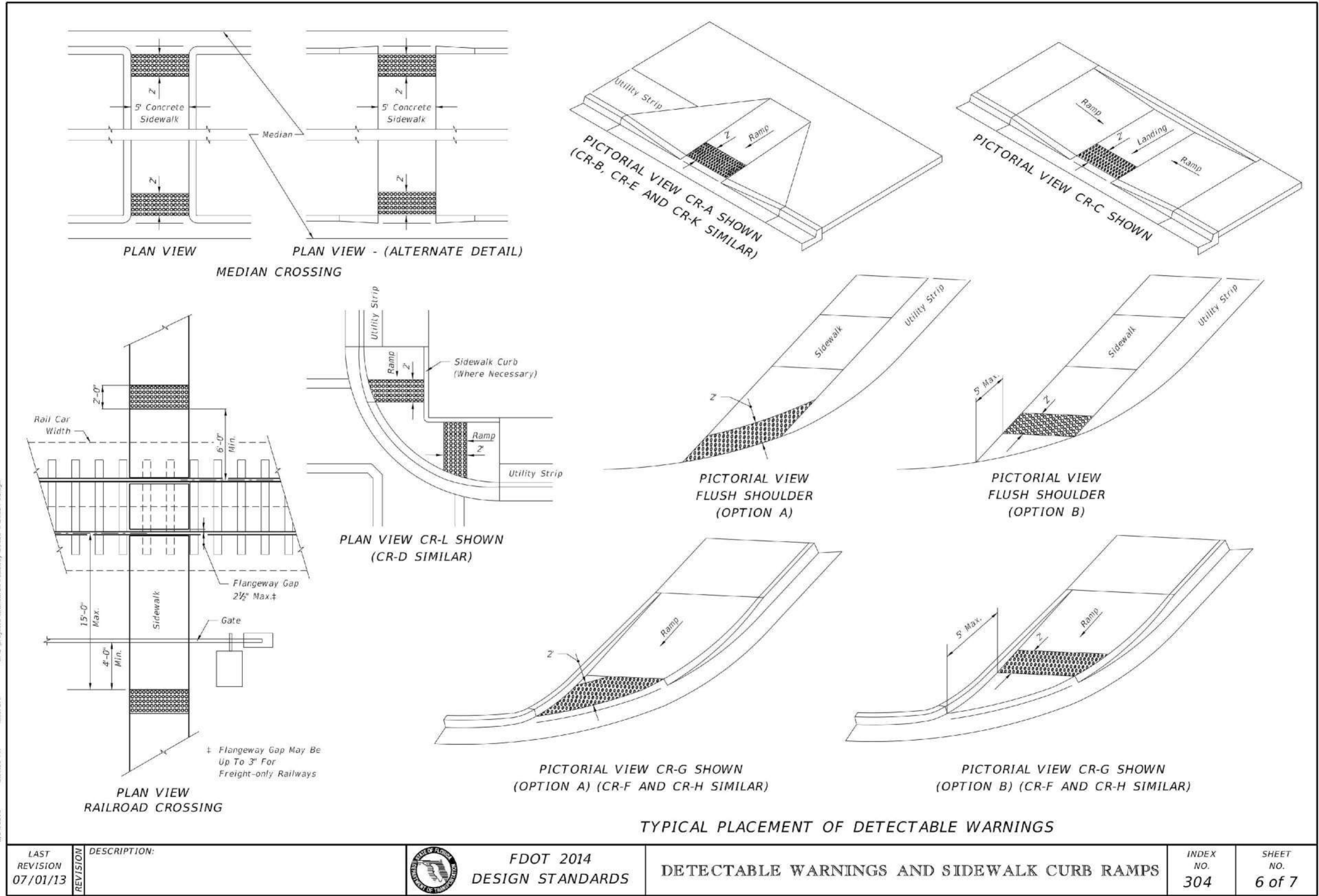
D. ALL FUTURE BUILDING CONSTRUCTION ON THE AREA WITHIN SEGMENT 5 SHALL BE ON DEEP FOUNDATIONS BASED ON GEOTECHNICAL INVESTIGATIONS AND RECOMMENDATIONS AND STRUCTURAL DESIGN COMPLETED FOR THOSE FACILITIES. THE PROJECT SHALL EVALUATE THE BULKHEAD WALL SYSTEM AT THAT TIME AND DETERMINE THE STRUCTURAL IMPACTS TO THE BULKHEAD DUE TO PROPOSED FACILITIES, CONSTRUCTION, AND DEVELOPMENT ACTIVITIES.

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SHEET NUMBER C-021	DREDGING PLAN- SEGMENT 5		KHA PROJECT 142806004 DATE APRIL 2024	LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910	THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER ON THE DATE ADJACENT TO THE SEAL PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND MAY BE VERIFIED ON ANY ELECTRONIC COPIES	 © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 CHALKSTONE DRIVE, 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106						
	WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH CITY OF FERNANDINA BEACH FLORIDA		SCALE: AS SHOWN DESIGNED BY: DRAWN BY: CHECKED BY:									

Plotted By: Solt, Cory Sheet: Sct-CofB Waterfront Resiliency Layout: C-022 CIVIL SITE DETAILS April 12, 2024 12:18:55pm K:\JAX_WaterResources\142806004 - FBEL Waterfront Resiliency\Cadd\SiteSheets\C-022 CIVIL SITE DETAILS.dwg

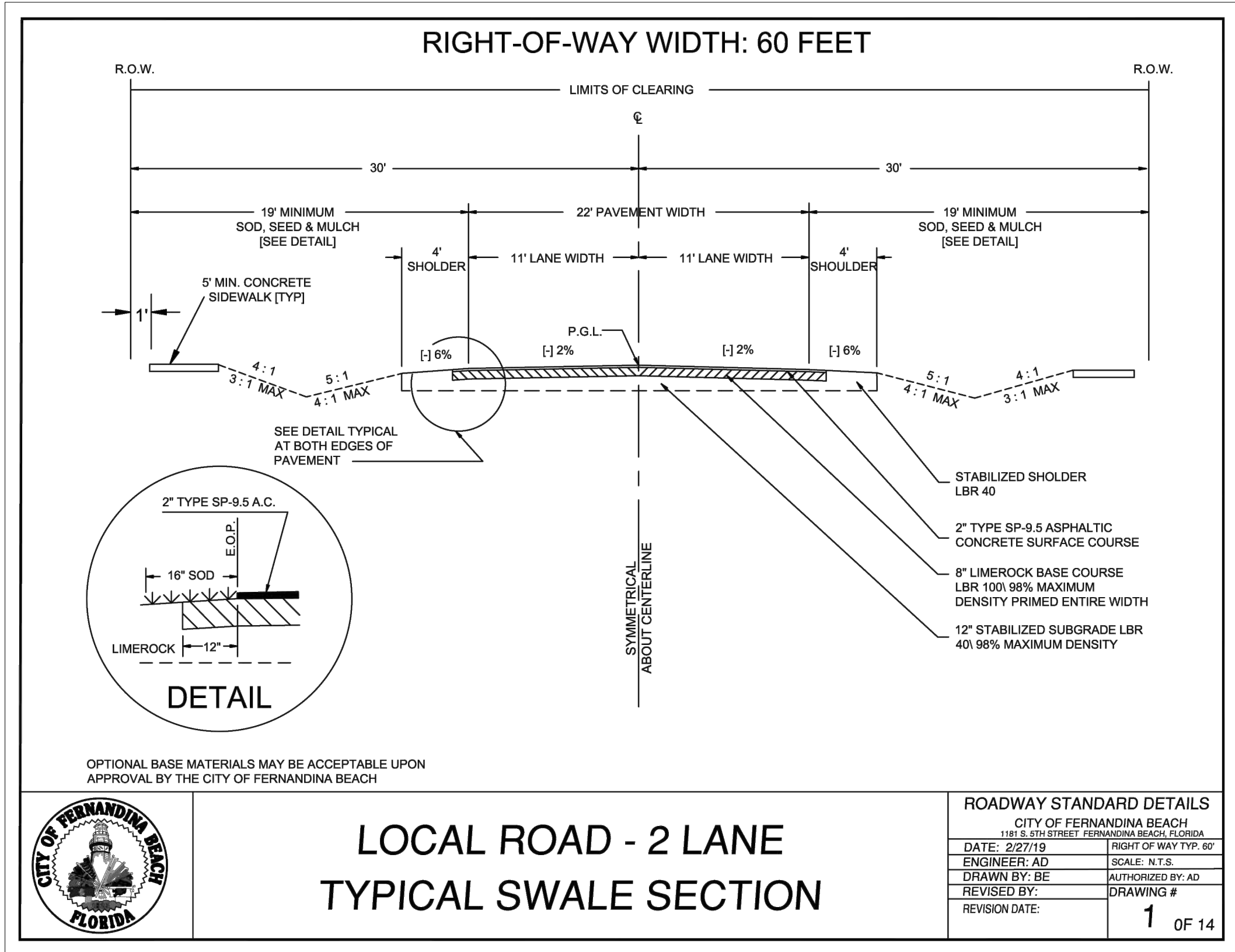
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3
C-022

BOLLARD (GUARDPOST) DETAIL

SCALE: N.T.S.

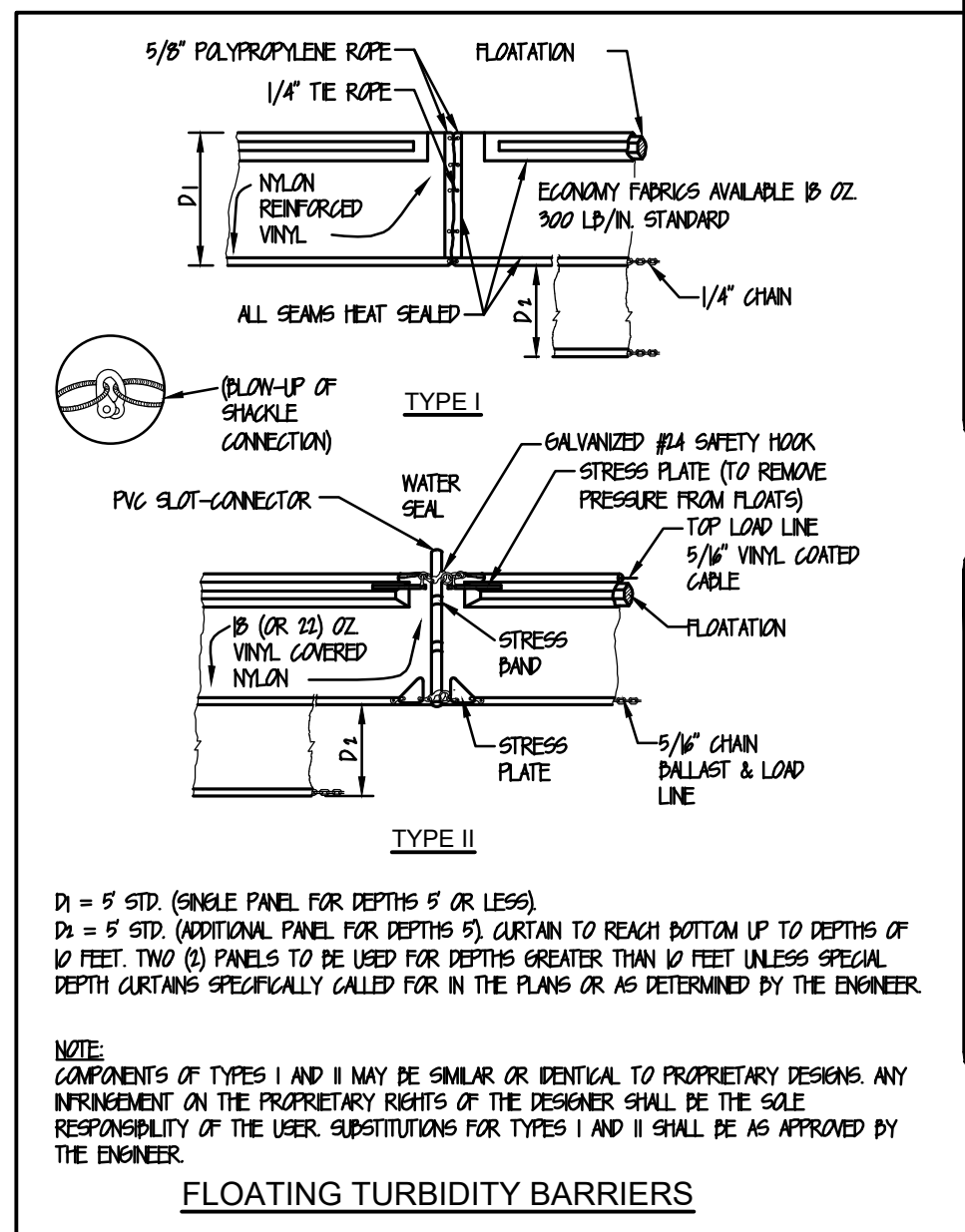
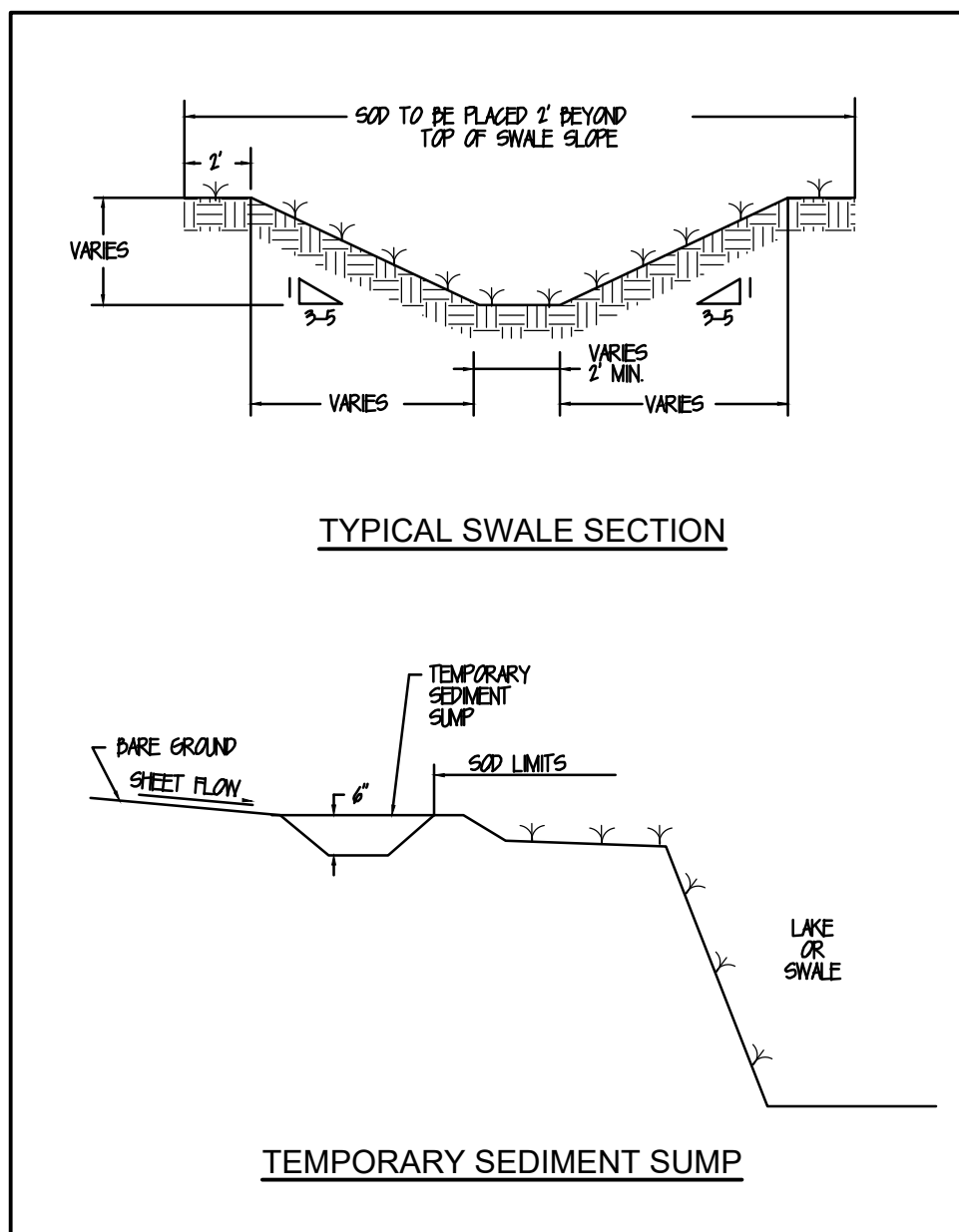
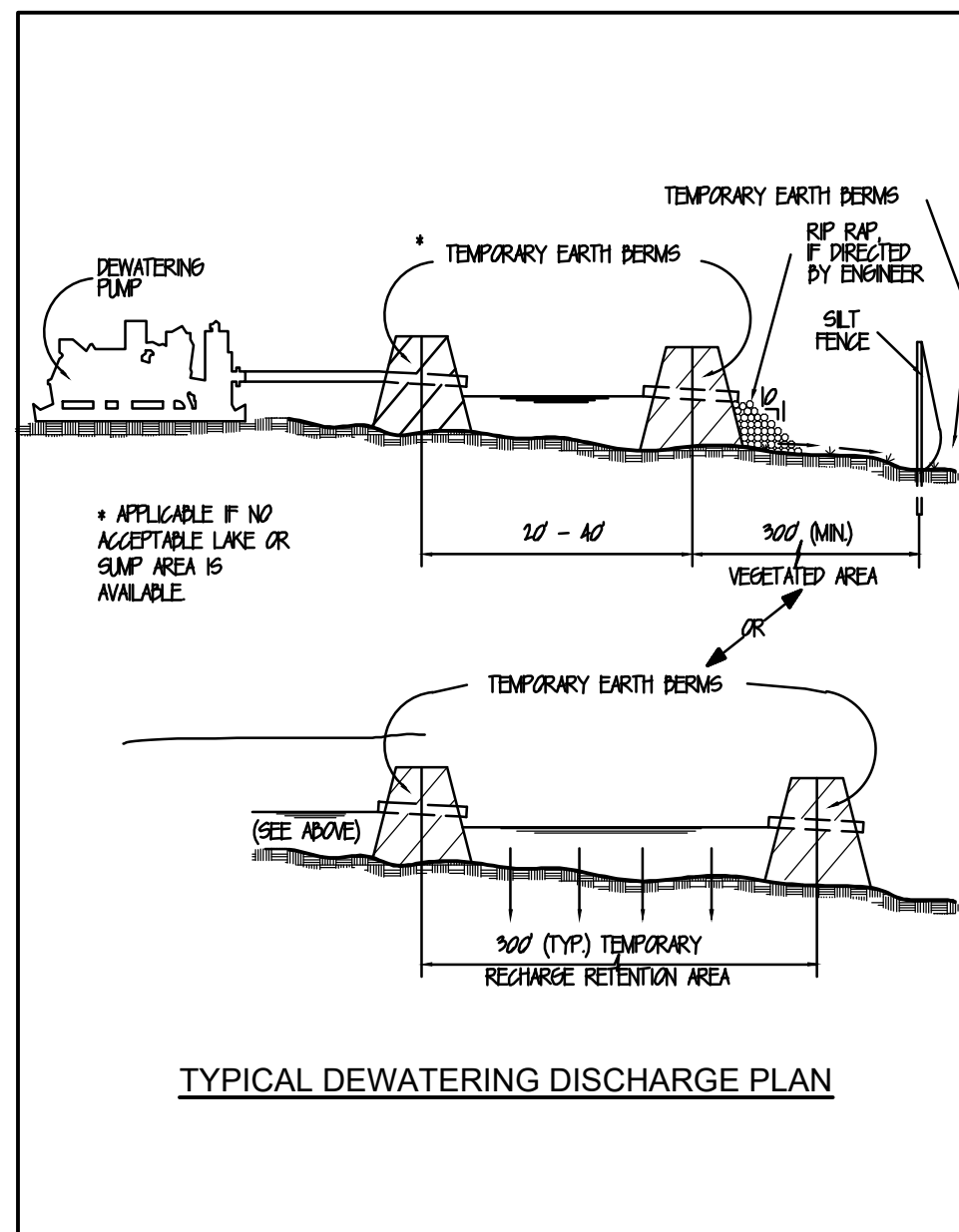
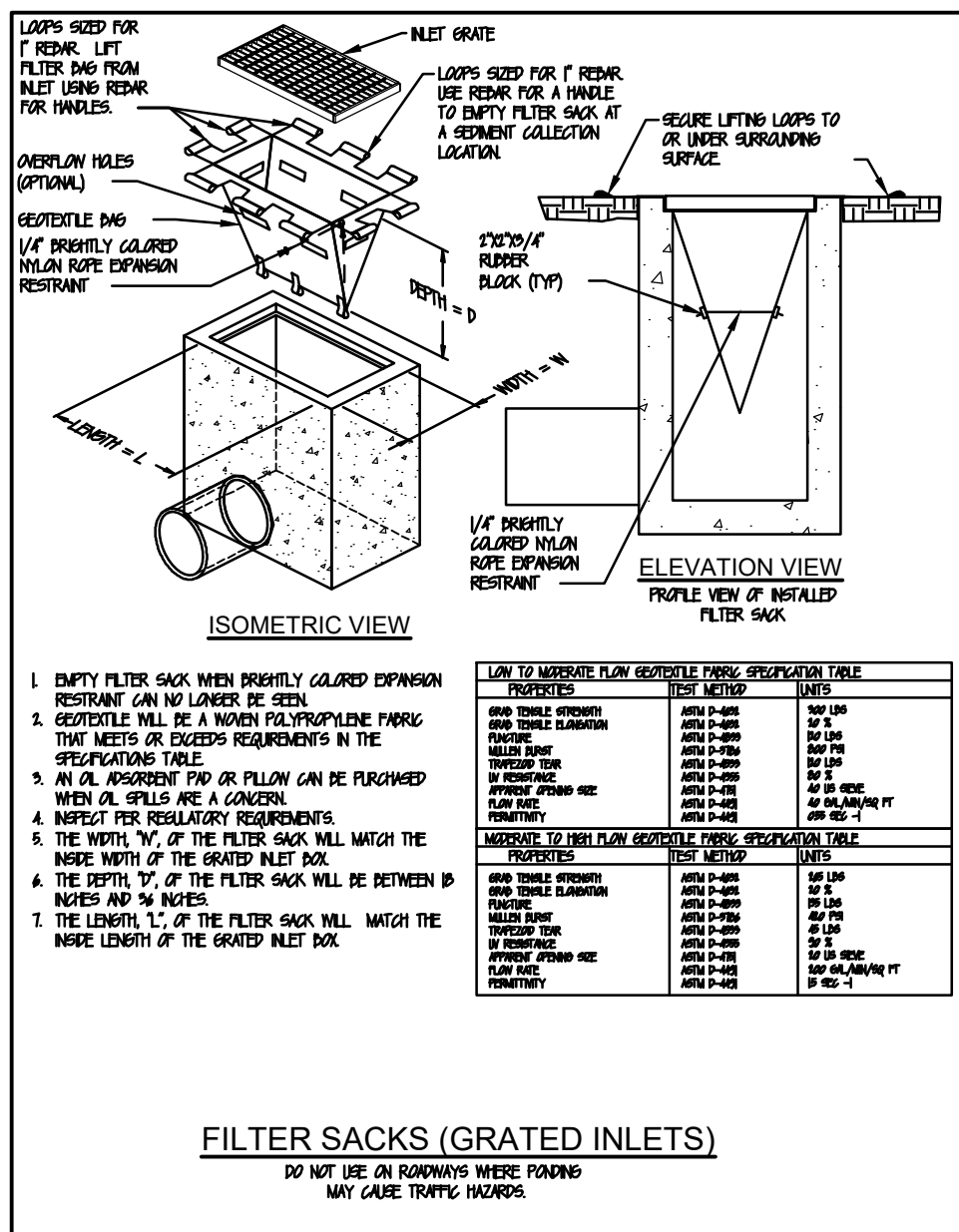
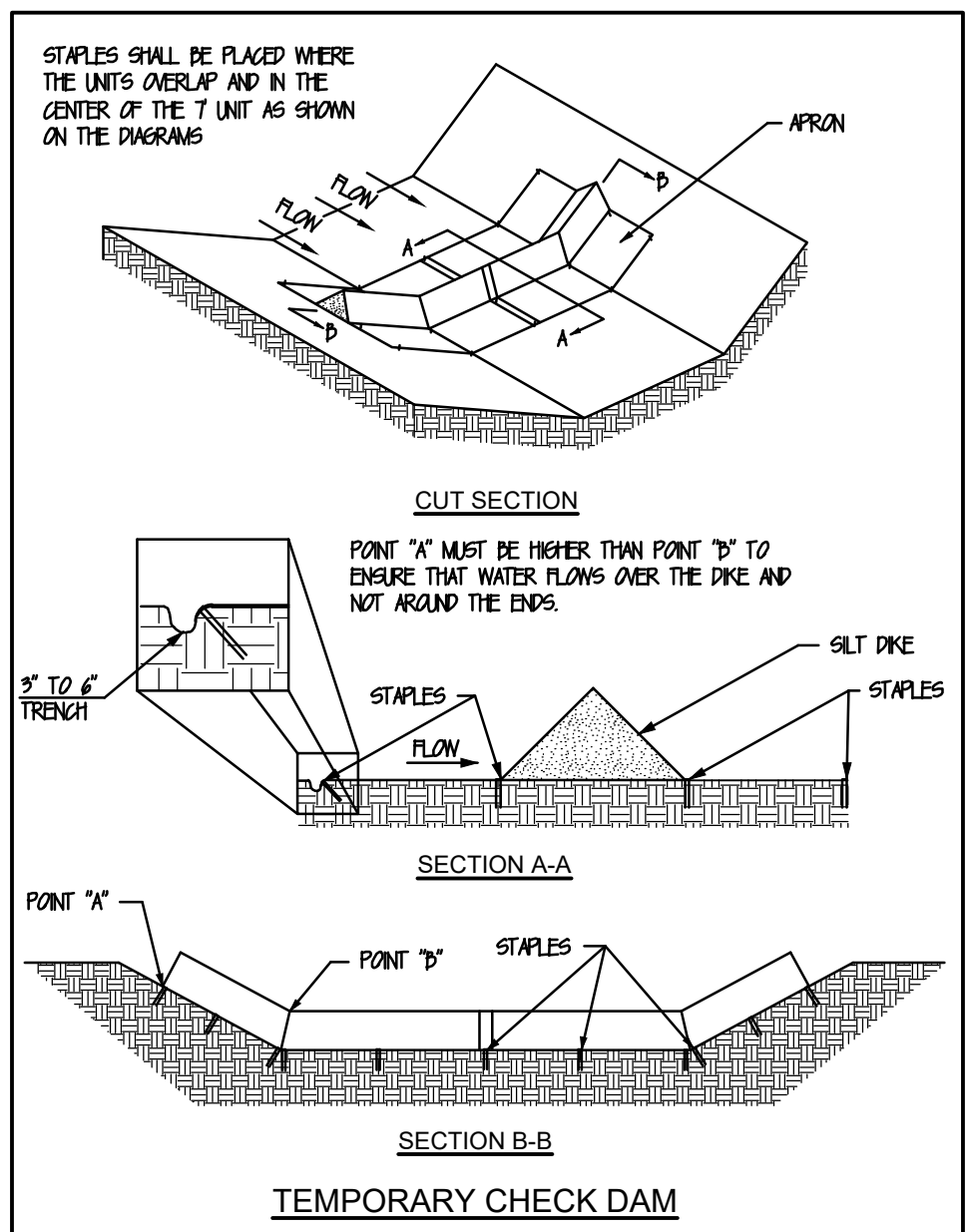
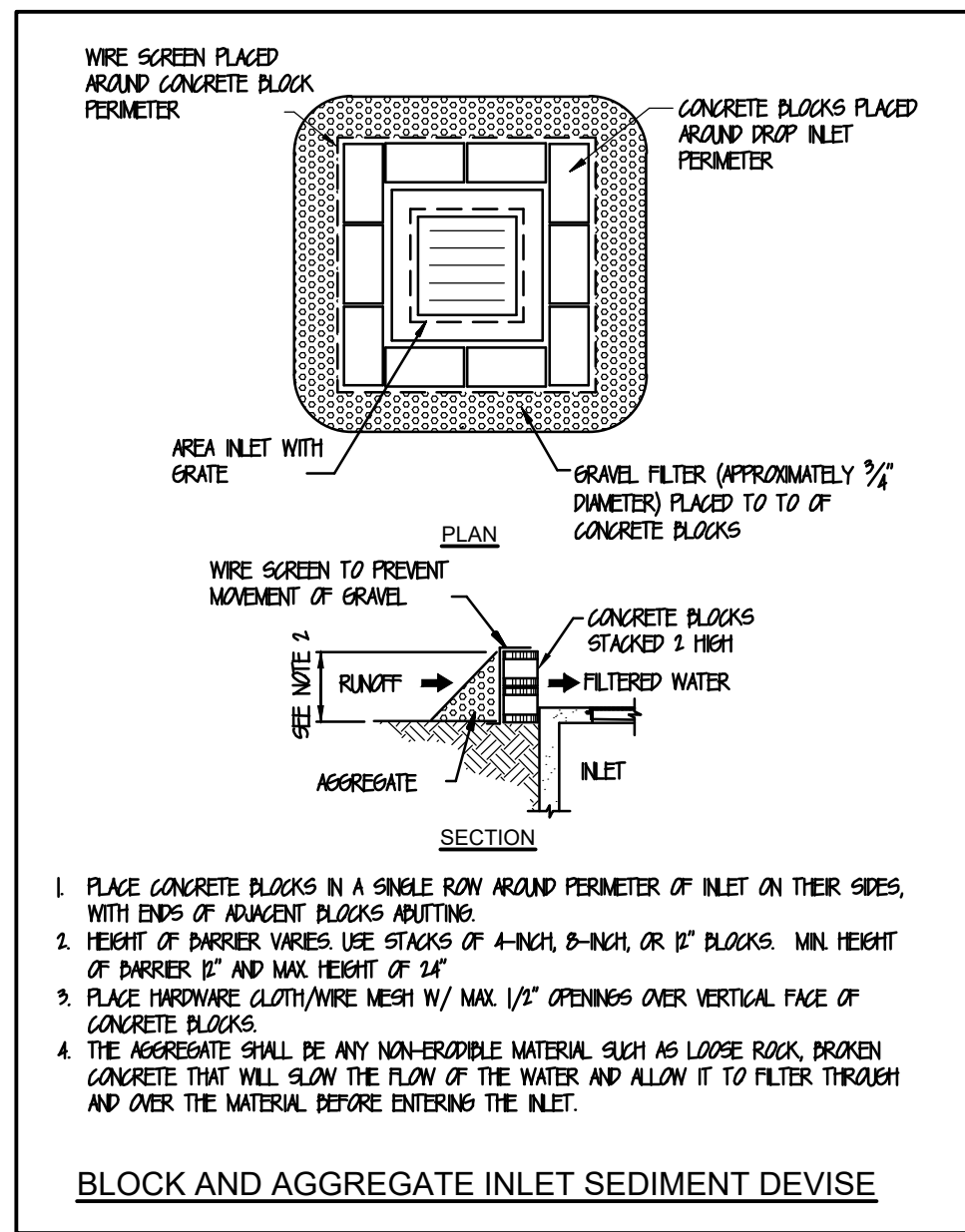
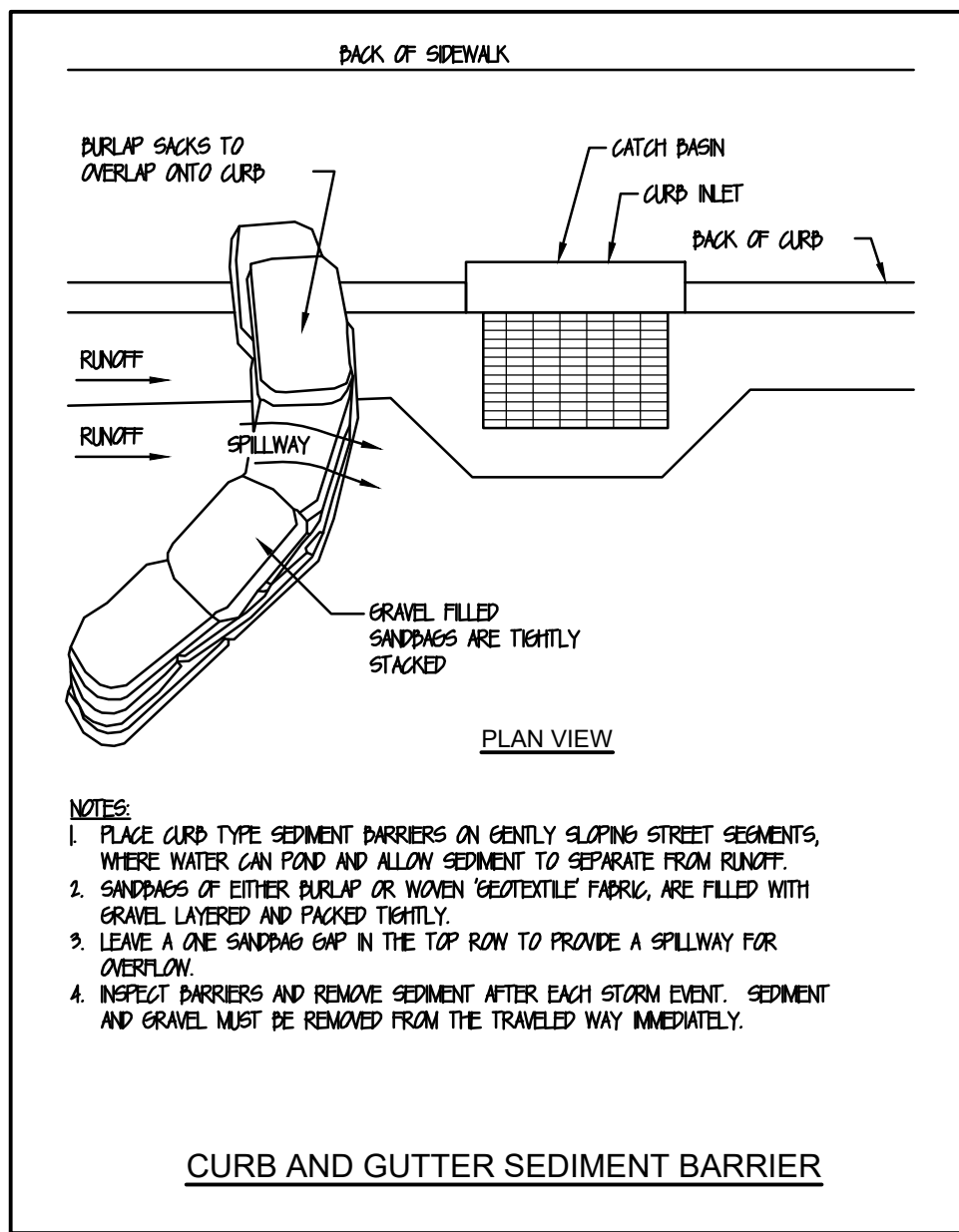
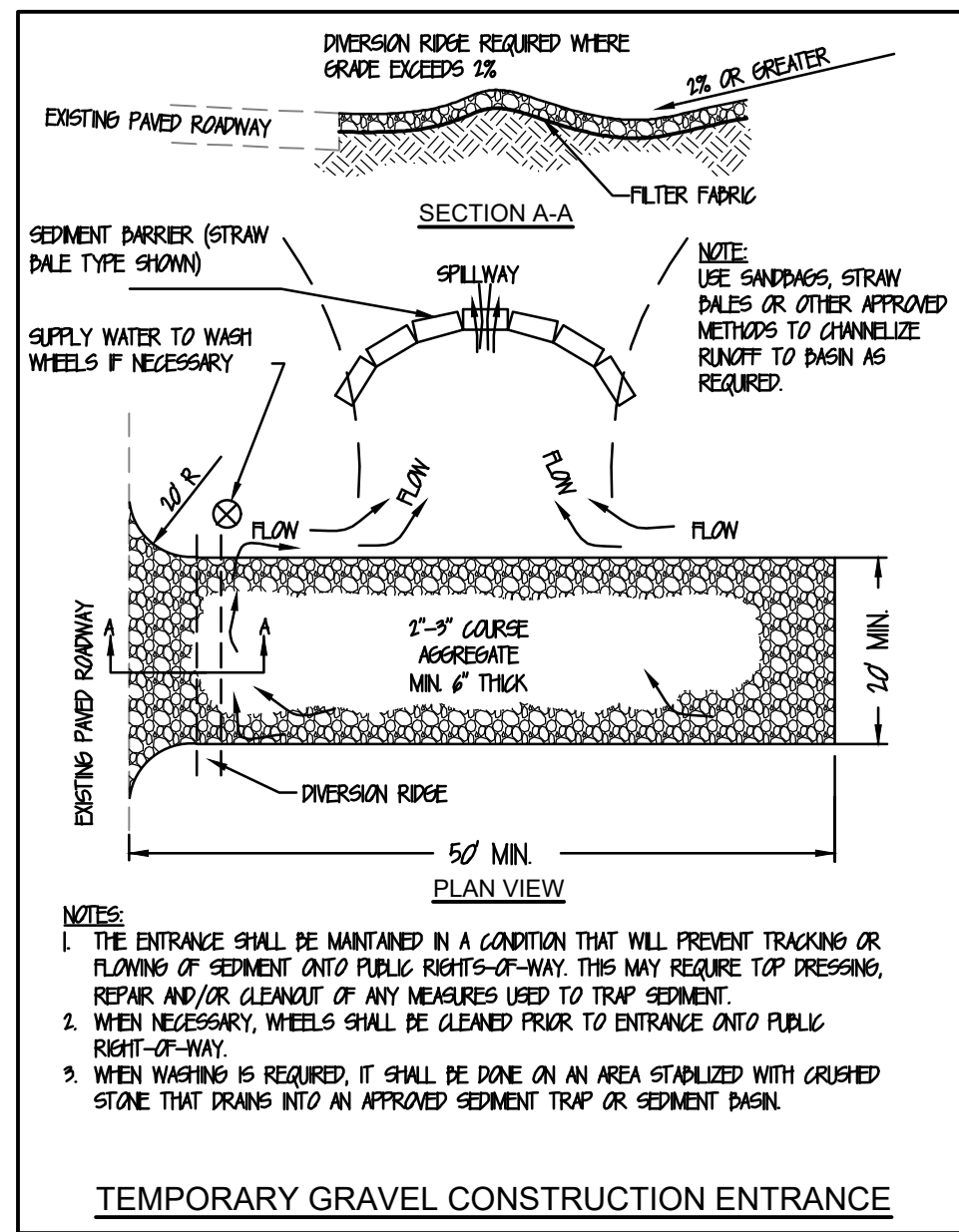
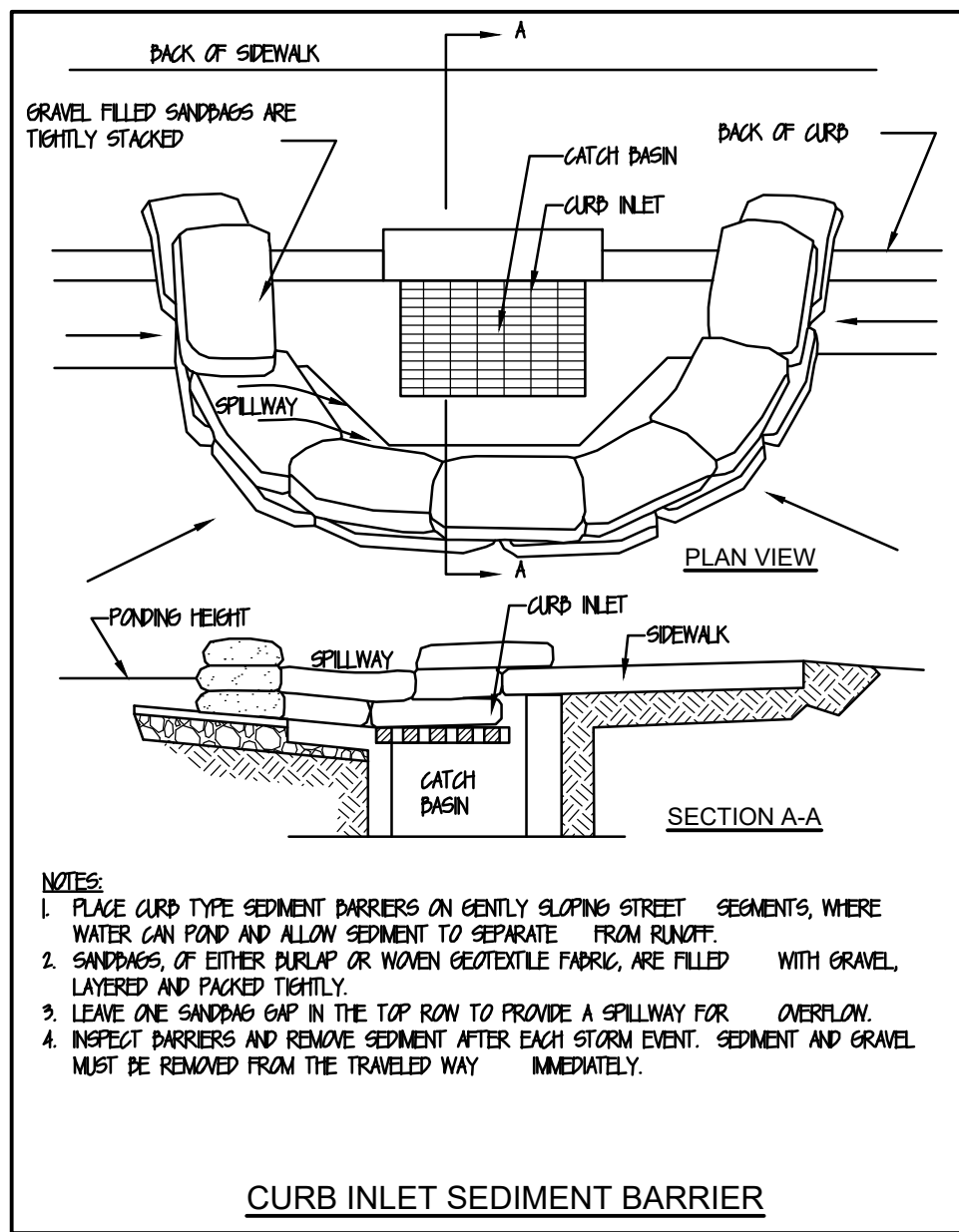
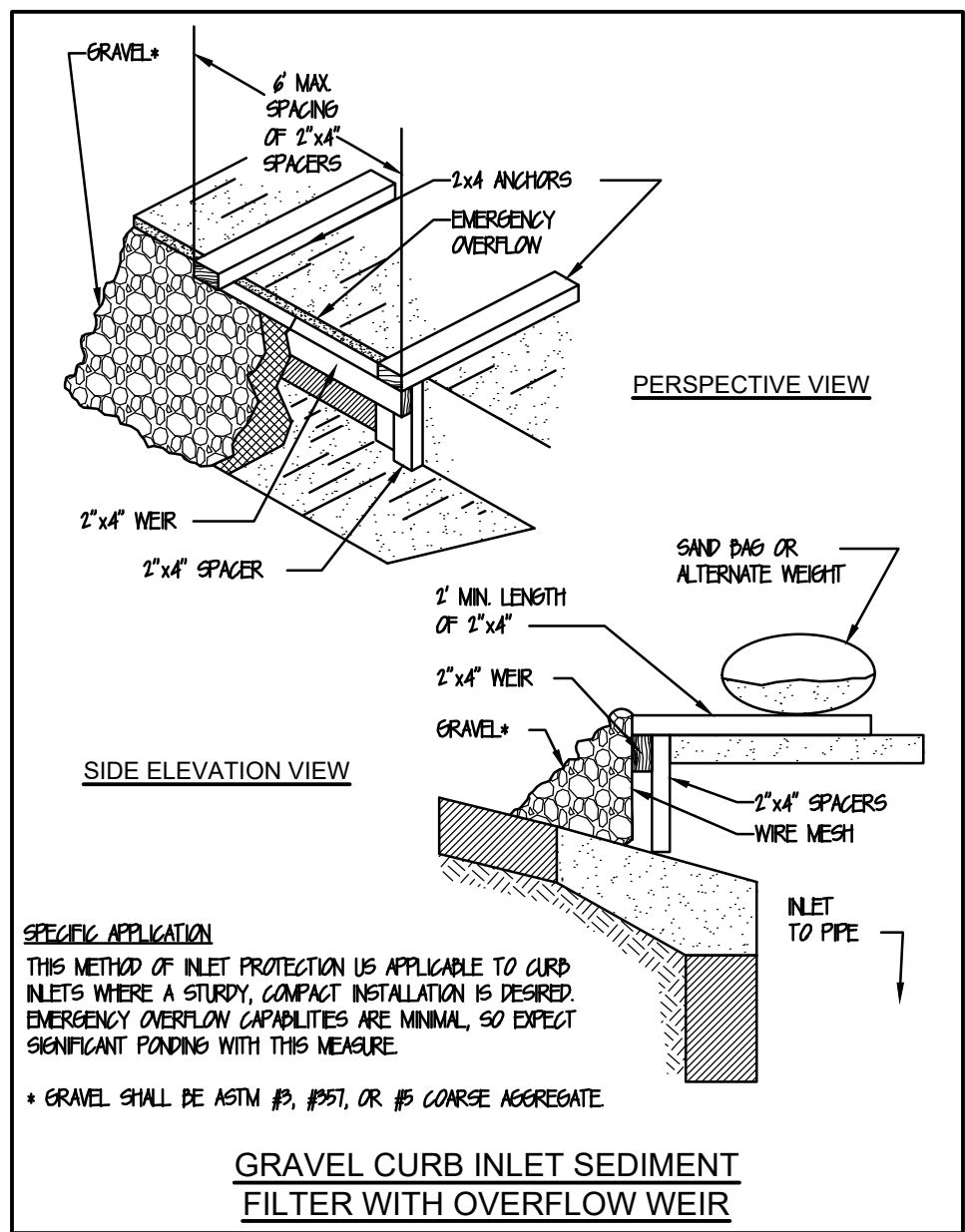
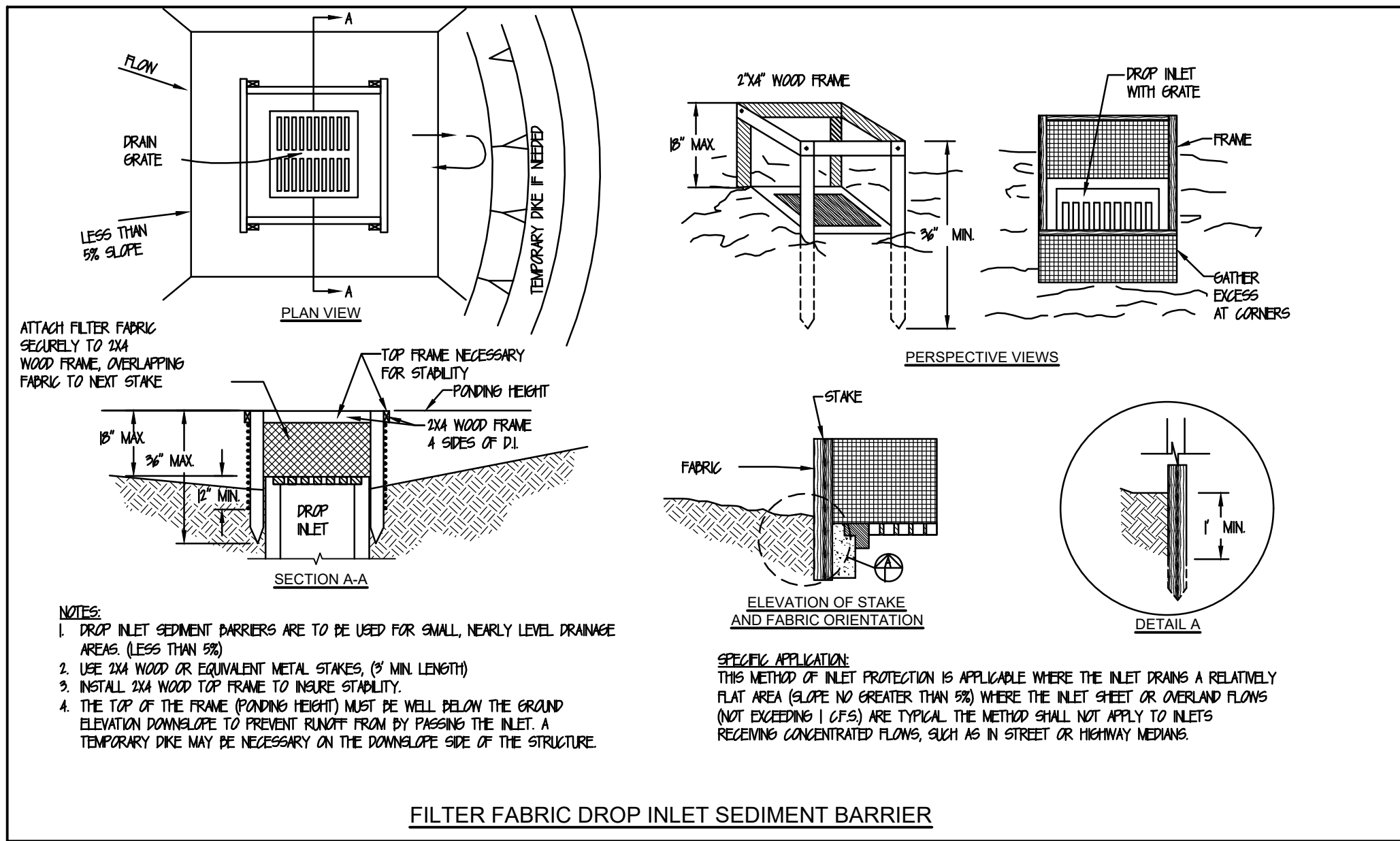
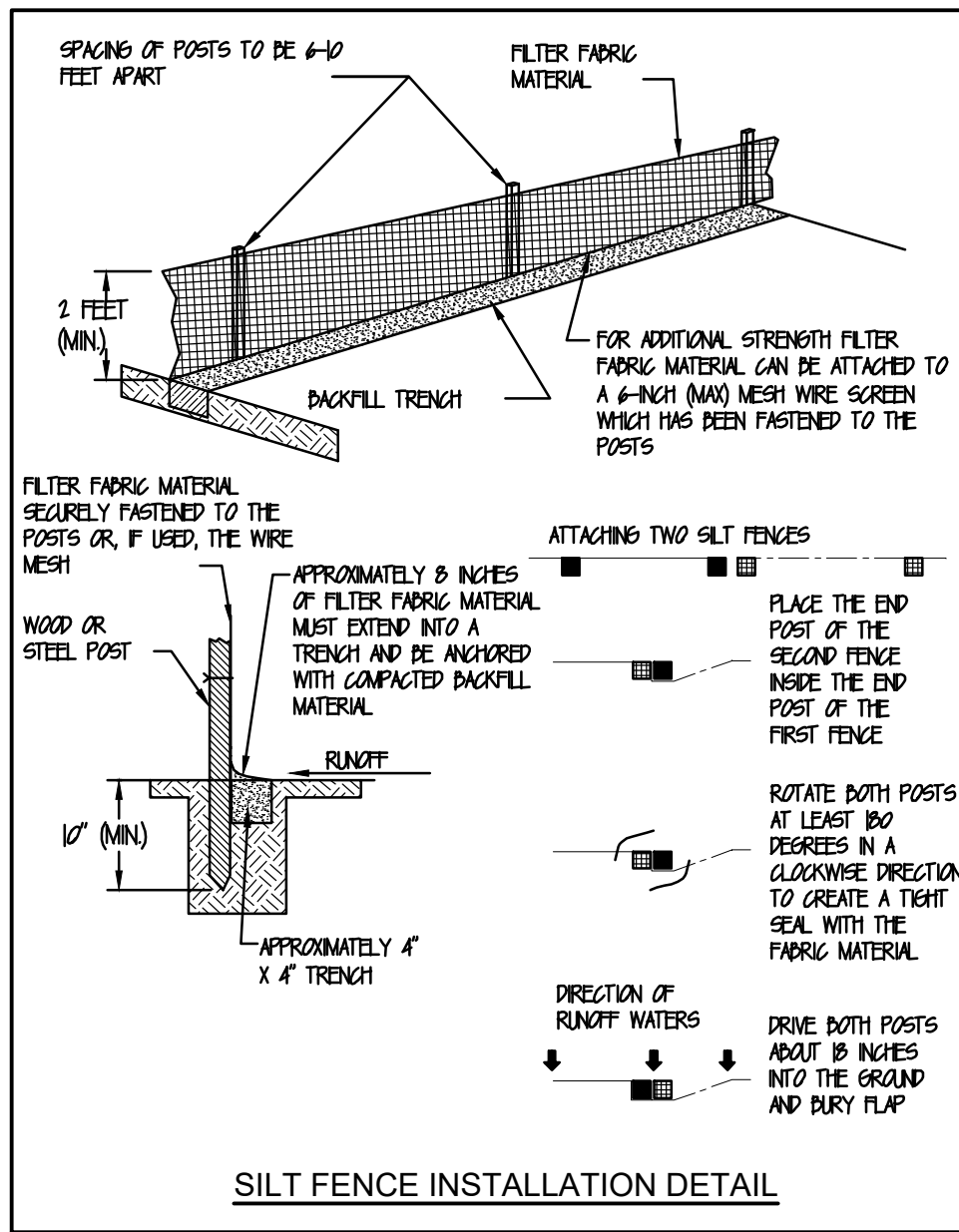
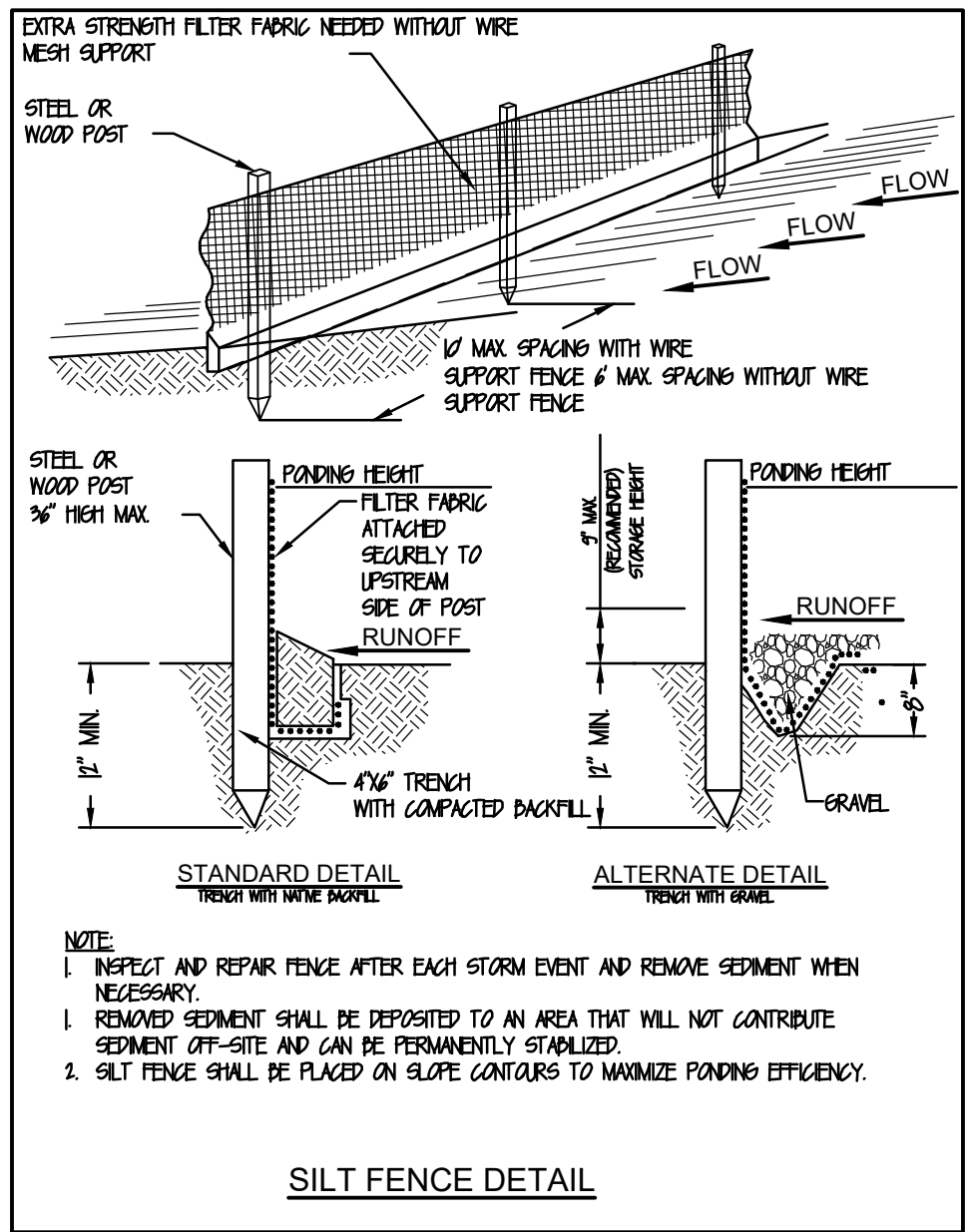


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CIVIL SITE DETAILS		KHA PROJECT 142806004	LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910	DATE APRIL 2024		THIS DRAWING HAS BEEN DIGITALLY SIGNED AND SEALED BY: KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL PRINTED COPIES OF THIS DOCUMENT SHALL BE SIGNED AND SEALED BY THE DESIGNER AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES	
WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH		DESIGNED BY: DRAWN BY: CHECKED BY:		DESIGNED BY: DRAWN BY: CHECKED BY:		CITY OF FERNANDINA BEACH FLORIDA	
SHEET NUMBER C-022		REVISIONS		DATE		BY	

Plotted By: Sait_Corv_Sheet_Sett-CofEB Waterfront Resiliency Layout-023 April 12, 2024 12:19:00pm K:\JAX-WaterResources\142806004 - EBEL Waterfront Resiliency\Cadd\PlanSheets\C-023 BEST MANAGEMENT PRACTICES DETAILS.dwg
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BEST MANAGEMENT PRACTICES DETAILS

WATERFRONT RESILIENCY SYSTEM

PREPARED FOR

CITY OF FERNANDINA BEACH

KHA PROJECT

142806004

DATE

APRIL 2024

SCALE: AS SHOWN

DESIGNED BY: KIRK F. DROST, P.E.

DRAWN BY: KIRK F. DROST, P.E.

CHECKED BY: KIRK F. DROST, P.E.

FLORIDA

CITY OF FERNANDINA BEACH

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SHEET NUMBER

C-023

REVISIONS

DATE

BY

K:\JAX WaterResources\142806004 - FBFL Waterfront Resiliency\Code\PlanSheets\C-024 STORMWATER POLLUTION PREVENTION PLAN.dwg

Plotted By: Sait_Corv_Sheet_Sheet_Sat-Corv Waterfront Resiliency - Layout: S-001-STRUCTURAL GENERAL NOTES.dwg
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DESIGN SPECIFICATIONS AND REFERENCES:

1. FLORIDA BUILDING CODE, EIGHTH EDITION, 2023.
2. STRUCTURAL STEEL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN." 15th EDITION.
3. STRUCTURAL CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE (ACI) PUBLICATION ACI 318-19 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301- 19," SPECIFICATIONS FOR STRUCTURAL CONCRETE".
4. STRUCTURAL WELDING CODE D1.1, LATEST EDITION, BY AMERICAN WELDING SOCIETY.

RAMP MATERIALS:

1. ALL CONCRETE SHALL CONTAIN:

A. PORTLAND CEMENT – ASTM C150–TYPE II.

B. FLY ASH – ASTM C618, CLASS F.

C. HIGH RANGE WATER.

D. REDUCING ADMIXTURE (SUPERPLASTICIZER) AND WATER REDUCING ADMIXTURE.

E. LOW WATER–TO–CEMENTITIOUS–MATERIALS RATIO – W/CM < 0.40.

F. LIMIT ON SIZE OF LARGE AGGREGATE – 57 STONE.
2. CAST–IN–PLACE CONCRETE – 28 DAY STRENGTH – 5000 PSI – EXPOSURE CLASS S2 FOR SEVERE CORROSION PROTECTION OF REINFORCEMENT.
3. REINFORCING STEEL:

A. NEW BILLET STEEL SHALL CONFORM TO ASTM A615, GRADE 60.

B. STEEL FOR TIGHT RADIUS BENDS AND WELDABILITY SHALL CONFORM TO ASTM A706, GRADE 60.

REINFORCED CONCRETE

- RC–1 ALL CONCRETE SHALL CONTAIN:

A. PORTLAND CEMENT –ASTM C150– TYPE II.

B. FLY ASH – ASTM C618, CLASS F. (25% MAX.)

C. HIGH RANGE WATER REDUCING ADMIXTURE (SUPERPLASTICIZER) AND WATER REDUCING ADMIXTURE. (SLUMP 6–8")

D. LOW WATER–TO–CEMENTITIOUS–MATERIALS RATIO – W/CM < 0.40.

E. LIMIT ON SIZE OF LARGE AGGREGATE – 57 STONE
- RC–2 STRUCTURAL CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS, AND SHALL DEVELOP THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS, AS WELL AS OTHER PROPERTIES SPECIFIED IN THESE DOCUMENTS. SEE SPECIFICATIONS FOR DESIGN MIX REQUIREMENTS.

CIP BULKHEAD CAPS/SLABS/WALLS 5,000 PSI

- RC–3 CONCRETE SHALL BE READY–MIX, REGULAR WEIGHT FOR ALL STRUCTURAL USES, WITH MINIMUM DRY DENSITY OF 140 LBS. PER CUBIC FOOT.
- RC–4 ALL PUMPED CONCRETE CONTAINING #57 AGGREGATE SHALL CONTAIN A HIGH RANGE WATER REDUCING AGENT. MINIMUM SIZE OF DISCHARGE SHALL BE 4 INCHES.
- RC–5 CONCRETE SHALL BE WET CURED FOR A 7 DAY MINIMUM FOLLOWED BY FDOT APPROVAL TYPE 2 CURBING COMPOUND.
- RC–6 CONTROL AND EXPANSION JOINTS SHALL BE PER DRAWINGS.
- RC–7 ALL CONCRETE CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
- RC–8 CHAMFER ALL EXPOSED CONCRETE EDGES, – 3/4"x3/4" UNLESS NOTED OTHERWISE.
- RC–9 REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED IN ACCORDANCE WITH ACI 318 AND ACI DETAILING MANUAL, ACI 315.
- RC–10 REINFORCING STEEL SHALL BE NEW, DEFORMED BARS, FREE OF RUST, SCALE AND OIL, CONFORMING TO ASTM A–615, GRADE 60 WITH A MINIMUM YIELD STRENGTH = 60,000 PSI.
- RC–11 LAP SPLICE REINFORCING STEEL AS INDICATED. LAP SPLICES NOT SPECIFICALLY DIMENSIONED SHALL BE IN ACCORDANCE WITH ACI 318, CLASS B AS INDICATED BELOW. TOP BARS ARE HORIZONTAL BARS WITH 12 INCHES OR MORE OF CONCRETE CAST BELOW THE BARS. IN BEAMS, LAP CONTINUOUS BOTTOM STEEL OVER SUPPORTS AND CONTINUOUS TOP STEEL AT MIDSPAN, UNLESS NOTED OTHERWISE.

BAR SIZE	TOP BARS	OTHER BARS
	5,000 PSI	5,000 PSI
#3	23"	17"
#4	30"	23"
#5	37"	28"
#6	45"	34"
#7	64"	49"
#8	73"	56"
#9	82"	63"
#10	93"	71"
#11	103"	78"
#14	123"	94"
#18	163"	125"

- RC–12 TERMINATE ALL DISCONTINUOUS ENDS OF TOP BARS WITH STANDARDS ACI HOOKS. TURN HOOKS UP OR DOWN INTO SUPPORTING STRUCTURE. CORNER BARS SHALL BE SUPPLIED AND PLACED IN ADDITION TO HOOKED ENDS, PER THE DETAILS IN THESE DOCUMENTS.
- RC–13 PROVIDE 3 INCH MINIMUM CONCRETE COVERAGE OVERALL REINFORCING UNLESS NOTED OTHERWISE.
- RC–14 ALL PENETRATIONS THROUGH SLABS, BEAMS OR FOOTINGS SHALL BE SLEEVED INDIVIDUALLY. CORE DRILLING OF EXISTING CONCRETE MEMBERS WILL NOT BE PERMITTED, UNLESS NOTED ON PLANS. SUBMIT LOCATIONS AND SIZES OF ALL SLEEVES FOR ENGINEER APPROVAL PRIOR TO CASTING.
- RC–15 WHERE WALLS, BEAMS AND CAPS CHANGE DIRECTION, PROVIDE CORNER BARS OF SAME SIZE AND QUANTITY AS THE SPECIFIED LONGITUDINAL STEEL.
- RC–16 FOLLOW ACI 301, ACI 305 AND ACI 306 FOR HOT AND COLD WEATHER CONCRETE WORK.
- RC–17 ALL EMBEDDED ITEMS SHALL BE SECURELY FIXED AND MAINTAINED IN POSITION PRIOR TO AND DURING CONCRETE PLACEMENT.
- RC–18 NOT MORE THAN ONE–HALF OF THE REINFORCING BARS SHALL BE SPLICED AT ANY ONE LOCATION, WITH ADJACENT SPLICES STAGGERED NOT LESS THAN ONE LAP SPLICE LENGTH BETWEEN SPLICES.
- RC–19 HOOKS AT THE ENDS OF REINFORCING BARS SHALL BE STANDARD ACI 90 DEGREE AND 180 DEGREE HOOKS CONFORMING TO ACI 318.
- RC–20 DO NOT CUT, BEND OR OTHERWISE MODIFY REINFORCING STEEL IN THE FIELD. REINFORCING BARS SHALL NOT BE DISPLACED PRIOR TO OR DURING CONCRETE PLACING TO ACCOMMODATE ANCHORS, EMBEDS, OR OTHER ITEMS.
- RC–21 CONCRETE CAP SHALL NOT BE POURED WITHIN 300 FEET OF PILE DRIVING OR VIBRATORY HAMMER OPERATIONS TO AVOID CRACKING, SETTLING ON IMPACTS TO CURING.
- RC–22 INTENTIONALLY ROUGHEN ALL EXISTING SMOOTH CONCRETE SURFACES TO RECEIVE FRESH CONCRETE PLACEMENT TO AT LEAST A 1/4" AMPLITUDE.
- RC–23 CONCRETE BULKHEAD CAP CAN NOT BE POURED WITHIN 7 DAYS OF A PREVIOUS ADJACENT POUR. SKIP POURING WILL BE REQUIRED.

STRUCTURAL STEEL/METALS

- S–1 FABRICATION AND ERECTION OF MISCELLANEOUS FABRICATIONS SHALL CONFORM TO THE A.I.S.C. "MANUAL OF STEEL CONSTRUCTION", 15th EDITION AND THE A.I.S.C. "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", 2016.
- S–2 STEEL SHAPES, PLATES, BRACKETS, SEATS AND OTHER FABRICATIONS SHALL BE OF STEEL CONFORMING TO A.S.T.M. A36, WITH A MINIMUM YIELD STRESS OF 36 KSI.
- S–3 STEEL SHEET PILES SHALL CONFORM TO A.S.T.M. A252/572 GR. 60 WITH A MINIMUM YIELD STRESS OF 60 KSI.
- S–4 TUBE SECTIONS SHALL CONFORM TO A.S.T.M. A500, GRADE B WITH A MINIMUM YIELD STRESS OF 46 KSI. PIPE SHALL CONFORM TO A.S.T.M. A501 OR A53, TYPES E OR S, WITH A MINIMUM YIELD STRESS OF 36 KSI.
- S–5 ALL BOLTS WHICH ARE TO BE CAST INTO CONCRETE SHALL BE A.S.T.M. A36 OR A307, UNLESS NOTED OTHERWISE.
- S–6 SUBMIT MISCELLANEOUS FABRICATIONS SHOP AND ERECTION DRAWINGS FOR REVIEW BY THE ENGINEER. ANY SPLICES OR CONNECTIONS NOT FULLY PROVIDED IN THESE PLANS SHALL BE DESIGNED BY A DELEGATED ENGINEER WHO OVERSEES THE DETAILING OF THE STEEL SHOP AND ERECTION DRAWINGS, AND BEAR THE SEAL OF THAT INDIVIDUAL, BEING A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA. PROVIDE SIGNED AND SEALED ENGINEERING CALCULATIONS FOR ANY SPECIAL MOMENT SPLICE DESIGNS.
- S–7 HAND RAILINGS AND LADDER SHALL BE PAINTED PURE WHITE TO MATCH EXISTING BASED ON A THREE PART SYSTEM CONSISTING OF A ZINC RICH PRIMER, EPOXY PAINT AND URETHANE FINISH COAT WITH A MINIMUM DRY FILM THICKNESS OF 16 MILS. THE COATING SYSTEM SHALL BE APPROVED PRIOR TO ANY WORK.
- S–8 ALL STEEL PLATES, BOLTS, WASHERS, NUTS, FASTENERS, HANGERS, STRAPS AND CLIPS SHALL BE TYPE 316 STAINLESS STEEL U.N.O.
- S–9 STEEL PLATES AND ROLLED STEEL MEMBERS, BOLTS, NUTS AND WASHERS SHALL CONFORM TO TYPE 316 STAINLESS STEEL.
- S–10 NAILS, SCREWS, HANGERS, STRAPS, AND CLIPS SHALL BE FABRICATED FROM APPROPRIATE MATERIALS TO MEET CONDITIONS SHOWN.
- S–11 PREFABRICATED AND MANUFACTURED METAL CONNECTORS, STRAPS, ANCHORS, TIES AND HANGERS SHALL BE STAINLESS STEEL, G90 U.N.O.
- S–12 PROVIDE SUBMITTAL OF ALL ITEMS OR PROPOSED SUBSTITUTIONS FOR EQUAL APPROVAL. PROVIDE SIZE AND NUMBER OF FASTENERS PER MANUFACTUER RECOMMENDATIONS, U.N.O. ON PLANS.

SHEET PILE INSTALLATION

- SP–1 PILES SHALL BE DRIVEN TO THE LENGTHS SPECIFIED. THE ENGINEER MUST APPROVE ANY DEVIATION.
- SP–2 PILES SHALL BE DRIVEN WITHIN THREE (3) INCHES OF PLAN LOCATION, AND PARALLEL TO EXISTING WALL

- SP–3 THE CONTRACTOR SHALL TAKE ADDED PRECAUTIONS TO MINIMIZE DAMAGE TO THE PILE COATING SYSTEM DURING HANDLING AND DRIVING. REPAIRS TO THE PILE COATING SYSTEM SHALL BE MADE AS SOON AS POSSIBLE AFTER THE DAMAGE OCCURS. THE CONTRACTOR SHALL PRE – APPROVE REPAIR METHODS WITH THE ENGINEER TO MINIMIZE DELAYS.
- SP–4 PILE DRIVING LOGS SHALL BE MAINTAINED AND SUBMITTED EVERY 2 TO 3 DAYS TO THE ENGINEER. PILE LOGS SHALL REFLECT THE PILE LOCATION AND METHOD OF INSTALLATION. LOCATION OF HARD MATERIAL SHALL BE NOTED.
- SP–5 CONTRACTOR SHALL REVIEW BORING LOGS FOR THE AREA AND FAMILIARIZE THEMSELVES WITH THE MATERIALS THAT WILL BE ENCOUNTERED. THERE IS AN INCONSISTENT THICKNESS OF HARD MATERIAL WITHIN THE SHEET PILE EMBEDMENT. CONTRACTOR IS RESPONSIBLE FOR BRINGING ALL EQUIPMENT NECESSARY TO BRING SHEET PILES TO GRADE INCLUDING, BUT NOT LIMITED TO, VIBRATOR HAMMER, PUNCHES (WITHOUT IMPACT), DRILLS/AUGERS AND OTHER. PAST PROJECTS IN ADJACENT PROPERTIES HAD DIFFICULTY VIBRATING. CONTRACTOR SHALL BE PREPARED TO BRING SHEETS TO GRADE AT NO ADDITIONAL COST TO OWNER.
- SP–6 ALL SHEET PILES SHALL BE BROUGHT TO GRADE / TIP IN SAME DAY AS THEY ARE STARTED. NO SHEET CAN BE LEFT EXTENDING ABOVE THE TOP OF THE FINISH ELEVATION OVERNIGHT TO PREVENT SET UP OF PILES IN GEOTECHNICAL MATERIALS.
- SP–7 DRY FIRING AND RAMPING OF THE PILE HAMMER AS REQUIRED BY ENVIRONMENTAL PERMIT. SEE PERMITS IN TECHNICAL SPECIFICATIONS FOR ADDITIONAL DETAILS.
- SP–8 CONTRACTOR SHALL USE A VARIABLE MOMENT HAMMER TO MINIMIZE VIBRATIONS OF SOILS AND ADJACENT STRUCTURES DURING PILE INSTALLATION.
- SP–9 THERE IS MISCELLANEOUS CONCRETE DEBRIS AND ASSOCIATED ROCK RIP RAP USED AS ARMOUR FOR FORMER STRUCTURES THAT COULD INTERFERE WITH PILE DRIVING OPERATIONS. CONTRACTOR SHALL CLEAR LOOSE DEBRIS AS REQUIRED TO ENSURE PILE DRIVING IS COMPLETED AS SPECIFIED.
- SP–10 ALL STEEL PIPE PILES SHALL BE SANDBLASTED TO A NEAR WHITE FINISH AND COATED WITH 16 MILS TOTAL DFT OF COAL TAR EPOXY. COATING SHALL EXTEND AS INDICATED.
- SP–11 JETTING OF PILES IS NOT PERMITTED

PRESTRESSED CONCRETE PILE NOTES:

- F–1 PILES SHALL BE 12" PRESTRESSED CONCRETE PILES PER FDOT INDEX 455–012 FY 2023–2024.
- F–2 MINIMUM PILE TIP ELEVATION SHALL BE AS INDICATED IN SECTIONS..
- F–3 JETTING OF PILES IS NOT PERMITTED.

WOOD / TIMBER:

- W–1 DIMENSIONAL LUMBER GRADES AND ALLOWABLE DESIGN STRESSES SHALL BE AS FOLLOWS: ALL WOOD SHALL BE P.T. SOUTHERN YELLOW PINE UNLESS NOTED OTHERWISE (U.N.O.)

DECKING AND JOISTS:

NO. 1 P.T. S.Y.P.:
FB = 1250 PSI
FV = 175 PSI
E = 1,600,000 PSI

GIRDERS:

NO. 1 P.T. S.Y.P.:
FB = 1000 PSI
FV = 175 PSI
E = 1,600,000 PSI

- W–2 GLUE USED IN THE FIELD FOR ASSEMBLING WOOD PRODUCTS SHALL BE WATERPROOF EXTERIOR GRADE EQUAL TO OR BETTER THAN LIQUID NAILS.

THE FOLLOWING PRESERVATIVES SHOULD BE APPLIED.

PILES 2.50 CCA
CAPS 0.60 CCA
JOISTS 0.60 CCA

- W–4 MANUFACTURED WOOD DECKING PRODUCT SHALL BE FABRICATED BY MANUFACTURER TO MEET CONDITIONS AND LOADING SHOWN ON PLANS.
- W–5 ALL WOOD FRAMING (NOT PILES OR DECK) SHALL BE PRESSURE TREATED AND COATED AFTER INSTALLED WITH A CLEAR COAT WEATHER SEALER AS APPROVED BY OWNER.

- W–6 DECKING THROUGHOUT THE SITE SHALL BE TREK COMPOSITE TRANSCEND (ISLAND MIST) OR APPROVED EQUAL – PHYSICAL SAMPLE OF COLOR OPTIONS TO BE PROVIDED TO PROJECT LA AND APPROVED THROUGH SUBMITTAL PROCESS.

- W–7 ALL SIMPSON AND TIMBER ANCHORS SHALL BE STAINLESS STEEL.

- W–8 ALL NUTS, WASHERS, AND BOLTS SHALL BE GRADE 316 S.S.

MECHANICAL ANCHORS:

- MA–1 USE WEDGE–TYPE OR THREADED/UNDERCUTTING–TYPE ANCHORS CONFORMING TO BROWARD COUNTY PRODUCT APPROVAL AND/OR FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) PRODUCT APPROVAL.
- MA–2 FOLLOW MANUFACTURER’S INSTRUCTIONS FOR USE AND INSTALLATION.
- MA–3 PROVIDE A MINIMUM SPACING OF 10 ANCHOR DIAMETERS AND EDGE DISTANCE OF 12 ANCHOR DIAMETERS, U.N.O.
- MA–4 ANCHORS FOR STRUCTURAL CONNECTIONS SHALL BE 1/2 INCH DIAMETER OR GREATER.

CHEMICAL ADHESIVE FOR THREADED BARS AND ANCHOR BOLTS:

- CA–1 CHEMICAL ADHESIVE PRODUCT USED SHALL CONFORM TO BROWARD COUNTY PRODUCT APPROVAL AND/OR FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) PRODUCT APPROVAL.
- CA–2 FOLLOW MANUFACTURER’S INSTRUCTIONS FOR USE AND INSTALLATION.
- CA–3 DIAMETER OF HOLE SHALL BE 1/16 INCH LARGER THAN DIAMETER OF ANCHOR BOLT, U.N.O.
- CA–4 PROVIDE A MINIMUM EMBEDMENT OF 12 ANCHOR DIAMETERS, U.N.O.
- CA–5 PROVIDE A MINIMUM SPACING OF 8 ANCHOR DIAMETERS AND EDGE DISTANCE OF 6 ANCHOR DIAMETERS, U.N.O.

WELDING

- W–1 WELDING OF METAL FABRICATIONS SHALL CONFORM TO (AWS) "STRUCTURAL WELDING CODE– STEEL", D1.1.
- W–2 ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY CERTIFIED AND APPROVED WELDERS.
- W–3 ALL WELDED CONNECTIONS SHALL BE PRE–QUALIFIED IN ACCORDANCE WITH AWS D1.1.
- W–4 ALL WELDED STEEL CONNECTIONS SHALL BE MADE USING SHIELDED METAL ARC PROCESS, OR APPROVED EQUAL, WITH ELECTRODES CONFORMING TO E70XX.
- W–5 ALL WELDS (SHOP AND FIELD) SHALL BE INSPECTED (VISUAL AND RT, MT AND BY AWS CERTIFIED WELDING INSPECTORS (CW) PER SPECIFICATIONS..

GEOTECHNICAL INFORMATION:

- G–1 CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT’S SOIL BORINGS AND REQUIREMENTS.
FINAL REPORT OF GEOTECHNICAL EXPLORATION BY MAE (MAE PROJECT NO. 0013–0011) DATED NOVEMBER 15, 2023

PRE-FINAL

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NOT FOR CONSTRUCTION

PROJECT DATUMS:

HORIZONTAL: NAD83/2011

(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)

VERTICAL: NAVD '88

Always call 811 two full business days before you dig to have underground utilities located and marked.



STRUCTURAL GENERAL NOTES

WATERFRONT RESILIENCY SYSTEM

PREPARED FOR

CITY OF FERNANDINA BEACH

CITY OF FERNANDINA BEACH

SHEET NUMBER
S-001

LICENSED PROFESSIONAL

KIRK F. DROST, P.E.

FLORIDA LICENSE NUMBER

51910

THIS SEAL HAS BEEN DIGITALLY SIGNED AND SEALED BY KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL

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KHA PROJECT

142806004

DATE

APRIL 2024

SCALE: AS SHOWN

DESIGNED BY: _____

DRAWN BY: _____

CHECKED BY: _____

Kimley»Horn

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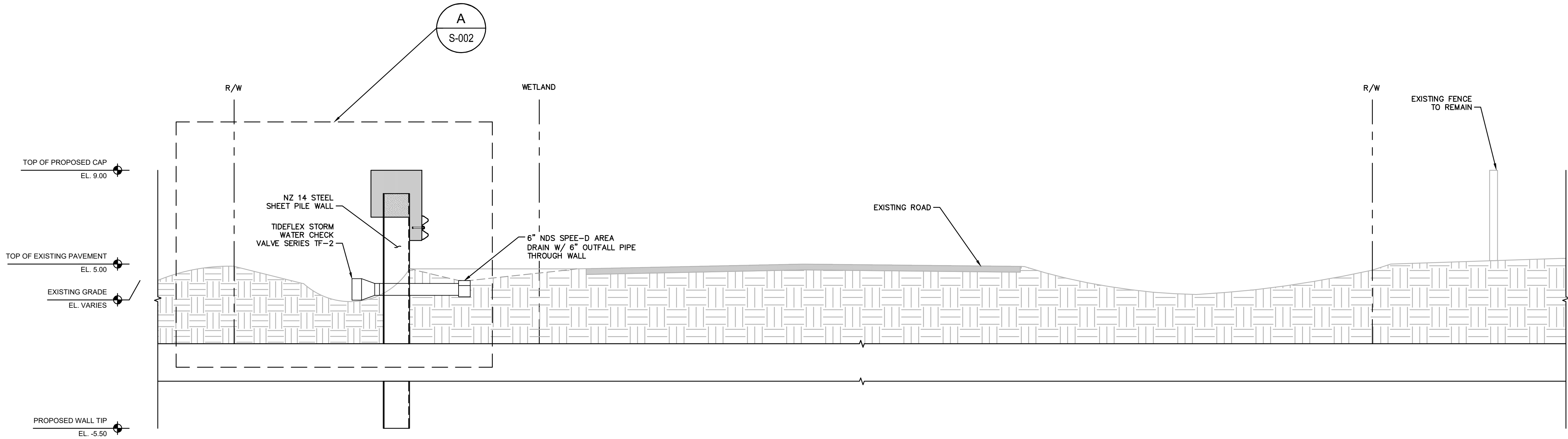
No.

REVISIONS

DATE

BY

Plotted: Bu.Solt_Corr_Sheet_Sat.CofEl Waterfront Resiliency - Layout: S-002 PROPOSED SEGMENT 1 April 12, 2024 12:19:16pm K:\JAX_WaterResources\142806004 - FBEI Waterfront Resiliency\Code\PlanSheets\S-002 PROPOSED SEGMENT 1.dwg
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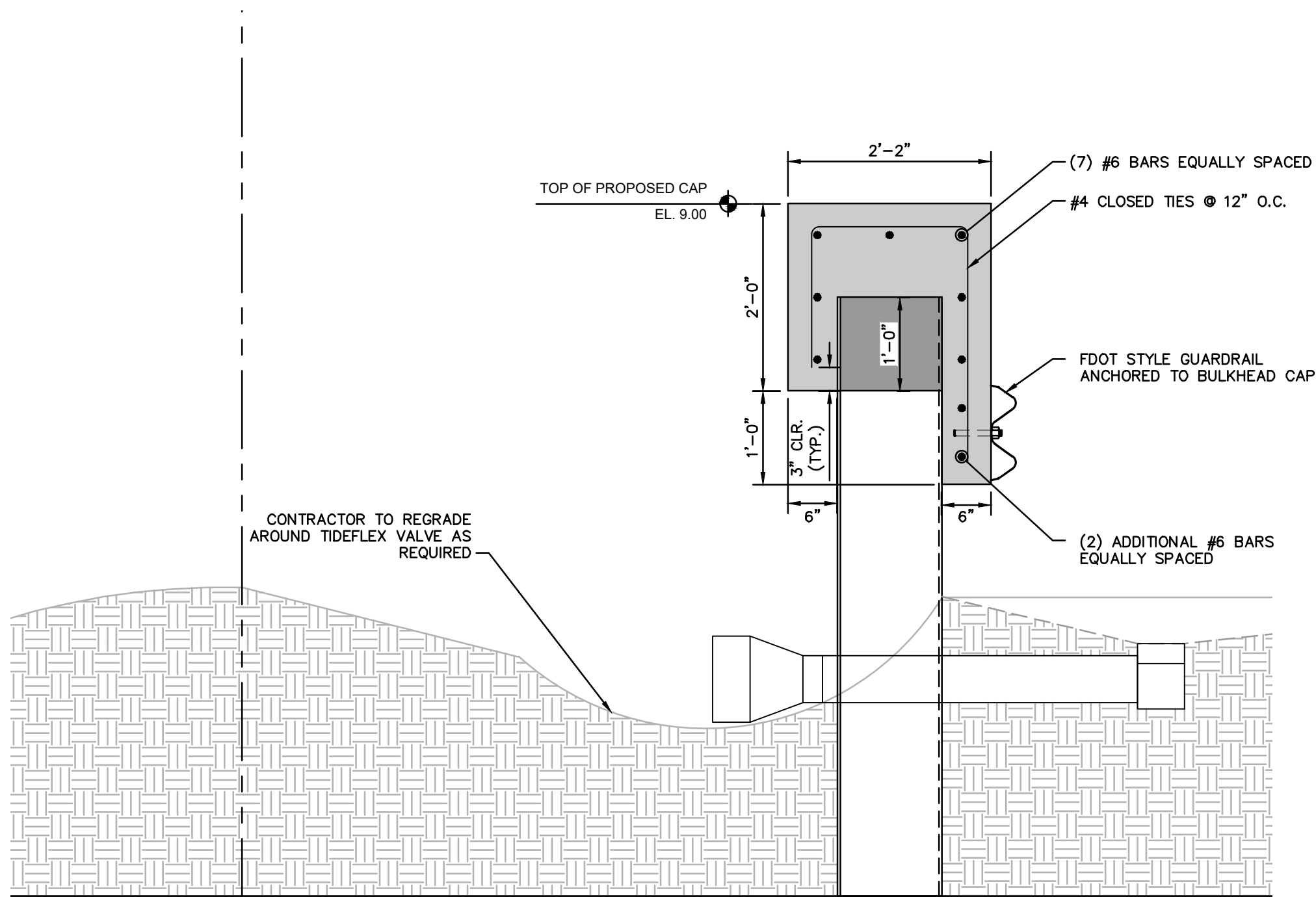
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S-002

SEGMENT 1 SECTION

SCALE: 3/8" = 1'-0"

0 2' 4' 6'

SCALE: 3/8" = 1'-0"



- NOTES:
1. CONTROL JOINTS: CONSTRUCT CONTROL JOINTS IN RESILIENCY WALL CONCRETE CAP AT 10'-0" ON CENTER, MAXIMUM.
 2. EXPANSION JOINTS: CONSTRUCT EXPANSION JOINTS IN RESILIENCY WALL CONCRETE CAP AT 40'-0" ON CENTER, MAXIMUM.

A
S-002

SEGMENT 1 ENLARGED SECTION

SCALE: 3/4" = 1'-0"

GRAPHIC SCALE IN FEET

0 8 16 32

PRE-FINAL

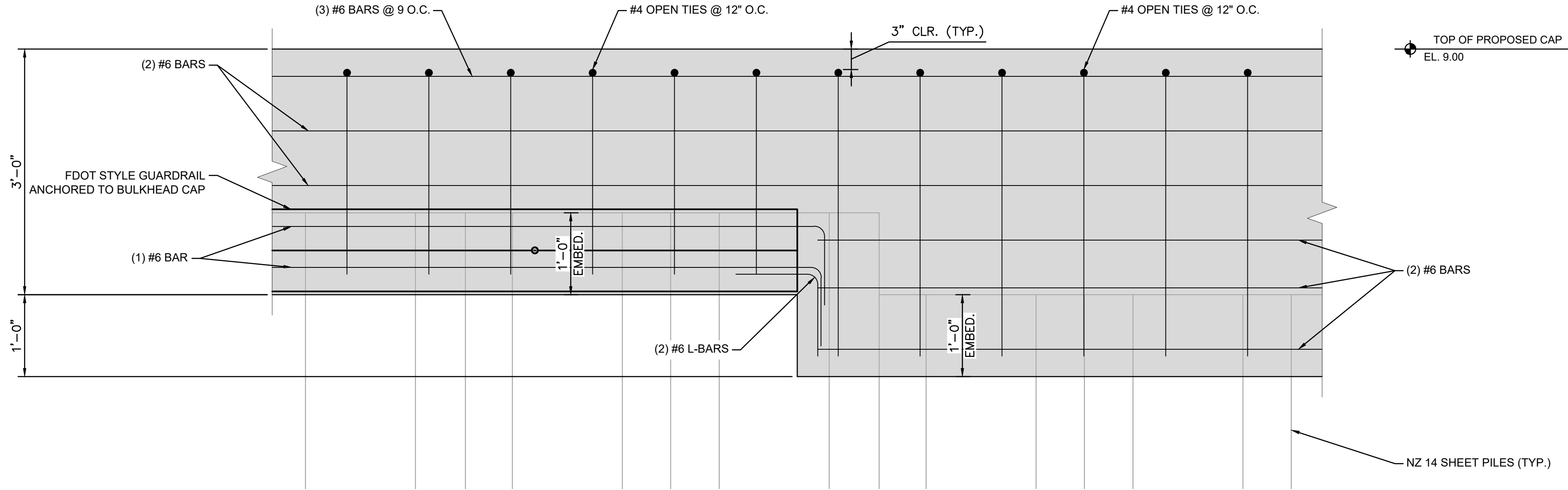
PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

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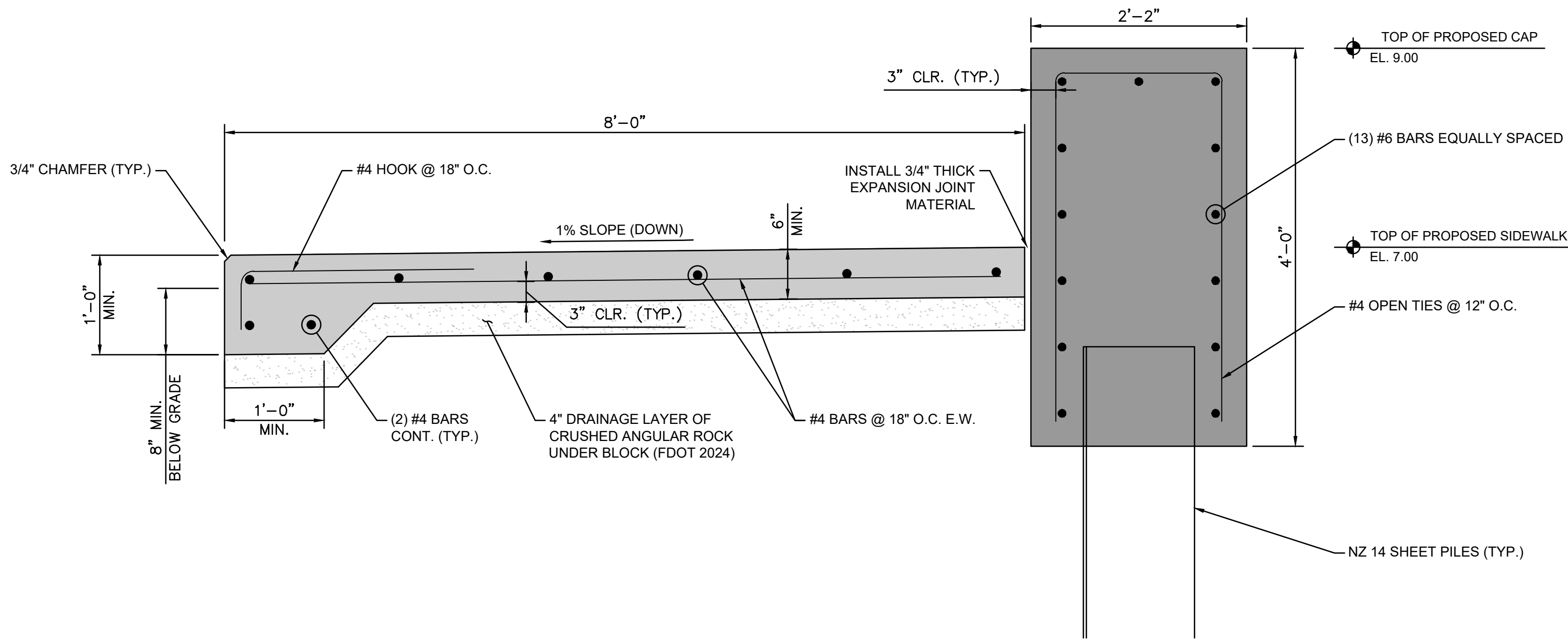
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WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH		DATE APRIL 2024		THIS DRAWING HAS BEEN DIGITALLY SIGNED AND SEALED BY: KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL PRINTED COPIES OF THIS DOCUMENT SHALL BE CONSIDERED VOID UNLESS SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES		No.	
CITY OF FERNANDINA BEACH FLORIDA		DESIGNED BY: DRAWN BY: CHECKED BY:		REVISIONS		DATE	
SHEET NUMBER S-002							

Plotted By: Solt, Cory. Sheet: S-003. Waterfront Resiliency - Layout: S-003. PROPOSED SEGMENT 1. April 12, 2024. 12:19:18pm. K:\VAX_WaterResources\142806004 - FBEI Waterfront Resiliency\Code\PlanSheets\S-002 PROPOSED SEGMENT 1.dwg
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1
S-003
SEGMENT 1 SECTION
SCALE: 1" = 1'-0"



2
S-003
6" CONCRETE (CONQUINA MIX) REINFORCED TYPICAL SIDEWALK ON GRADE SECTION
SCALE: 1" = 1'-0"

NOTES:

- CONTROL JOINTS (WALL): CONSTRUCT CONTROL JOINTS IN RESILIENCY WALL AND CONCRETE CAP AT 10'-0" ON CENTER, MAXIMUM.
- CONTROL JOINTS (SIDEWALK): CONSTRUCT CONTROL JOINTS IN NEW SIDEWALK AT 10'-0" ON CENTER, MAXIMUM.
- EXPANSION JOINTS (WALL): CONSTRUCT EXPANSION JOINTS IN RESILIENCY WALL CONCRETE CAP AT 40'-0" ON CENTER, MAXIMUM.
- EXPANSION JOINTS (SIDEWALK): CONSTRUCT EXPANSION JOINTS IN SIDEWALK AT 40'-0" ON CENTER, MAXIMUM AND ADJACENT TO THE EXISTING SIDEWALK ON THE SOUTH SIDE OF THIS SEGMENT AS WELL AS ADJACENT TO THE BULKHEAD FOR THE BOAT RAMP ON THE NORTH SIDE OF THIS SEGMENT.

PRE-FINAL

PRELIMINARY
NOT FOR CONSTRUCTION

PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

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PROPOSED SEGMENT 1

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

SHEET NUMBER
S-003

KHA PROJECT
142806004
DATE
APRIL 2024
SCALE: AS SHOWN
DESIGNED BY:
DRAWN BY:
CHECKED BY:

LICENSED PROFESSIONAL
KIRK F. DROST, P.E.
FLORIDA LICENSE NUMBER
51910

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CITY OF FERNANDINA BEACH

FLORIDA

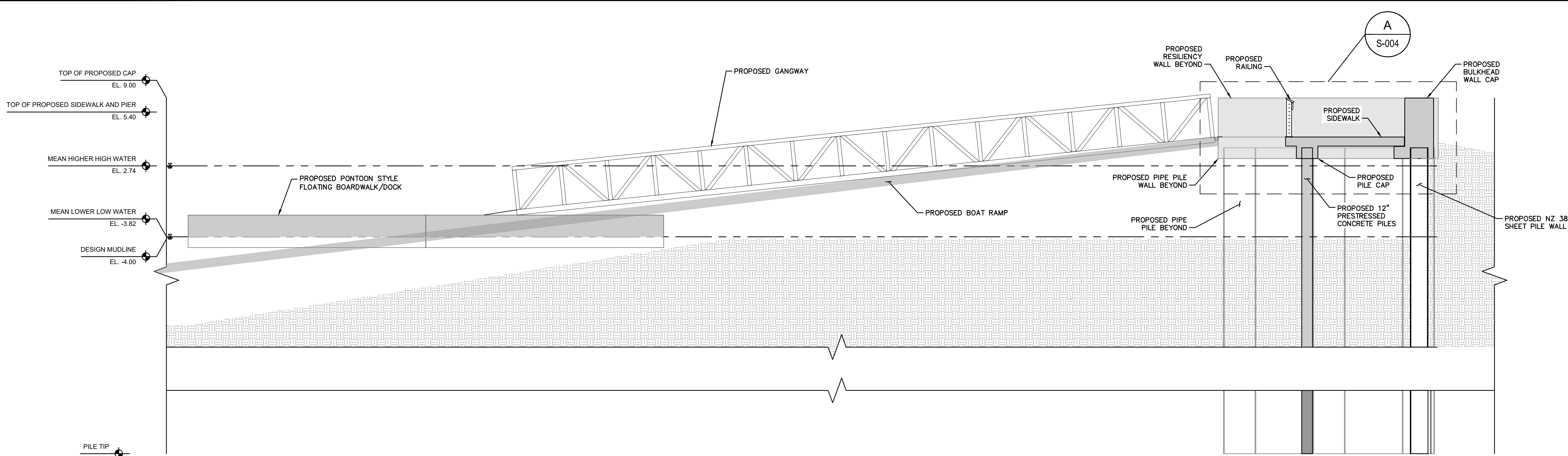
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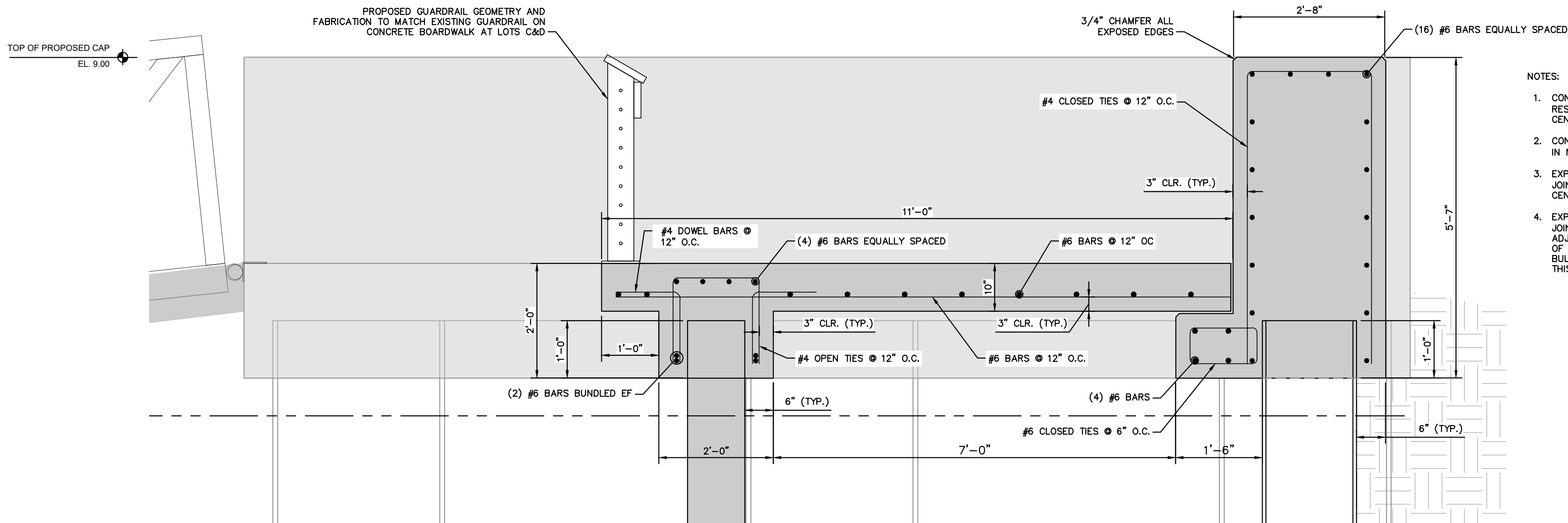
DATE

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Plotted By: Solt, Cory. Sheet: S-004. Waterfront Resiliency - Layout: S-004. PROPOSED SEGMENT 2A - April 12, 2024, 12:19:25pm. K:\JAX_WaterResources\142806004 - FBEL Waterfront Resiliency\Code\PlanSheets\S-004. PROPOSED SEGMENT 2A.dwg
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1
S-004
SEGMENT 2A SECTION
SCALE: 3/16" = 1'-0"
0 2' 4' 8'
SCALE: 3/16" = 1'-0"



- NOTES:
- CONTROL JOINTS (WALL): CONSTRUCT CONTROL JOINTS IN RESILIENCY WALL AND CONCRETE CAP AT 10'-0" ON CENTER, MAXIMUM.
 - CONTROL JOINTS (SIDEWALK): CONSTRUCT CONTROL JOINTS IN NEW SIDEWALK AT 10'-0" ON CENTER, MAXIMUM.
 - EXPANSION JOINTS (WALL): CONSTRUCT EXPANSION JOINTS IN RESILIENCY WALL CONCRETE CAP AT 40'-0" ON CENTER, MAXIMUM.
 - EXPANSION JOINTS (SIDEWALK): CONSTRUCT EXPANSION JOINTS IN SIDEWALK AT 40'-0" ON CENTER, MAXIMUM AND ADJACENT TO THE EXISTING SIDEWALK ON THE SOUTH SIDE OF THIS SEGMENT AS WELL AS ADJACENT TO THE BULKHEAD FOR THE BOAT RAMP ON THE NORTH SIDE OF THIS SEGMENT.

A
S-004
SEGMENT 2A ENLARGED SECTION
SCALE: 3/4" = 1'-0"
0 2' 4' 8'
SCALE: 3/16" = 1'-0"

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PROJECT DATUMS:
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(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
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PROPOSED SEGMENT 2A

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

SHEET NUMBER
S-004

KHA PROJECT
142806004
DATE
APRIL 2024
SCALE: AS SHOWN
DESIGNED BY:
DRAWN BY:
CHECKED BY:

LICENSED PROFESSIONAL
KIRK F. DROST, P.E.
FLORIDA LICENSE NUMBER
51910

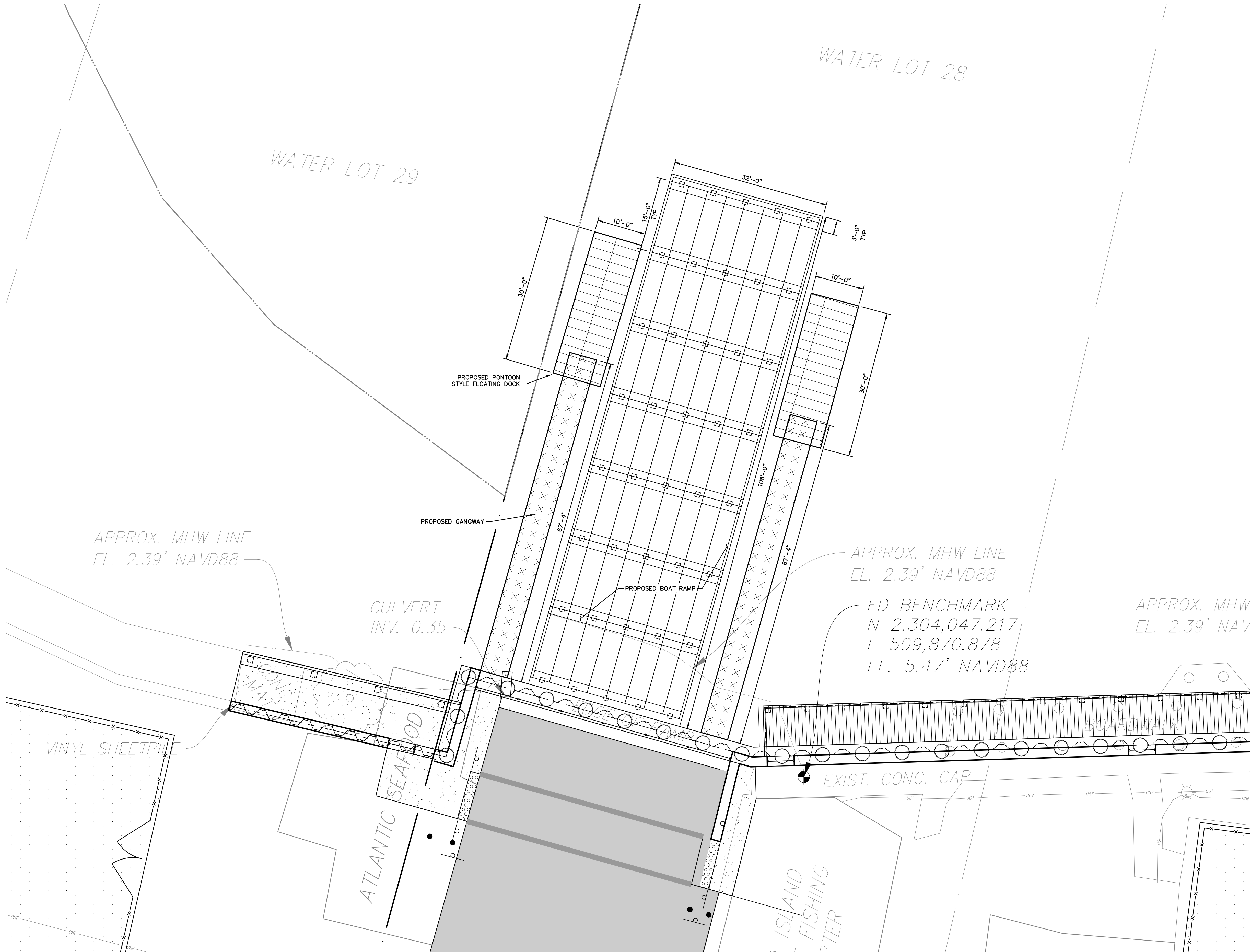
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Plotted By: Sait_Corv_Sheet_Sat-Cafel Waterfront Resiliency - Layout: S-005 PROPOSED SEGMENT 2B PLAN - April 12, 2024, 12:19:30pm - K:\JAX_WaterResources\142806004 - FBEL Waterfront Resiliency\Cadd\PlanSheets\S-004 PROPOSED SEGMENT 2B PLAN.dwg

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1
S-005
SEGMENT 2B SECTION AT BOAT RAMP
SCALE: 1" = 10'
GRAPHIC SCALE IN FEET
0 5 10 20

PRELIMINARY
NOT FOR CONSTRUCTION

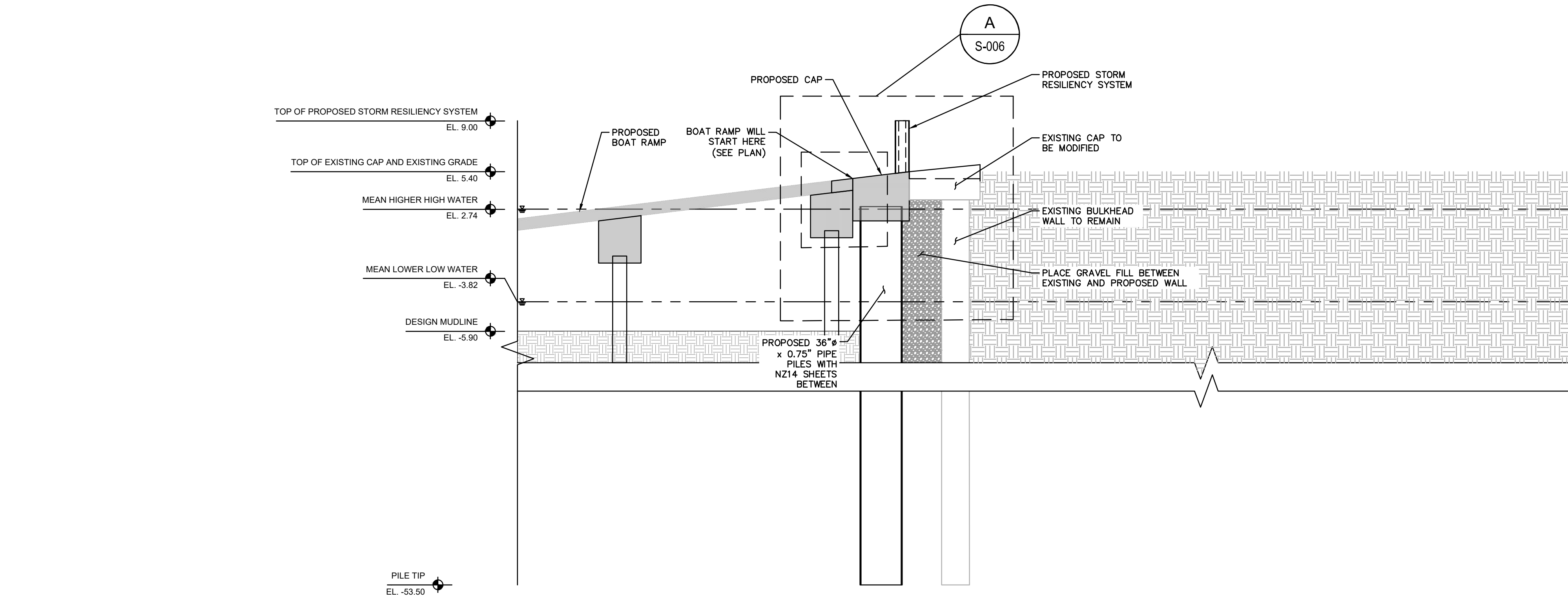
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PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

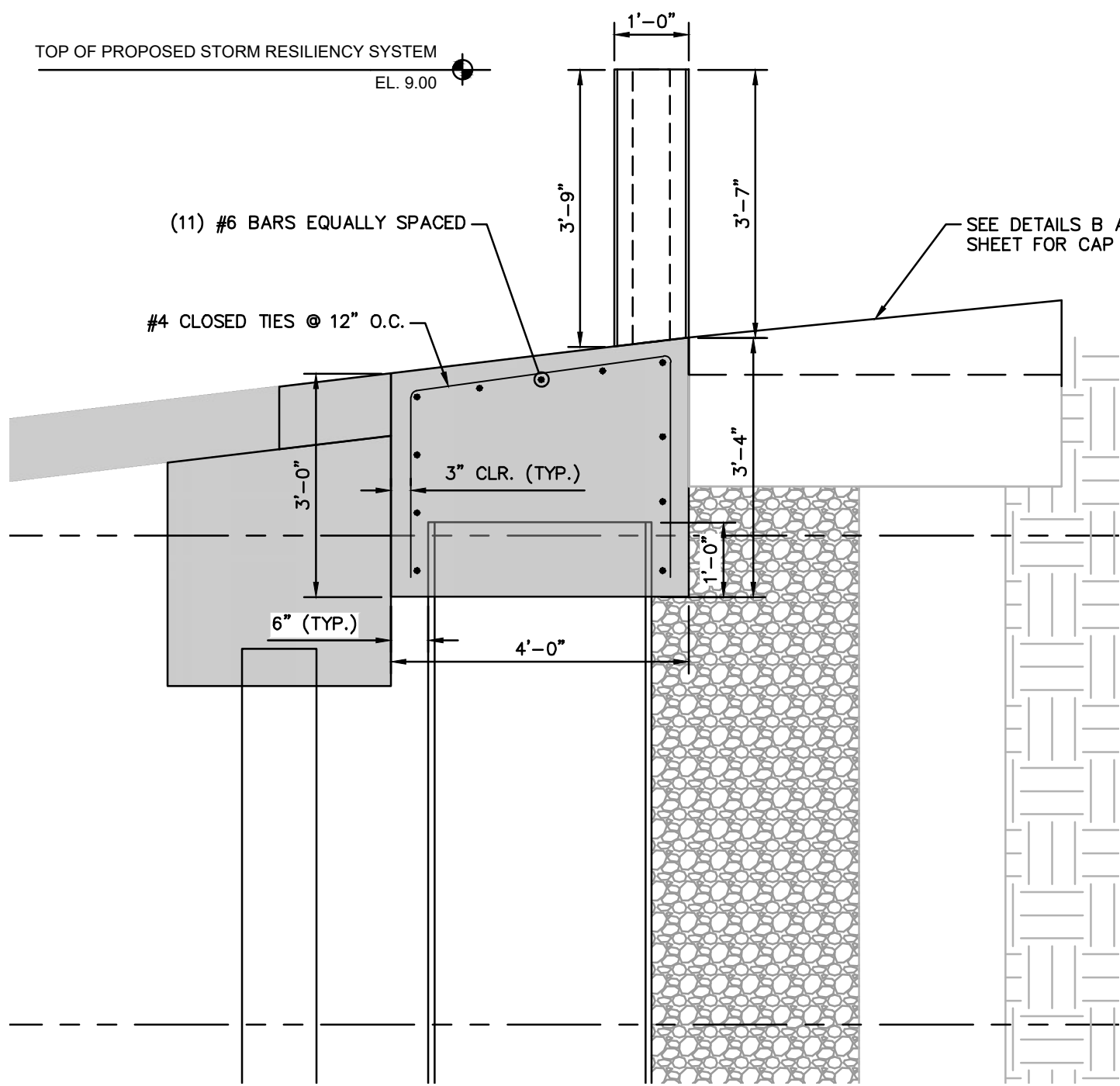
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PROPOSED SEGMENT 2B PLAN		KHA PROJECT 142806004		LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910		 © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106															
		DATE APRIL 2024		THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY: KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL PRINTED COPIES OF THIS DOCUMENT SHOULD BE SIGNED AND SEALED BY THE DESIGNER AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES																	
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		DRAWN BY:																			
CITY OF FERNANDINA BEACH		FLORIDA		CHECKED BY:																	
SHEET NUMBER S-005																					

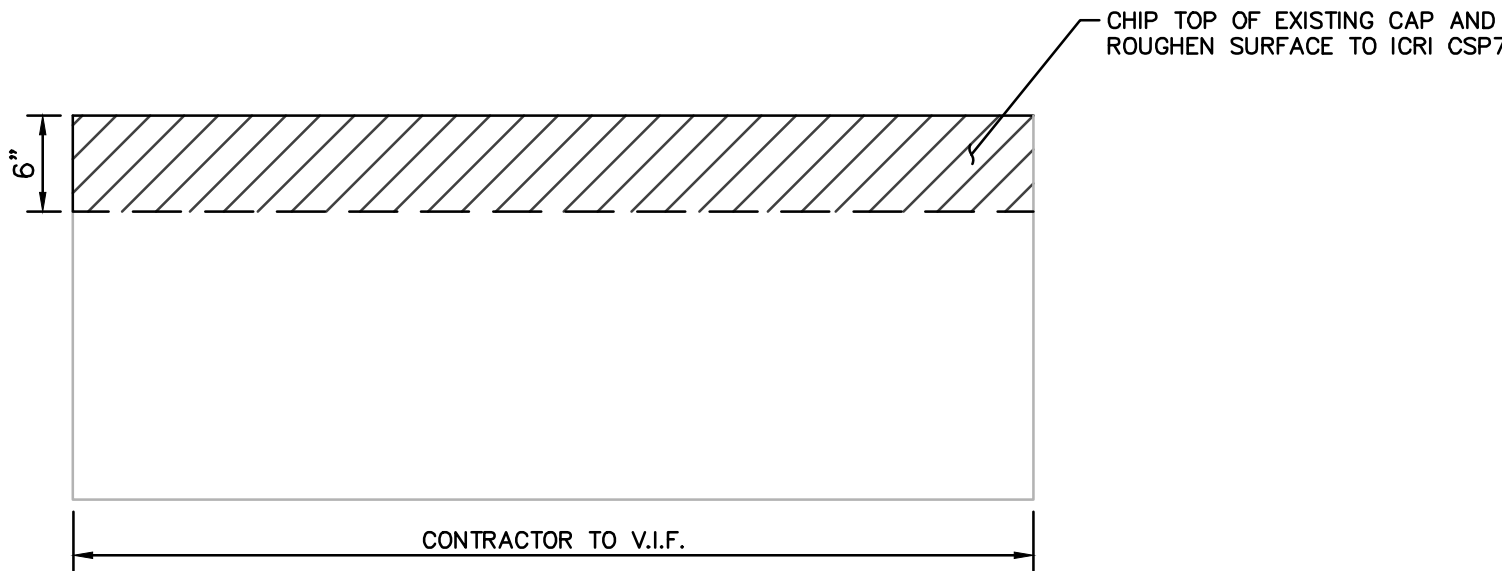
Plotted By: Sait, Corv. Sheet: Sait-Corv Waterfront Resiliency - Layout: S-006, PROPOSED SEGMENT 2B - April 12, 2024, 12:19:39pm. K:\AX_WaterResources\142806004 - FBEL Waterfront Resiliency\Cadd\PlanSheets\S-003, PROPOSED SEGMENT 2A.dwg
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1 SEGMENT 2B SECTION AT BOAT RAMP
S-006 SCALE: 3/16" = 1'-0"
0 2' 4' 8'
SCALE: 3/16" = 1'-0"

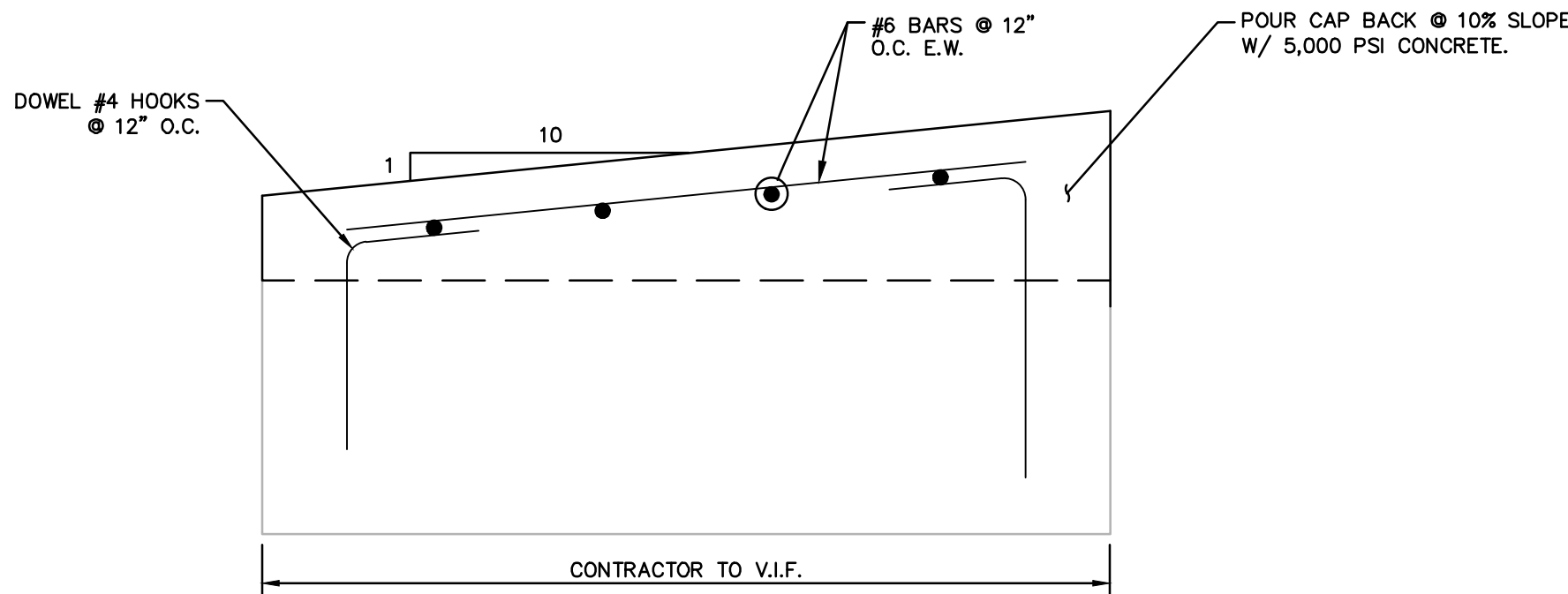


A SEGMENT 2B ENLARGED SECTION AT BOAT RAMP
S-006 SCALE: 1/2" = 1'-0"
GRAPHIC SCALE IN FEET
0 12 24 48

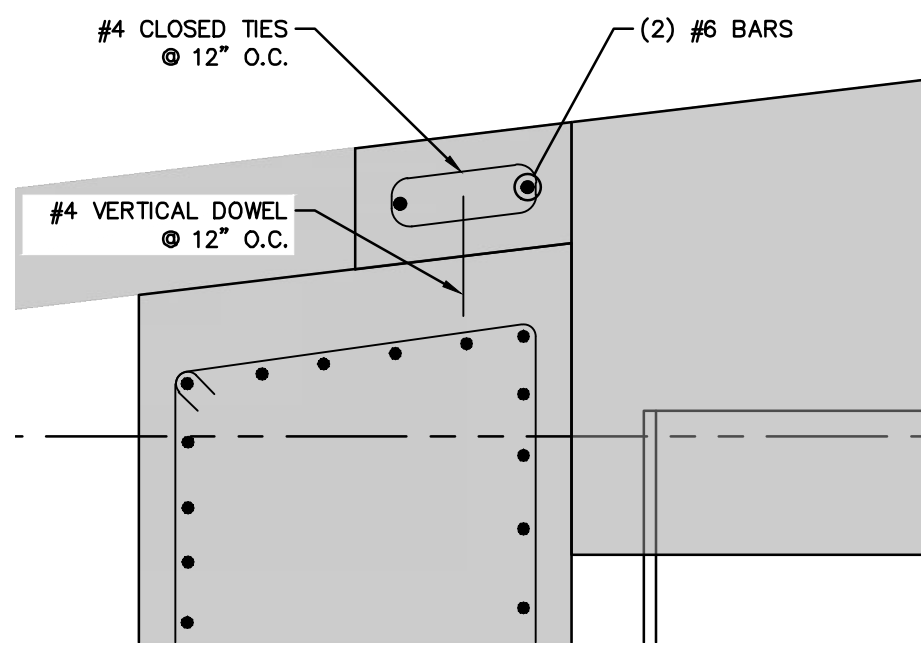


B MODIFICATION OF EXISTING CAP
S-006 SCALE: 1" = 1'-0"

- NOTES:
1. CONTROL JOINTS: CONSTRUCT CONTROL JOINTS IN RESILIENCY WALL CONCRETE CAP AT 10'-0" ON CENTER, MAXIMUM.
 2. EXPANSION JOINTS: CONSTRUCT EXPANSION JOINTS IN RESILIENCY WALL CONCRETE CAP AT 40'-0" ON CENTER, MAXIMUM.



C NEW CAP DETAIL
S-006 SCALE: 1" = 1'-0"



D BOAT RAMP CLOSURE POUR
S-006 SCALE: 3/4" = 1'-0"

PRE-FINAL

PROJECT DATUMS:
HORIZONTAL: NAD83/2011
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PROPOSED SEGMENT 2B

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

SHEET NUMBER
S-006

KHA PROJECT
142806004

DATE
APRIL 2024

SCALE: AS SHOWN

DESIGNED BY: KIRK F. DROST, P.E.

DRAWN BY: KIRK F. DROST, P.E.

CHECKED BY: KIRK F. DROST, P.E.

LICENSED PROFESSIONAL

KIRK F. DROST, P.E.

FLORIDA LICENSE NUMBER

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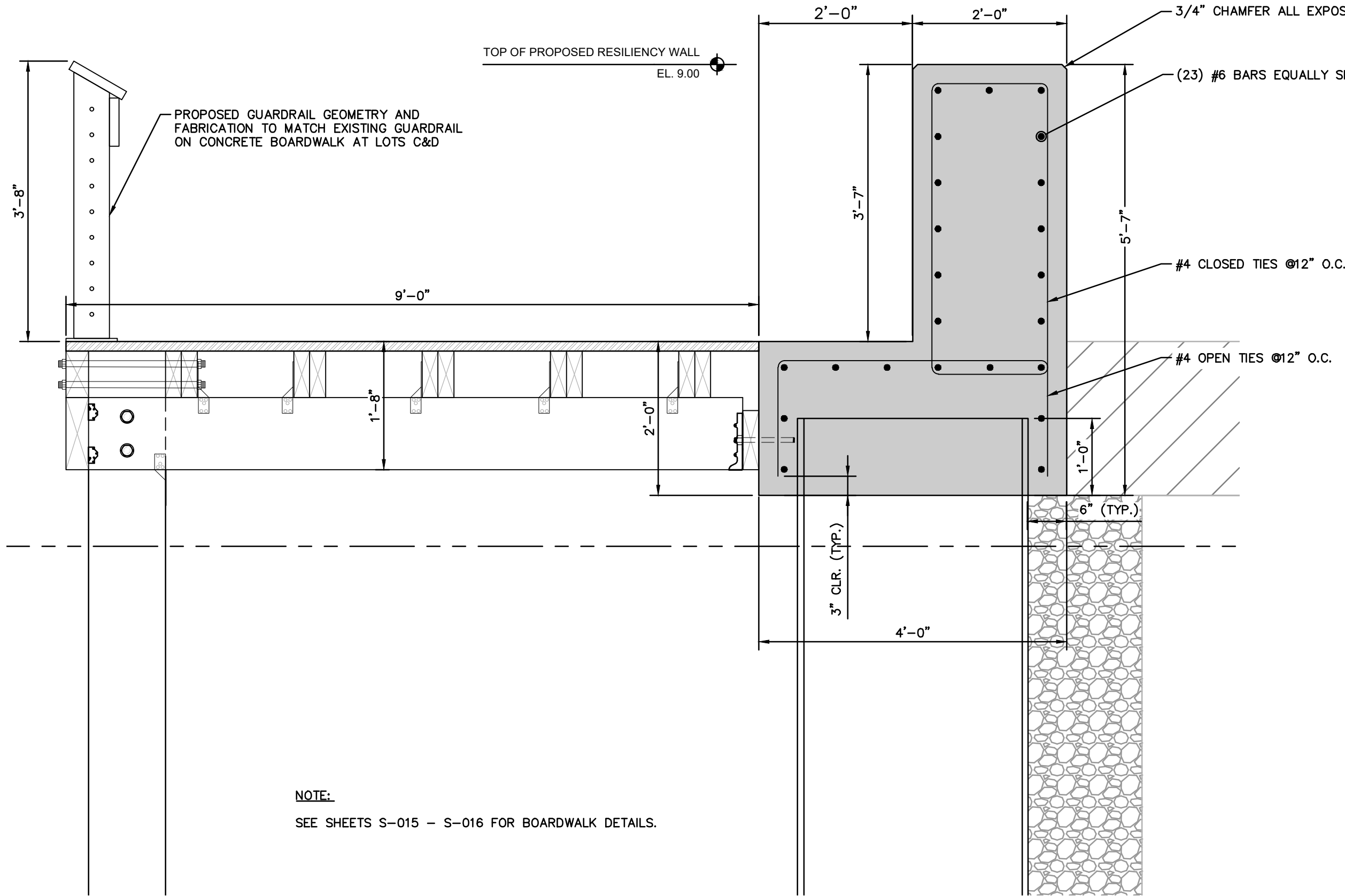
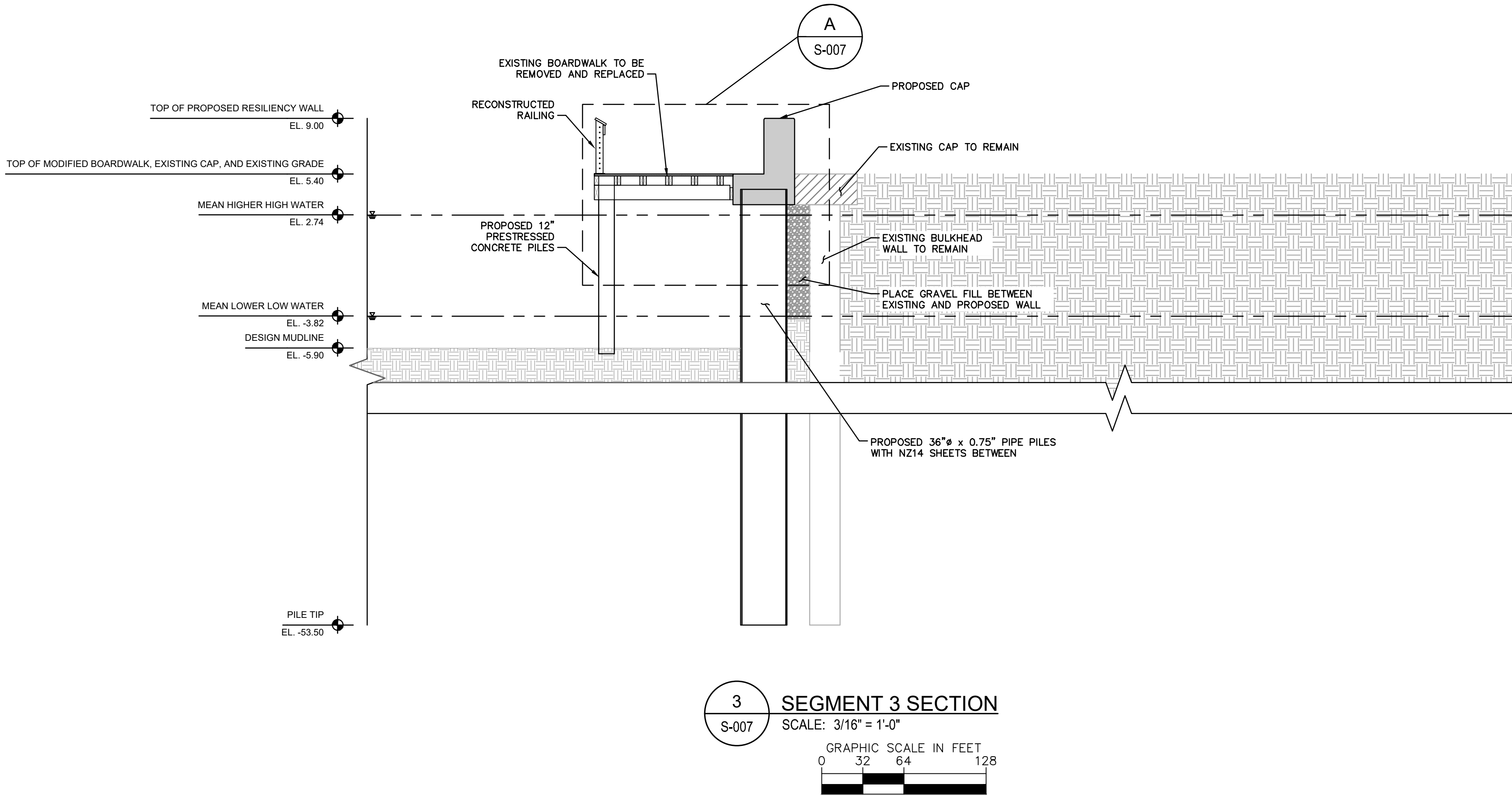
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- NOTES:
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 - EXPANSION JOINTS: CONSTRUCT EXPANSION JOINTS IN RESILIENCY WALL CONCRETE CAP AT 40'-0" ON CENTER, MAXIMUM.

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PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

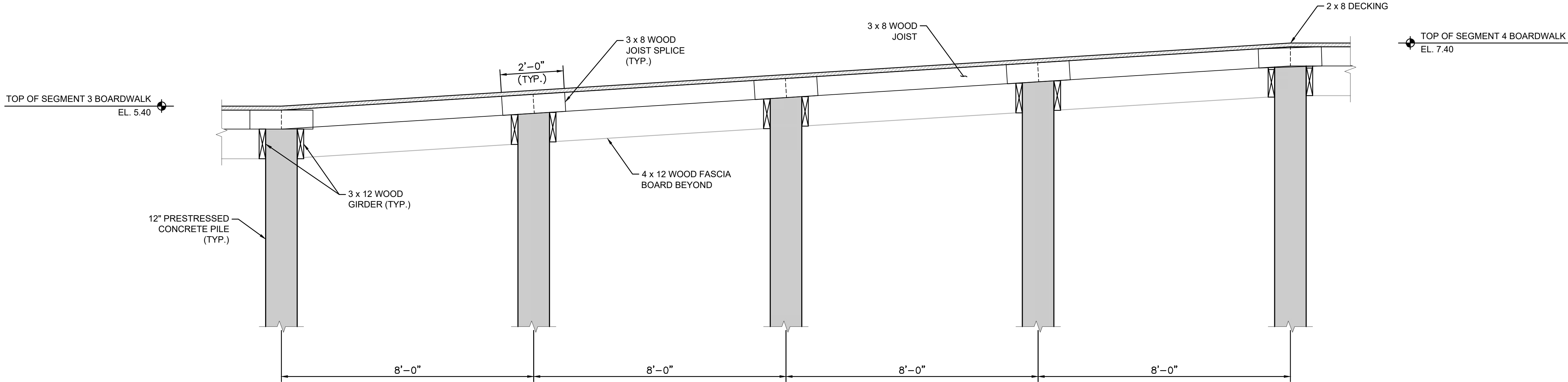
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PROPOSED SEGMENT 3		WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH		SHEET NUMBER S-007	
KHA PROJECT 142806004		LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910		© 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	
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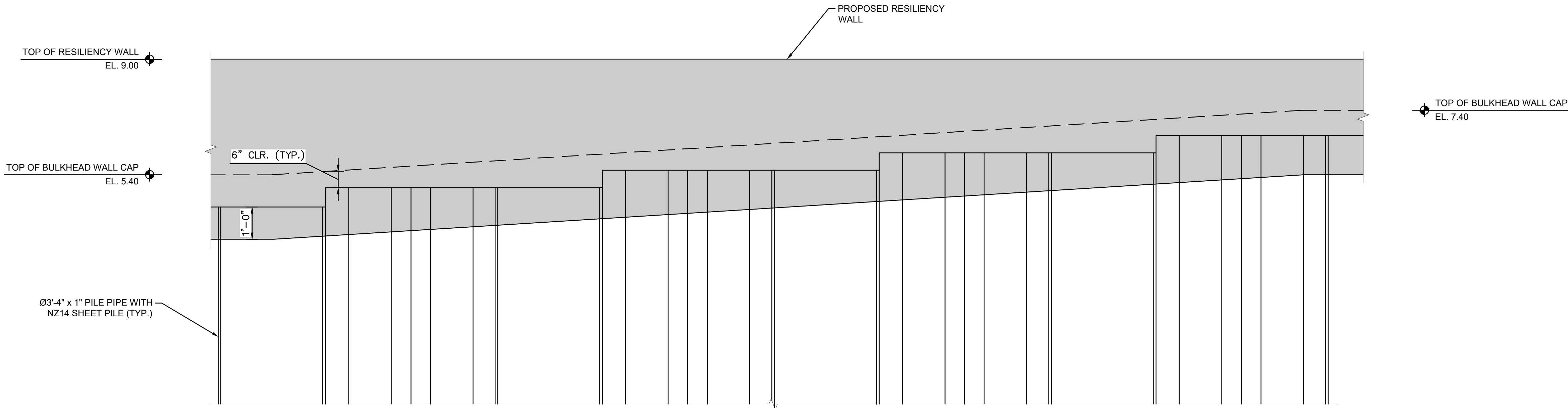
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1
S-008

TYPICAL BOARDWALK ELEVATION VIEW @ SEGMENT TRANSITION

SCALE: 1/2" = 1'-0"



2
S-008

TYPICAL BULKHEAD WALL ELEVATION VIEW @ SEGMENT TRANSITION

SCALE: 1/2" = 1'-0"

PRE-FINAL

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NOT FOR CONSTRUCTION

PROJECT DATUMS:

HORIZONTAL: NAD83/2011

(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
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VERTICAL: NAVD '88

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PROPOSED SEGMENT 3-4 TRANSITION

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

CITY OF FERNANDINA BEACH FLORIDA

KHA PROJECT
142806004

DATE
APRIL 2024

SCALE: AS SHOWN

DESIGNED BY: _____

DRAWN BY: _____

CHECKED BY: _____

LICENSED PROFESSIONAL

KIRK F. DROST, P.E.

FLORIDA LICENSE NUMBER
51910

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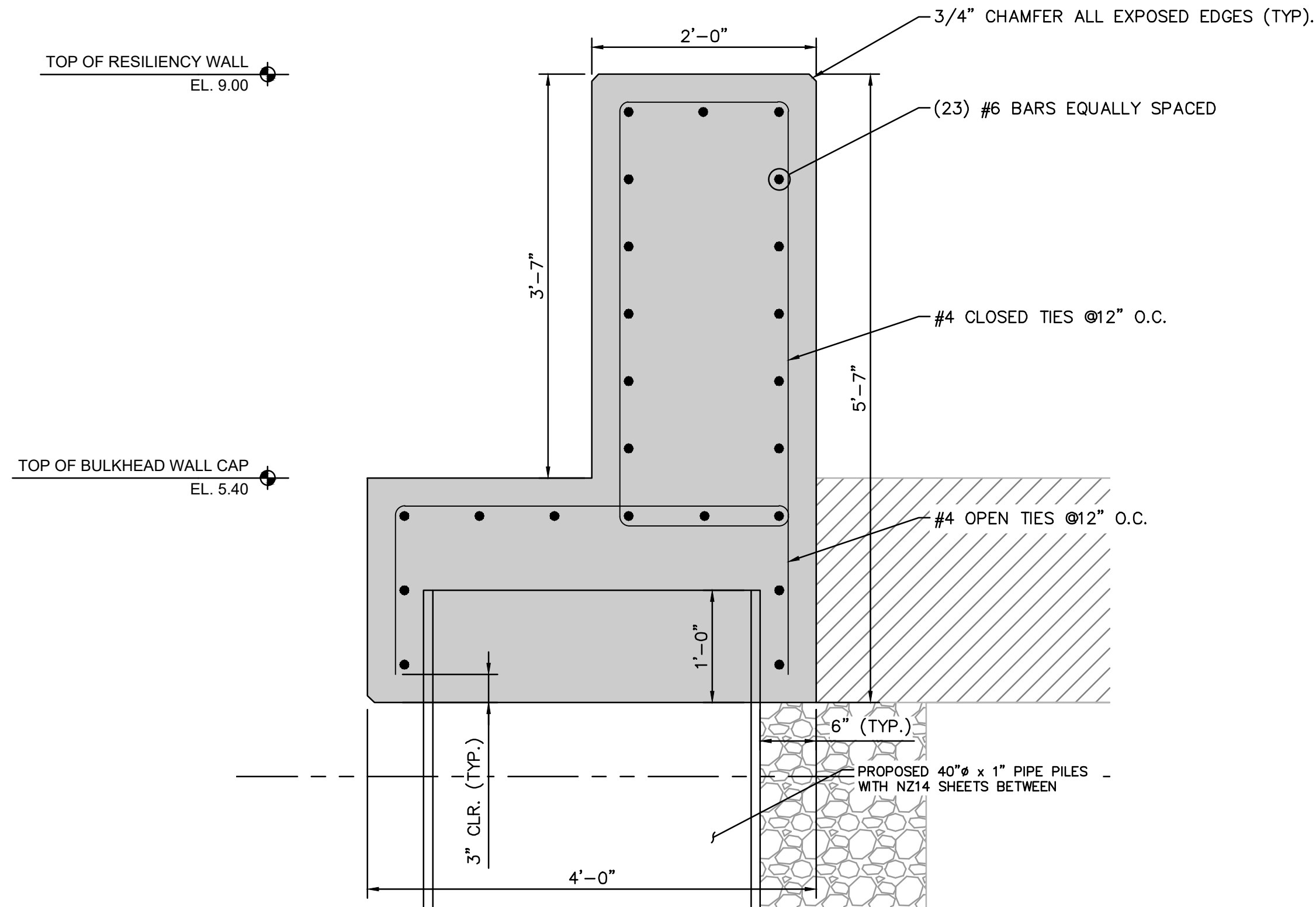
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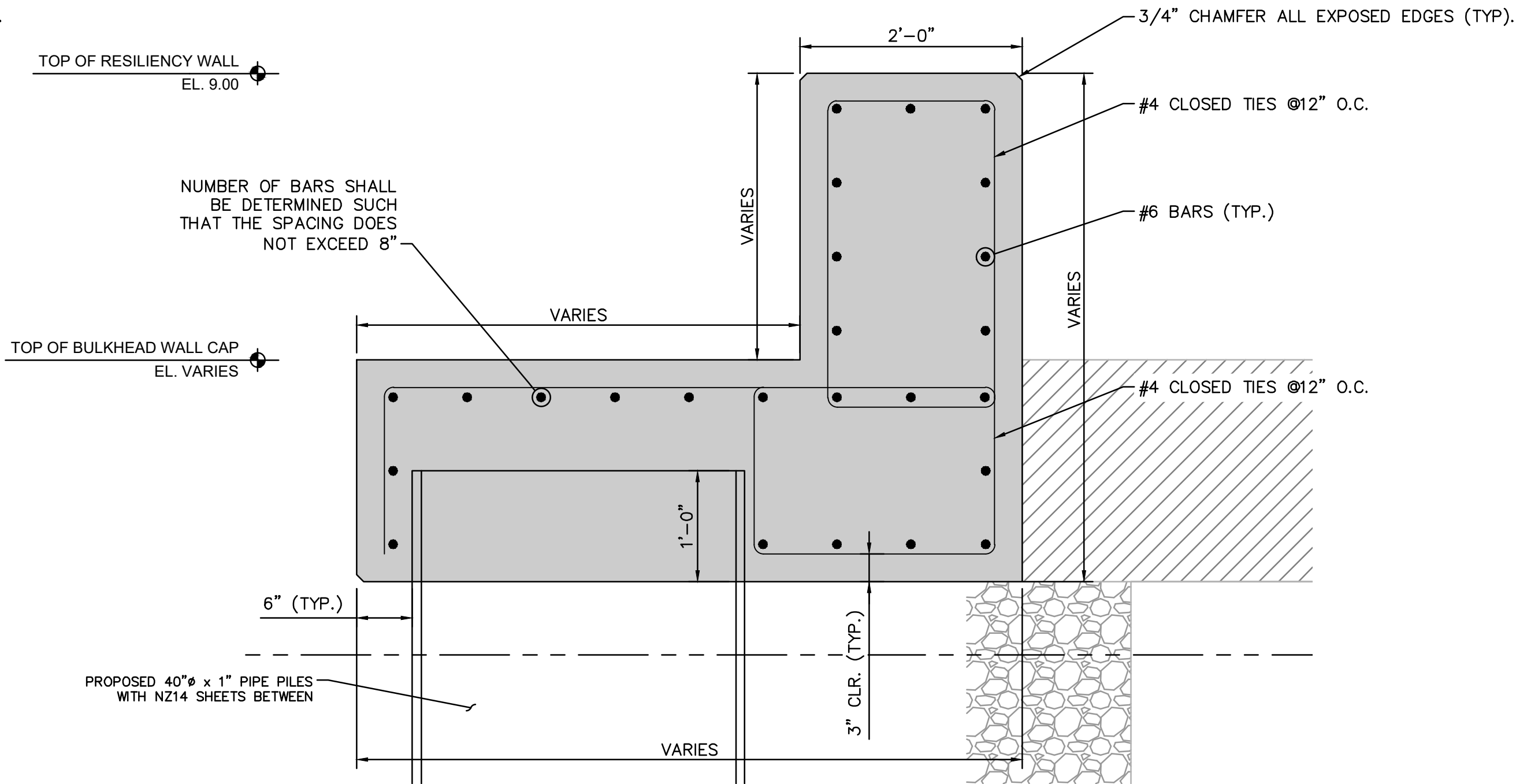
SHEET NUMBER
S-008

Plotted By: Solt, Cory. Sheet: S-009. Waterfront Resiliency - Layout: S-009. PROPOSED SEGMENT 3-4 TRANSITION. April 12, 2024. 12:19:57pm. K:\JAX - WaterResources\142806004 - EFEL Waterfront Resiliency\Cadd\PlanSheets\S-003 PROPOSED SEGMENT 2A.dwg

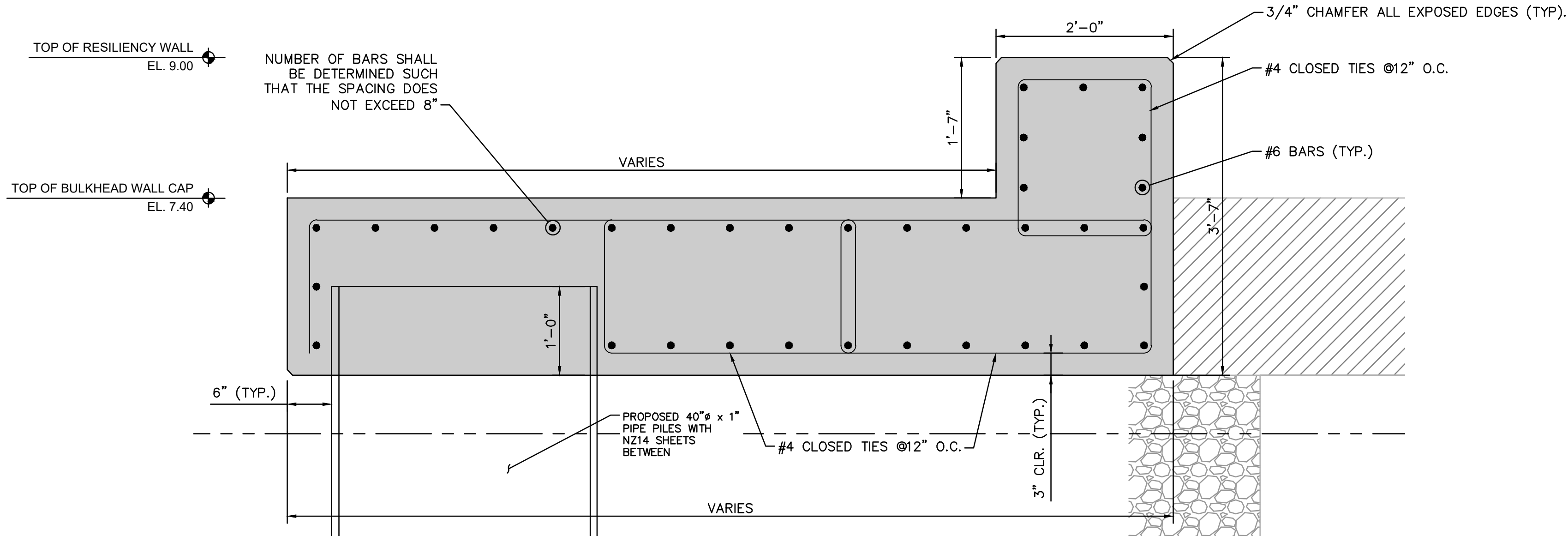
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1
S-009
SEGMENT 3 TO 4 TRANSITION - START
SCALE: 1" = 1'-0"



2
S-009
SEGMENT 3 TO 4 TRANSITION - MIDDLE
SCALE: 1" = 1'-0"



3
S-009
SEGMENT 3 TO 4 TRANSITION - END
SCALE: 1" = 1'-0"

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PROJECT DATUMS:
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VERTICAL: NAVD '88

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PROPOSED SEGMENT 3-4 TRANSITION

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

SHEET NUMBER
S-009

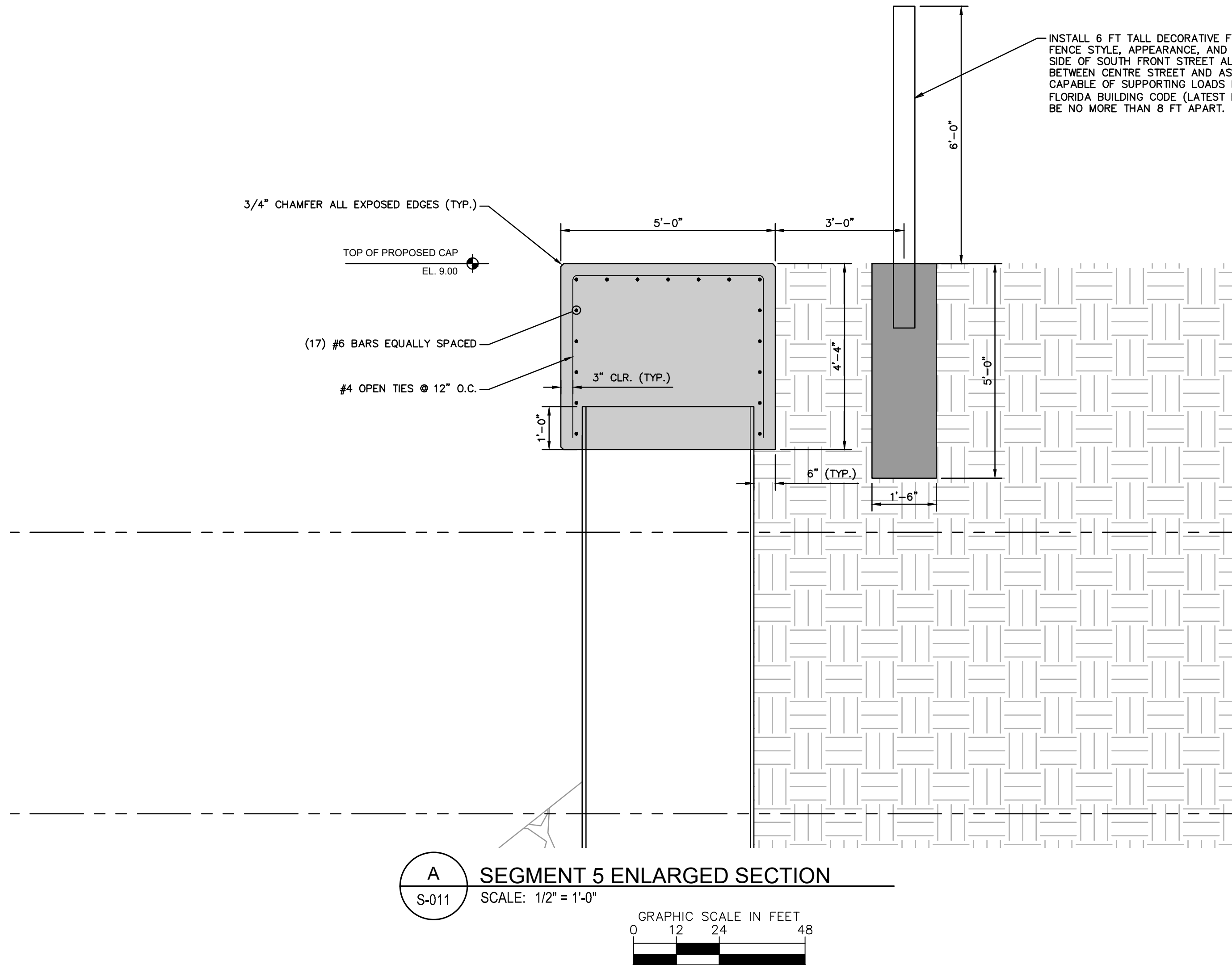
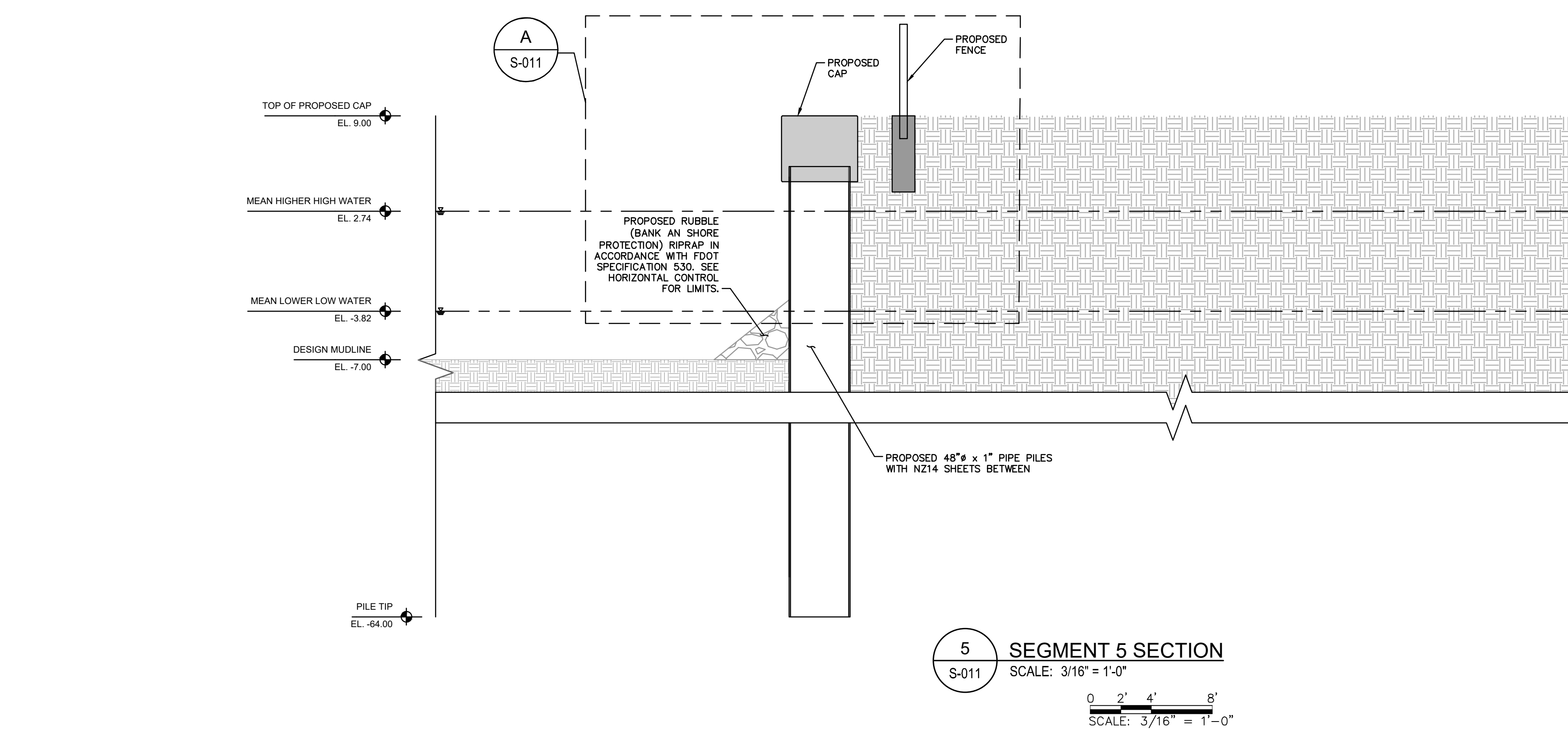
KHA PROJECT
142806004
DATE
APRIL 2024
SCALE: AS SHOWN
DESIGNED BY:
DRAWN BY:
CHECKED BY:

LICENSED PROFESSIONAL
KIRK F. DROST, P.E.
FLORIDA LICENSE NUMBER
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2. EXPANSION JOINTS: CONSTRUCT EXPANSION JOINTS IN RESILIENCY WALL CONCRETE CAP AT 40'-0" ON CENTER, MAXIMUM.

PRE-FINAL

PRELIMINARY
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PROJECT DATUMS:
HORIZONTAL: NAD83/2011
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VERTICAL: NAVD '88

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PROPOSED SEGMENT 5

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

KHA PROJECT
142806004

DATE
APRIL 2024

LICENSED PROFESSIONAL
KIRK F. DROST, P.E.

FLORIDA LICENSE NUMBER
51910

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CITY OF FERNANDINA BEACH
FLORIDA

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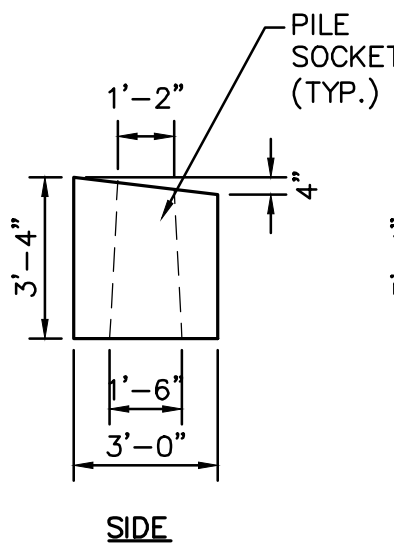
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No.

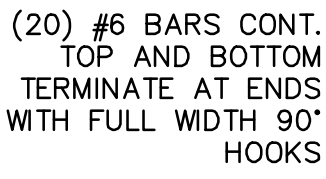
REVISIONS

DATE

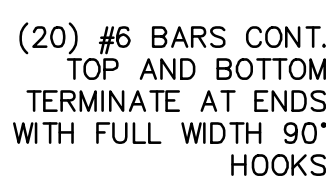
BY



1
S-013 BOAT RAMP
SCALE: 1/4" = 1'-0"



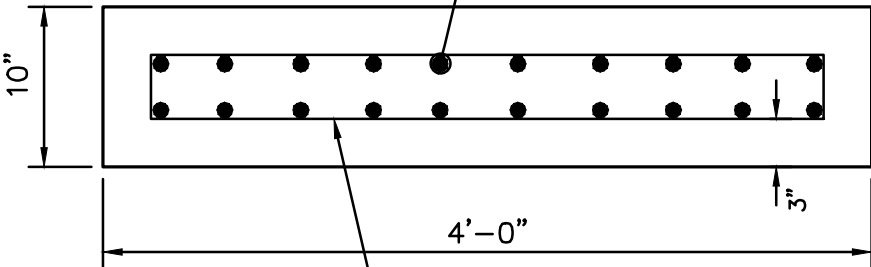
2A PRECAST BEAM DETAIL @ PILE
S-013 SCALE: 1" = 1'-0"



2B PRECAST BEAM DETAIL BETWEEN PILES
S-013 SCALE: 1" = 1'-0"



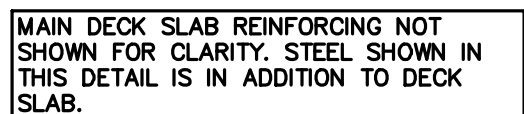
3 PRECAST BEAM REINFORCING
S-013 SCALE: 1/2" = 1'-0"



4
S-013

TYPICAL BOAT RAMP PLANK SECTION

SCALE: 1" = 1'-0"



5 CAST IN PLACE - EDGE CURB DETAIL
S-013 SCALE: 1" = 1'-0"

PRE-FINAL

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PROJECT DATUMS:
HORIZONTAL: NAD83/2011
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BOAT RAMP DETAILS

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

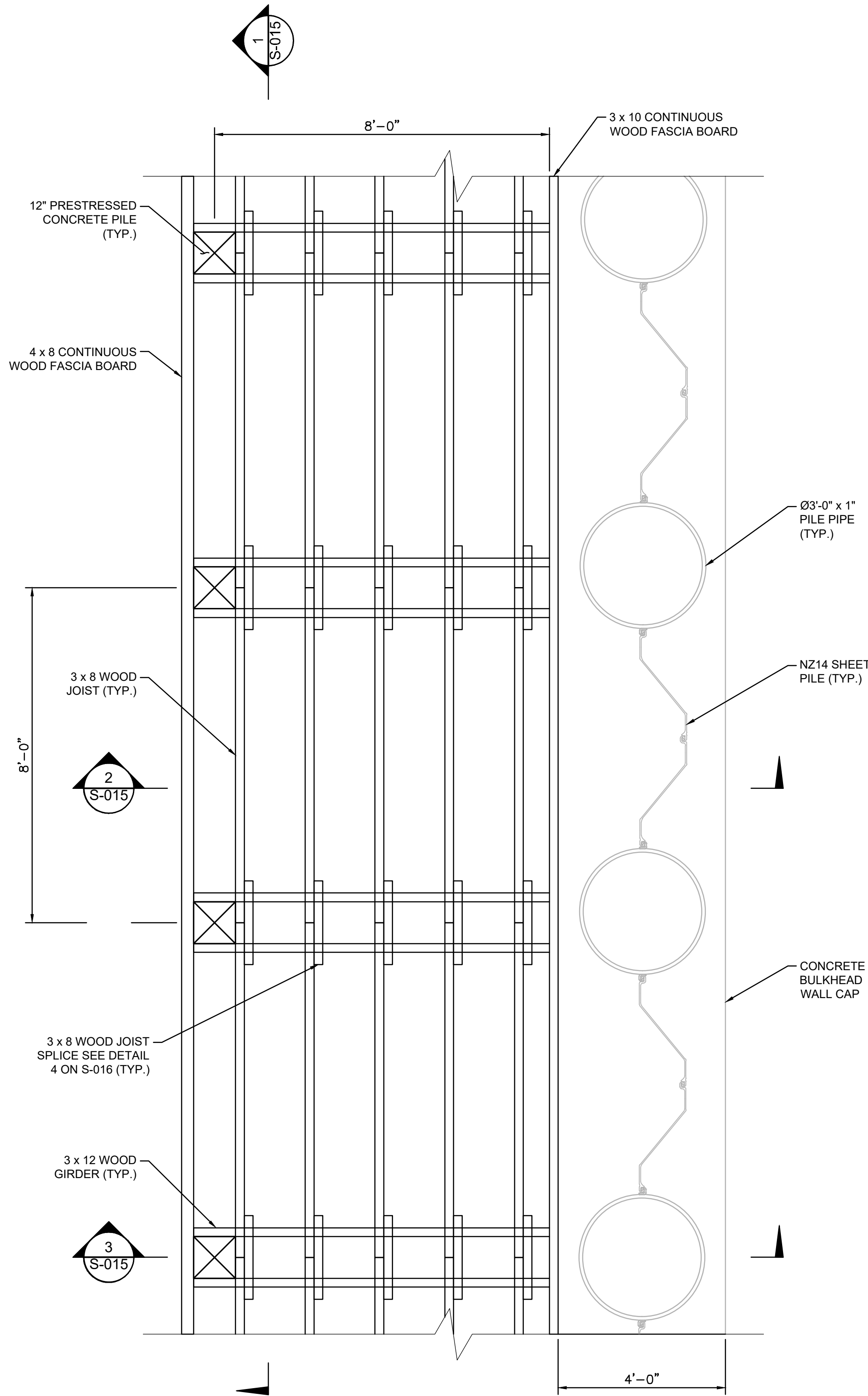
CITY OF FERNANDINA BEACH
FLORIDA

DATE	APRIL 2024	THIS TEXT HAS BEEN DIGITALLY SIGNED AND SEALED BY KIRK F. DROST, P.E. ON THE DATE ADJACENT TO THE SEAL PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE CHECKED BY:
142806004		
KHA PROJECT		
LICENSED PROFESSIONAL		
KIRK F. DROST, P.E.	51910	

Kimley»Horn
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12740 GRAY BAY PARKWAY WEST, SUITE 2350
JACKSONVILLE, FLORIDA 32258
PHONE: 904-828-3900
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

[illegible]

Plotted By: Solt, Cory. Sheet Set: CofE Waterfront Resiliency - Layout: S-014. BOARDWALK PLAN. April 12, 2024, 12:20:24pm. K:\JAX - WaterResources\142806004 - FBFL Waterfront Resiliency\Cadd\PlanSheets\S-011 BOARDWALK PLAN AND DETAILS.dwg
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1
S-014
BOARDWALK PLAN VIEW
SCALE: 1/2" = 1'-0"

PRE-FINAL

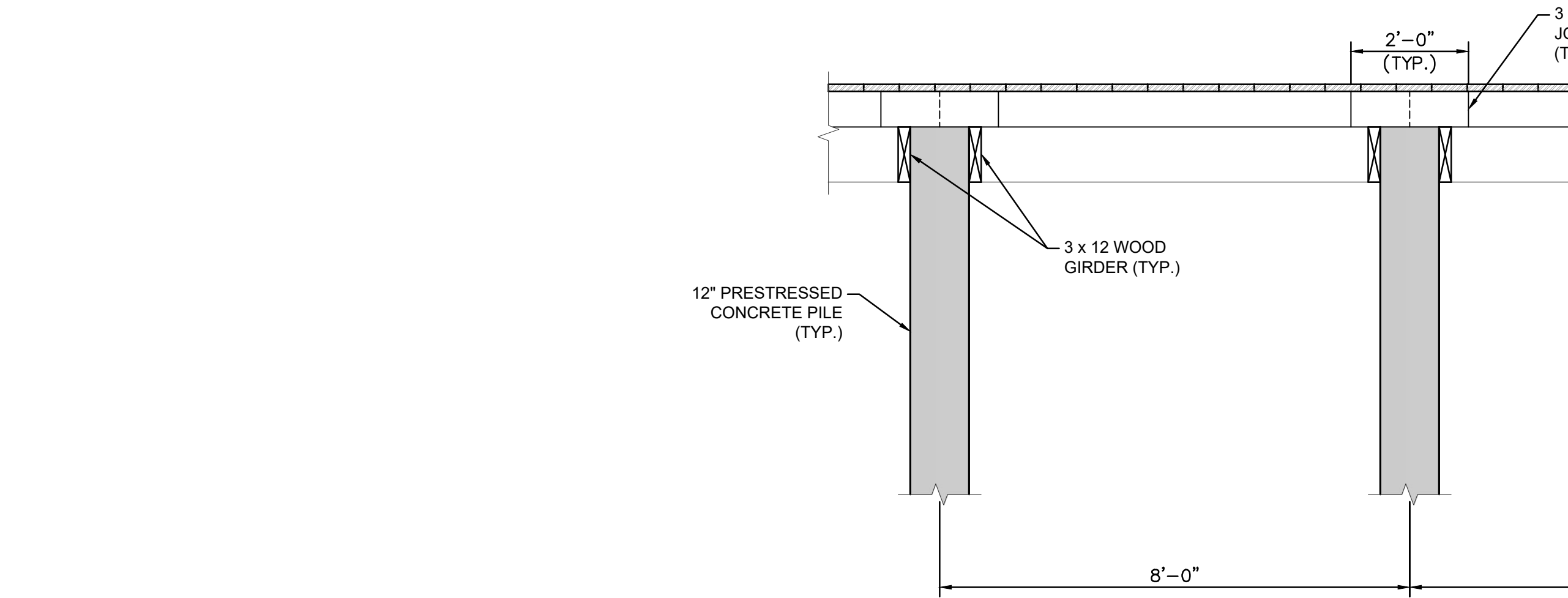
PROJECT DATUMS:
HORIZONTAL: NAD83/2011
(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

PRELIMINARY
NOT FOR CONSTRUCTION

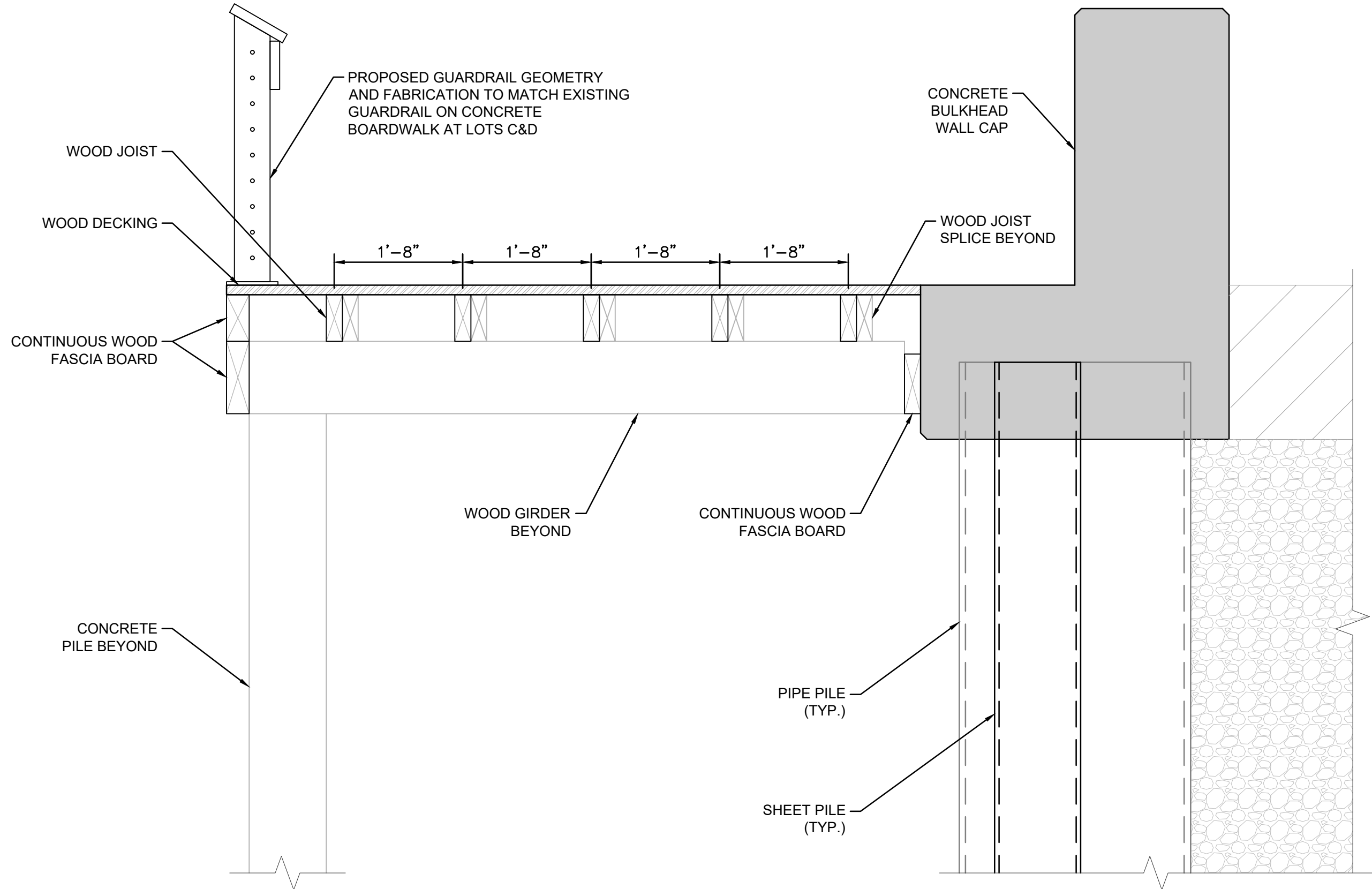
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underground utilities located and marked.
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SHEET NUMBER S-014	BOARDWALK PLAN	KHA PROJECT	DATE APRIL 2024	LICENSED PROFESSIONAL 51910	Kimley»»Horn © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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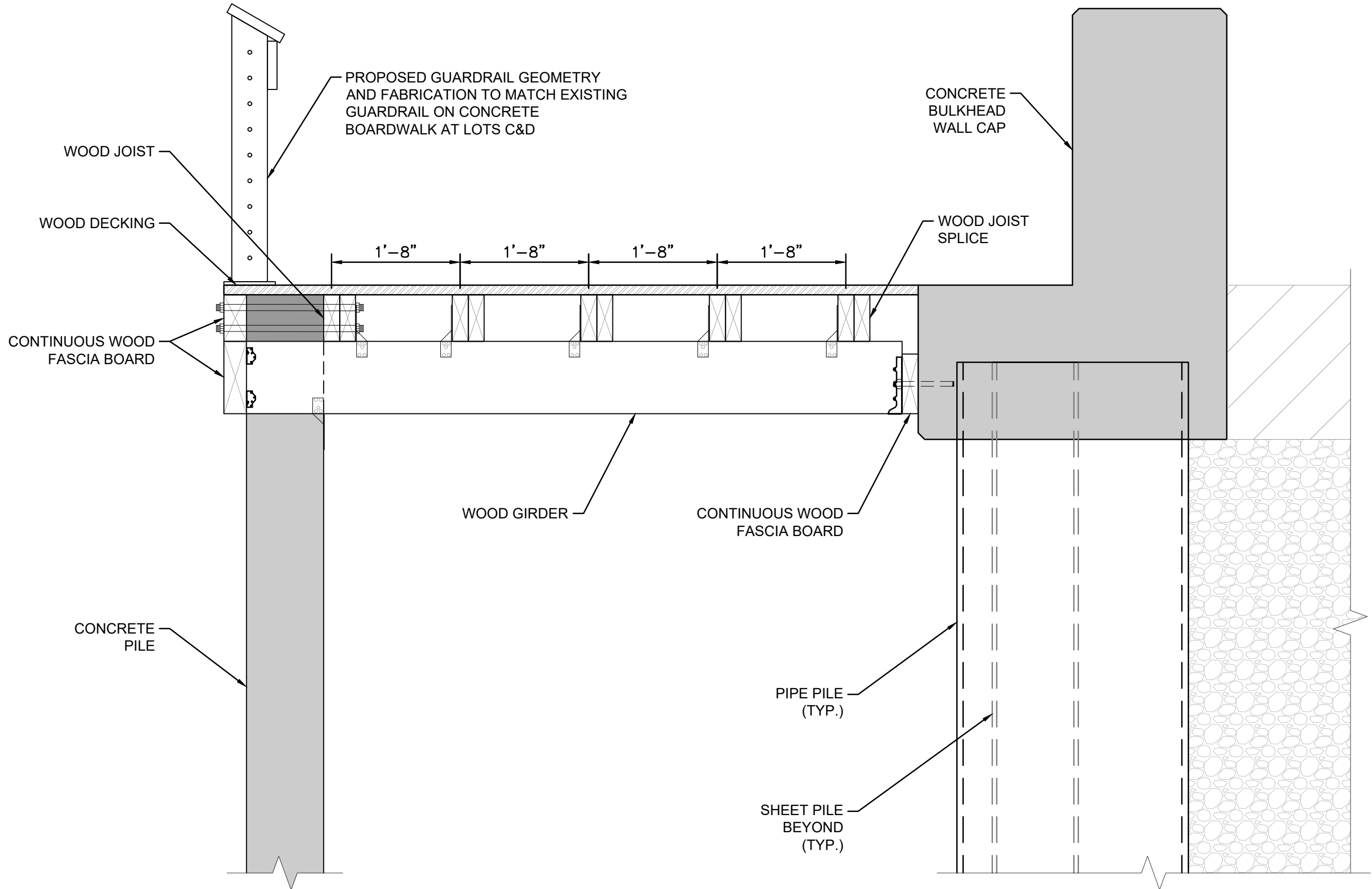
Plotted By: Solt, Cory. Sheet: S-015. Waterfront Resiliency - Layout: S-015. BOARDWALK DETAILS - April 12, 2024, 12:20:27pm. K:\JAX - WaterResources\142806004 - FBFI - Waterfront Resiliency\011 BOARDWALK PLAN AND DETAILS.dwg. This document, together with the concepts and designs presented herein, is an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



1
S-015
TYPICAL ELEVATION VIEW
SCALE: 1/2" = 1'-0"



2
S-015
TYPICAL ELEVATION VIEW BETWEEN PILES
SCALE: 3/4" = 1'-0"



3
S-015
TYPICAL ELEVATION VIEW @ PILES
SCALE: 3/4" = 1'-0"

PRE-FINAL

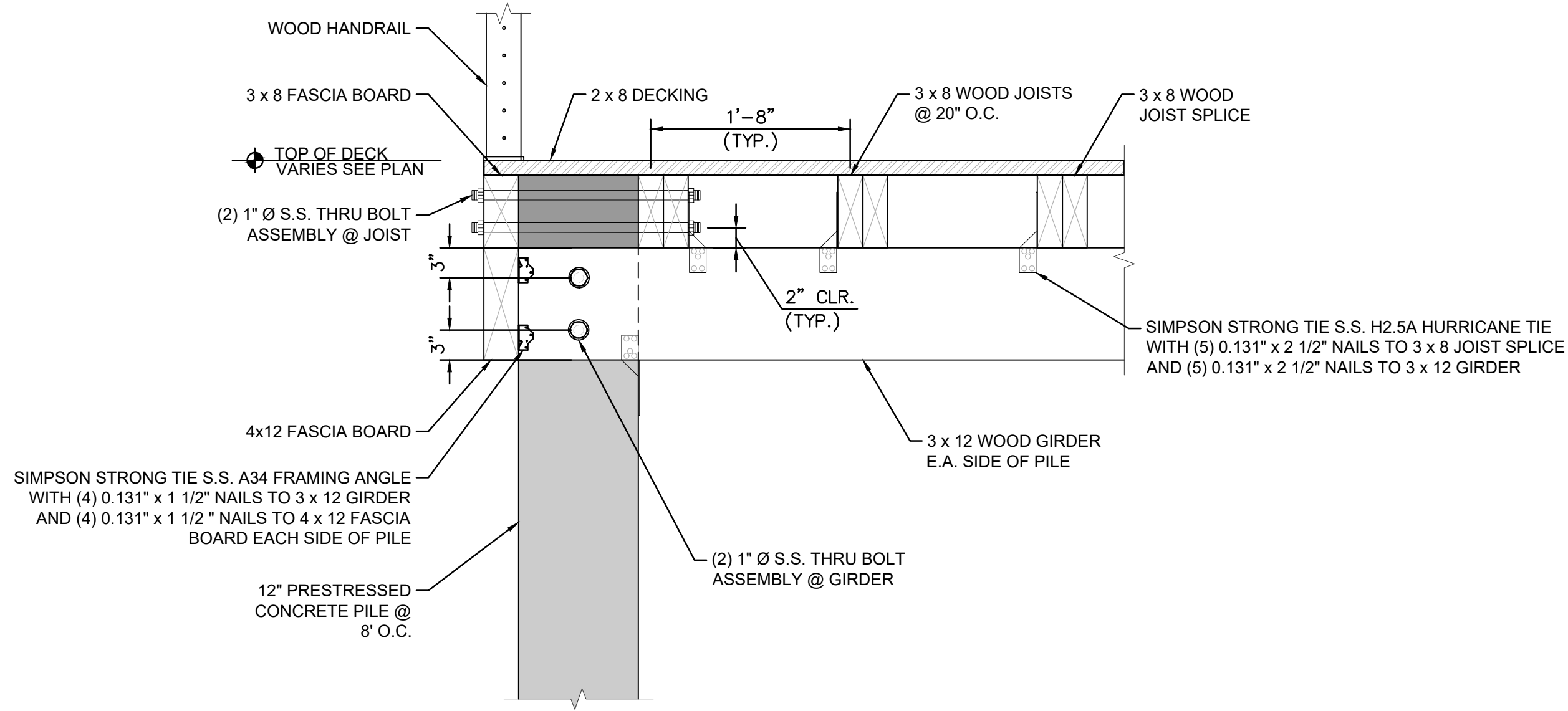
PROJECT DATUMS:
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(FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

PRELIMINARY
NOT FOR CONSTRUCTION

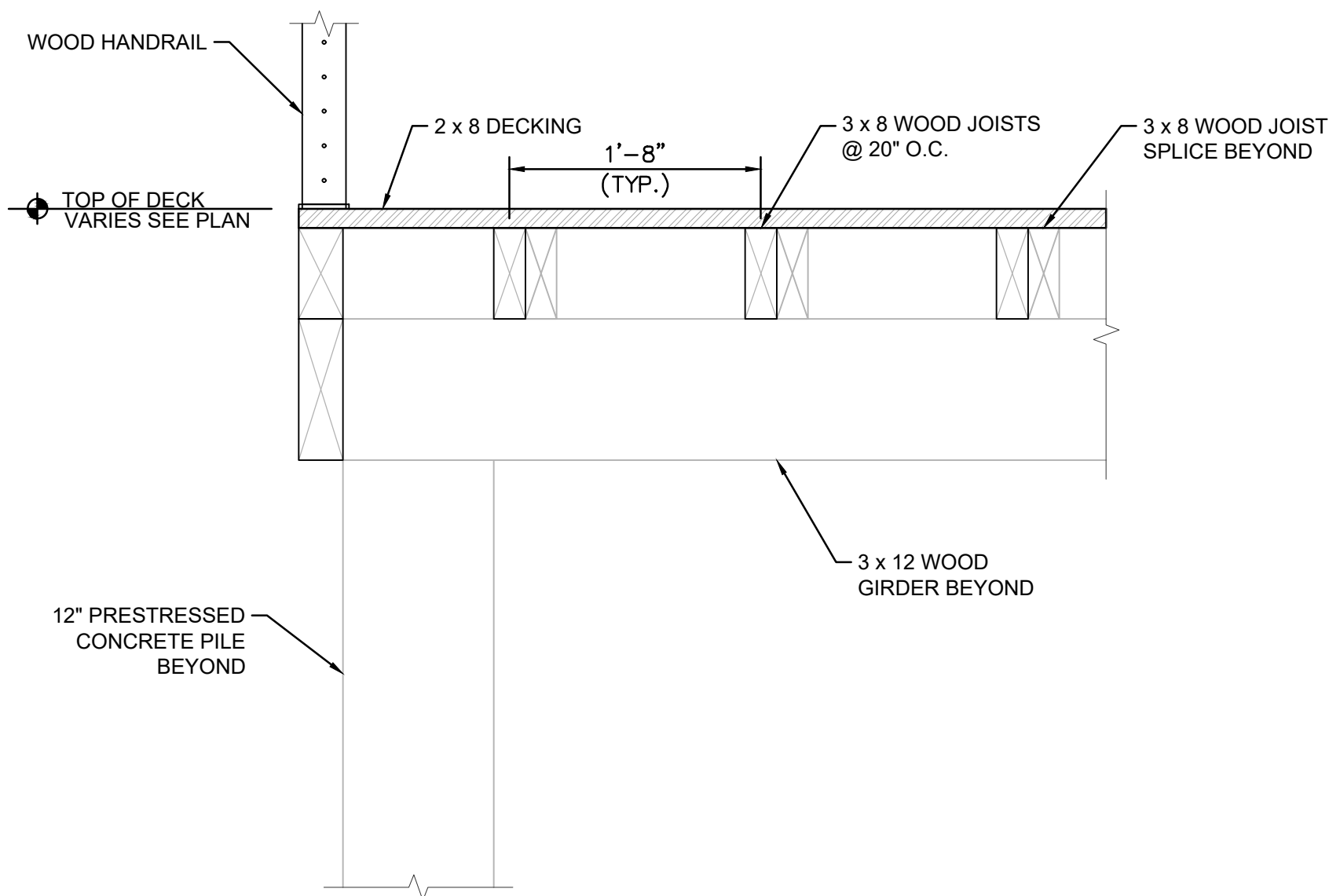
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SHEET NUMBER S-015	BOARDWALK DETAILS	KHA PROJECT				LICENSED PROFESSIONAL	 © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106			
		DATE APRIL 2024		51910						
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	WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH CITY OF FERNANDINA BEACH FLORIDA	SCALE: AS SHOWN		DESIGNED BY:	DRAWN BY:	CHECKED BY:	No.	REVISIONS	DATE	BY

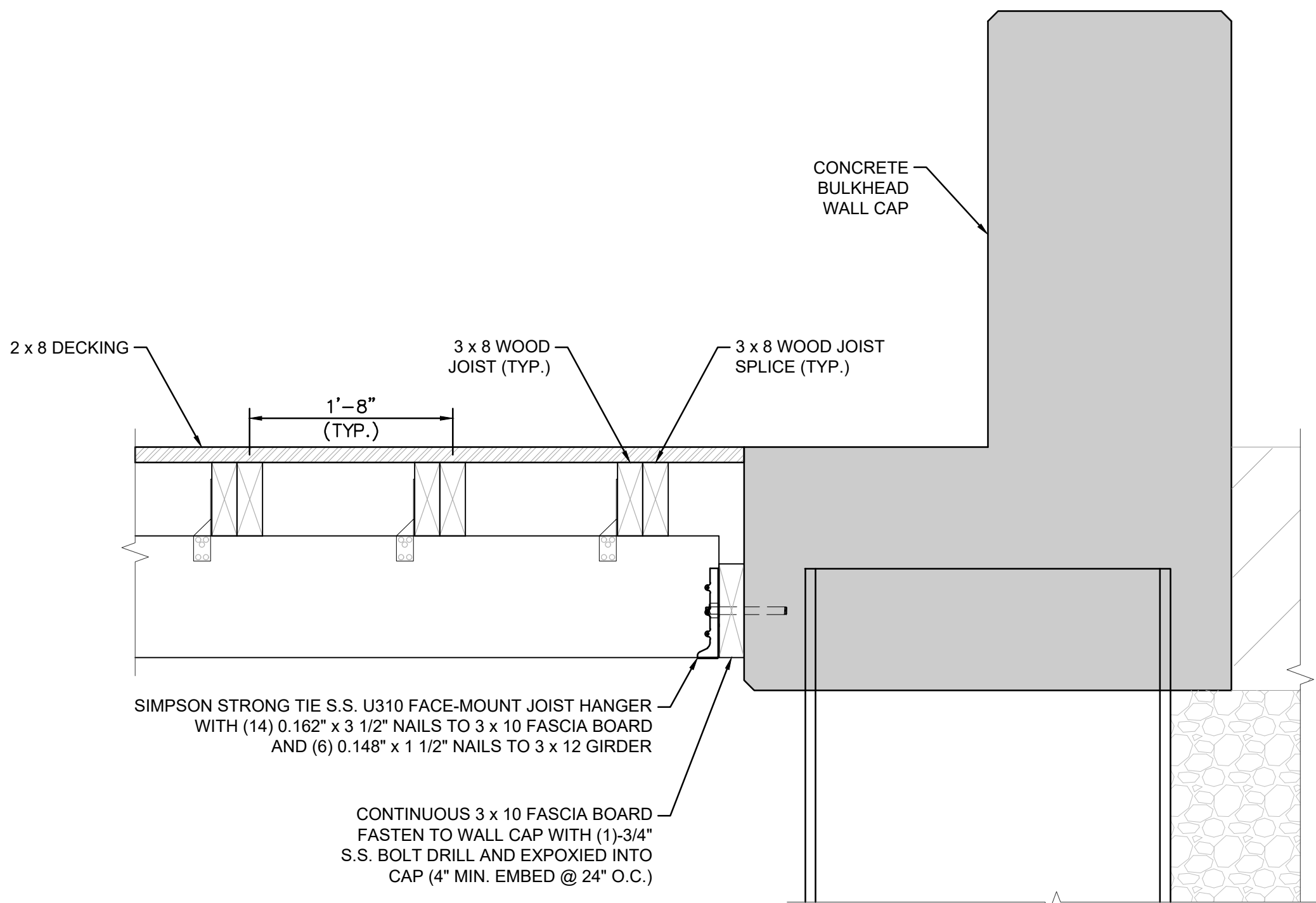
Plotted By: Solt, Cory. Sheet Set: CofE Waterfront Resiliency. Layout: S-016, BOARDWALK DETAILS. April 12, 2024, 12:20:32pm. K:\JAX_WaterResources\142806004 - FBFI Waterfront Resiliency\Cadd\PlanSheets\S-011 BOARDWALK PLAN AND DETAILS.dwg. This document, together with the concepts and designs presented herein, is an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse or improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



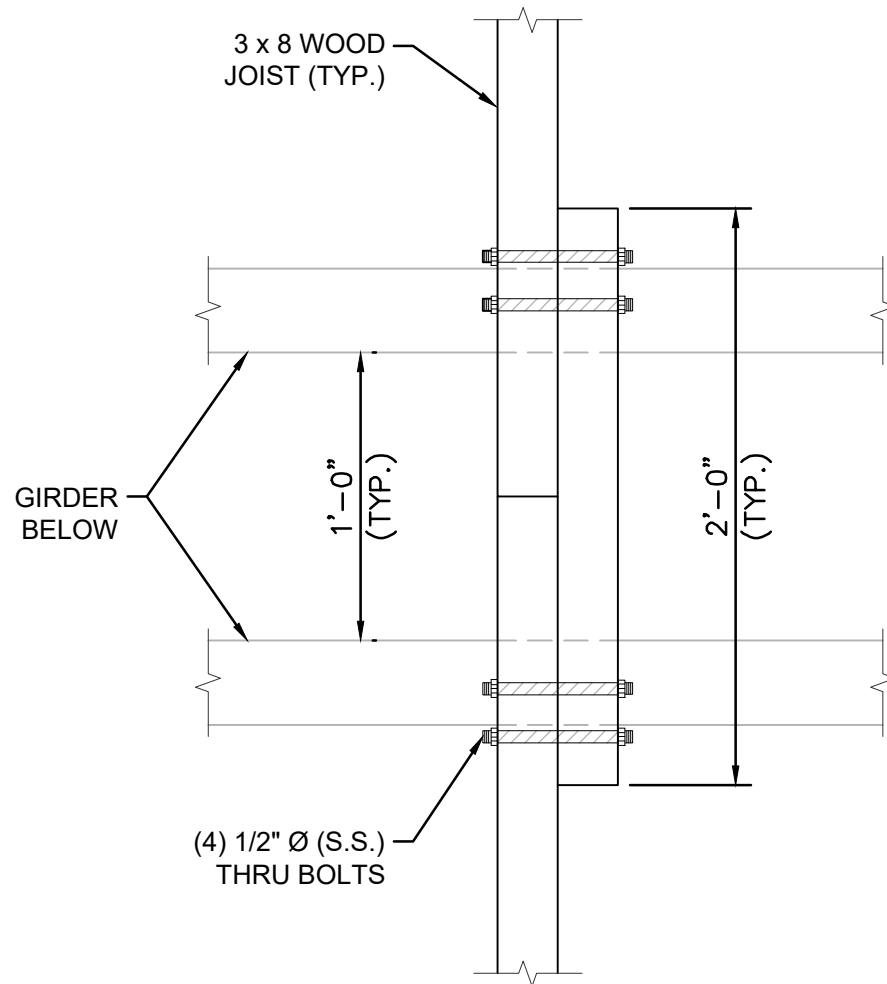
1 TYPICAL EDGE DETAIL @ PILE
S-016 SCALE: 1" = 1'-0"



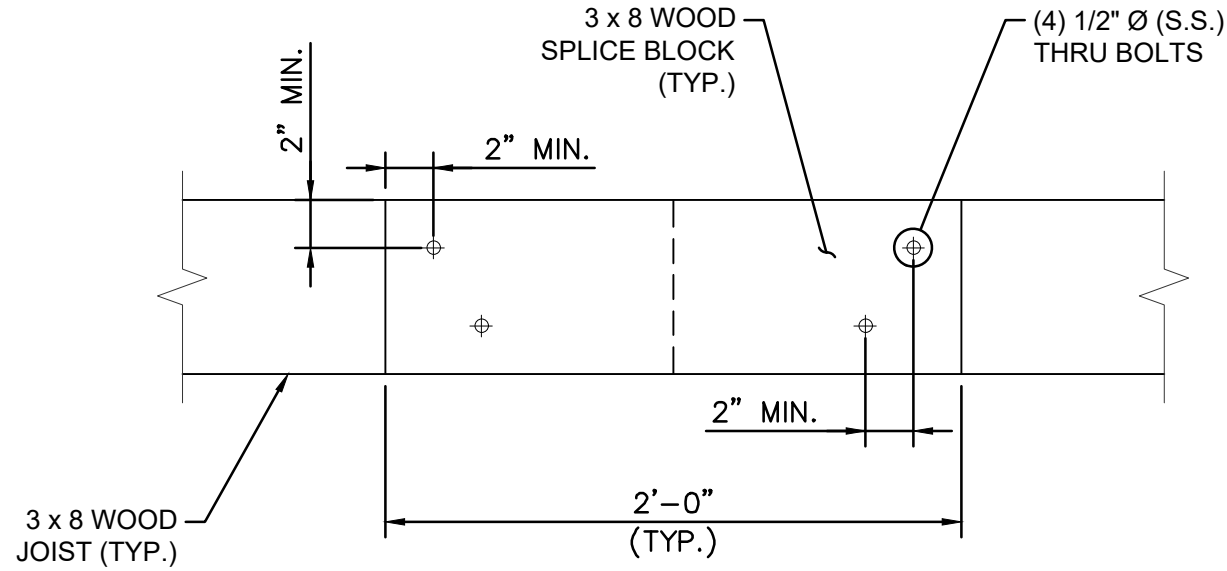
2 TYPICAL EDGE DETAIL BETWEEN PILES
S-016 SCALE: 1" = 1'-0"



3 TYPICAL GIRDER TO BULKHEAD WALL CONNECTION DETAIL
S-016 SCALE: 1" = 1'-0"



TOP VIEW



SIDE VIEW

4 TYPICAL JOIST SPLICE
S-016 SCALE: 1-1/2" = 1'-0"

PRE-FINAL

PRELIMINARY
NOT FOR CONSTRUCTION

PROJECT DATUMS:
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VERTICAL: NAVD '88

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BOARDWALK DETAILS

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

CITY OF FERNANDINA BEACH FLORIDA

LICENSED PROFESSIONAL

DATE: APRIL 2024
SCALE: AS SHOWN
DESIGNED BY: KIRK F. DROST, P.E.
DRAWN BY: KIRK F. DROST, P.E.
CHECKED BY: KIRK F. DROST, P.E.
THIS DRAWING HAS BEEN DIGITALLY SIGNED
AND SEALED BY KIRK F. DROST, P.E.
ON THE DATE ADJACENT TO THE SEAL
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Kimley»Horn

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JACKSONVILLE, FLORIDA 32258
PHONE: 904-828-3900
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

No.

REVISIONS

DATE

BY

SHEET NUMBER
S-016

RIGHT JAMB

DESIGN LOADS

1. DUE TO VARIABILITY IN EXISTING MOUNTING STRUCTURE, PS INDUSTRIES IS NOT RESPONSIBLE FOR STRUCTURAL FASTENER DESIGN INTO LESS THAN IDEAL FIELD CONDITIONS. PS INDUSTRIES PRODUCT'S FASTENING SYSTEMS ARE DESIGNED BASED ON 8" CIP CONCRETE (3000 PSI MIN.) OR 8" FULLY GROUT-FILLED CMU MASONRY (ASTM C90-MIN PRISM STRENGTH 1500 PSI) MOUNTING STRUCTURE.

2. IF FIELD CONDITIONS ARE NOT IDEAL, PS INDUSTRIES REQUIRES THAT THE PROVIDED FASTENING SYSTEM IS REVIEWED BY A QUALIFIED LOCAL ENGINEER BASED ON ACTUAL FIELD CONDITIONS, PRIOR TO APPROVING DRAWINGS. REFER TO ANCHOR MANUFACTURER'S TECHNICAL DATA MANUAL FOR INSTALLATION LIMITATIONS AND REQUIREMENTS.

3. MODIFICATION OF MOUNTING STRUCTURE MAY BE REQUIRED (NOT BY PS INDUSTRIES) TO ACCOMMODATE FASTENERS AND DESIGN LOADS.

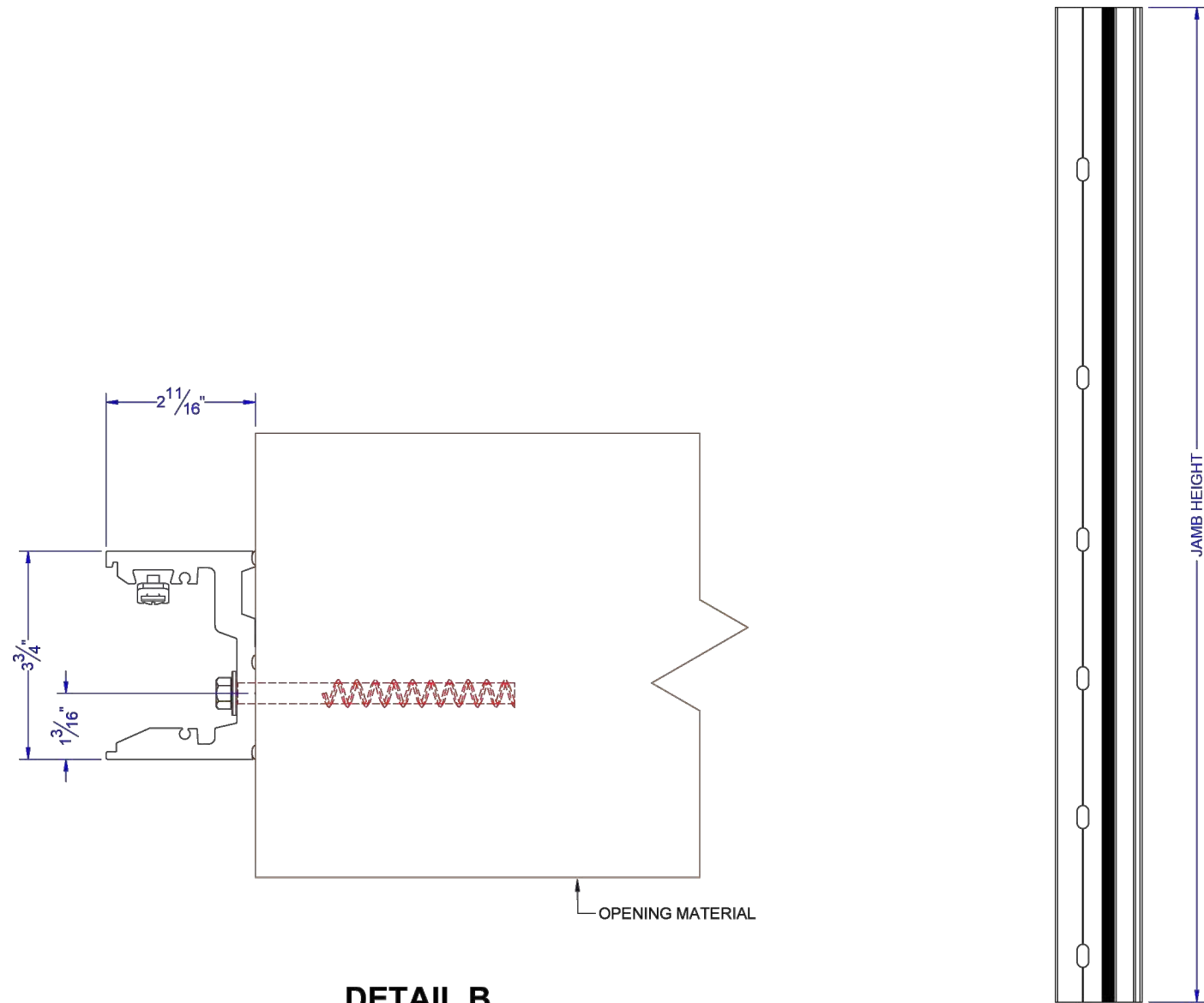
RIGHT JAMB MOUNT TYPE: BETWEEN
JAMB FINISH: MILL FINISH ALUMINUM
JAMB EXTENSION:

☐ YES

☒ NO

BETWEEN MOUNT JAMB ANCHORS:
HILTI KWIK HUS-EZ 3/8"X5"
MIN. 3-3/4" EDGE DISTANCE
MIN. 3-1/4" EMBED DEPTH

ANCHORS MAY CHANGE BASED ON
EXISTING WALL STRUCTURE



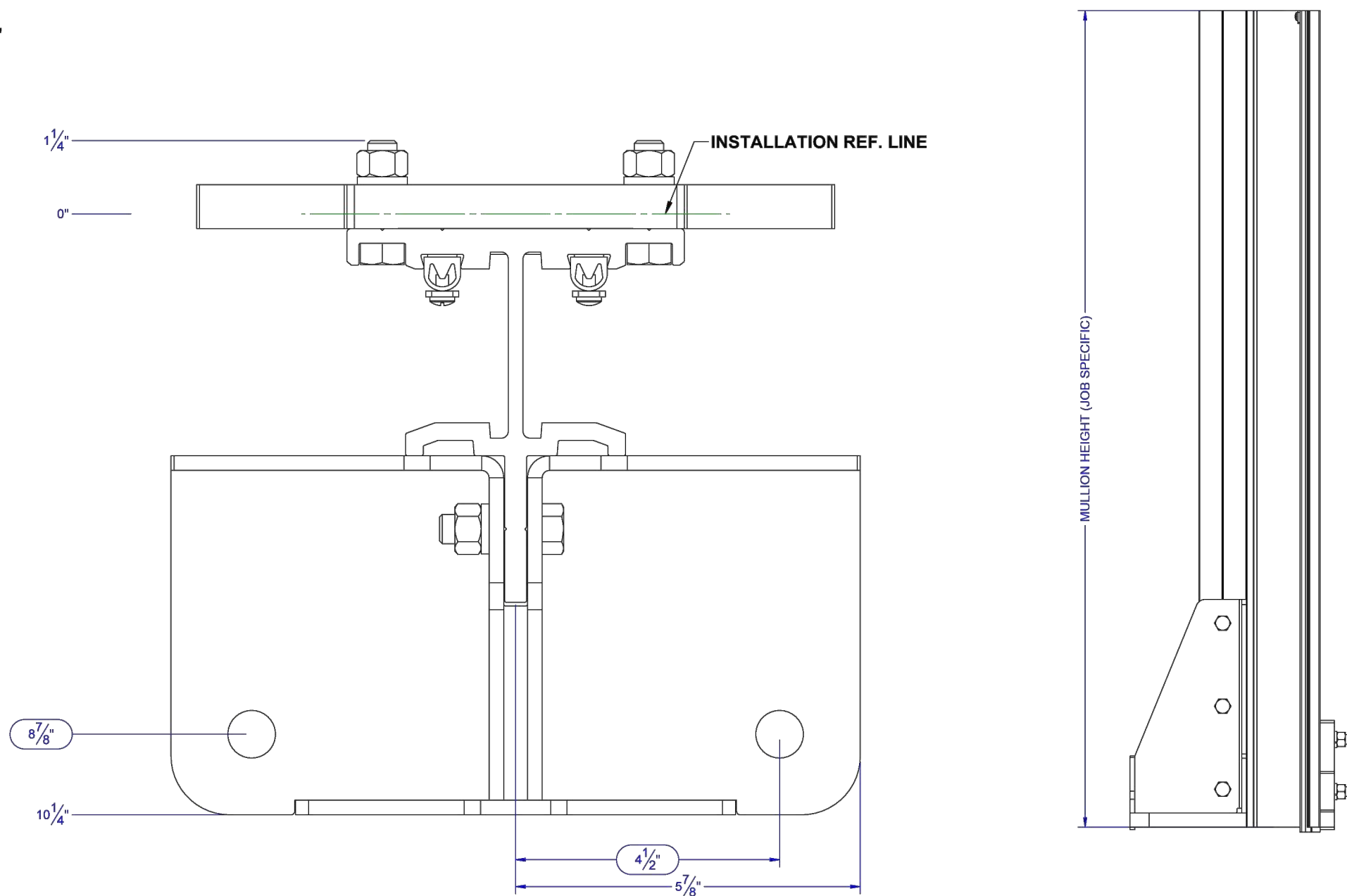
REV	REVISIONS	DATE	REVISD BY	FINISH	DOOR/OPENING NAME: POST MULLION - BETWEEN (HILTI ANCHORS)			MODEL NAME: PP-530 (HydroDefense Flood Plank)			 A Division of PS INDUSTRIES INC 1150 48th St. S Grand Forks, ND 58001 Ph: 701-746-4370 Fax: 701-746-8340
					SN:			SQ R:		QTY:	
					SHP TO:			DATE: 12/14/2021			
					SOLD TO:			REFERENCE DRAWING - NOT FOR CONSTRUCTION		SCALE: NTS	
					PROJECT NAME:			ESTIMATED PARTISHP WEIGHT: 34.09 LBS.		DWG BY: clayton	
					CUST PCD #:			DWG # GEN-POST-BETWEEN-HILTI		CHECKED: 1	
										SHEET # 4 OF 6	REV. 1

POST MULLION

HILTI ANCHOR EMBED DEPTH: 8.25"

HILTI HIS-RN B8 3/4in INSERT
HILTI HIT-RE 200 EPOXY
MIN 3000 PSI CONCRETE
MIN SLAB THICKNESS: 11in
MIN EDGE DISTANCE (SIDE): 15in
MIN EDGE DISTANCE (WET SIDE): 9in
MIN EDGE DISTANCE (DRY SIDE): 15in
SLAB SATISFYING ALL EDGE AND DEPTH
REQUIREMENTS MUST BE MONOLITHIC

MULLION DETAIL
MULLION TYPE: BOLTED POST
ESTIMATED MULLION WEIGHT:



REV	REVISIONS	DATE	REVISD BY	FINISH	DOOR/OPENING NAME: POST MULLION - BETWEEN (HILTI ANCHORS)	MODEL NAME: FP-530 (HydroDefense Flood Plank)		 A Division of PS INDUSTRIES INC	
						SN:	SO R:		QTY:
						SNP TO:	DATE 13/14/2021		
						SOLD TO:	REFERENCE DRAWING - NOT FOR CONSTRUCTION		PROPRIETARY AND CONFIDENTIAL DRAWINGS ARE EXCLUDED PROPERTY OF PS INDUSTRIES INCORPORATED AND CANNOT BE USED IN WHOLE OR PART WITHOUT WRITTEN CONSENT. © 2015 PS INDUSTRIES INCORPORATED. ALL RIGHTS RESERVED.
						PROJECT NAME:	ESTIMATED PARTISANSHIP WEIGHT: 64.15 LBS.		SCALE: NTS
				CUST PO #	DWG # GEN-POST-BETWEEN-HILTI	DESIGNED BY: dtzinger	CHECKED: /	SHEET # OF 6	Rev. E

SILL / EMBED PLAN VIEW

IMPORTANT
SEE PRODUCT O&M MANUAL TO REVIEW CRITICAL
INSTALLATION AND DEPLOYMENT PROCEDURES.

GASKET CONTACT AREA SHOULD BE SOUND, FLAT/LEVEL AND WITHOUT BLEMISH FOR BEST GASKET PERFORMANCE, MAY REQUIRE SHIMMING TO KEEP SILL LEVEL. REVIEW O&M.

FIELD CONCRETE FOUNDATION DESIGN AND COMPLETE
CONSOLIDATION OF CONCRETE SURROUNDING EMBEDDED
ITEM(S) ANCHORAGE POINTS NOT BY PS INDUSTRIES.

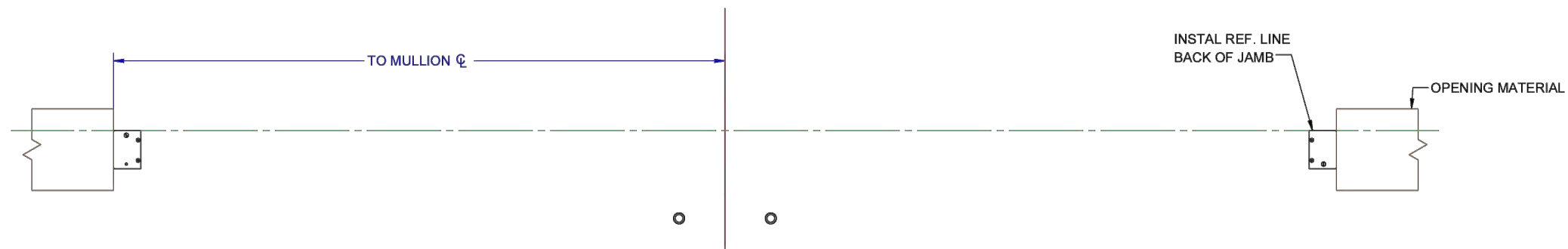
INSTALLATION REFERENCE LINE
SHOWN WITH GREEN CONSTRUCTION LINE

MULLION MIN. EDGE DISTANCES (EXISTING)
SEE MULLION SPECIFIC INSTALLATION GUIDE
IN O&M FOR MIN. EDGE DISTANCES BASED ON
3000 (PSI) CONCRETE.

MULLION TYPE NOTE

DIMENSIONS ARE TO CENTERLINE OF MULLIONS
ANCHORED BY HILTI INSERTS.

REFERENCE MULLION DETAIL SHEET FOR
LOCATION OF INSERTS USING CENTERLINE
AND INSTALLATION REFERENCE LINE.



REV.	REVISIONS	DATE	REVISED BY	FWB:R	DOOR/OPENING NAME: POST MULLION - BETWEEN (HILTI ANCHORS)		MODEL NAME: PP-530 (HydroDefense Flood Plank)		 A Division of PS INDUSTRIES INC 1150 48th St. S Grand Forks, ND 58001 Ph: 701-764-6352 Fax: 701-764-6340
					SN	SO #	QTY:	DATE: 12/14/2021	
					SHIP TO:		DWG STATUS:	PROTECTIVE AND CONFIDENTIAL DRAWING IS EXCLUSIVE PROPERTY OF PS INDUSTRIES INCORPORATED AND CANNOT BE USED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF PS INDUSTRIES INCORPORATED ALL RIGHTS RESERVED	
					SOLD TO:		REFERENCE DRAWING - NOT FOR CONSTRUCTION	SCALE: NTS	
					PROJECT NAME:		ESTIMATED PARTIALLY WEIGHT: 34.69 LBS.	DRW BY: <i>dlange</i>	
					CUST PO #:		DWG NO. GEN-POST-BETWEEN-HILTI	CHECKED: /	SHEET # 5 OF 6
								Rev. E	

PRE-FINAL

**PRELIMINARY
NOT FOR CONSTRUCTION**

PROJECT DATUMS:
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HYDROPLANK DETAILS

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

KHA PROJECT 142806004	LICENSED PROFESSIONAL KIRK F. DROST, P.E. FLORIDA LICENSE NUMBER 51910
DATE APRIL 2024	

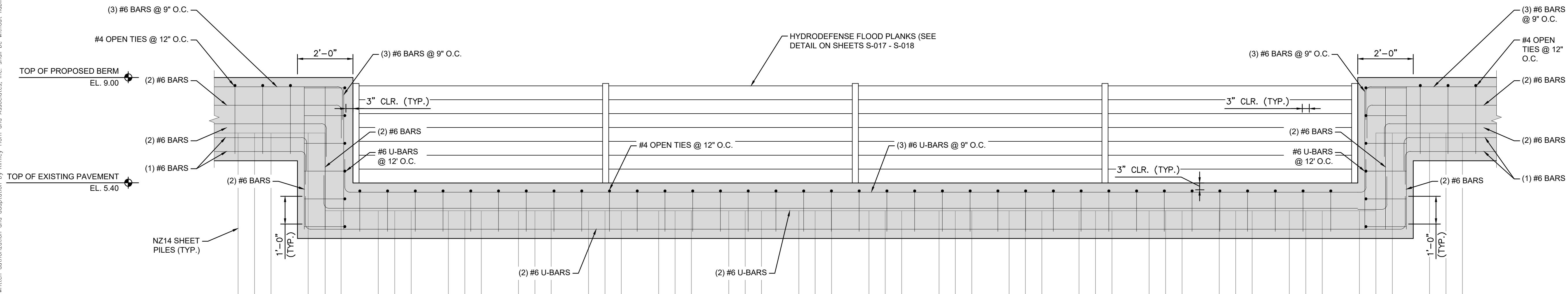
SCALE: AS SHOWN	THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY: KIRK F. DROST, P.E.
DESIGNED BY: ---	ON THE DATE ADJACENT TO THE SEAL
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CHECKED BY: ---	



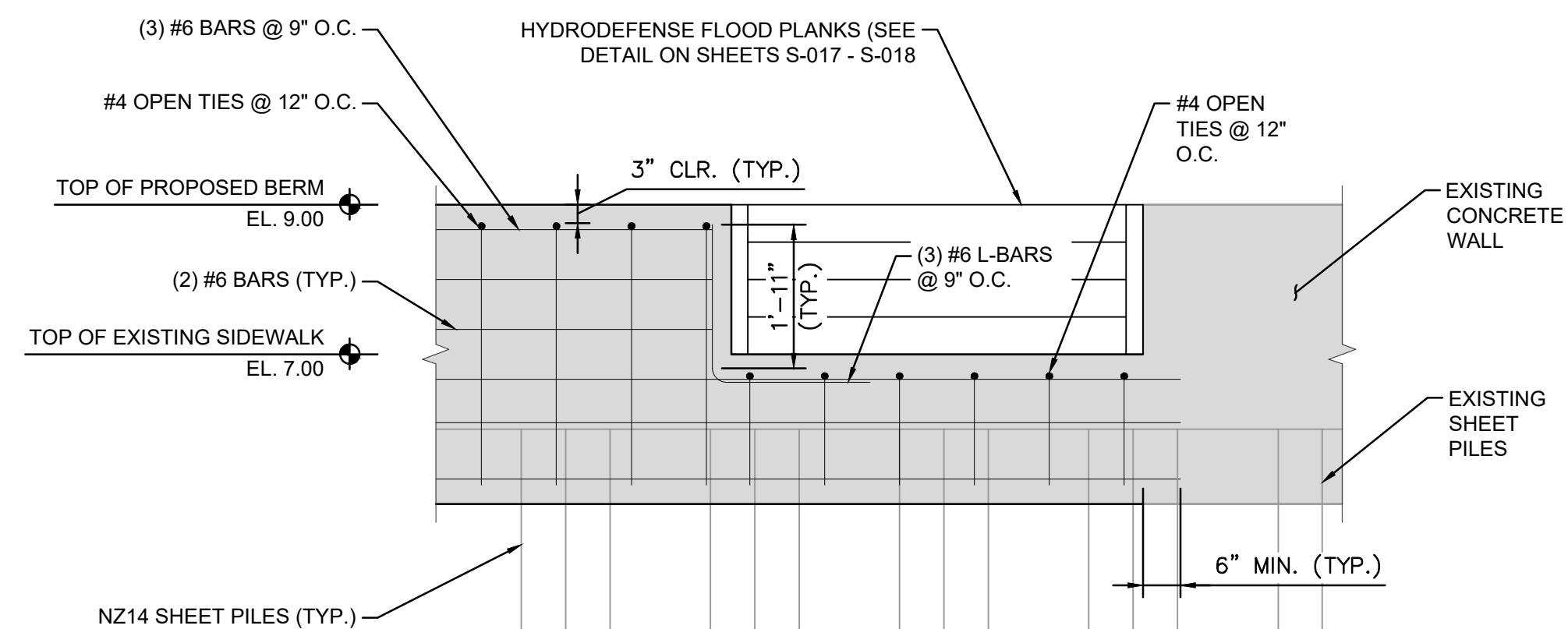
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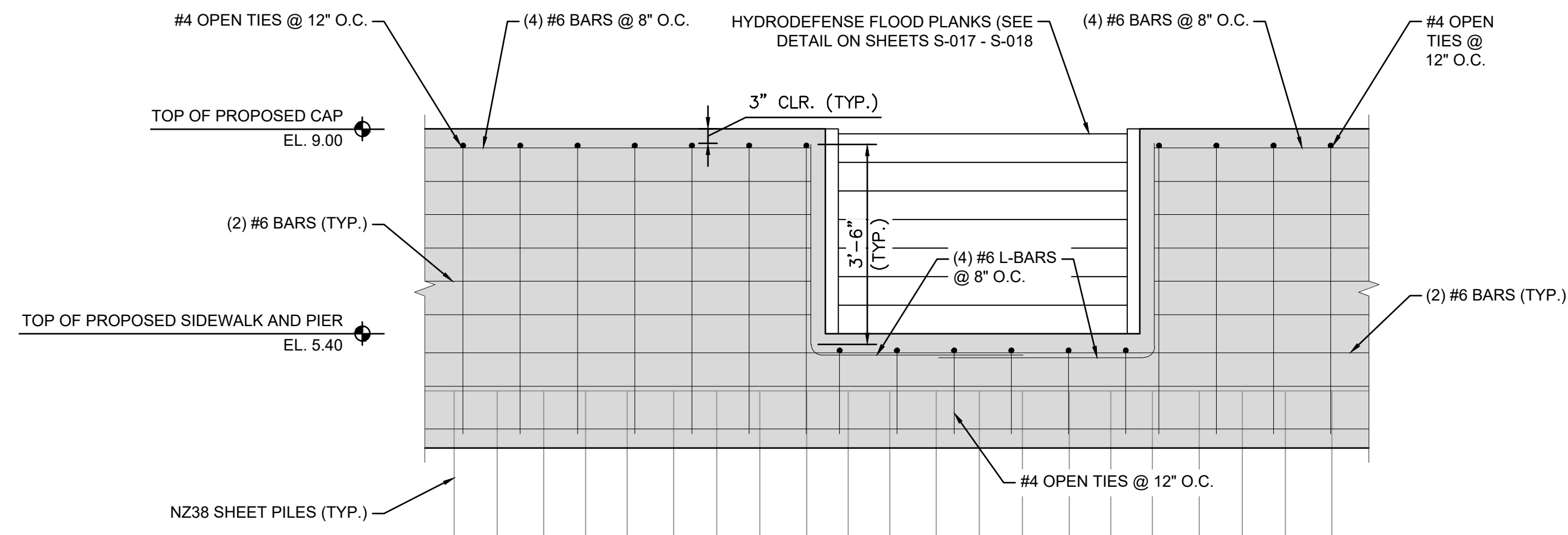
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1 SEGMENT 1 CAP END WALL @ DRIVEWAY
S-019 SCALE: 1/2" = 1'-0"



2 SEGMENT 1 CAP END WALL @ SIDEWALK
S-019 SCALE: 1/2" = 1'-0"



3 SEGMENT 2A CAP END WALL
S-019 SCALE: 1/2" = 1'-0"

PRE-FINAL

**PRELIMINARY
NOT FOR CONSTRUCTION**

PROJECT DATUMS:
HORIZONTAL: NAD83/2011
 (FLORIDA STATE PLANE COORDINATE SYSTEM EAST ZONE
 0901, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT)
VERTICAL: NAVD '88

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ENDWALL DETAILS

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

CITY OF FERNANDINA BEACH
FLORIDA

KHA PROJECT	LICENSED PROFESSIONAL
-------------	-----------------------

DATE	51910
APRIL 2024	
SCALE: AS SHOWN	THIS ITEM HAS BEEN DIGITALLY SIGNED
DESIGNED BY: _____	AND SEALED BY
DRAWN BY: _____	KIRK F. DROST, P.E.
CHECKED BY: _____	ON THE DATE ADJACENT TO THE SEAL
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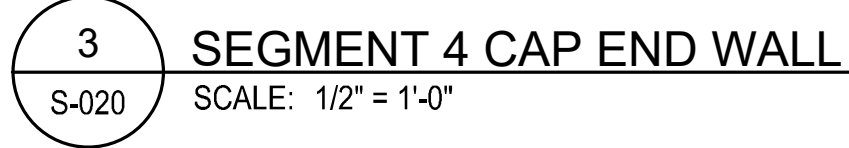
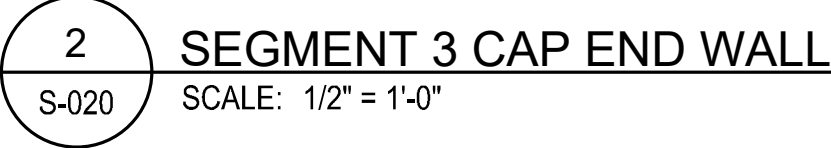
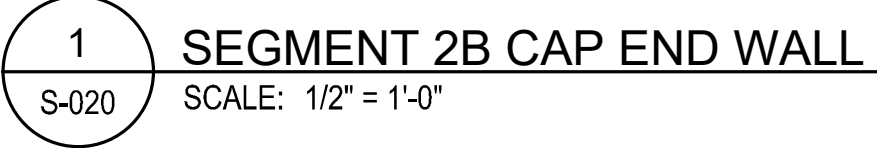
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REVISIONS

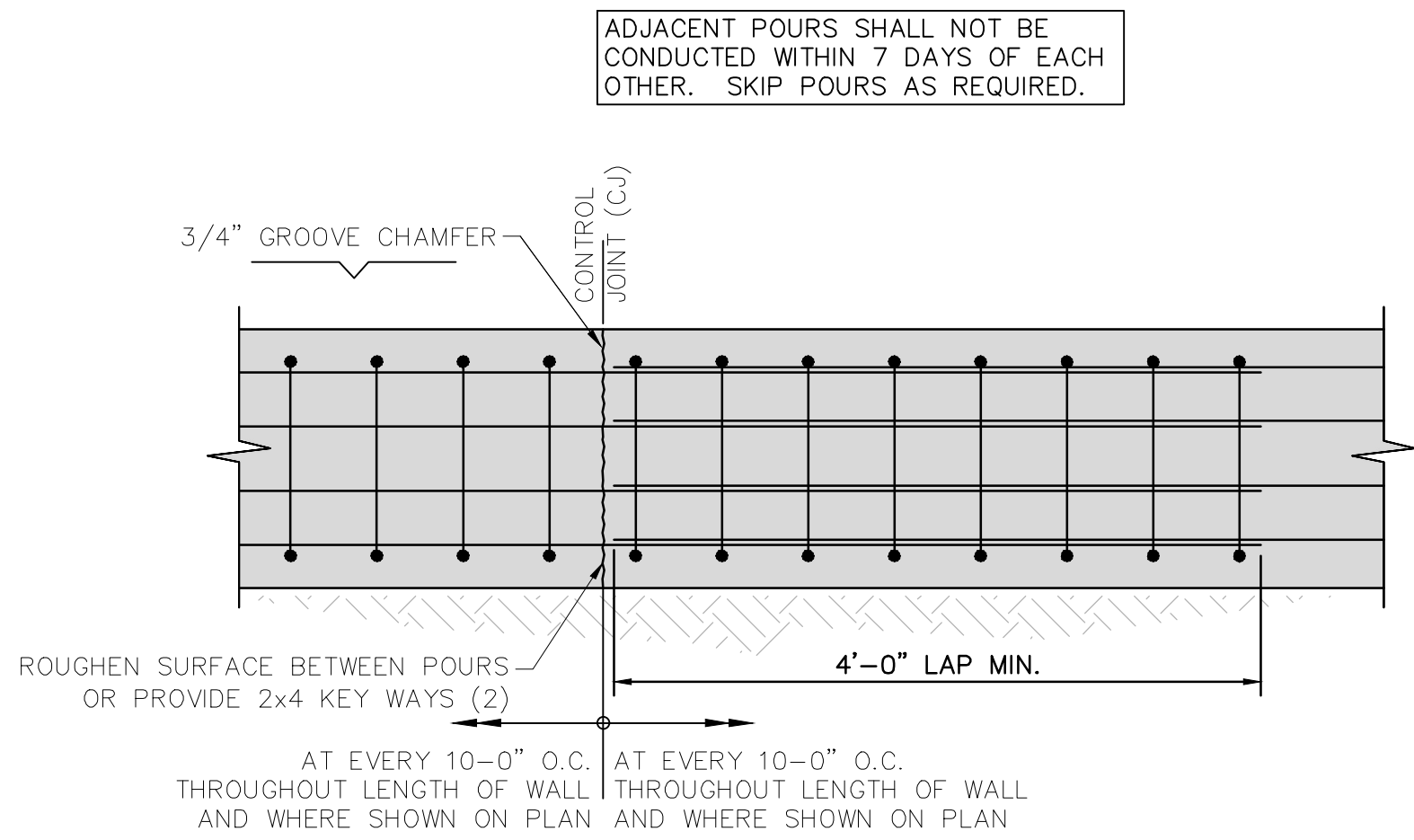
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DATE	BY
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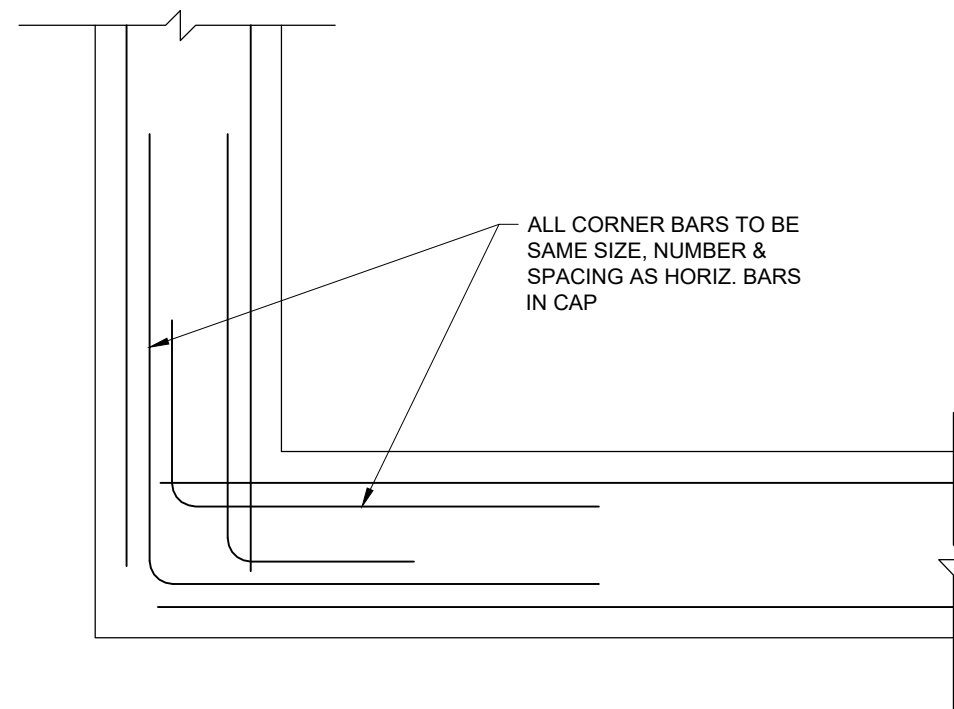


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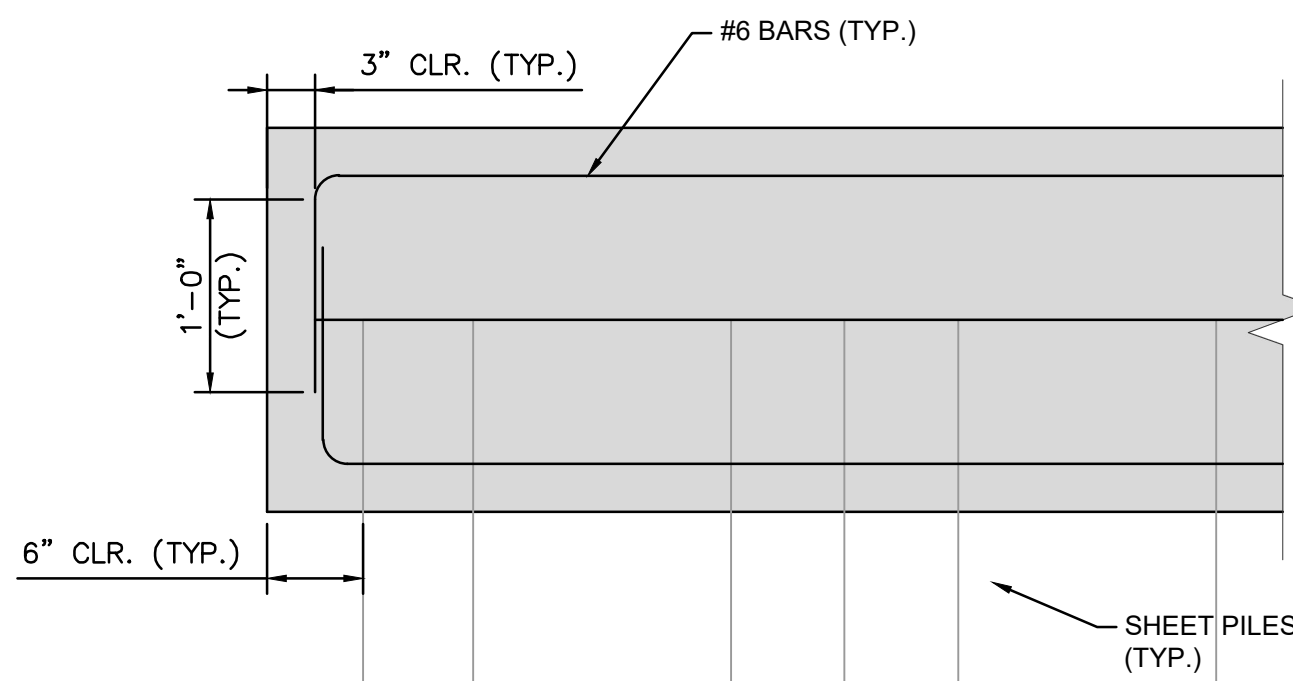
SHEET NUMBER		ENDWALL DETAILS		KHA PROJECT		LICENSED PROFESSIONAL		Kimley»Horn		No.		DATE		BY	
S-020		WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH		DATE APRIL 2024		51910		© 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3800 WWW.KIMLEY-HORN.COM REGISTRY No. 35106							
CITY OF FERNANDINA BEACH		FLORIDA		SCALE: AS SHOWN		THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY: KIRK F. DROST, P.E.									
				DESIGNED BY:		ON THE DATE ADJUNCT TO THE SEAL									
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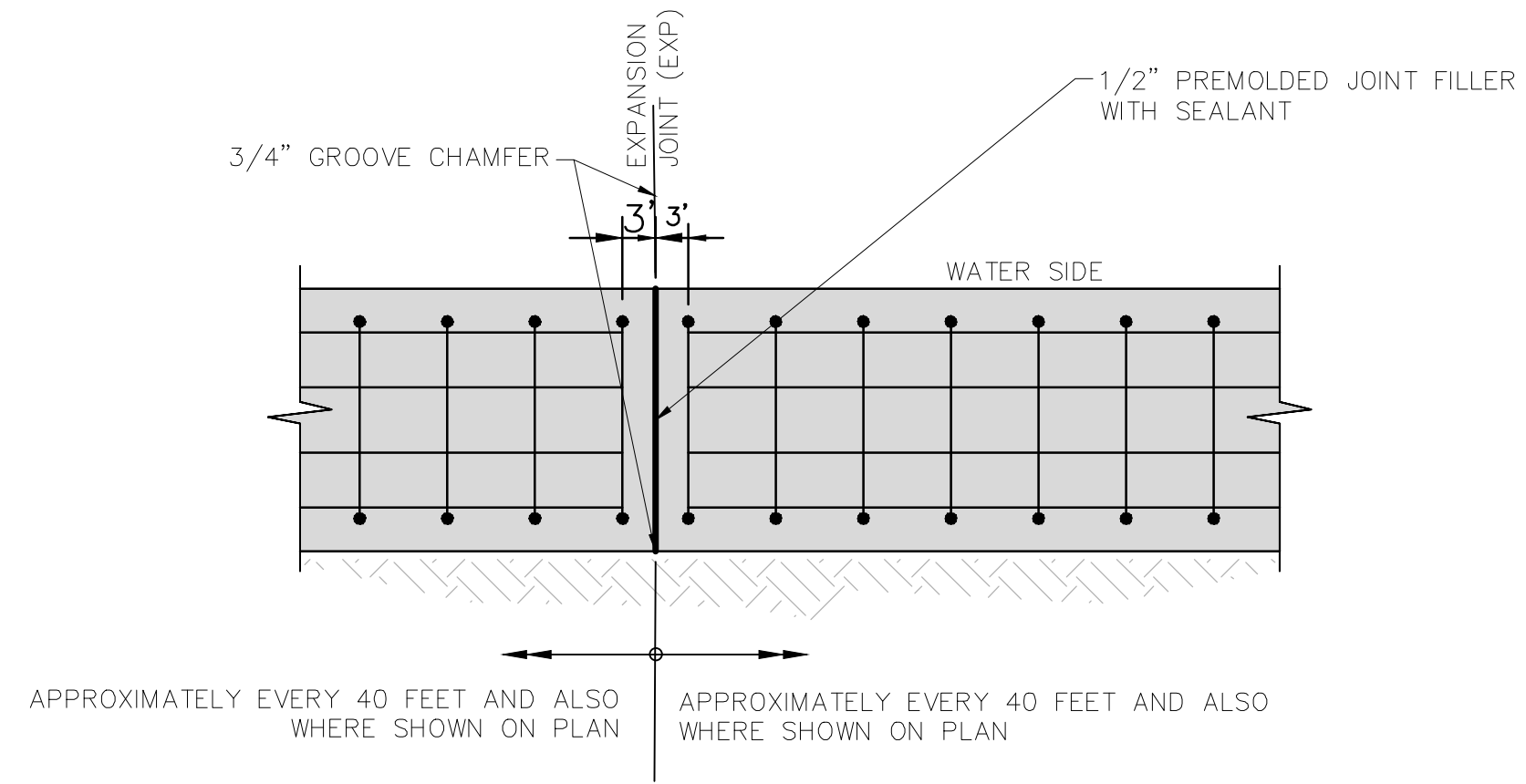
1 CAP CONTROL JOINT DETAIL (C.J.)
S-021 SCALE: N.T.S.



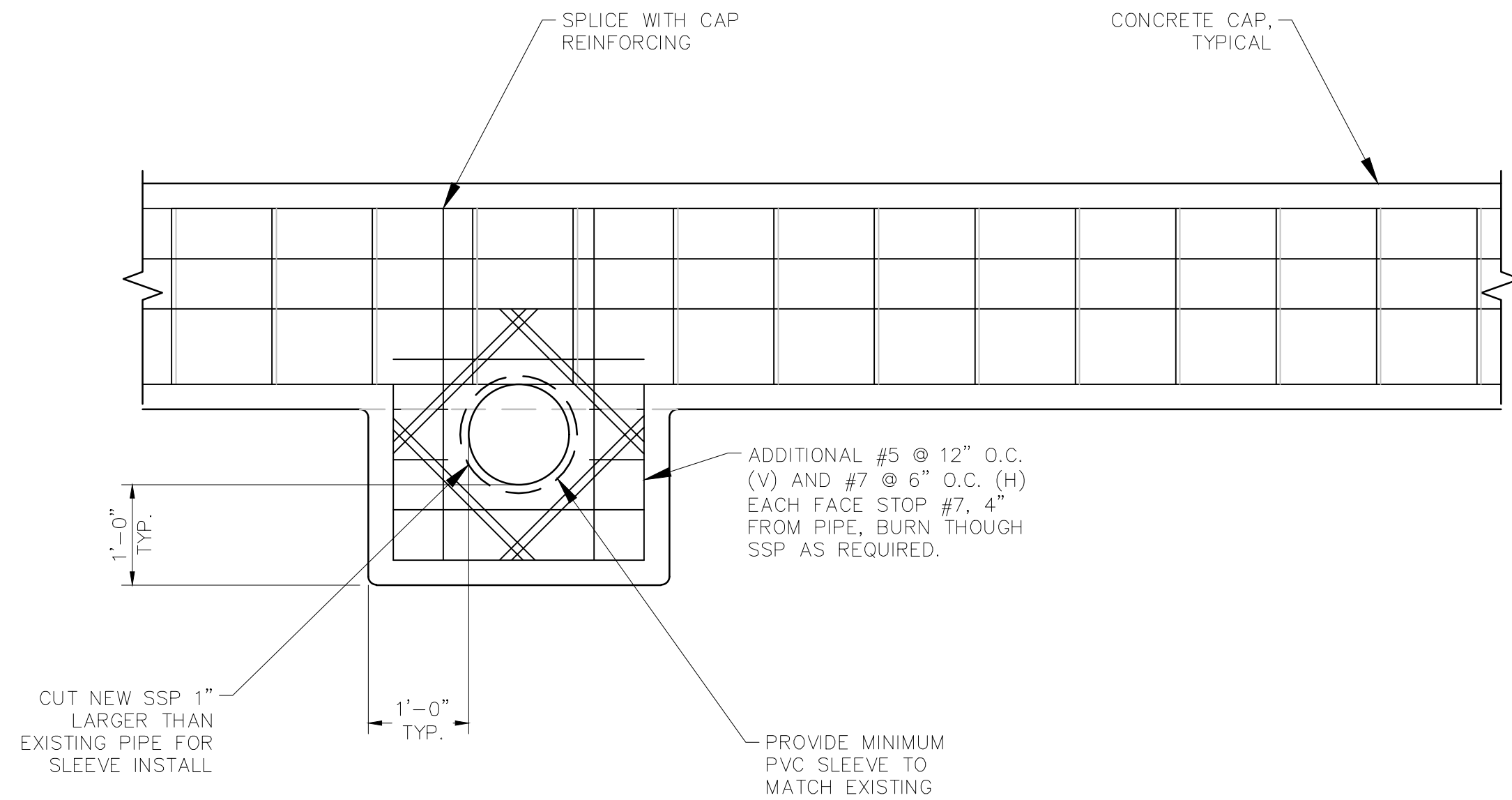
3 CAP CORNER REINFORCING DETAIL
S-021 SCALE: N.T.S.



5 TYPICAL CAP TERMINATION DETAIL
S-021 SCALE: 1" = 1'-0"



2 CAP EXPANSION JOINT PLAN (EXP.)
S-021 SCALE: N.T.S.



4 OUTFALL PENETRATION DETAIL
S-021 SCALE: 1/2" = 1'

PRE-FINAL

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CONCRETE CAP DETAILS

WATERFRONT RESILIENCY SYSTEM
PREPARED FOR
CITY OF FERNANDINA BEACH

CITY OF FERNANDINA BEACH
FLORIDADATE
APRIL 2024

51910

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SHEET NUMBER
S-021

35106

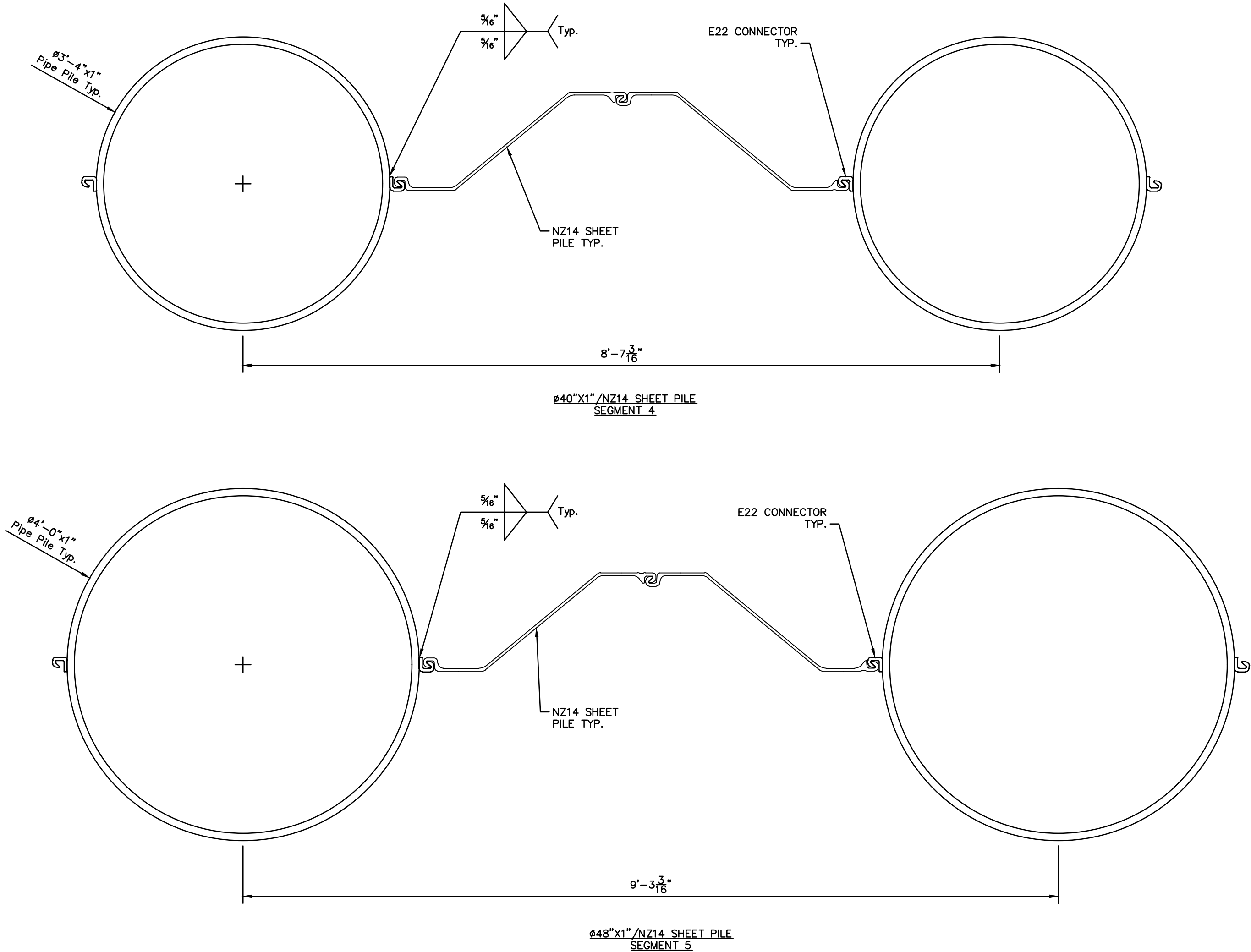
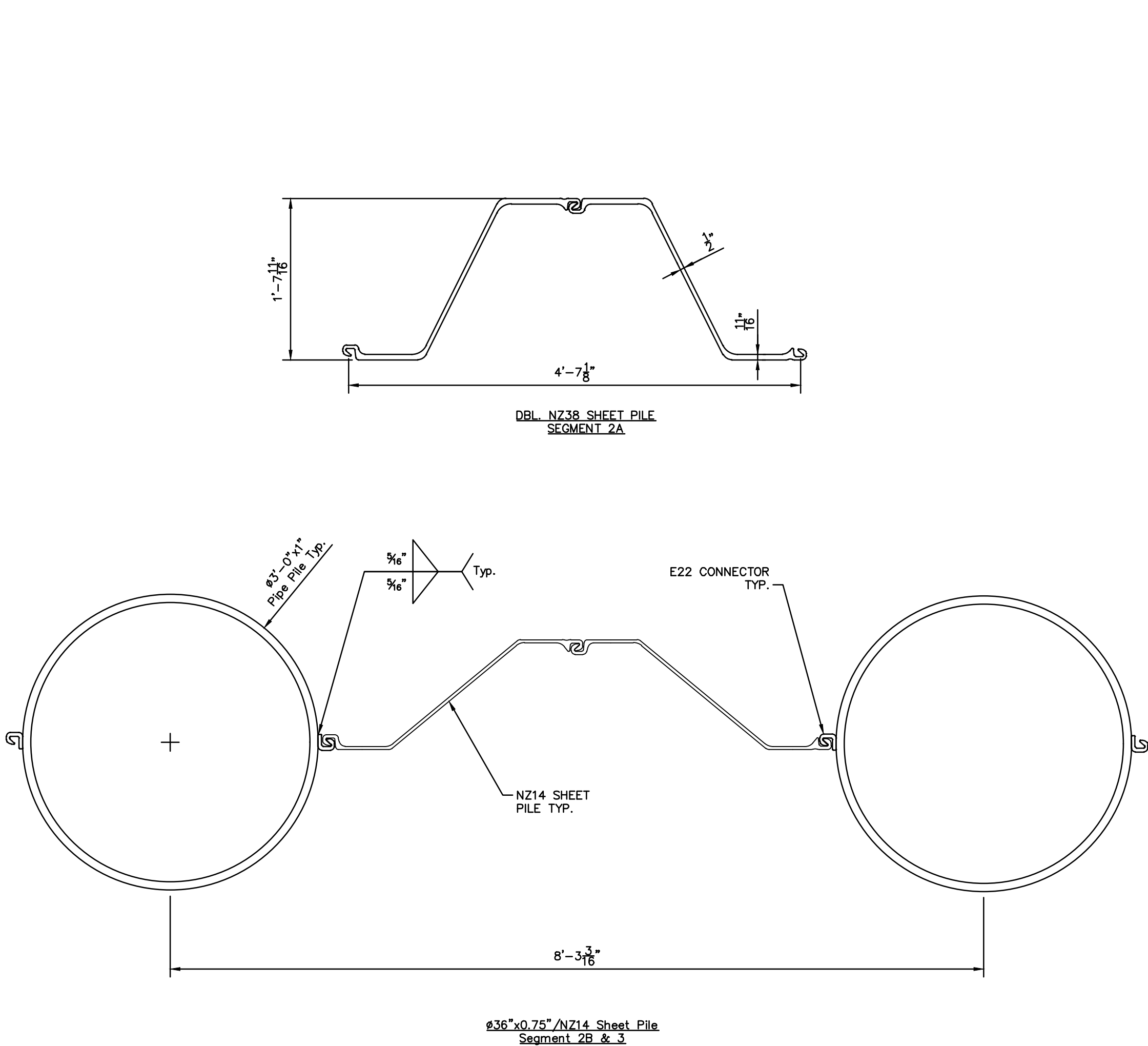
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Plotted: Bu.Solt_Corv_Sheet_Sat-CofE8 Waterfront Resiliency_Layout.S-022 BULKHEAD WALL SPECIFICATIONS April 12, 2024 12:21:15pm K:\JAX_WaterResources\142806004 - EF8E1 Waterfront Resiliency\Code\PlanSheets\S-19 BULKHEAD WALL SPECIFICATIONS.dwg
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Wall Segment	Wall Section	ASTM Designation	Requied Elastic Section Modulus	Initial Properties						Reduced Properties					
			in ³ /ft	Flange Thk.	Web Thk.	Elastic Section Modulus	Moment of Inertia	Steel Grade	Moment Capacity	Total Thickness Loss	Flange Thk.	Web Thk.	Elastic Section Modulus	Moment of Inertia	Moment Capacity
2A	NZ38	A572	44.81	0.689	0.689	70.48	697.30	60	352.40	0.12500	0.564	0.56400	57.69	570.79	288.47
2B & 3	36"O.Dx0.75"/NZ14	A252/A572	97.99	1	1	111.80	2012.00	60	559.00	0.12500	0.875	0.87500	97.83	1760.50	489.13
4	40"O.D.x1"/NZ14	A252/A572	115.37	1	1	137.27	2745.49	60	686.37	0.12500	0.875	0.87500	120.12	2402.30	600.58
5	48"O.D.x1"/NZ14	A252/A572	166.35	1	1	197.09	4730.18	60	985.45	0.12500	0.875	0.87500	172.45	4138.90	862.27



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BULKHEAD WALL SPECIFICATIONS	KHA PROJECT 142806004	DATE APRIL 2024	SCALE: AS SHOWN	DESIGNED BY: _____	DRAWN BY: _____	CHECKED BY: _____	CITY OF FERNANDINA BEACH FLORIDA	WATERFRONT RESILIENCY SYSTEM PREPARED FOR CITY OF FERNANDINA BEACH	KIMLEY-HORN © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 12740 GRAN BAY PARKWAY WEST, SUITE 2350 JACKSONVILLE, FLORIDA 32258 PHONE: 904-828-3900 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	REVISIONS	No.	DATE	BY

CITY OF FERNANDINA BEACH

Waterfront Resiliency System 2023

Conceptual Design



FERNANDINA BEACH
FLORIDA

Kimley»Horn





NO
RESILIENCY
SYSTEM

SEGMENT 1

EXISTING
RESILIENCY
SYSTEM

SEGMENT 2

SEGMENT 3

SEGMENT 4

NO
RESILIENCY
SYSTEM

SEGMENT 5

NO
RESILIENCY
SYSTEM

Site Location



Existing Grades in Project Area

	EL (NAVD88)	(Wall Ht to Achieve a top of wall EL of 9.0)
• Segment 1:	4.8 ft	(Wall Ht = 4.2 ft)
• Existing Resiliency System (Lot C-D)	7.1 ft	(Wall Ht = 1.9 ft)
• Segment 2A (Boardwalk):	7.1 ft	(Wall Ht = 1.9 ft)
• Segment 2B (Boat Ramp):	5.4 ft	(Wall Ht = 3.6 ft)
• Segment 3:	5.4 ft	(Wall Ht = 3.6 ft)
• Segment 4:	7.4 ft	(Wall Ht = 1.6 ft)
• Segment 5:	N/A (9.0 ft)	(Wall Ht = 0 ft)

Segment 1 - Existing

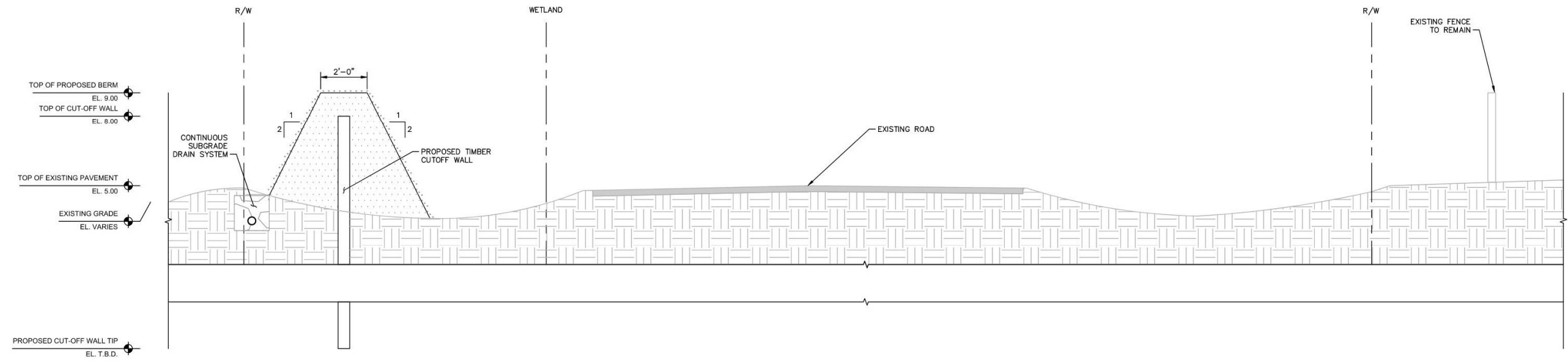


Segment 1 - Conceptual

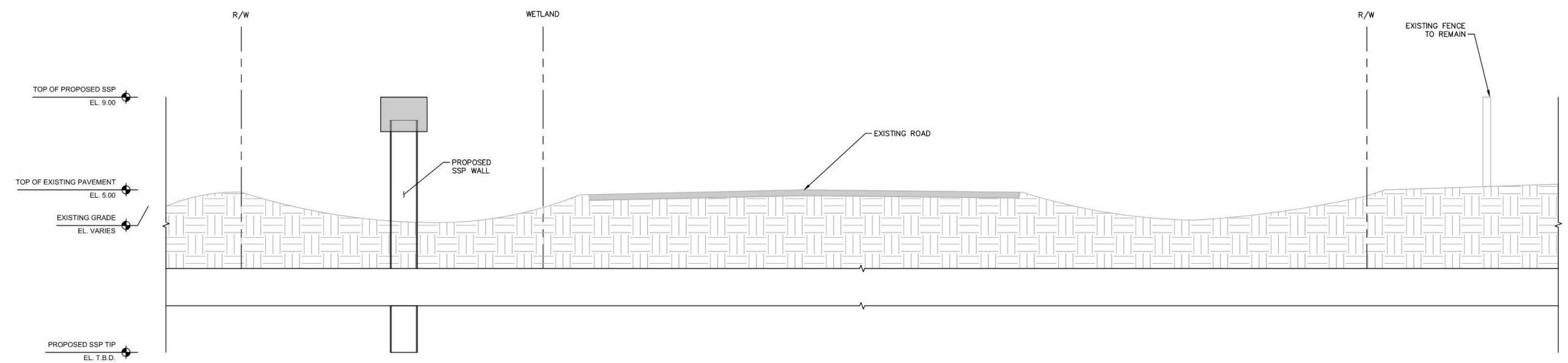


Segment 1

Option 1



Option 2



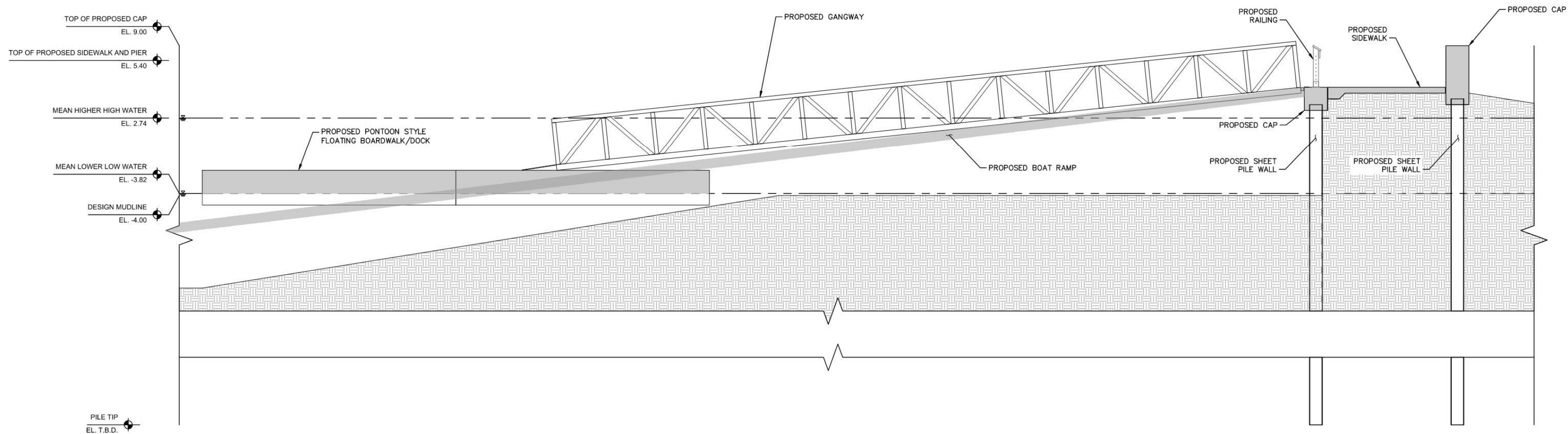
Segment 2A Boardwalk - Existing



Segment 2A Boardwalk - Conceptual



Segment 2A Boardwalk



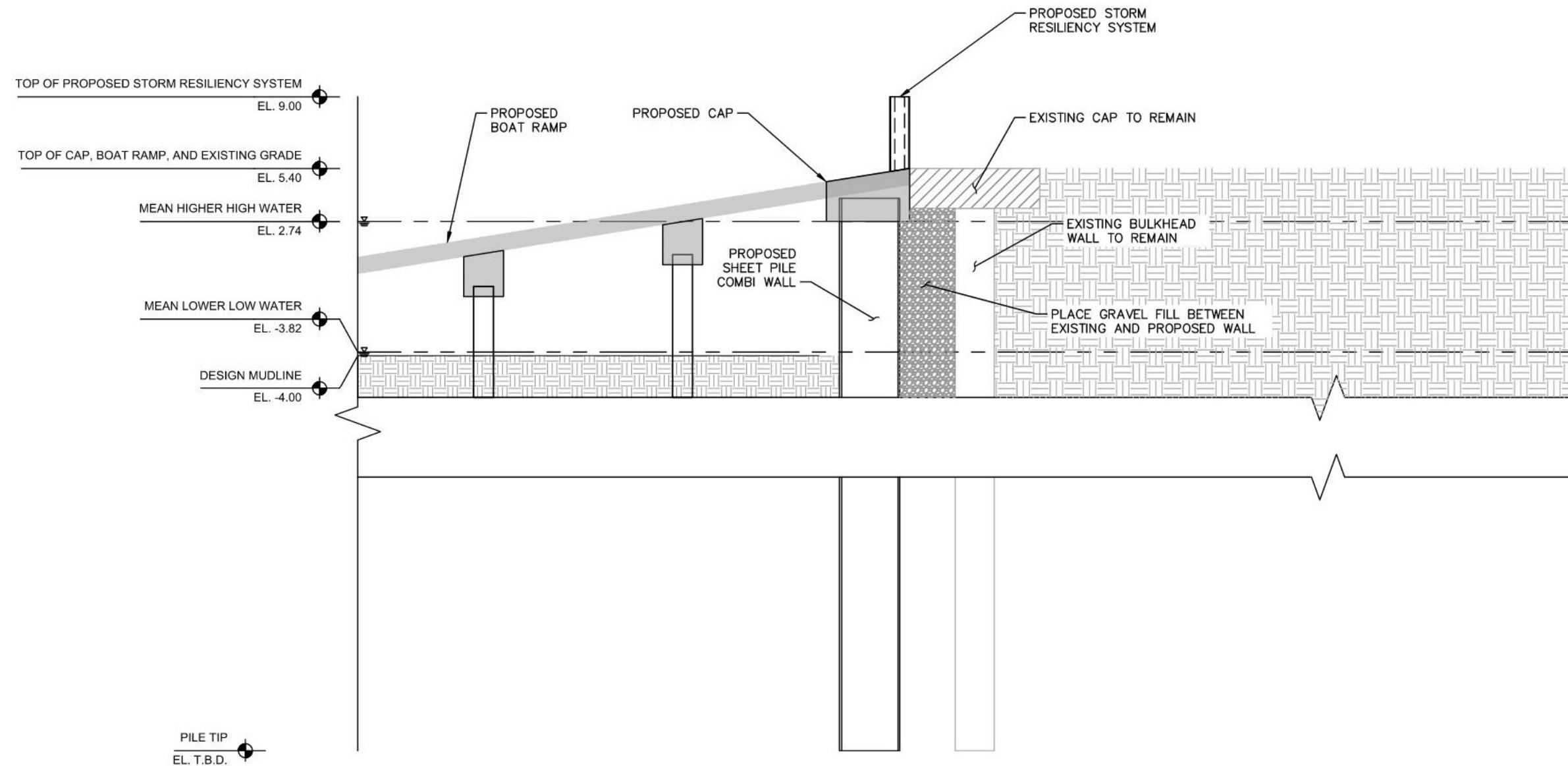
Segment 2B Boat Ramp - Existing



Segment 2B Boat Ramp - Conceptual



Segment 2B Boat Ramp



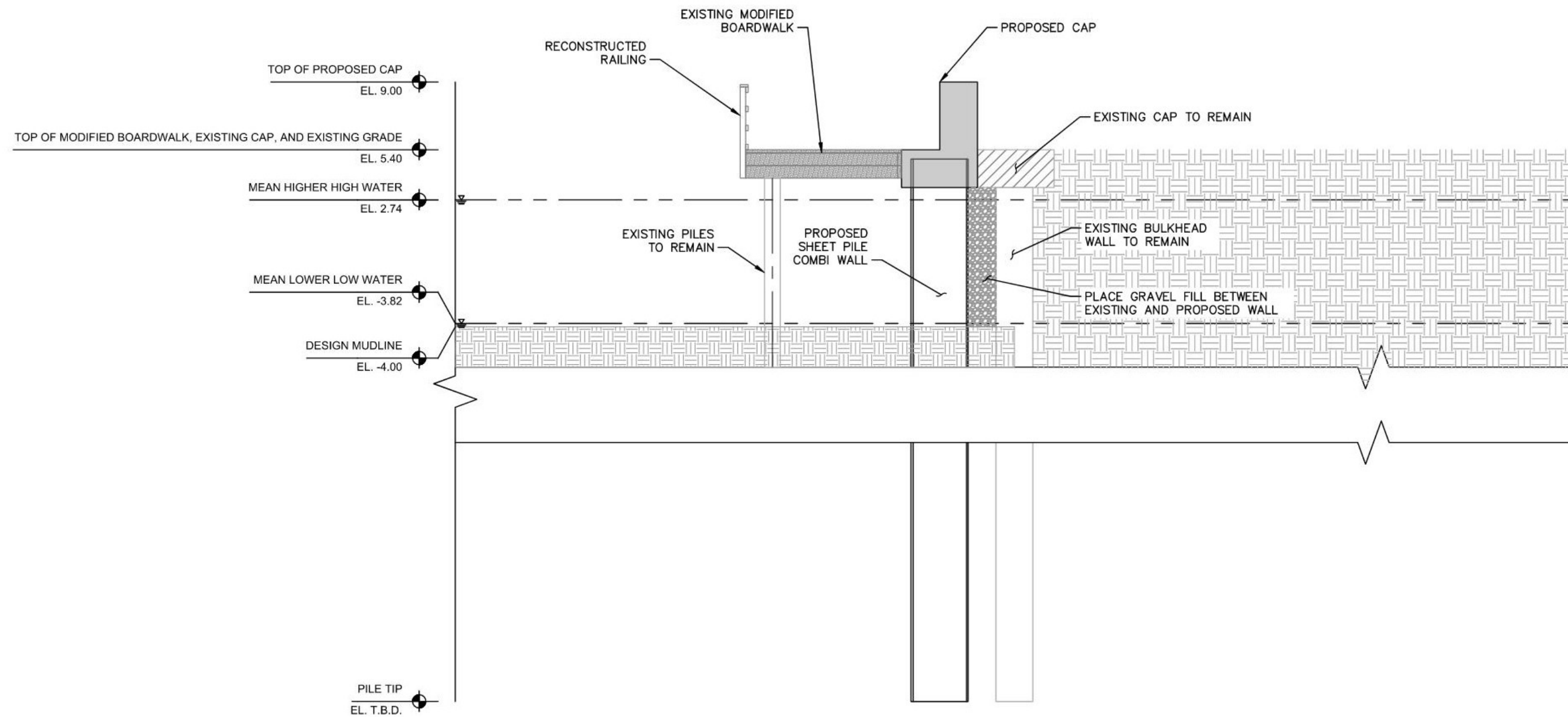
Segment 3 - Existing



Segment 3 - Conceptual



Segment 3



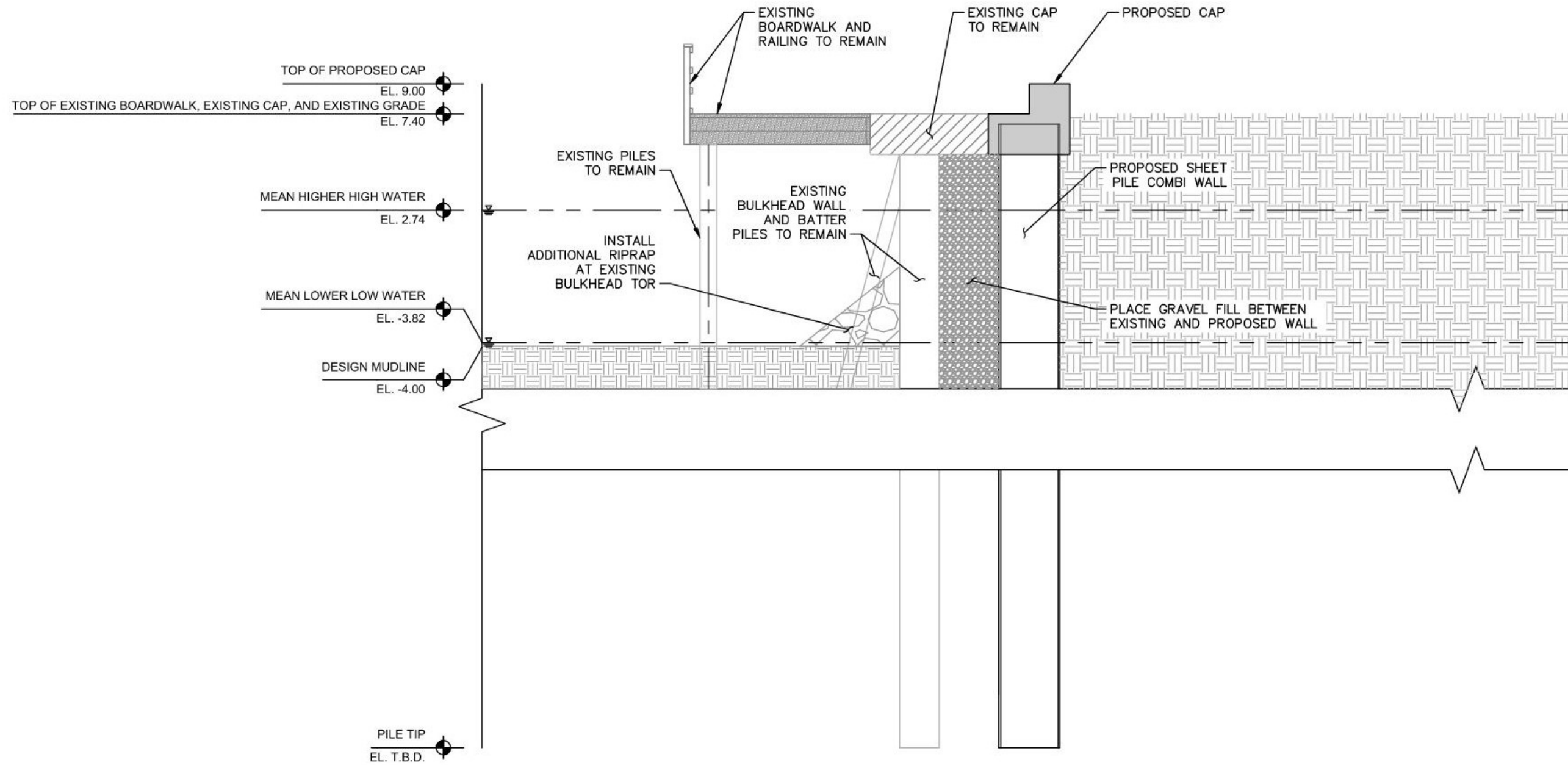
Segment 4 - Existing



Segment 4 - Conceptual



Segment 4



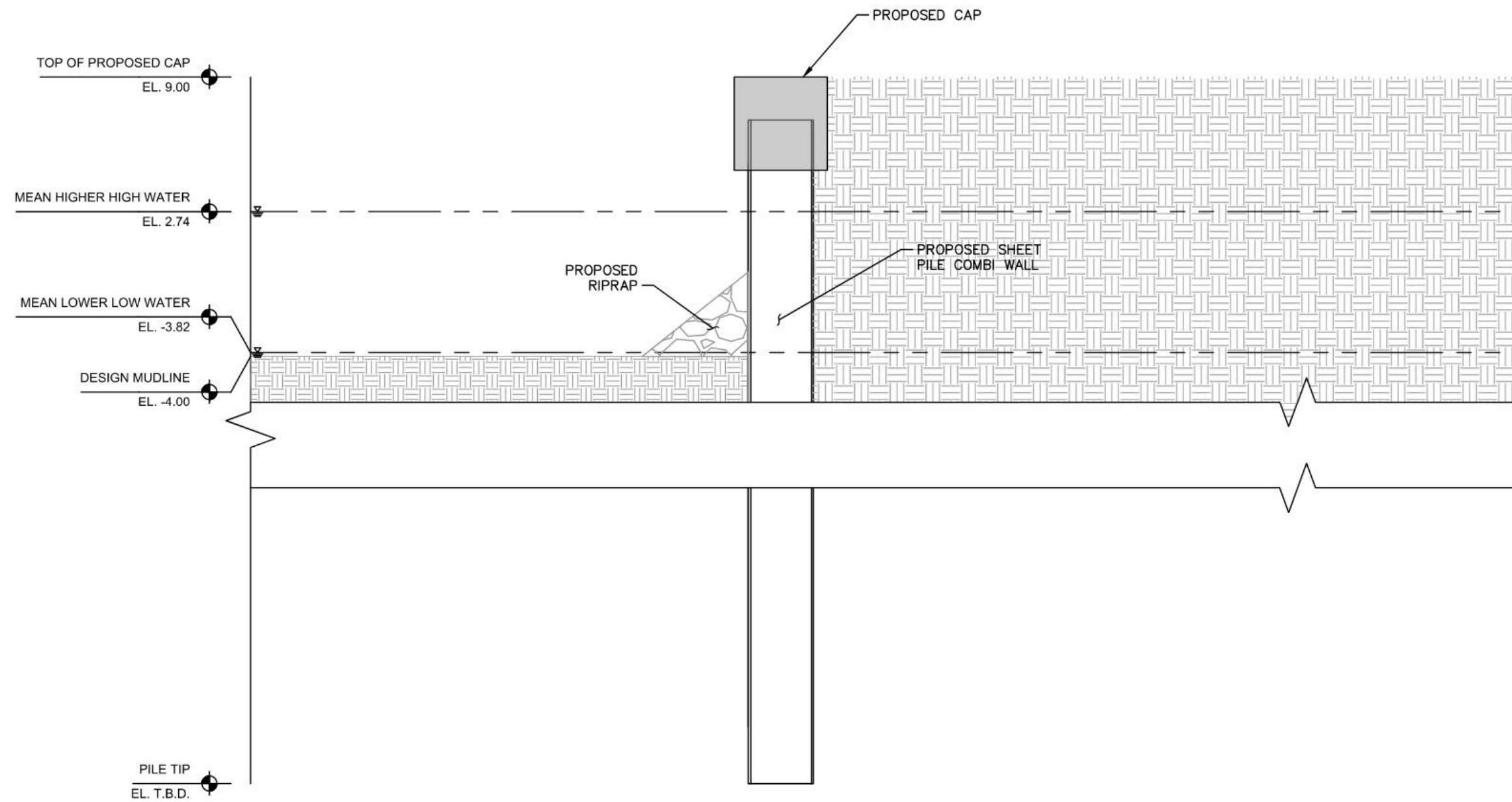
Segment 5 - Existing



Segment 5 - Conceptual



Segment 5





Questions?



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8175

June 5, 2024

Regulatory Division
North Branch
Jacksonville Permits Section
SAJ-2020-01078 (SP-TMM)

City of Fernandina Beach
Attention: Charles George
204 Ash Street
Fernandina Beach, Florida 32034
Sent via: cgeorge@fbfl.org

Dear Mr. George:

This correspondence is in reference to your permit application received on May 13 2024, requesting Department of the Army (DA) authorization to impact waters of the United States in association with the Fernandina Beach bulkhead. The project site is located at 101 Front Street, Sections 21, and 22, Township 3 East, Range 28 North, Fernandina Beach, Nassau County, Florida. This project has been assigned permit application number SAJ-2020-01078, which should be referenced on all future correspondence.

The U.S. Army Corps of Engineers (Corps) received insufficient information to evaluate the proposal. The Corps considers your application incomplete, as it does not provide information needed to prepare a public notice that would generate meaningful comments. The Corps will not take further action, including the circulation of a public notice, until receipt of the information requested on the enclosed checklist for bolded Items 1 and 2. The remaining items on the enclosed checklist are not required for a public notice; however, the Corps needs this information to complete our evaluation of the project. If you submit all of the information requested at this time, it could expedite the review of your application.

1.0. Figures and Exhibits:

1.1. Submit drawings, sketches, or plans sufficient for issuing a Public Notice.

a. Provide a figure that clearly shows the proposed site plan and adjacent site features, including specific locations and dimensions of existing and proposed structures or activities. At this time, there are multiple phases and only two phases show proposed work. Please include the proposed work in all phases. Include the mean high water line and the high tide line in the drawings. Include

measurements of the proposed work, including length and width, and the distance from the mean high water line to the waterward most point of the proposed bulkhead.

i. Show the total plan of development including existing and future phases. If the proposed work would occur to support development or additional dock structures, please provide those plans.

ii. Provide a drawing of the location of the proposed dredge.

b. Provide a drawing that shows the cross-sectional (elevation) view of the entire proposed project and impact areas to indicate the relationship to the affected waters.

1.2. Other figures and exhibits that could be addressed at this time and would benefit you by helping us to expedite the review of your application are as follows:

a. Provide a map that includes the XY coordinates of the most waterward points on the structure. This will be utilized to submit to Corps Navigation Section to ensure that the proposed work would not impact the federal channel.

b. Provide the cross sections of the proposed dredge on a separate map.

2.0. Description and Narratives:

2.1. Provide a proposed schedule for the project or activity.

2.2. Provide a listing of all other government authorizations obtained or requested for the work, including required certifications relative to water quality, coastal zone management, or marine sanctuaries.

2.3. Since your permit application proposes the discharge of dredged or fill material into waters of the United States, you must provide the Corps with a statement describing how impacts to waters of the United States would be avoided and minimized in order to complete your application. Please also include information on why the proposed bulkhead that is proposed a certain distance into the water (please provide this distance) needs to go waterward of the mean high water line instead of along the road.

2.4 Since your permit application proposes the discharge of dredged or fill material into waters of the United States, you must provide the Corps with a statement describing how impacts to waters of the United States would be

compensated or a statement explaining why compensatory mitigation should not be required for the proposed impacts. This information is required for the public notice.

3.0. Additional information not needed for issuance of a public notice that could be addressed at this time and would benefit you by helping us to expedite the review of your application are as follows:

3.1. Provide a delineation of affected special aquatic sites (wetlands). Wetland delineations must be prepared in accordance with the *1987 Wetland Delineation Manual* and the *Atlantic and Gulf Coastal Plain Regional Supplement, Version 2.0*, November 2010. Information necessary to compile a delineation is available on the Internet at <http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx> (please be advised, this Internet URL address is case specific and must be entered exactly as presented) and clicking on the links below "Wetlands." Data points are required for anything above the high tide line.

3.2 In order for the Corps to fully evaluate the regulatory status of the wetlands on the project site, a site inspection will be required. The site inspection will verify the wetland lines and the wetlands hydrological connectivity (or lack of connectivity) to waterways in the area. Please contact me (or the Project Manager) to schedule a site inspection (contact information can be found at the end of this letter). During the site inspection, please provide good resolution aerials of the project site and adjacent properties as required, to trace water flows on and off the site and into waterways in the area.

3.3. Provide any information in reference to the presence or absence of submerged aquatic vegetation or resources, which could be adversely affected by this project. Please include the dates and times of any survey or site review work, and any maps that depict the locations of any submerged aquatic vegetation or resources.

3.4. The proposed impacts must also meet the 404(b)(1) guidelines of the Clean Water Act. Although only a statement concerning avoidance, minimization, and compensatory mitigation is necessary for the issuance of the public notice, the following detailed information will be needed to assist us in fully evaluating the project. It often expedites the permitting process if this information is submitted at this time.

a. Avoidance: Your project is considered to be a non-water dependent proposal because it does not have to be located in a wetland to achieve the basic project purpose. For non-water dependent projects there is a presumption that alternative upland sites exist which are available to the applicant. There is also a presumption that

fill placed elsewhere, other than wetlands or other aquatic sites will have less adverse impact. The applicant must rebut these presumptions. Please provide a discussion of alternative sites and why this particular site was selected for your project.

b. Minimization: After the least damaging alternative site is selected or after the applicant successfully rebuts the above avoidance presumptions, the project must be shown to be the least damaging practicable alternative that meets the basic project purpose. Minimization includes alternate site plans and other steps (e.g., site access options) which would reduce impacts to on site wetlands. Please describe other site plans and steps you can take to minimize the impact of your project on wetland resources.

c. Compensatory Mitigation: You may be required to provide compensatory mitigation for resource losses which are specifically identifiable and reasonably likely to occur. Mitigation proposals cannot be fully evaluated until successfully completing the above avoidance and minimization steps.

3.5. Provide the JAXBO sheets for the JAXBO summary, shoreline stabilization activity, and dredging activity. Provide the material of the bulkhead and how the bulkhead will be installed. Provide any piles that will be installed and how the pilings will be installed (impact hammer? Etc.).

3.6. Please fill in the following information: The applicant seeks authorization for the following:

1. To place 11,700-cubic-yards of clean fill into 0.48-acre of waters of the United States (XXX acre of open water and XXX acre of salt marsh) for construction of a bulkhead for shoreline stabilization. The bulkhead would be XXX-feet-long by XXX-feet-wide and would be located XXX-feet waterward of the mean high water line. This is for Phase 5.

2. Please fill in the same info for Phase 1 as #1 for Phase 5 above. This is in the proposed drawings. Please also provide additional lines for each of the phases that have no information.

3. To place 2,300-cubic-yards of fill into 0.77-acre of waters of the United States (XXX-acre of open water and XXX-acre of salt marsh) for rip rap shoreline stabilization. The rip rap would be XXX-feet-long by XXX-feet wide and would be placed XXX-feet waterward of the mean high water line.

4. To dredge 3,200-cubic-yards of sediment from XXX acres of waters of the United States (open, tidal water). The dredge would be XXX-feet-wide by XXX-feet long and

would be to a depth of -XXX-feet mean low water. The dredge would be conducted by XXX methods (mechanical? Clam shell? From a floating barge? Etc.) and the material would be placed in an upland location called XXX.

3.7. The proposed project may affect endangered or threatened species under the purview of National Marine Fisheries Service (NMFS) Protected Resource Division (PRD) and will require individual consultation. In order to initiate consultation, please provide the following information:

a. Do you agree to adhere to the National Marine Fisheries Service's "Protected Species Construction Conditions, NOAA Fisheries Southeast Regional Office," dated May 2021.

b. Will all work be performed during daylight hours?

c. Do you agree to adhere to the "Vessel Strike Avoidance Measures and Reporting for Mariners", revised May 2021, for marine turtles and marine mammals?

d. What is the anticipated start date of the project?

e. How many days will the in-water work take to complete?

f. How will the work be performed?

g. Please complete the following table if piles will be installed. An example is provided in the second column.

Pile Type and Material	<i>Concrete, Square</i>	
Pile Diameter or Sheet Pile width (inches)	<i>24-in</i>	
Number of Piles or Sheet Piles Total	<i>5</i>	
Installation Method	<i>Impact</i>	
Number of Strikes per Pile/Sheet Pile (if using impact hammer) or Number of Seconds of Vibration per Pile/Sheet Pile (if using vibratory hammer)	<i>55 strikes</i>	
Number of Piles/Sheet Piles Installed per Day (if using impact or vibratory hammer)	<i>No more than 5</i>	
Duration of pile driving activity (days)	<i>5-6</i>	
Substrate and water depth in pile installation area	<i>Sand/Silt, 10 ft</i>	
Confined Space or Open Water?	<i>Open Water</i>	
Noise abatement used	<i>Nylon cushion block</i>	

As the Corps considers the application incomplete, we will not take action on it until we receive the required information and drawings. We request you provide this information within 30 days. If the Corps does not receive a response, we will assume you have no further interest in obtaining a Department of the Army permit and the Corps will withdraw your permit application. Such action will constitute final action by the Department of the Army.

You are cautioned that work performed below the mean high waterline or ordinary high waterline in waters of the United States, or the discharge of dredged or fill material into adjacent wetlands, without a Department of the Army permit could subject you to enforcement action. Receipt of a State permit does not obviate the requirement for obtaining a Department of the Army permit for the work described above prior to commencing work.

Should you have any questions or comments regarding this request for additional information, please contact me at the letterhead address, by phone at 904-251-9179, or by electronic mail at Terri.M.Mashour@usace.army.mil.

Sincerely,

MASHOUR.TERRI.
MARIE.1557668493

Digitally signed by
MASHOUR.TERRI MARIE.15576
668493
Date: 2024.06.05 10:54:25 -04'00'

Terri M. Mashour
Project Manager

Enclosures

cc:

LG2 Environmental, Attention: Hayley Torkos, HTorkos@oescgroup.com