



September 2, 2026

Josh Noble
Marsh and Shore Management Program Manager
Coastal Resources Division

RE: Application for Issuance of a Shore Protection Act Permit - *Minor Activities*
East Beach (Massengale Park) Boardwalk Project
Glynn County, Georgia

Dear Mr. Noble,

*Please note: the applicant is no longer proposing the Arnold Road boardwalk as part of this proposed project. The proposed project consists of the Massengale Park boardwalk only; an updated project description is provided below.

On behalf of the applicant, Glynn County Engineering Services, we are submitting this package including an application for a Shore Protection Act (SPA) permit to authorize construction of the East Beach Boardwalk project (the Project) located near Massengale Park on East Beach, St. Simons Island, Georgia. The information below details the project, its purpose and need, alternatives considered, location, and other information required for permit review and issuance. Please review the attached application, forms, plans, figures, and supplemental information and contact me if you have any questions or need additional information.

Basic Project Details

The Project Area is located on East Beach, St. Simons Island, Glynn County, Georgia and consists of one boardwalk crossing that would extend from existing permitted beach access point at Massengale Park across the recently formed tidal slough and wetland areas to the lower beach. The Project Area is approximately 6.16 acres, and the center is located at 81.3767398°W, 31.1396293°N. Impacts to the Project Area will be primarily temporary and limited to the boardwalk construction corridor and construction staging area. Refer to Attachment A for a project location map, wetland and waters delineation map, and site photographs. Refer to Attachment B for Project Plans and Plan Review Letters, and to Attachment C for the SPA jurisdictional determinations, SPA permit forms, and the Federal Consistency Certification

form. The project includes construction of a boardwalk extension from an existing beach access point that will provide a safe crossing of the recently formed tidal slough, wetlands, and protected dune habitats. The project will reconnect Massengale Park via Americans with Disabilities Act (ADA) and vehicle accessible boardwalk to the lower beach area. See below for project dimensions and proposed permanent and temporary impacts.

Massengale Park Boardwalk:

Length: 676'

Width: 13'-0" (Extends to 41'-5" at Access Ramps)

The dimensions of the construction corridor for the Massengale Boardwalk are 33-ft wide by 672.5-ft long. The corridor expands to 41.85-ft wide around the existing flagpole and then expands again to 61-ft wide around the access ramp. The corridor also shortens to 20.5-ft wide for 162-ft as it crosses the tidal wetlands and pool. The total proposed temporary impacts of 13,043 SF include 12,727 SF for construction, 278 SF for vegetation clearing for construction access as, and 316 SF for construction staging or 0.30AC total

1. **Permanent (structure):** 8,788 SF boardwalk + 910 SF access ramps = **9,698 SF** or **0.22AC** total
2. **Temporary**
13,043 SF (including **12,727 SF** for construction, **278 SF** for vegetation clearing for construction access, and **316 SF** for construction staging) or **0.30AC** total

Proposed Permanent Impacts (SF)	Proposed Temporary Impacts
9,698 SF / 0.22AC	13,043 SF / 0.30AC

The boardwalk is designed to avoid and minimize impacts to jurisdictional resources to the maximum extent practicable with no permanent fill proposed. Because of weight capacity limitations and project area soils, a temporary construction crossing of the tidal pool and wetlands is required to safely construct the boardwalk. Temporary construction mats will be placed in the wetlands from the landward side. The mat crossing will then be extended into the tidal pool along the temporary construction limits shown on the previously submitted plans. The selected contractor will be required to construct a temporary access corridor that is stable and dry so that equipment does not contact JD wetland areas or water in the tidal pool. Depending on the contractor's means and methods, this could involve stacked timber mats in the pool or potentially a floating modular system across the tidal pool. A mini to small sized excavator will be used with vibratory pile driving attachment to install wooden piles. The superstructure (decking and hand rails) will be constructed with no impact to the tidal pool, wetlands, or dune areas.

Construction personnel and equipment will access the Massengale Boardwalk from the northeast corner of the construction staging area located in the southeast corner of the park parking lot.

Project Purpose and Need

The purpose of the project is to protect and improve public safety and provide safe, accessible beach access for all citizens and emergency services (EMS) vehicles. The need for the project is the lack of safe connection to the lower beach and risk to public safety from the current open water crossing conditions. The current floating bridges are not ADA accessible and cannot be crossed by EMS vehicles. The need will be met by extending an existing permitted beach access point, including replacement and extension of the existing permitted 12-foot-wide boardwalk at Massengale Park. This project will result in a safe crossing of the tidal slough system for EMS vehicles, pedestrians, and mobility assistance devices which will provide safe, stable, and accessible connections to beach areas for all members of the public.

Description of Alternatives Considered

Alternative 1 - Tidal Slough Fill

This alternative would fill the entire open water area with native sand from an onsite borrow area. Native sand would be harvested by shallow scraping of the beach throughout a 12.58-acre borrow area. To fill the 3.83-acre open water area, approximately 10,420 cubic yards of sand would be collected from the borrow area. Wetlands along the open water area would be avoided and protected with best management practices (BMPs). Newly formed dune areas would be impacted by sand excavation.

Alternative 2 -Partial Tidal Slough Fill

Alternative 2 would fill 2.07 acres of open water with imported sand. This alternative would avoid impacts to 1.76 acres of open water, avoid impacts to any dunes and dune vegetation, and avoid all permanent wetland impacts. Wetlands along the open water area would be avoided and protected with BMPs.

Preferred Alternative 3 - Boardwalk Construction

Alternative 3 would span the existing open water with a permanent pile-supported structure that would extend from Massengale Park to the lower beach area. The Massengale structure would include 676 linear feet of 13-foot-wide new boardwalk. The existing permitted 12-foot-wide boardwalk beach access at Massengale Park would be removed and replaced by new ADA and EMS vehicle accessible boardwalk. Alternative 3 includes pedestrian ramp and stair access from each side of the Massengale structure along the upper beach area. This alternative would place piles in the wetland areas and tidal slough but would not include any permanent fills or fill impacts to wetlands, open water areas, and dune habitats. Construction mats or similar would be used in the tidal pool and wetland areas for the construction corridor. No permanent fill to wetlands or clearing of wetland vegetation is proposed. Minor edge clearing of 278 SF of upland vegetation is required in Massengale Park.

Landfill/Hazardous Waste Statement

Glynn County does not have any records of landfills or hazardous sites in the Project Area.

Public Interest Statement

Provide a statement demonstrating that **each** of the following public interests have been considered:

1. Whether or not unreasonably harmful, increased alteration of the dynamic dune field or submerged lands, or function of the sand-sharing system will be created

The project will not harm and will have minimal effects on the sand sharing system. No sand will be removed from the sand sharing system. The new boardwalk will be elevated above dunes and will begin landward of existing dunes and end on the seaward side of existing dunes. The boardwalk will provide dedicated pedestrian and EMS vehicle beach access which will significantly reduce existing foot traffic and existing dune impacts due to the lack of safe and fully accessible crossings across the tidal slough. The project will provide an accessible alternative to existing pedestrian trails through sensitive areas and dunes. All applicable BMPs will be utilized. Construction mats will be used in the tidal pool and wetland areas to reduce temporary impacts to project area resources as much as practicable.

2. Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with the conservation of marine life, wildlife, or other resources

Impacts to marine life, wildlife, waters and wetlands have been minimized to the maximum extent practicable while designing and planning for the project goals of public safety and access. Alternative 3 would construct a pile-supported boardwalk across aquatic habitats and wetland areas and will have no permanent fill impacts on marine or wildlife habitats. Aquatic function will be protected by construction of an elevated pile-supported structure only, which will give the public and EMS vehicles a dedicated crossing while improving conservation opportunities by limiting existing human impacts. The project will provide the public with access to observe wildlife and natural resource areas safely while reducing foot traffic impacts to wetlands, vegetation, dunes, and open water areas.

3. Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with access by and recreational use and enjoyment of public properties impacted by the project

The Project Area is a highly used public beach. The existing conditions interfere with public enjoyment and recreational use by limiting stable and safe access to the beach. Granting a permit for this project will facilitate increased public safety, access, enjoyment, and recreational use.

Glynn County appreciates your review of the enclosed information. Please review and contact me if you have any questions or need additional information.

Best regards,



Stephen M. Bailey, PWS
Principal | Owner
Longleaf Consulting

Enclosure(s)

Attachment A: Figures

- Figure 1 USGS 7.5 Minute Quadrangle Project Area Location Map
- Figure 2 Wetlands and Waters Delineation Map
- Figure 3 Resource Photos

Attachment B: Project Plans

- Project Design Plans and Plan Review Letters

Attachment C: Shore Protection Act Application Form and DNR JDs

- Shore Protection Act Permit Application Forms
- Shore Protection Act JD Line Survey Exhibits and JD Letters

Attachment D: USACE Letter of Permission Application

Attachment A: Figures

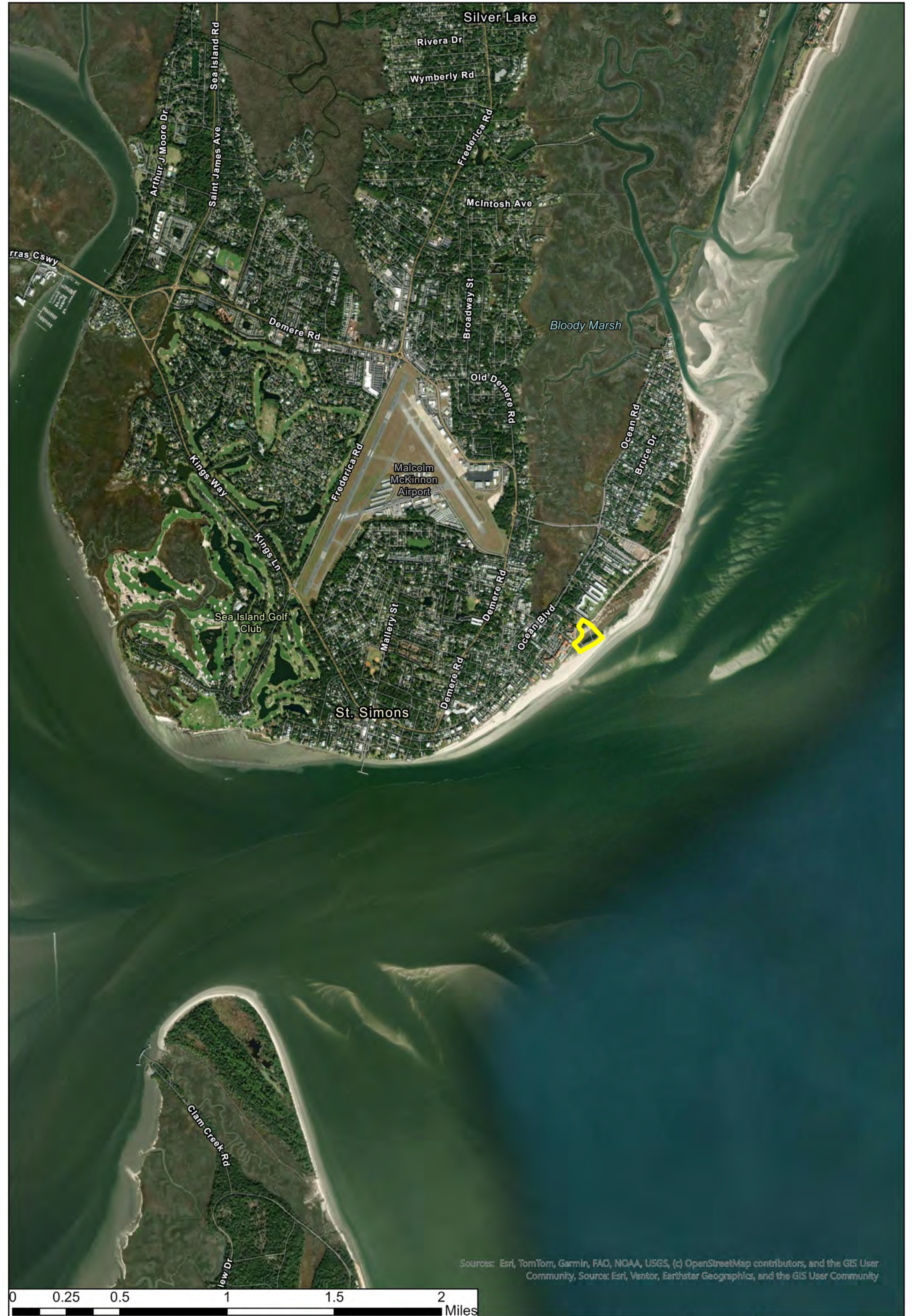


Figure 1: Project Location Map
East Beach Tidal Pool Project
Glynn County, Georgia
07/15/2026



Legend

 Project Area





Figure 2: Aquatic Resources Delineation Map East Beach Tidal Pool Project Glynn County, Georgia 07/15/2026	N 	Legend  Project Area  Wetlands  Open Water	
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Figure 3: Resource Photographs November 2025 and February 2026



Wetland 3 and northern pool area - facing north



Wetland 3 and Tidal Pool 1 southern pool area – facing east



Wetland 4 – facing north



Wetland 4 – facing north



GLYNN COUNTY GOVERNMENT

1725 Reynolds Street, Suite 200 - Brunswick, Georgia 31520
Phone: (912) 554-7428
Planning and Zoning Department

July 15, 2026

Josh Noble
Marsh and Shore Management Program Manager
Georgia DNR, Coastal Resources Division
One Conservation Way
Brunswick, GA 31520

RE: East Beach Boardwalks
Glynn County

Dear Mr. Noble:

The above referenced project has been submitted by Glynn County to CRD for authorization under the requirements of the Shore Protection Act (SPA). The County proposes to conduct activities within SPA jurisdictional areas on St. Simons Island.

All of the proposed activities are allowed as a Conditional Use, per Section 6.6.3.E, Zoning Ordinance. Otherwise, the project does not conflict with any zoning laws.

The submitted plans for this project have been reviewed and initialed. Please see attached.

Should you have any additional questions, please feel free to contact me at mpostal@glynncounty-ga.gov, (912) 554-7487.

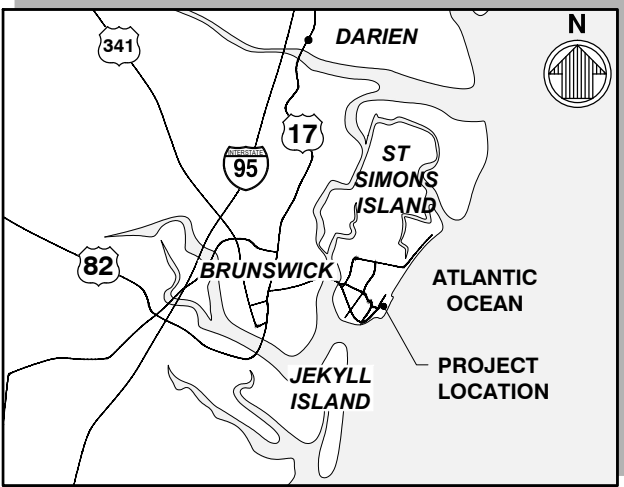
Sincerely,

Maurice Postal

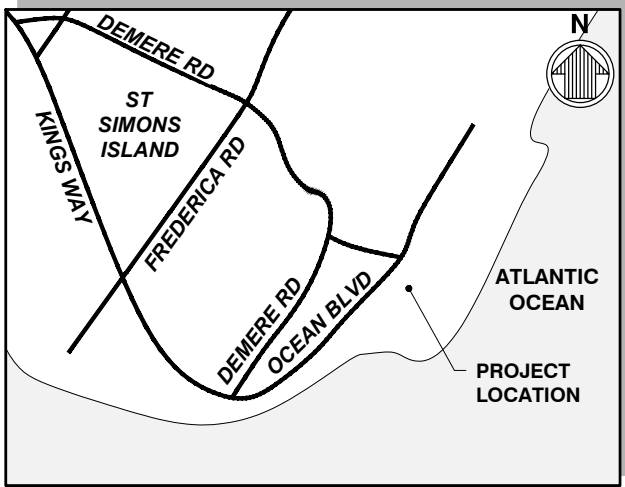
Maurice Postal, AICP
Development Review Manager

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

M&N JOB #: 240281-12



VICINITY MAP
SCALE: NTS



LOCATION MAP
SCALE: NTS

The construction project, as depicted in the attached plans, does not conflict with current Glynn County zoning laws.

Preliminary review of the proposed plans does not constitute approval of the project itself. All necessary permits and approvals for activities associated with this proposal will need to be obtained prior to project commencement.

Reviewed by Maurice Postal, Development Review Manager

Maurice Postal

Glynn County Planning & Zoning Department
July 15, 2026

GOVERNING STANDARDS AND SPECIFICATIONS:
DESIGN STANDARDS AND APPLICABLE CODES USE GA DNR, GEORGIA CODE,
OCCUPATIONAL SAFETY AND HEALTH ADMINISTARTION (OSHA) REGULATIONS.



mo
hoffatt & nichol
300 BULL ST., SUITE 200
SAVANNAH, GA, 31401
MOFFATT NICHOL.COM

COVER SHEET

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: EG
CHECKED BY: CRS
REVIEWED BY: AEJ
SUBMITTED BY: ABBY JACOBSON
MOFFATT NICHOL
PROJECT NUMBER: 240281-12
DATE: 07/14/2026 REVISED:



GENERAL NOTES

1.

ALL CONSTRUCTION ASSOCIATED WITH THIS PROJECT MUST BE IN ACCORDANCE WITH APPLICABLE CODES & AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO OWNER, LOCAL, AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS. ANY DISCREPANCY MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER & ENGINEER OF RECORD.
2.

IT IS THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE HIMSELF/HERSELF WITH THE PROJECT SITE & TO DETERMINE TOPOGRAPHIC OR UNDERGROUND FEATURES THAT WILL BE IMPACTED DUE TO HIS/HER PROPOSED METHOD OF CONSTRUCTION. THE CONTRACTOR MUST INCLUDE IN HIS BID PRICE, THE COST OF RELOCATING OR REPLACING IN KIND ANY FEATURES THAT WILL BE IMPACTED DUE TO HIS/HER PROPOSED METHOD OF CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED BY THE OWNER IN THE EVENT THE CONTRACTOR NEGLECTS TO ACCOUNT FOR THIS WORK IN HIS BID PRICE.
3.

CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING TREES, STRUCTURES, & UTILITIES WHICH MAY OR MAY NOT BE SHOWN ON THE PLANS. ANY EXISTING STRUCTURE, PAVEMENT, TREES OR OTHER EXISTING UTILITIES NOT SPECIFIED FOR REMOVAL WHICH ARE DAMAGED, EXPOSED OR IN ANY WAY DISTURBED BY CONSTRUCTION PERFORMED, SHALL BE REPAIRED, PATCHED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
4.

CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF/HERSELF WITH CURRENT SITE CONDITIONS & SHALL REPORT ANY DISCREPANCIES TO THE OWNER & EOR PRIOR TO STARTING WORK.
5.

THE CONTRACTOR SHALL KEEP THE SITE REASONABLY FREE FROM DEBRIS, TRASH, & CONSTRUCTION WASTE. BUILDING MATERIAL AND/OR CONSTRUCTION DEBRIS STORED ADJACENT TO OR UPON THE ROADWAY SHALL BE ADEQUATELY MARKED AT ALL TIMES FOR PEDESTRIAN & TRAFFIC SAFETY.
6.

CONTRACTOR SHALL CONTACT GEORGIA 811 AT LEAST 3 BUSINESS DAYS PRIOR TO PERFORMING ANY EXCAVATION/DIGGING TO VERIFY THE EXACT LOCATION OF EXISTING UTILITIES.
7.

CONTRACTOR TO ADHERE TO APPLICABLE NOISE ORDINANCES THAT PROHIBIT ANY PLAIN AUDIBLE SOUND IN CONNECTION WITH CONSTRUCTION ACTIVITIES OUTSIDE OF PERMITTED HOURS.
8.

ALL ENVIRONMENTAL REGULATORY PERMITS WILL BE PROVIDED BY GLYNN COUNTY. CONTRACTOR IS REQUIRED TO OBTAIN ALL OTHER NECESSARY PERMITS AND/OR APPROVALS PRIOR TO THE START OF CONSTRUCTION. COST OF ALL OTHER NECESSARY PERMITS IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
9.

ALL LANDSCAPED/OPEN AREAS, SIDEWALKS, PAVEMENTS & OTHER IMPROVEMENTS IMPACTED BY CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER.
10.

THE TRAFFIC CONTROL PLAN FOR THE PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MUST PRODUCE HIS/HER OWN TRAFFIC CONTROL PLAN & MUST HAVE SAID PLAN APPROVED BY THE OWNER AND CITY PRIOR TO CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE GRANTED BY THE OWNER FOR TRAFFIC CONTROL COSTS ASSOCIATED WITH THIS PROJECT AFTER PROJECT AWARD. TRAFFIC CONTROL PLAN SHALL INCLUDE BUT NOT LIMITED TO MESSAGE BOARDS TO INFORM EMERGENCY SERVICES WITHIN THE VICINITY OF THE PROJECT LIMITS ABOUT THE CONSTRUCTION SCHEDULE.
11.

SURVEY MONUMENTS WITHIN THE LIMITS OF THE PROJECT ARE TO BE PROTECTED.
12.

NO DEVIATIONS FROM APPROVED PLANS SHALL BE PERMITTED WITHOUT THE WRITTEN CONSENT THE OWNER AND GA DNR.
13.

WORK PERFORMED UNDER THIS PROJECT WILL NOT BE CONSIDERED COMPLETE UNTIL THE NECESSARY DOCUMENTS ARE RECEIVED BY THE OWNER.
14.

ALL DEFECTIVE WORK NOT ACCEPTED BY THE OWNER, EOR OR BY ANY GOVERNMENT PERMITTING AGENCY SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
15.

ALL EXISTING GRASSED OR LANDSCAPED AREAS, ALL DECORATIVE FEATURES (INCLUDING PAVERS) AND PAVED GROUND CONDITIONS DAMAGED AS RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED COMPLETELY AS DIRECTED BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
16.

DAMAGED ITEMS SHALL BE RESTORED TO THEIR ORIGINAL DESIGN AND FUNCTION AT THE CONTRACTOR'S EXPENSE.
17.

A PRE-CONSTRUCTION MEETING WILL BE HELD ON SITE TO VERIFY DETAILS AND METHODS OF CONSTRUCTION.
18.

THESE PLANS ARE INCOMPLETE WITHOUT THE TECHNICAL SPECIFICATIONS.
19.

CONTRACTOR SHALL NOT BLOCK OR OBSTRUCT PUBLIC BEACH ACCESS PARKING WITHOUT WRITTEN APPROVAL FROM THE OWNER.
20.

CONTRACTOR WILL COORDINATE DAILY WITH THE OWNER'S ENVIRONMENTAL MONITOR AND WILL FOLLOW ALL REQUIRED ENVIRONMENTAL PERMIT CONDITIONS AND MANAGEMENT PRACTICES.
21.

CONTRACTOR SHALL AVOID IMPACTS TO EXISTING DUNES AND DUNE HABITAT. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY DUNE HABITAT LOCATIONS AND ERECT AND MAINTAIN CONSTRUCTION FENCING OR SIMILAR TO PREVENT IMPACTS.

SURVEY NOTES

1.

THE ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88). THE CONVERSION BETWEEN NATIONAL GEODETIC VERTICAL DATUM (NGVD 29) AND THE NAVD 88 FOR THE PROJECT SITE IS APPROXIMATELY 0.97 FEET (EXAMPLE: 0.0 FEET NGVD = -0.97 FEET NAVD).
2.

SHORELINE PROTECTION ACT JURISDICTION SURVEYED BY LONGLEAF CONSULTING DATED APRIL 2026.
3.

TOPOGRAPHIC AND BATHYMETRIC SURVEY DATA PERFORMED BY ARC SURVEYING & MAPPING DATED FEBRUARY 2026. ADDITIONAL SURVEY DATA PROVIDED BY GLYNN COUNTY.
4.

THE FOLLOWING TIDAL DATUM RELATIONSHIP IS BASED ON NOAA TIDE STATION 8677344 - ST. SIMONS, GA

TIDAL DATA

HIGH TIDE LINE (HTL)	5.00' NAVD
MEAN HIGHER HIGH WATER (MHHW)	2.97' NAVD
MEAN HIGH WATER (MHW)	2.60' NAVD
NORTH AMERICAN VERTICAL DATUM	0.00 NAVD
MEAN LOW WATER (MLW)	-4.02' NAVD
MEAN LOWER LOW WATER (MLLW)	-4.23' NAVD

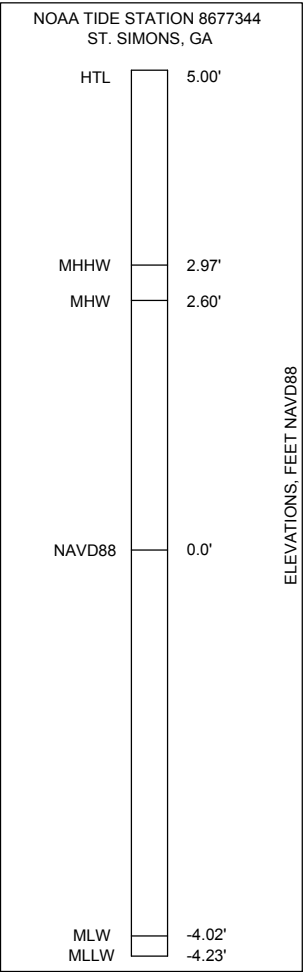
5.

HORIZONTAL CONTROL REFERENCED TO NORTH AMERICAN DATUM OF 1983, STATE PLANE COORDINATE SYSTEM, GEORGIA EAST ZONE, IN FEET.
6.

PARCELS BOUNDARIES BASED GIS FILES RECEIVED FROM GLYNN COUNTY GEOGRAPHIC INFORMATION SYSTEM DEPARTMENT.

AERIAL IMAGERY

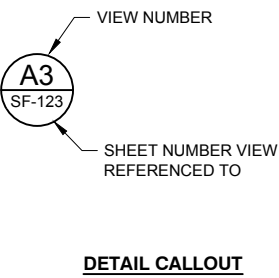
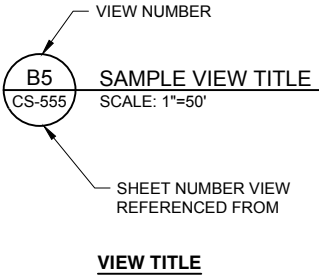
AERIAL IMAGERY OBTAINED FROM ARC SURVEY, DATED FEBRUARY 2026.



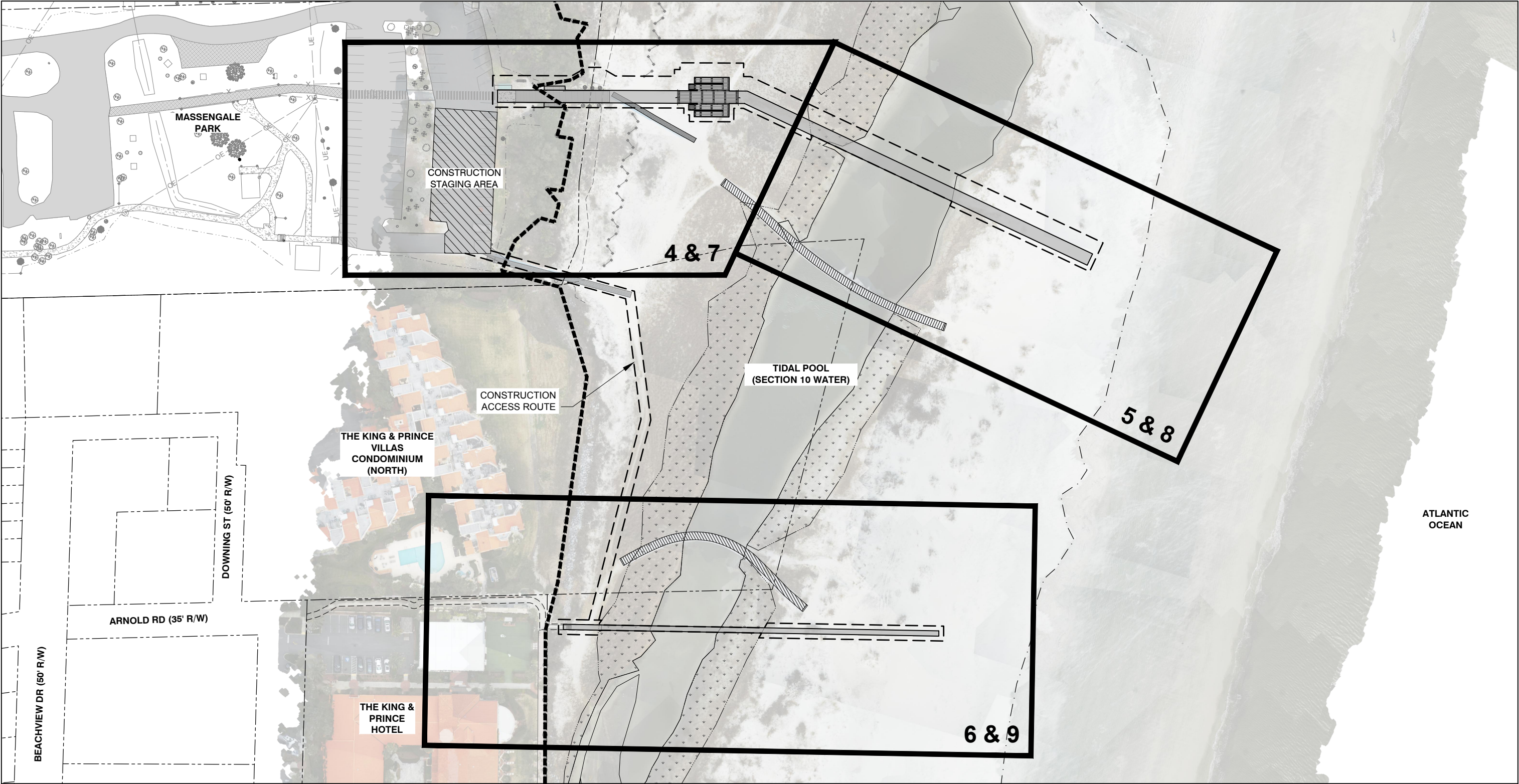
ABBREVIATIONS

CRD	COASTAL RESOURCE DIVISION
CY	CUBIC YARD
EOR	ENGINEER OF RECORD
FT(')	FEET
GA DNR	GEORGIA DEPARTMENT OF NATURAL RESOURCES
HORZ	HORIZONTAL
HTL	HIGH TIDE LINE
IN(")	INCHES
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
N	NORTH
NAD	NORTH AMERICAN DATUM OF 1983
NAVD	NORTH AMERICAN VERTICAL DATUM OF 1988
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NTS	NOT TO SCALE
OHW	ORDINARY HIGH WATER
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
SPA	SHORELINE PROTECTION ACT
SF	SQUARE FEET
TYP	TYPICAL
USACE	US ARMY CORPS OF ENGINEERS
VERT	VERTICAL

SHEET INDEX	
SHEET NO.	SHEET TITLE
1	COVER SHEET
2	NOTES, ABBREVIATIONS, LEGEND, & SHEET INDEX
3	KEY PLAN
4	EXISTING CONDITIONS & CONSTRUCTION ACCESS
5	EXISTING CONDITIONS & CONSTRUCTION ACCESS
6	EXISTING CONDITIONS & CONSTRUCTION ACCESS
7	SCHEMATIC DESIGN
8	SCHEMATIC DESIGN
9	SCHEMATIC DESIGN
10	CROSS SECTIONS & DETAILS
11	CROSS SECTIONS & DETAILS
12	CROSS SECTIONS & DETAILS
13	CROSS SECTIONS & DETAILS
14	CROSS SECTIONS & DETAILS
15	CROSS SECTIONS & DETAILS



MP



LEGEND

	EXISTING CONTOURS		ORDINARY HIGH WATER LINE
	SPA JURISDICTION LINE		MLW
	PARCEL LINES		MEAN LOW WATER LINE
	TIDAL WETLAND		TEMPORARY CONSTRUCTION LIMITS
	EXISTING BOARDWALK		

NOTES

1. AERIAL IMAGERY OBTAINED FROM ARC SURVEY, DATED FEBRUARY 2026.
2. WETLANDS WERE DELINEATED IN THE IMMEDIATE PROJECT VICINITY BY LONGLEAF CONSULTING, APRIL 2026.

MP



moffatt & nichol
300 BULL ST., SUITE 200
SAVANNAH, GA, 31401
MOFFATT NICHOL.COM



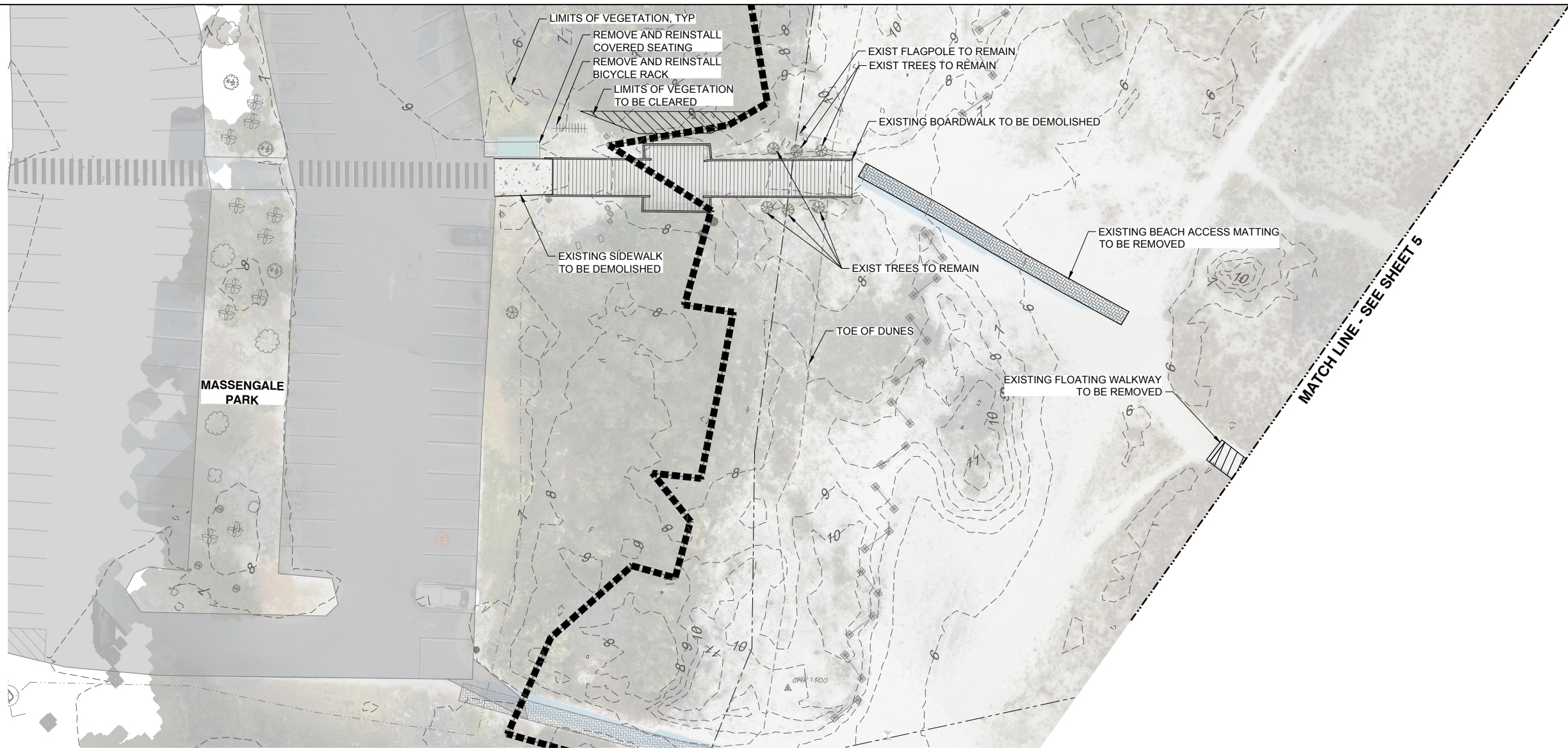
50' 0' 50' 100'
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KEY PLAN
GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: EG
CHECKED BY: CRS
REVIEWED BY: AEJ
SUBMITTED BY: ABBY JACOBSON
MOFFATT NICHOL
PROJECT NUMBER: 240281-12
DATE: 07/14/2026 REVISED:



SHEET 3 OF 15



LEGEND

- | | | | |
|--|-----------------------|--|--------------------------|
| | EXISTING CONTOURS | | ORDINARY HIGH WATER LINE |
| | SPA JURISDICTION LINE | | MLW |
| | PARCEL LINES | | MEAN LOW WATER LINE |
| | TIDAL WETLAND | | |
| | EXISTING BOARDWALK | | |

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MP

EXISTING CONDITIONS & CONSTRUCTION ACCESS

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA



LEGEND

- | | | | |
|--|-----------------------|--|--------------------------|
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| | EXISTING BOARDWALK | | |

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MP

EXISTING CONDITIONS & CONSTRUCTION ACCESS

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA



LEGEND

- | | | | |
|--|-----------------------|--|--------------------------|
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| | SPA JURISDICTION LINE | | MLW |
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| | TIDAL WETLAND | | |
| | EXISTING BOARDWALK | | |

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MP



moffatt & nichol
300 BULL ST., SUITE 200
SAVANNAH, GA, 31401
MOFFATT NICHOL.COM



20' 0' 20' 40'
SCALE: 1"=40'

EXISTING CONDITIONS & CONSTRUCTION ACCESS

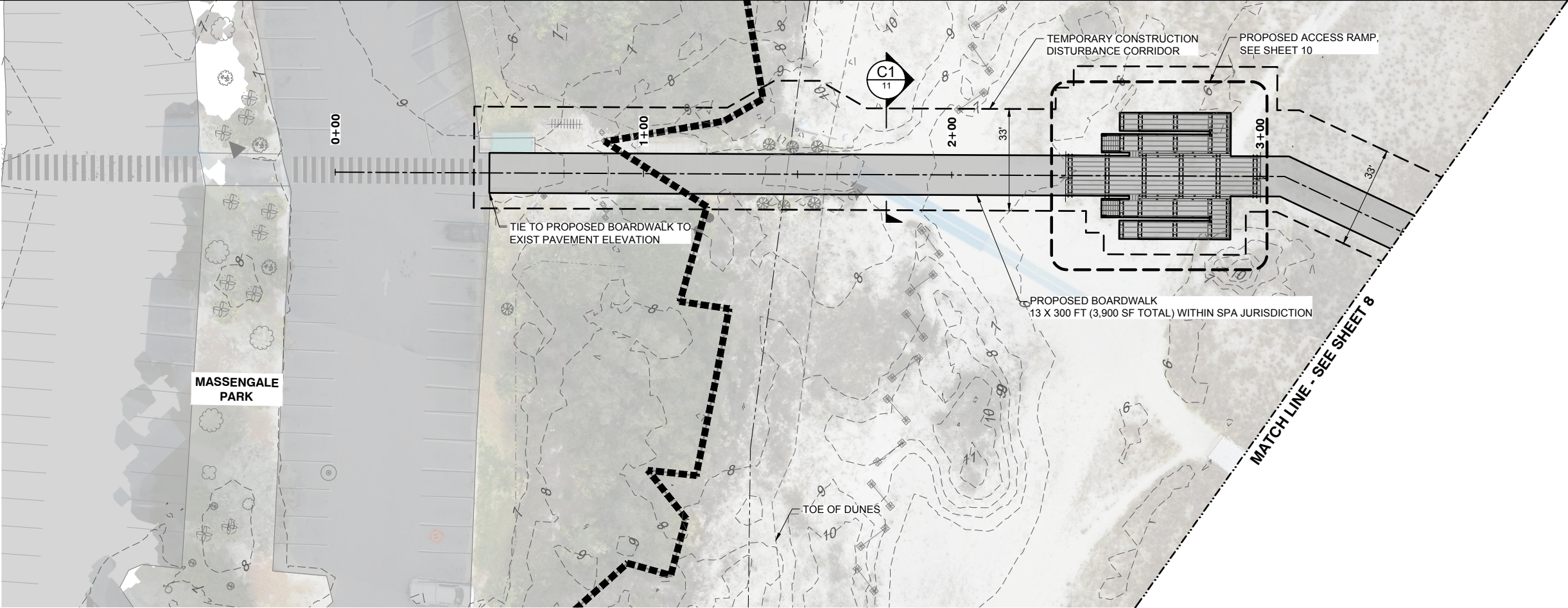
GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: EG
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REVIEWED BY: AEJ
SUBMITTED BY: ABBY JACOBSON
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DATE: 07/14/2026 REVISED:

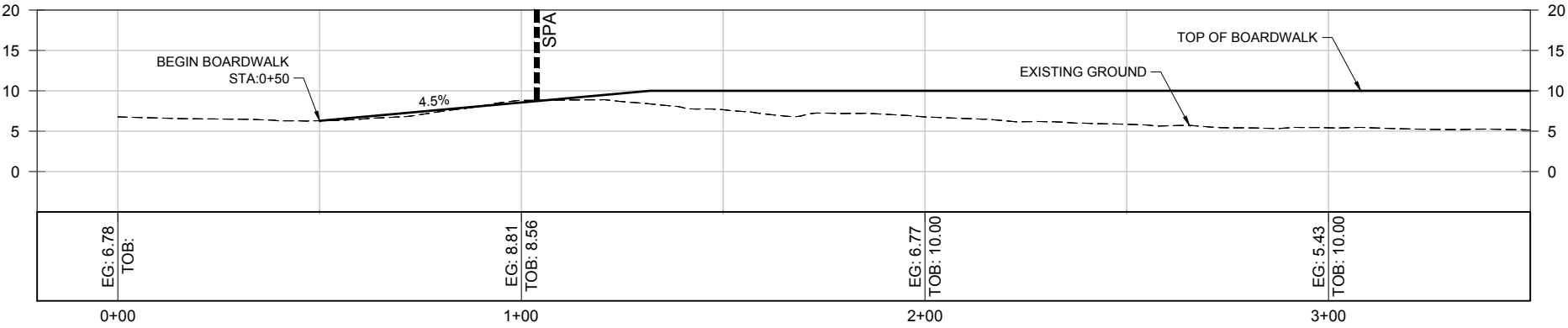


GLYNN COUNTY
GEORGIA

SHEET 6 OF 15



PLAN - BOARDWALK A (0+00 - 3+50)
SCALE: 1" = 40'



PROFILE - BOARDWALK A (0+00 - 3+50)
SCALE: HORZ.: 1" = 40'
SCALE: VERT.: 1" = 20'

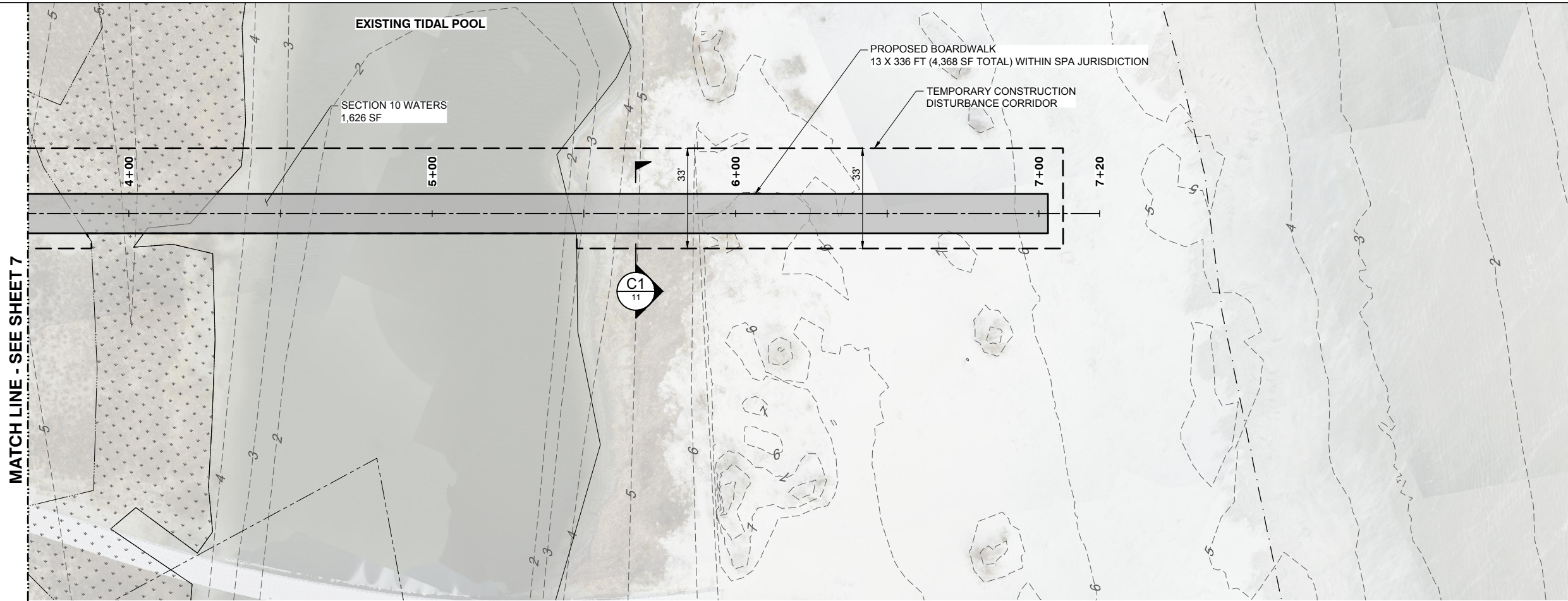
LEGEND

- | | | | |
|--|-----------------------|--|--------------------------|
| | EXISTING CONTOURS | | ORDINARY HIGH WATER LINE |
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| | EXISTING BOARDWALK | | |

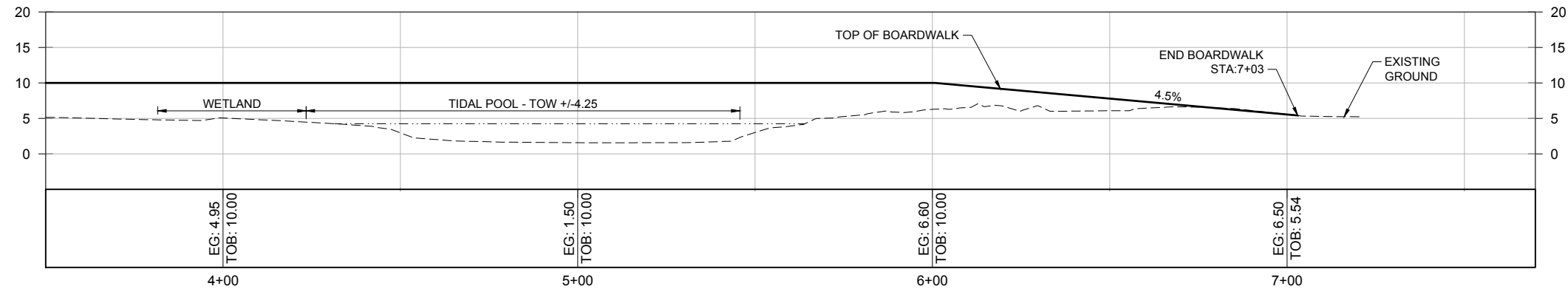
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MP



PLAN - BOARDWALK A (3+50 - 7+50)
SCALE: 1" = 40'



PROFILE - BOARDWALK A (3+50 - 7+50)
SCALE: HORZ.: 1" = 40'
VERT.: 1" = 20'

LEGEND

2

EXISTING CONTOURS

ORDINARY HIGH WATER LINE

SPA JURISDICTION LINE

MLW

MEAN LOW WATER LINE

PARCEL LINES

TIDAL WETLAND

EXISTING BOARDWALK

NOTES

- AERIAL IMAGERY OBTAINED FROM ARC SURVEY, DATED FEBRUARY 2026.
- WETLANDS WERE DELINEATED IN THE IMMEDIATE PROJECT VICINITY BY LONNGLEAF CONSULTING, APRIL 2026.

mo

ffatt

& nichol

300 BULL ST., SUITE 200

SAVANNAH, GA, 31401

MOFFATT NICHOL.COM

N

20'

0'

20'

40'

SCALE: 1"=40'

SCHEMATIC DESIGN

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: EG

CHECKED BY: CRS

REVIEWED BY: AEJ

SUBMITTED BY: ABBY JACOBSON

MOFFATT NICHOL

PROJECT NUMBER: 240281-12

DATE: 07/14/2026

REVISED:

MP

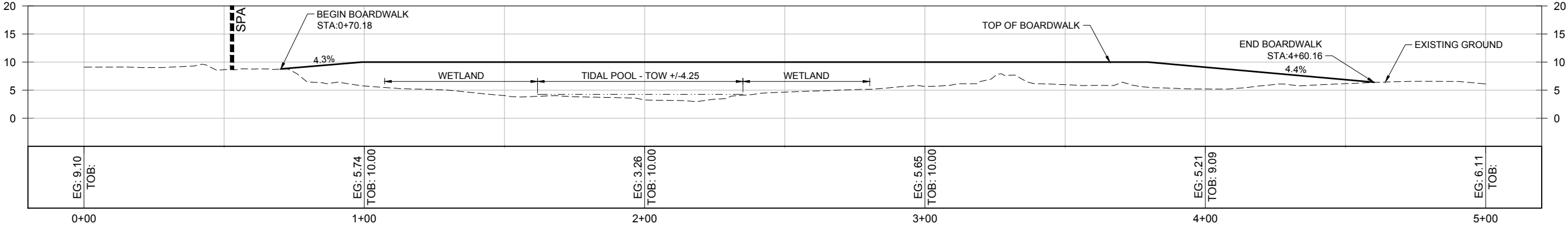
GLYNN COUNTY

GEORGIA

SHEET 8 OF 15



PLAN - BOARDWALK B
SCALE: 1" = 40'



PROFILE - BOARDWALK B
SCALE: HORZ.: 1" = 40'
VERT.: 1" = 20'

LEGEND

- | | | | |
|--|-----------------------|--|--------------------------|
| | EXISTING CONTOURS | | ORDINARY HIGH WATER LINE |
| | SPA JURISDICTION LINE | | MLW |
| | PARCEL LINES | | MEAN LOW WATER LINE |
| | TIDAL WETLAND | | |
| | EXISTING BOARDWALK | | |

NOTES

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- WETLANDS WERE DELINEATED IN THE IMMEDIATE PROJECT VICINITY BY LONGLEAF CONSULTING, APRIL 2026.

moffatt & nichol
300 BULL ST., SUITE 200
SAVANNAH, GA, 31401
MOFFATT NICHOL.COM

20' 0' 20' 40'
SCALE: 1"=40'

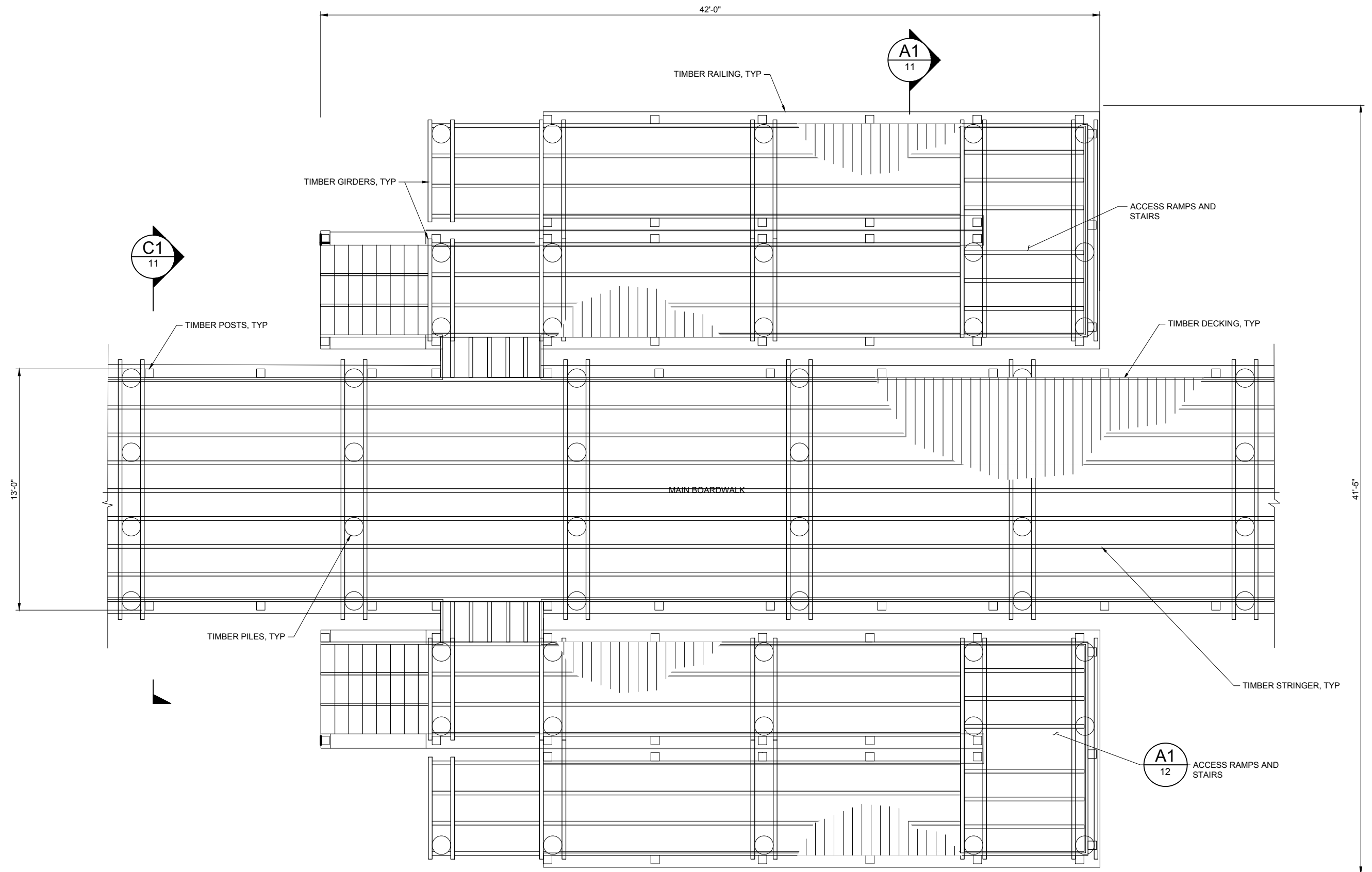
SCHEMATIC DESIGN

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: EG
CHECKED BY: CRS
REVIEWED BY: AEJ
SUBMITTED BY: ABBY JACOBSON
MOFFATT NICHOL
PROJECT NUMBER: 240281-12
DATE: 07/14/2026 REVISED:

MP

SHEET 9 OF 15



NOTE
FOR ISOMETRIC VIEW SEE SHEET 15

A1
7 PLAN - BOARDWALK A
SCALE: 3/8" = 1'-0"

moftatt & nichol
300 BULL ST., SUITE 200
SAVANNAH, GA, 31401
MOFFATT NICHOL.COM

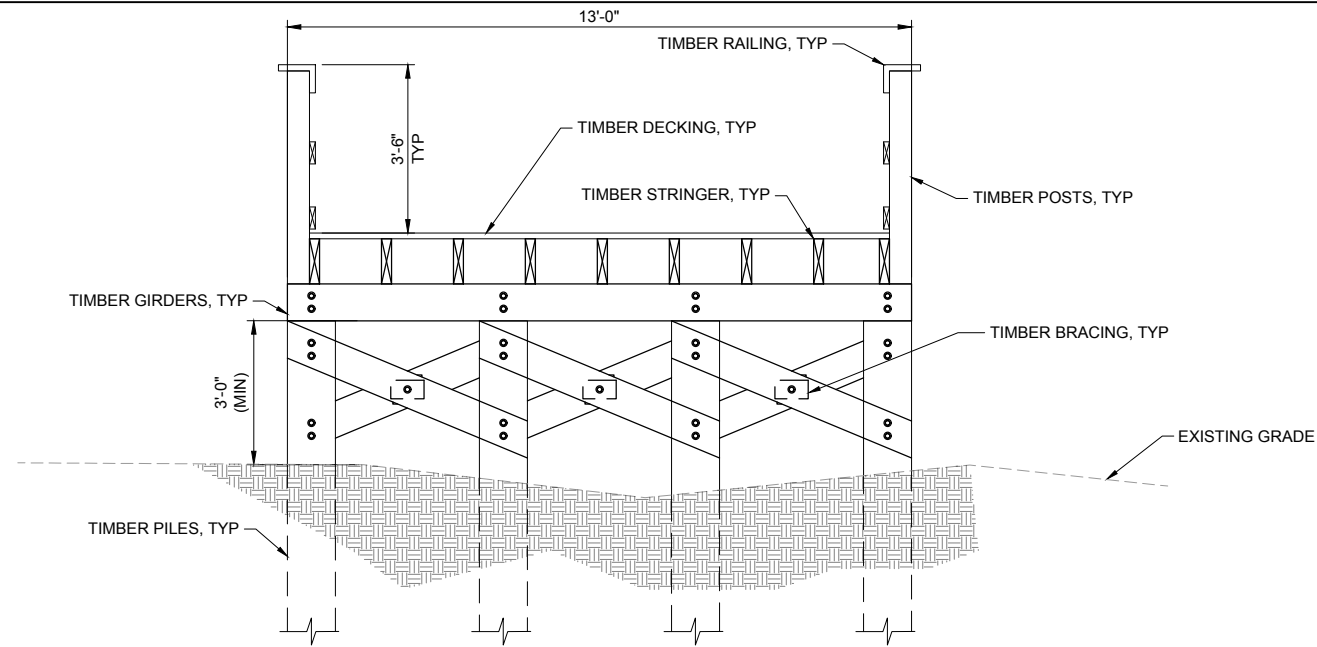
3/32" 0' 3/32" 3/16"
SCALE: 1"=3/16"

CROSS SECTIONS & DETAILS
GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

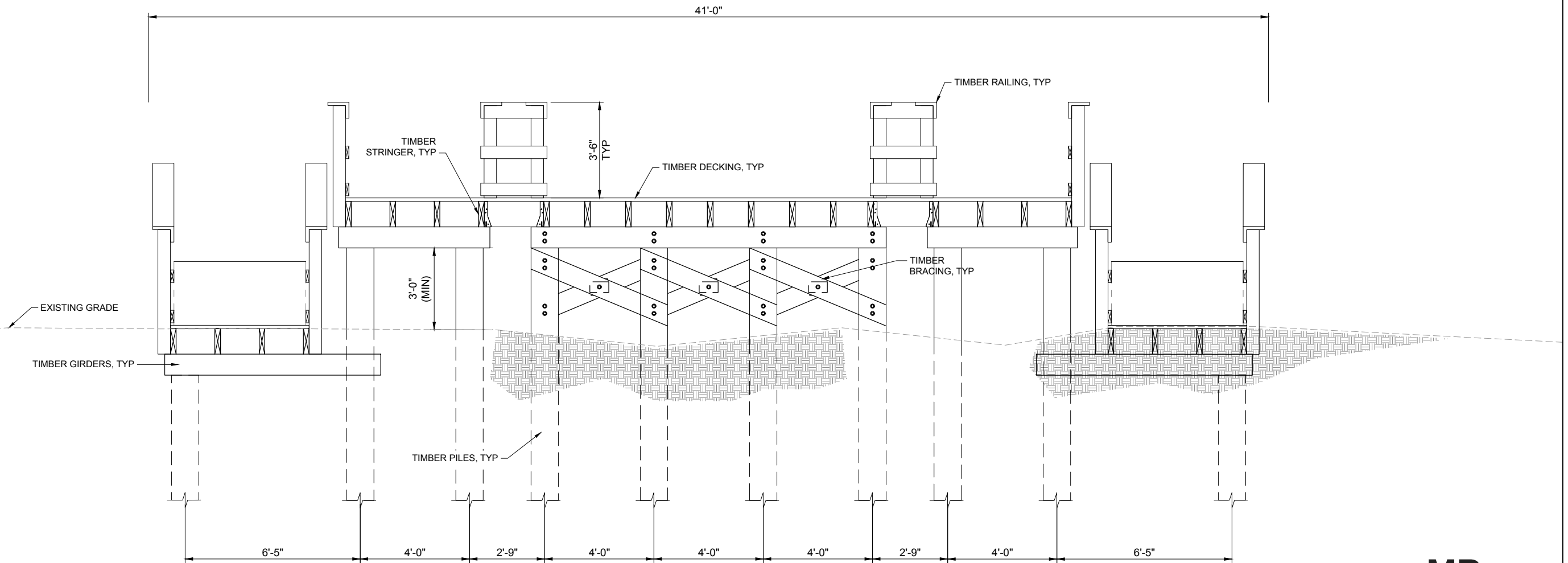
DRAWN BY: EG
CHECKED BY: CRS
REVIEWED BY: AEJ
SUBMITTED BY: ABBY JACOBSON
MOFFATT NICHOL
PROJECT NUMBER: 240281-12
DATE: 07/14/2026 REVISED:



SHEET 10 OF 15



C1 SECTION - TYPICAL BOARDWALK A
7, 8, & 10 SCALE: 1/2" = 1'-0"

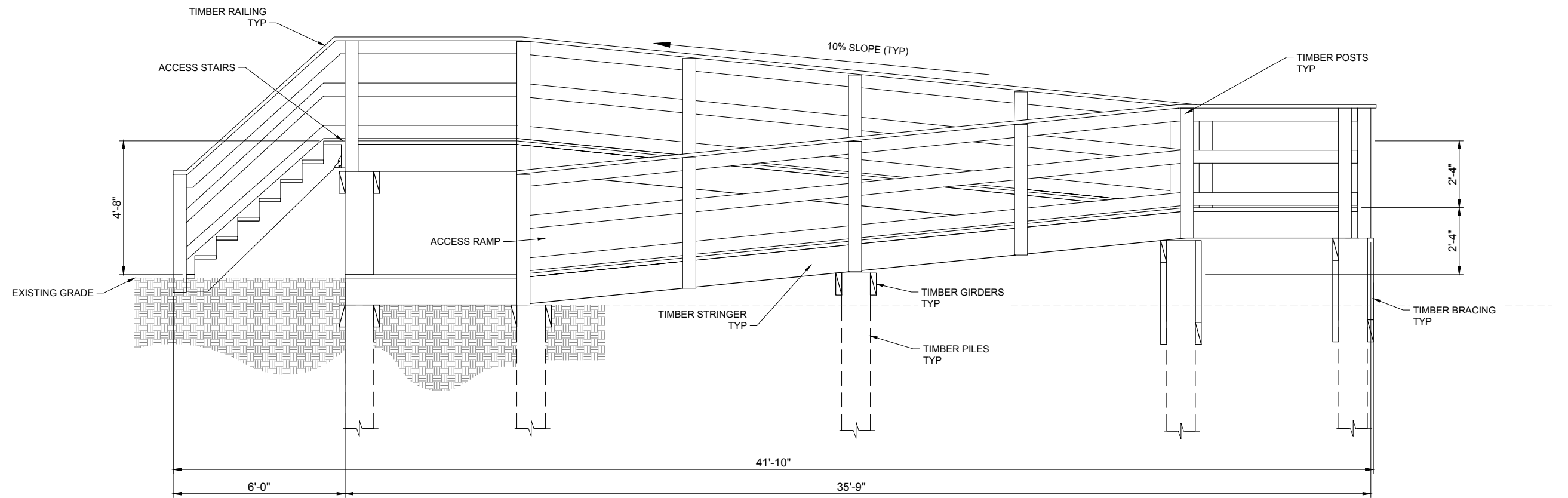


A1 SECTION - BOARDWALK AT ACCESS RAMP
10 SCALE: 1/2" = 1'-0"

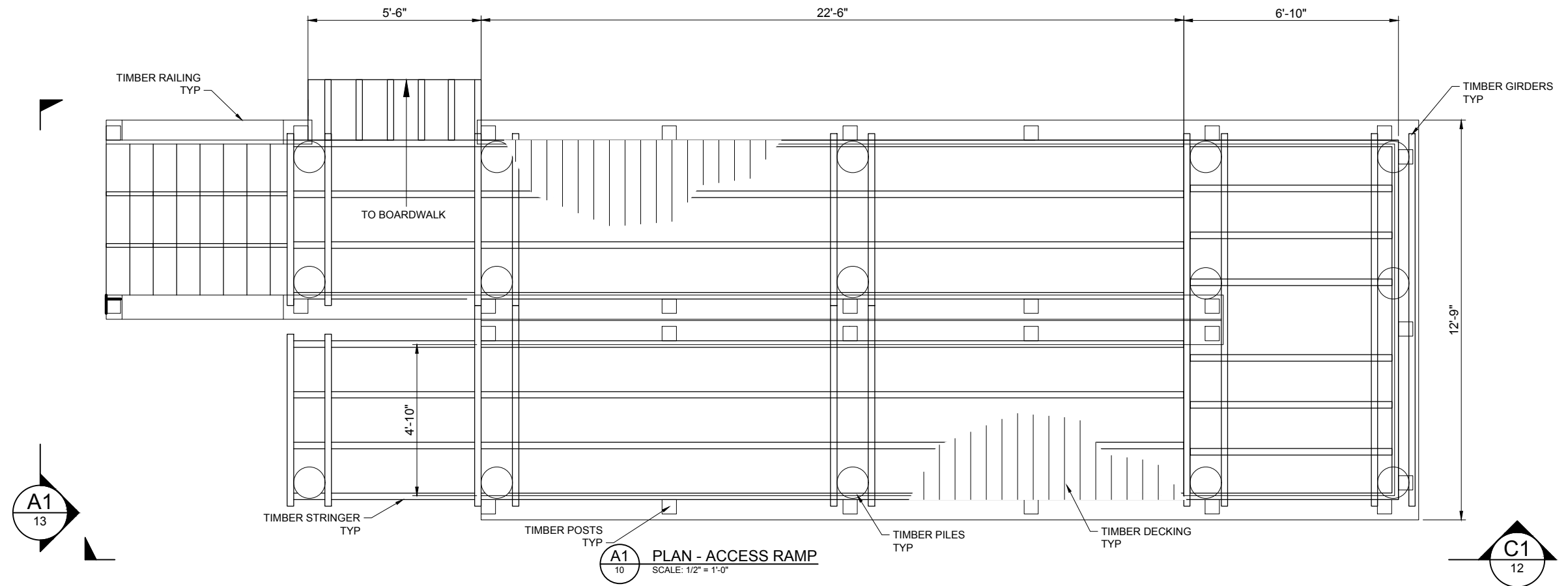
MP

CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA



C1
 10
ELEVATION - ACCESS RAMP
 SCALE: 1/2" = 1'-0"



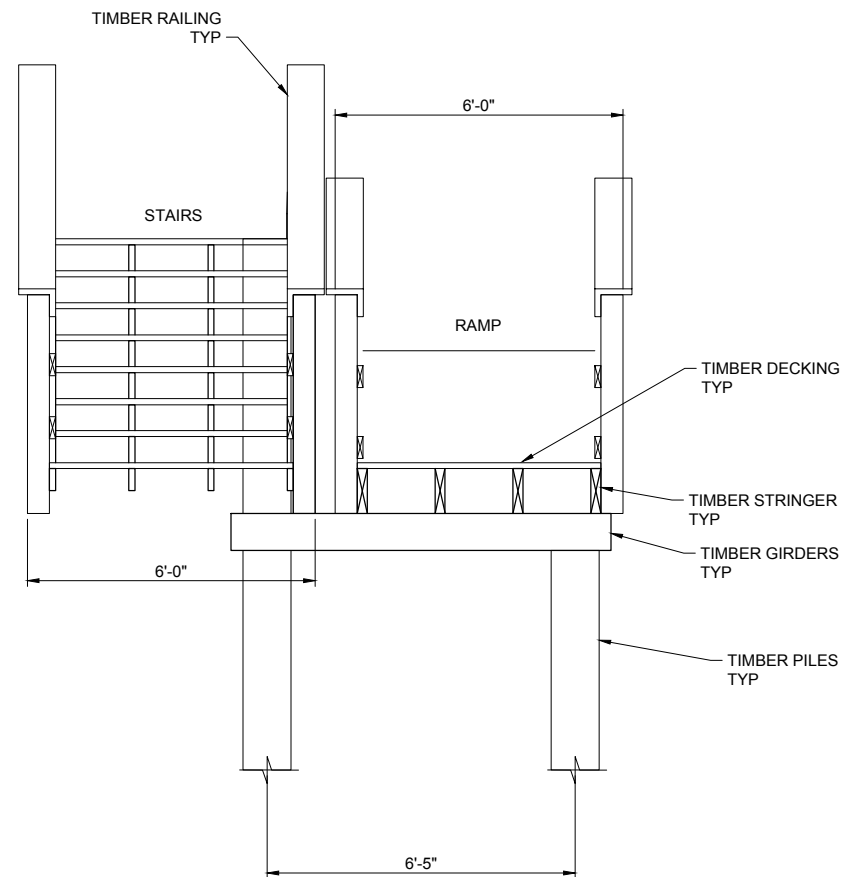
A1
 10
PLAN - ACCESS RAMP
 SCALE: 1/2" = 1'-0"

C1
 12

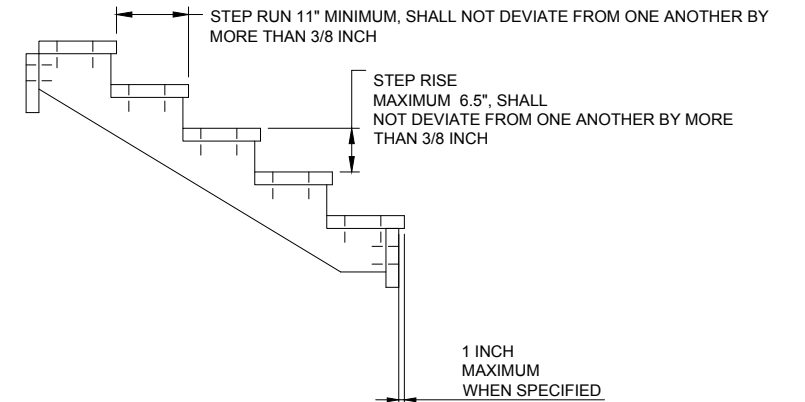
MP

CROSS SECTIONS & DETAILS

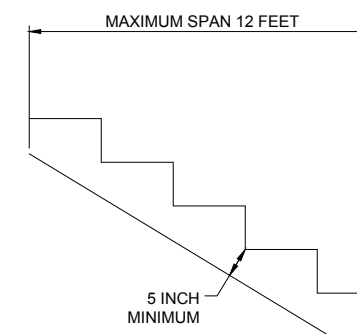
GLYNN COUNTY
 EAST BEACH BOARDWALKS
 ST. SIMONS ISLAND, GEORGIA



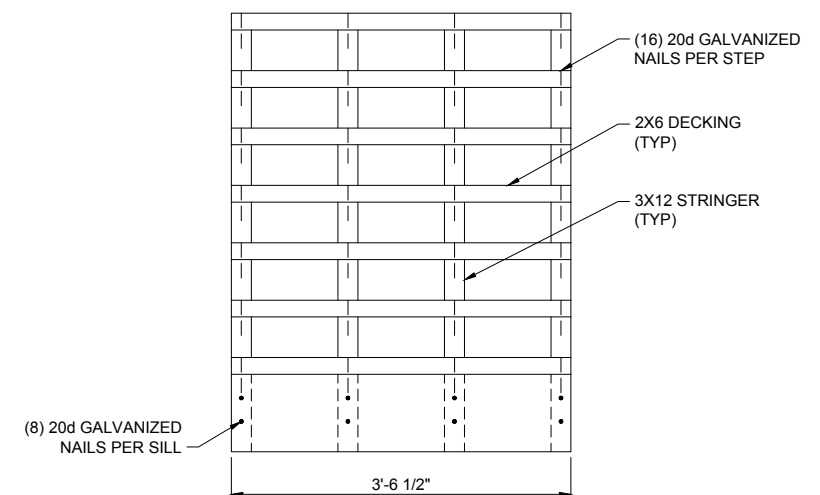
A1 SECTION - DUNE ACCESS
SCALE: 1/2" = 1'-0"



ELEVATION VIEW



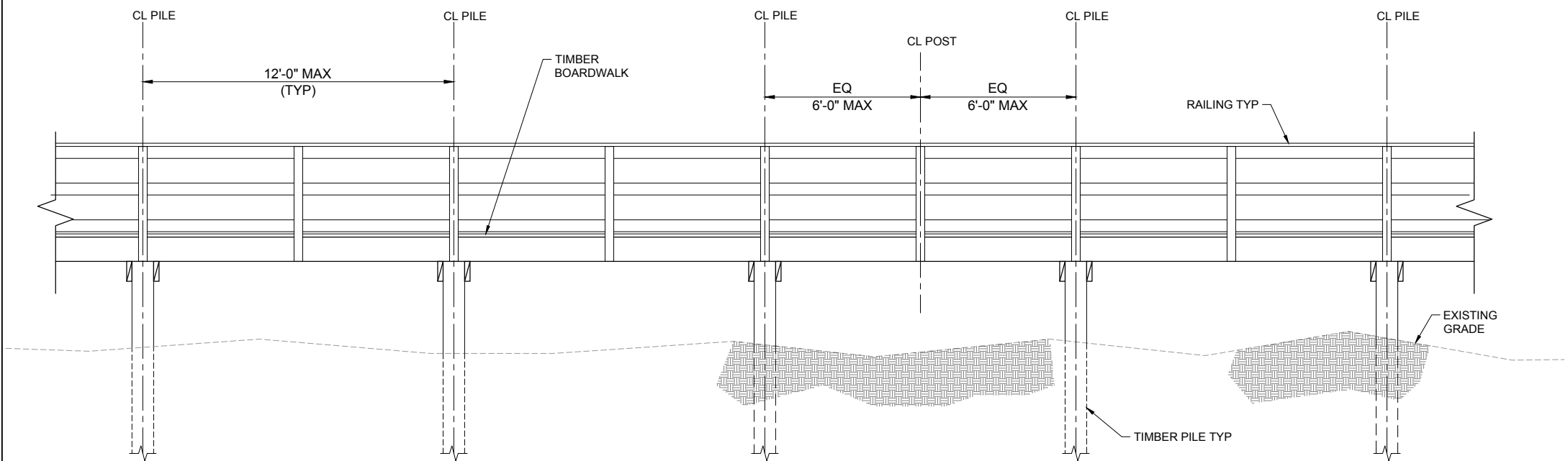
STRINGER DETAILS



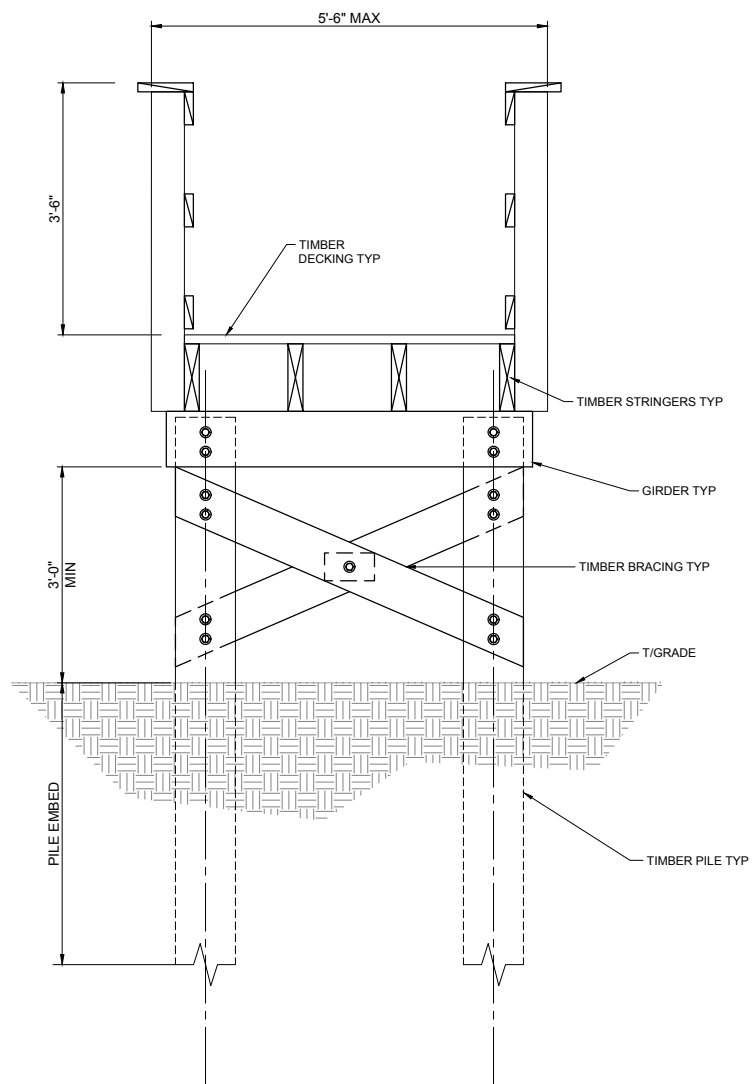
FRONT VIEW

C1 DETAIL - STAIRS
SCALE: 1" = 1'-0"

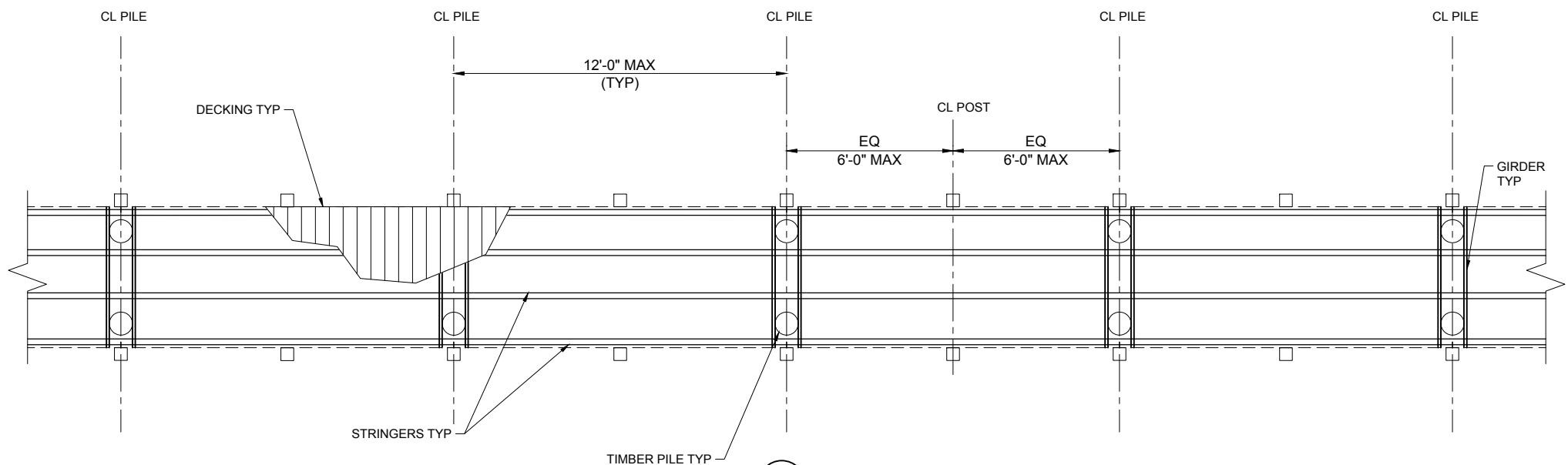
MP



C1 ELEVATION - TYPICAL BOARDWALK B
SCALE: 3/8" = 1'-0"

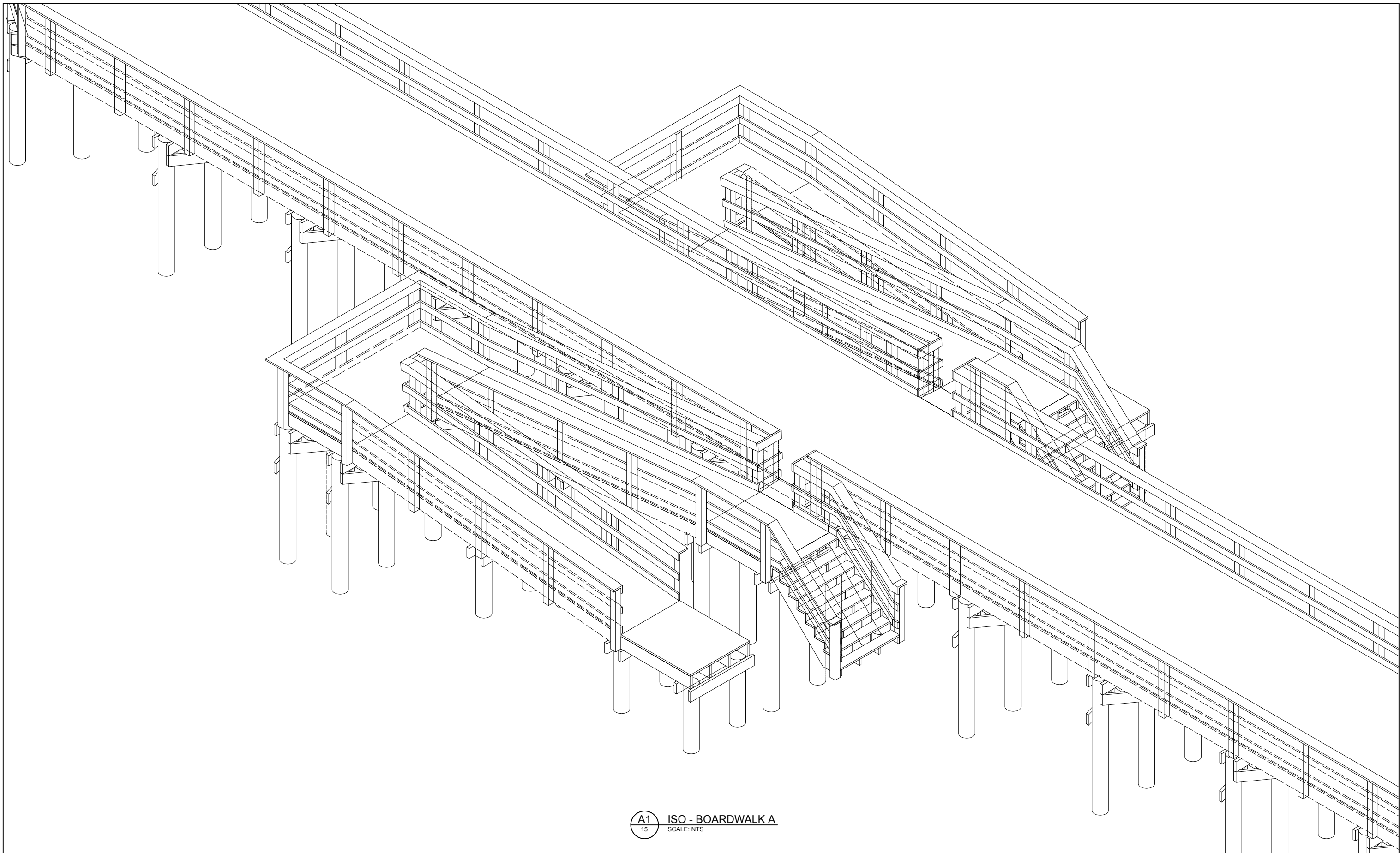


B3 SECTION - TYPICAL BOARDWALK B
SCALE: 3/4" = 1'-0"



A1 PLAN - TYPICAL BOARDWALK B
SCALE: 3/8" = 1'-0"

MP



A1 ISO - BOARDWALK A
15 SCALE: NTS

CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

MP





Moffatt & Nichol
300 Bull St Suite 200
Savannah, Georgia 31401
(912) 231-0044

ENGINEERING CERTIFICATION

Ms. Elizabeth Byrnes
Georgia Department of Natural Resources
Coastal Resources Division
1 Conservation Way
Suite 300
Brunswick, GA 31520

RE: East Beach Boardwalk – SPA Permit Application

July 22, 2026

Dear Ms. Byrnes:

Please accept this letter as certification that the proposed construction of two new boardwalks at the East Beach Boardwalk on St. Simons Island will be designed in accordance with the requirements of ASCE 7-16 for basic wind speeds up to 130 mph.

Please contact me if your department requires any additional information regarding this certification while the application is under review.

Sincerely,

Eric Golant, PE
Georgia PE No. PE054661
egolant@moffattnichol.com
(707)695-7644

The King and Prince
CONDOMINIUM ASSOCIATION

July 21, 2026

To whom it may concern:

The King and Prince Condominium Villas Association has reviewed the plans for the boardwalk at Arnold Road, and Massengale Park and is in agreement to allow Glynn County to construct the project as designed.

Best,

A handwritten signature in black ink, appearing to read 'J. P. Wade', written in a cursive style.

John Paul Wade
President
King and Prince Villas Condominium Association



COASTAL RESOURCES DIVISION
ONE CONSERVATION WAY · BRUNSWICK, GA 31520 · 912-264-7218

WALTER RABON
COMMISSIONER

DOUG HAYMANS
DIRECTOR

September 17, 2025

Glynn County
c/o Jason Hartman
1725 Reynolds Street
Brunswick, GA 31520

RE: Shore Protection Act (SPA), Jurisdiction Determination Verification, Massengale Park, St. Simons Island, Glynn County, Georgia

Dear Glynn County:

Our office has received the survey plat dated August 5, 2025, prepared by ARC Surveying & Mapping, Inc., No. 3011 entitled "*Map to Show Sketch of Massengale Park, Shore Protection Act Line, Glynn County, Georgia*" prepared for Moffatt & Nichol. This plat and survey generally depicts the Jurisdiction Line under the authority of the Shore Protection Act O.C.G.A. 12-5-230 et seq. as verified by the Department on May 20, 2025.

The Shore Protection Act O.C.G.A. 12-5-230 et seq. delineation of this parcel is subject to change due to environmental conditions and legislative enactments. This jurisdiction line is valid for one year from date of the delineation. It will normally expire on May 20, 2026 but may be voided should legal and/or environmental conditions change.

This letter does not relieve you of the responsibility of obtaining other state, local, or federal permission relative to the site. Authorization by the Shore Protection Committee or the Department is required prior to any construction or alteration in the shore jurisdictional area. We appreciate you providing us with this information for our records. If you have any questions, please contact me at (912) 264-7218.

Sincerely,

Beth Byrnes
Coastal Permit Coordinator
Marsh and Shore Management Program

Enclosure: *Map to Show Sketch of Massengale Park, Shore Protection Act Line, Glynn County, Georgia*

Cc: Stephen Bailey, Longleaf Consulting, Stephen.bailey@longleafconsulting.com

Filename: JDS202400297

MARK WILLIAMS
COMMISSIONER

DOUG HAYMANS
DIRECTOR

July 11, 2022

King & Prince Villa Condo. Assoc.
c/o Kimbo McMinn
201 Arnold Road
St. Simons Island, GA 31522

**RE: Shore Protection Act (SPA), Jurisdiction Determination Verification, 1300
Downing St. #10000, King and Prince North Common, St. Simons Island, Glynn
County, Georgia**

Dear Mr. McMinn:

Our office has received the survey plat dated January 11, 2021 and revised July 5, 2022, prepared by Shupe Surveying Company, P.C., No. 2401 entitled "*SPA Jurisdiction Line Survey Of: King and Prince Villas North Condominium 25th G.M.D., St. Simons Island, Glynn County, Georgia*" prepared for King and Prince Villas North Property Owners Association. This plat and survey generally depicts the Jurisdiction Line under the authority of the Shore Protection Act O.C.G.A. 12-5-230 et seq. as verified by the Department on June 28, 2022.

The Shore Protection Act O.C.G.A. 12-5-230 et seq. delineation of this parcel is subject to change due to environmental conditions and legislative enactments. This jurisdiction line is valid for one year from date of the delineation. It will normally expire on June 28, 2023 but may be voided should legal and/or environmental conditions change.

This letter does not relieve you of the responsibility of obtaining other state, local, or federal permission relative to the site. Authorization by the Shore Protection Committee or the Department is required prior to any construction or alteration in the shore jurisdictional area. We appreciate you providing us with this information for our records. If you have any question, please contact me at (912) 264-7218.

Sincerely,



Beth Byrnes
Coastal Permit Coordinator
Marsh and Shore Management Program

Enclosure: *SPA Jurisdiction Line Survey Of: King and Prince Villas North Condominium
25th G.M.D., St. Simons Island, Glynn County, Georgia*

cc: JDS20220140

Attachment D: USACE Standard Permit Application



July 16, 2026

U.S. Army Corps of Engineers
ATTN: CESAS-RD-C
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3604
(912) 652-5242
CESAS-RD-C@usace.army.mil

Re: Letter of Permission Application
East Beach Boardwalks Project
St. Simons Island, Glynn County, Georgia

Dear USACE Project Manager:

On behalf of the applicant, Glynn County Engineering Services, we are submitting this package including an application for a Letter of Permission (LOP) to authorize new boardwalk crossings of improvements to wetlands and open water areas associated with construction of the East Beach Boardwalks Project (the Project) located on areas East Beach, Massengale Park, and Arnold Road, St. Simons Island, Georgia.

The information below details the project, its purpose and need, alternatives considered, location, and other information required for USACE Standard Permit issuance. Please review the attached application, forms, plans, figures, and supplemental information and contact me if you have any questions or need additional information.

Project Description

The project includes construction of two boardwalk extensions from existing beach access points that will provide safe crossings of the recently formed tidal slough, wetlands, and protected dune habitats. The project will reconnect Massengale Park via ADA and vehicle accessible boardwalk to the lower beach area and reconnect the existing beach access at Arnold Road to the lower beach.

Project Purpose and Need

The purpose of the project is to protect and improve public safety and provide safe, accessible beach access for all citizens and emergency services (EMS) vehicles. The need for the project is the lack of safe connections to the lower beach and risk to public safety from the current open water crossing conditions. The current floating bridges are not ADA accessible and cannot be crossed by any EMS vehicles. The need will be met by extending existing permitted beach access points, including replacement and extension of the existing permitted 12-foot-wide boardwalk at Massengale Park. This project will result in safe crossings of the tidal slough system for EMS vehicles, pedestrians, and mobility assistance devices which will provide safe, stable, and accessible connections to beach areas for all members of the public.

Site Location and Description

The Project Area is located on East Beach, St. Simons Island, Glynn County, Georgia and consists of the tidal pool, adjacent wetlands, adjacent beach area, and access corridors to the beach from Massengale Park and the existing Arnold Road beach access. The Project Area is approximately 6.16 acres, and the center is located at 81.3767398°W, 31.1396293°N. The Project Area is within the Blackbank River-Frontal Atlantic Ocean (HUC ID 030702030202) and St. Simons Sound-Atlantic Ocean (HUC ID: 030702030204) sub-watersheds and is within FEMA Zone VE. Soils within the Project Area include two soil mapping units, Beaches (Be) and Cainhoy fine sand 0-5% slopes (CaB). Refer to Attachment A for all figures. Refer to Figure 1 for the USGS 7.5-minute topographic Project Location Map, Figure 2 for the Aquatic Resources Delineation Map, Figure 3 for the FEMA Flood Zone Map, and Figure 4 for the Soils Map. Refer to Attachment B for project plans and Refer to Attachment C for the Application for Department of the Army Permit Form.

Jurisdictional Studies

Longleaf Consulting conducted a wetland/waters delineation of the review area based on the methodology outlined in the July 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)* in November 2025 and January 2026. The delineation consisted of identification, location, and mapping of aquatic resources and features within the review area. In addition, an Approved Jurisdictional Determination (AJD) was issued for the delineated resources. Refer to Figure 5 for resource photographs. Refer to Attachment D for the AJD letter and USACE Wetland and Upland Data forms.

Tidal Pool 1

Tidal Pool 1 is a recently formed open water area and is approximately 3.42 acres. Tidal Pool 1 receives some higher tidal inundation flows from the Atlantic Ocean and then drains to the ocean via its outfall area. The pool drains as the tide recedes and is impounded during low tides. Tidal Pool 1 is a USACE regulated jurisdictional water due to its flow regime and its continuous surface connection (CSC) to other WOTUS. Tidal Pool 1 will be spanned by construction of the new boardwalks. During construction, the pool will be crossed by construction equipment using timber mats and all appropriate best management practices (BMPs).

Wetland 3 is approximately 4.0 acres and is located along the northern area of Tidal Pool 1 and extends outside of the Project Area. Dominant vegetation includes saltgrass (*Distichlis spicata*), saltmarsh fimbry (*Fimbristylis castanea*), and smooth cordgrass (*Spartina alterniflora*). Soils are reduced with prominent redox concentrations. Wetland 3 is indistinguishable from the tidal pool which is a tributary to the Atlantic Ocean. Wetland 3 has a CSC to the Atlantic Ocean. Wetland 3 will be protected with all appropriate BMPs and will not be permanently impacted by the project.

Wetland 4 is approximately 0.3-acre and is located along the southwestern area of Tidal Pool 1. Dominant vegetation includes saltgrass and smooth cordgrass. Soils are reduced with prominent redox concentrations. Wetland 4 is indistinguishable from the tidal pool which is a tributary to the Atlantic Ocean. Wetland 4 has a CSC to the Atlantic Ocean. Wetland 4 will be protected with appropriate BMPs and will not be permanently impacted by the project.

Cultural Resources

In July 2025, Brockington & Associates (Brockington) conducted a cultural resources survey to identify archaeological sites and above-ground architectural properties within the Project Area and its viewshed. No archaeological resources were identified during field survey. Due to the limited impact of the project and limited visibility within the surrounding area due to intervening buildings and vegetation, the viewshed was determined to consist of parcels immediately adjacent to the Project Area. Brockington's survey identified one previously recorded resource (The King and Prince Hotel [NRHP#04001465]) within the viewshed of the proposed project.

The King and Prince Hotel (NRHP#04001465) is a previously recorded resource listed in the National Register of Historic Place (NRHP). The resource is a two- and three-story Spanish Colonial Revival-style hotel constructed in 1941, and it is located approximately 60 feet north of the project tract at its closest point. The King and Prince Hotel has been previously determined to be NRHP-Eligible, and Brockington's preliminary assessment has not identified any alterations or circumstances impacting on the integrity of the resource sufficient to render the resource no longer NRHP-eligible. However, due to the limited impact of the proposed project, Brockington anticipates that the proposed project will have No Adverse Impact on the King and Prince Hotel. Based on the above findings, the project is not anticipated to affect or impact cultural resources. Refer to Attachment E for the Phase 1 Cultural Resources Report.

Protected Species

A review of available resources was performed to develop a list of federally protected species of possible occurrence within or near the Project Area. The official species list for the project area was obtained from the United States Fish and Wildlife Service Information, Planning and Conservation System (<https://ipac.ecosphere.fws.gov/>).

The review indicated that 11 federally protected species have the potential to exist within or near the Project Area in Glynn County, GA. During field studies, the Project Area was assessed for the potential presence and location of federally threatened and endangered species and their respective habitats.

Please refer to Table 1 for a summary of federally listed species of possible occurrence, the federal designation for each species, a brief description of their respective habitats and habitat presence in the Project Area.

Table 1: Federally Listed Species for Glynn County

Scientific Name	Common Name	Federal Status	Preferred Habitat	Habitat Present
<i>Calidris canutus rufa</i>	rufa red knot	T	breeding habitats are elevated and sparsely vegetated ridges or slopes often adjacent to wetlands and lake edges; wintering and migration habitats are often muddy or sandy coastal areas, such as the mouths of bays and estuaries, and tidal flats	yes
<i>Caretta caretta</i>	loggerhead sea turtle	T	open ocean; sounds; coastal rivers; beaches	yes
<i>Charadrius melodus</i>	piping plover	T	gently sloping foredunes and blow-out areas behind primary dunes of sandy coastal beaches; sparsely vegetated sandy beaches, gravel, or cobble; frequently near sand dunes. Wintering areas include beaches, mudflats, and tidal ponds that are periodically inundated by water from high tide.	yes
<i>Chelonia mydas</i>	green sea turtle	T	open ocean; sounds; coastal rivers; beaches	yes
<i>Danaus plexippus</i>	monarch butterfly	C	open habitats, emergent/scrub wetlands, old fields and other open habitats; relies heavily on a variety of native milkweed species and nectar producing plants.	yes
<i>Dermochelys coriacea</i>	leatherback sea turtle	E	open ocean, seas, gulfs, bays, and estuaries	yes
<i>Drymarchon couperi</i>	eastern indigo snake	T	sandhill regions dominated by mature longleaf pines, turkey oaks, and wiregrass; flatwoods; most types of hammocks; coastal scrub; dry glades; palmetto flats; prairie; brushy riparian and canal corridors; and wet fields	no
<i>Eretmochelys imbricata</i>	hawksbill sea turtle	E	shallow coastal waters, coral reefs, beds of sea grass or algae, mangrove-bordered bays and estuaries, and submerged mud flats	yes

Table 1: Federally Listed Species for Glynn County

Scientific Name	Common Name	Federal Status	Preferred Habitat	Habitat Present
<i>Laterallus jamaicensis jamaicensis</i>	eastern black rail	T	herbaceous, persistent, emergent wetland plant cover with dense overhead cover and soils that are moist to saturated (occasionally dry) and interspersed with or adjacent to very shallow water	yes
<i>Lepidochelys kempii</i>	Kemp's ridley sea turtle	E	open ocean; sounds; coastal rivers; beaches	yes
<i>Trichechus manatus</i>	West Indian manatee	T	estuaries, tidal rivers, nearshore ocean waters	no

T = Threatened, E = Endangered, C = Candidate, BGEPA = Bald and Golden Eagle Protection Act; habitat notes from USFWS, GA DNR, and <https://explorer.natureserve.org/>

Tidal Pool 1 and surrounding beach and dune areas are winter habitat for rufa red knot and piping plover. Wetland areas of the Project Area are potential habitat for eastern black rail; however, no wetlands will be permanently impacted by the project. A qualified environmental monitor will be onsite every day during construction to monitor for the presence of protected birds. Should protected birds enter the Project Area, work will be stopped until the birds are no longer in the project area.

The beach and dunes in the Project Area qualify as nesting habitat for sea turtles. A qualified environmental monitor will observe the project area during each day of construction. Should a sea turtle enter the Project Area, work will be stopped until the turtle is no longer in the area. Refer to the project Biological Assessment (Attachment F) for additional details on species protections.

Compensatory Mitigation

Project construction will avoid all permanent wetland impacts. Wetlands will be crossed with temporary construction mats using minimal soil disturbance techniques and will be returned to pre-construction conditions. Since all wetland impacts will be temporary with no permanent loss of wetlands, mitigation is not proposed for this project.

Description of Alternatives Considered

Alternative 1 - Tidal Pool Fill

This alternative would fill the entire open water area with native sand from an onsite borrow area. Native sand would be harvested by shallow scraping of the beach throughout a 12.58-acre borrow area. To fill the 3.83-acre open water area, approximately 10,420 cubic yards of sand would be collected from the

borrow area. Wetlands along the open water area would be avoided and protected with BMPs. Newly formed dune areas would be impacted by sand excavation.

Alternative 2 -Partial Tidal Pool Fill

Alternative 2 would fill 2.07 acres of open water with imported sand. This alternative would avoid impacts to 1.76 acres of open water, avoid impacts to any dunes and dune vegetation, and avoid all permanent wetland impacts. Wetlands along the open water area would be avoided and protected with BMPs.

Preferred Alternative 3 - Boardwalks Construction

Alternative 3 would span the existing open water with two permanent pile-supported structures that would extend from Massengale Park and Arnold Road to the lower beach area. The Massengale structure would include 636 linear feet of 13-foot-wide new boardwalk. The existing permitted 12-foot-wide boardwalk beach access at Massengale Park would be removed and replaced by new ADA accessible construction. Alternative 3 includes pedestrian access from each side of the Massengale structure along the upper beach area. The Arnold Road boardwalk would extend from the existing permitted Arnold Road beach access for 390 linear feet and would be 5.5 feet wide for pedestrian access only. This alternative would place piles in the wetland areas and tidal slough but would not include any permanent fills or fill impacts to wetlands, open water areas, and protected dune habitats. Construction mats would be used in the tidal pool and wetland areas for both construction corridors. No permanent fill to wetlands or clearing of wetland vegetation is proposed.

Conclusion

An LOP is requested to authorize the project. Preferred Alternative 3 would minimize impacts to regulated resources to the maximum extent practicable while satisfying the purpose and need for the project. Based on this analysis, Preferred Alternative 3 is the proposed least environmentally damaging practicable alternative.

Glynn County appreciates your review of the enclosed information. Please review and contact me if you have any questions or need additional information.

Best regards,

A handwritten signature in blue ink that reads "Stephen M. Bailey". The signature is fluid and cursive, with the first letters of each word being capitalized and prominent.

Stephen M. Bailey, PWS
Principal | Owner
Longleaf Consulting

Enclosure(s)

Attachment A: Figures

- Figure 1 USGS Project Location Map
- Figure 2 Aquatic Resources Delineation Map
- Figure 3 FEMA Flood Zone Map
- Figure 4 Soils Map
- Figure 5 Resource Photos

Attachment B: Project Plans

Attachment C: Application for Department of the Army Permit Form

Attachment D: AJD Letter and USACE Wetland and Upland Data Forms

Attachment E: Biological Assessment

Attachment F: Phase 1 Cultural Resources Survey Report

Attachment A: Figures

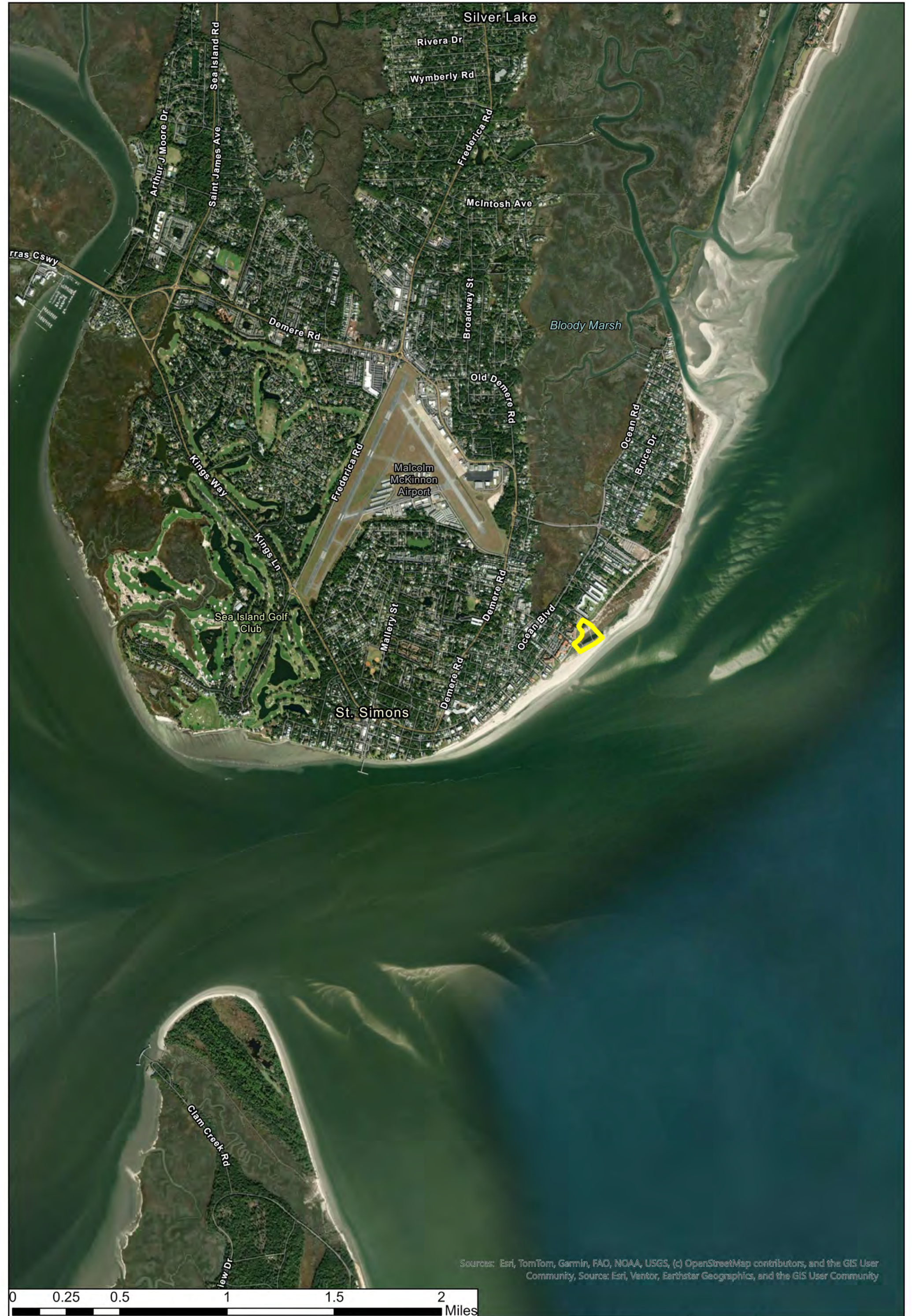


Figure 1: Project Location Map
East Beach Tidal Pool Project
Glynn County, Georgia
07/15/2026



Legend

 Project Area





Figure 2: Aquatic Resources Delineation Map East Beach Tidal Pool Project Glynn County, Georgia 07/15/2026	N 	Legend  Project Area  Wetlands  Open Water	
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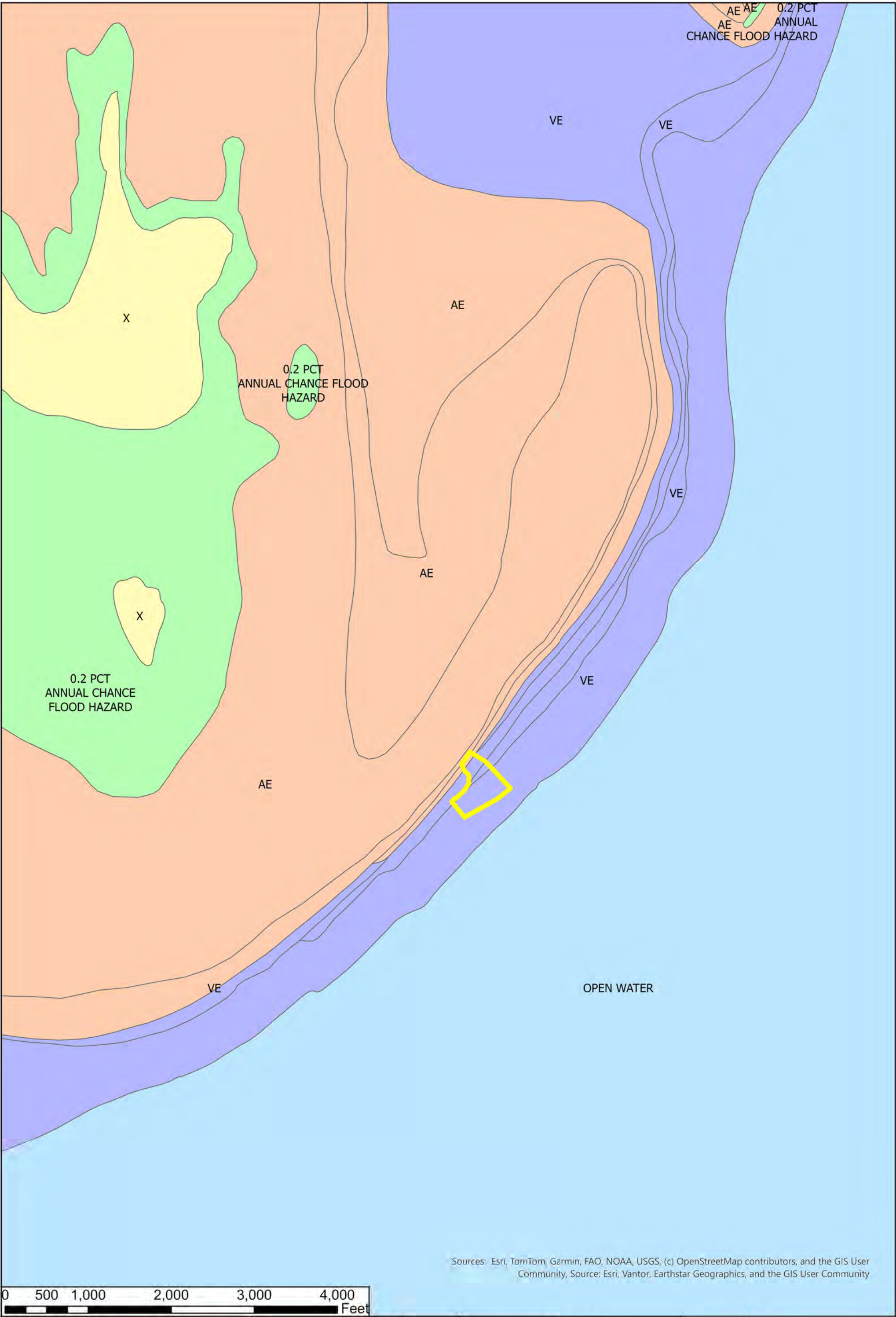


Figure 3: FEMA Flood Zone Map
East Beach Tidal Pool Project
Glynn County, Georgia
07/15/2026



Legend

- | | |
|------------------------------------|------------|
| Project Area | AE |
| 0.2 PCT ANNUAL CHANCE FLOOD HAZARD | OPEN WATER |
| A | VE |
| | X |



Figure 4:

Soil Map—Camden and Glynn Counties, Georgia



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Camden and Glynn Counties, Georgia

Survey Area Data: Version 18, Sep 10, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 9, 2022—Apr 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Be	Beaches	20.1	26.0%
CaB	Cainhoy fine sand, 0 to 5 percent slopes	6.8	8.8%
W	Water	32.3	41.6%
Totals for Area of Interest		77.5	100.0%

Figure 5: Resource Photographs November 2025 and February 2026



Wetland 3 and northern pool area - facing north



Wetland 3 and Tidal Pool 1 southern pool area – facing east



Wetland 4 – facing north



Wetland 4 – facing north

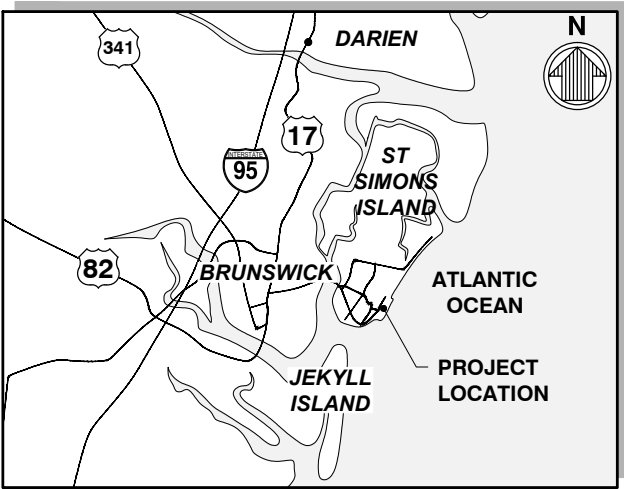
Attachment B: Project Plans

GLYNN COUNTY

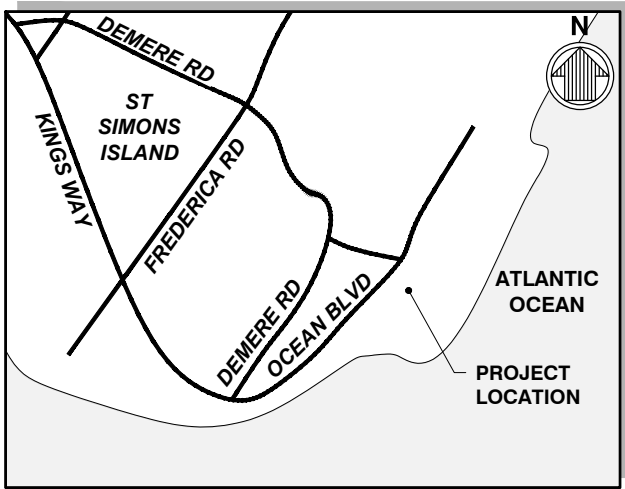
EAST BEACH BOARDWALKS

ST. SIMONS ISLAND, GEORGIA

M&N JOB #: 240281-12



VICINITY MAP
SCALE: NTS



LOCATION MAP
SCALE: NTS

GOVERNING STANDARDS AND SPECIFICATIONS:
DESIGN STANDARDS AND APPLICABLE CODES USE GA DNR, GEORGIA CODE,
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.



mo
ffatt & nichol
300 BULL ST., SUITE 200
SAVANNAH, GA, 31401
MOFFATT NICHOL.COM

COVER SHEET

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: EG
CHECKED BY: CRS
REVIEWED BY: AEJ
SUBMITTED BY: ABBY JACOBSON
MOFFATT NICHOL
PROJECT NUMBER: 240281-12
DATE: 07/10/2026 REVISED:



GENERAL NOTES

1.

ALL CONSTRUCTION ASSOCIATED WITH THIS PROJECT MUST BE IN ACCORDANCE WITH APPLICABLE CODES & AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO OWNER, LOCAL, AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS. ANY DISCREPANCY MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER & ENGINEER OF RECORD.
2.

IT IS THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE HIMSELF/HERSELF WITH THE PROJECT SITE & TO DETERMINE TOPOGRAPHIC OR UNDERGROUND FEATURES THAT WILL BE IMPACTED DUE TO HIS/HER PROPOSED METHOD OF CONSTRUCTION. THE CONTRACTOR MUST INCLUDE IN HIS BID PRICE, THE COST OF RELOCATING OR REPLACING IN KIND ANY FEATURES THAT WILL BE IMPACTED DUE TO HIS/HER PROPOSED METHOD OF CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED BY THE OWNER IN THE EVENT THE CONTRACTOR NEGLECTS TO ACCOUNT FOR THIS WORK IN HIS BID PRICE.
3.

CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING TREES, STRUCTURES, & UTILITIES WHICH MAY OR MAY NOT BE SHOWN ON THE PLANS. ANY EXISTING STRUCTURE, PAVEMENT, TREES OR OTHER EXISTING UTILITIES NOT SPECIFIED FOR REMOVAL WHICH ARE DAMAGED, EXPOSED OR IN ANY WAY DISTURBED BY CONSTRUCTION PERFORMED, SHALL BE REPAIRED, PATCHED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
4.

CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF/HERSELF WITH CURRENT SITE CONDITIONS & SHALL REPORT ANY DISCREPANCIES TO THE OWNER & EOR PRIOR TO STARTING WORK.
5.

THE CONTRACTOR SHALL KEEP THE SITE REASONABLY FREE FROM DEBRIS, TRASH, & CONSTRUCTION WASTE. BUILDING MATERIAL AND/OR CONSTRUCTION DEBRIS STORED ADJACENT TO OR UPON THE ROADWAY SHALL BE ADEQUATELY MARKED AT ALL TIMES FOR PEDESTRIAN & TRAFFIC SAFETY.
6.

CONTRACTOR SHALL CONTACT GEORGIA 811 AT LEAST 3 BUSINESS DAYS PRIOR TO PERFORMING ANY EXCAVATION/DIGGING TO VERIFY THE EXACT LOCATION OF EXISTING UTILITIES.
7.

CONTRACTOR TO ADHERE TO APPLICABLE NOISE ORDINANCES THAT PROHIBIT ANY PLAIN AUDIBLE SOUND IN CONNECTION WITH CONSTRUCTION ACTIVITIES OUTSIDE OF PERMITTED HOURS.
8.

ALL ENVIRONMENTAL REGULATORY PERMITS WILL BE PROVIDED BY GLYNN COUNTY. CONTRACTOR IS REQUIRED TO OBTAIN ALL OTHER NECESSARY PERMITS AND/OR APPROVALS PRIOR TO THE START OF CONSTRUCTION. COST OF ALL OTHER NECESSARY PERMITS IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
9.

ALL LANDSCAPED/OPEN AREAS, SIDEWALKS, PAVEMENTS & OTHER IMPROVEMENTS IMPACTED BY CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER.
10.

THE TRAFFIC CONTROL PLAN FOR THE PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MUST PRODUCE HIS/HER OWN TRAFFIC CONTROL PLAN & MUST HAVE SAID PLAN APPROVED BY THE OWNER AND CITY PRIOR TO CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE GRANTED BY THE OWNER FOR TRAFFIC CONTROL COSTS ASSOCIATED WITH THIS PROJECT AFTER PROJECT AWARD. TRAFFIC CONTROL PLAN SHALL INCLUDE BUT NOT LIMITED TO MESSAGE BOARDS TO INFORM EMERGENCY SERVICES WITHIN THE VICINITY OF THE PROJECT LIMITS ABOUT THE CONSTRUCTION SCHEDULE.
11.

SURVEY MONUMENTS WITHIN THE LIMITS OF THE PROJECT ARE TO BE PROTECTED.
12.

NO DEVIATIONS FROM APPROVED PLANS SHALL BE PERMITTED WITHOUT THE WRITTEN CONSENT THE OWNER AND GA DNR.
13.

WORK PERFORMED UNDER THIS PROJECT WILL NOT BE CONSIDERED COMPLETE UNTIL THE NECESSARY DOCUMENTS ARE RECEIVED BY THE OWNER.
14.

ALL DEFECTIVE WORK NOT ACCEPTED BY THE OWNER, EOR OR BY ANY GOVERNMENT PERMITTING AGENCY SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
15.

ALL EXISTING GRASSED OR LANDSCAPED AREAS, ALL DECORATIVE FEATURES (INCLUDING PAVERS) AND PAVED GROUND CONDITIONS DAMAGED AS RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED COMPLETELY AS DIRECTED BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
16.

DAMAGED ITEMS SHALL BE RESTORED TO THEIR ORIGINAL DESIGN AND FUNCTION AT THE CONTRACTOR'S EXPENSE.
17.

A PRE-CONSTRUCTION MEETING WILL BE HELD ON SITE TO VERIFY DETAILS AND METHODS OF CONSTRUCTION.
18.

THESE PLANS ARE INCOMPLETE WITHOUT THE TECHNICAL SPECIFICATIONS.
19.

CONTRACTOR SHALL NOT BLOCK OR OBSTRUCT PUBLIC BEACH ACCESS PARKING WITHOUT WRITTEN APPROVAL FROM THE OWNER.
20.

CONTRACTOR WILL COORDINATE DAILY WITH THE OWNER'S ENVIRONMENTAL MONITOR AND WILL FOLLOW ALL REQUIRED ENVIRONMENTAL PERMIT CONDITIONS AND MANAGEMENT PRACTICES.
21.

CONTRACTOR SHALL AVOID IMPACTS TO EXISTING DUNES AND DUNE HABITAT. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY DUNE HABITAT LOCATIONS AND ERECT AND MAINTAIN CONSTRUCTION FENCING OR SIMILAR TO PREVENT IMPACTS.

SURVEY NOTES

1.

THE ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88). THE CONVERSION BETWEEN NATIONAL GEODETIC VERTICAL DATUM (NGVD 29) AND THE NAVD 88 FOR THE PROJECT SITE IS APPROXIMATELY 0.97 FEET (EXAMPLE: 0.0 FEET NGVD = -0.97 FEET NAVD).
2.

SHORELINE PROTECTION ACT JURISDICTION SURVEYED BY LONGLEAF CONSULTING DATED APRIL 2026.
3.

TOPOGRAPHIC AND BATHYMETRIC SURVEY DATA PERFORMED BY ARC SURVEYING & MAPPING DATED FEBRUARY 2026. ADDITIONAL SURVEY DATA PROVIDED BY GLYNN COUNTY.
4.

THE FOLLOWING TIDAL DATUM RELATIONSHIP IS BASED ON NOAA TIDE STATION 8677344 - ST. SIMONS, GA

TIDAL DATA

HIGH TIDE LINE (HTL)	5.00' NAVD
MEAN HIGHER HIGH WATER (MHHW)	2.97' NAVD
MEAN HIGH WATER (MHW)	2.60' NAVD
NORTH AMERICAN VERTICAL DATUM	0.00 NAVD
MEAN LOW WATER (MLW)	-4.02' NAVD
MEAN LOWER LOW WATER (MLLW)	-4.23' NAVD

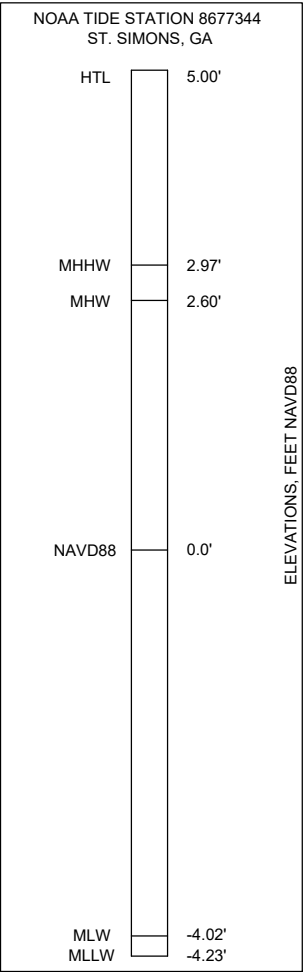
5.

HORIZONTAL CONTROL REFERENCED TO NORTH AMERICAN DATUM OF 1983, STATE PLANE COORDINATE SYSTEM, GEORGIA EAST ZONE, IN FEET.
6.

PARCELS BOUNDARIES BASED GIS FILES RECEIVED FROM GLYNN COUNTY GEOGRAPHIC INFORMATION SYSTEM DEPARTMENT.

AERIAL IMAGERY

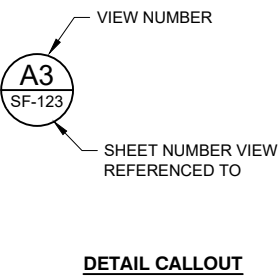
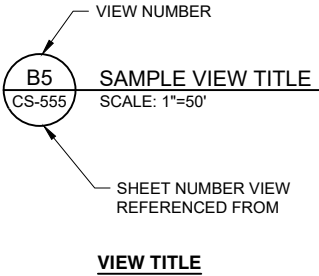
AERIAL IMAGERY OBTAINED FROM ARC SURVEY, DATED FEBRUARY 2026.

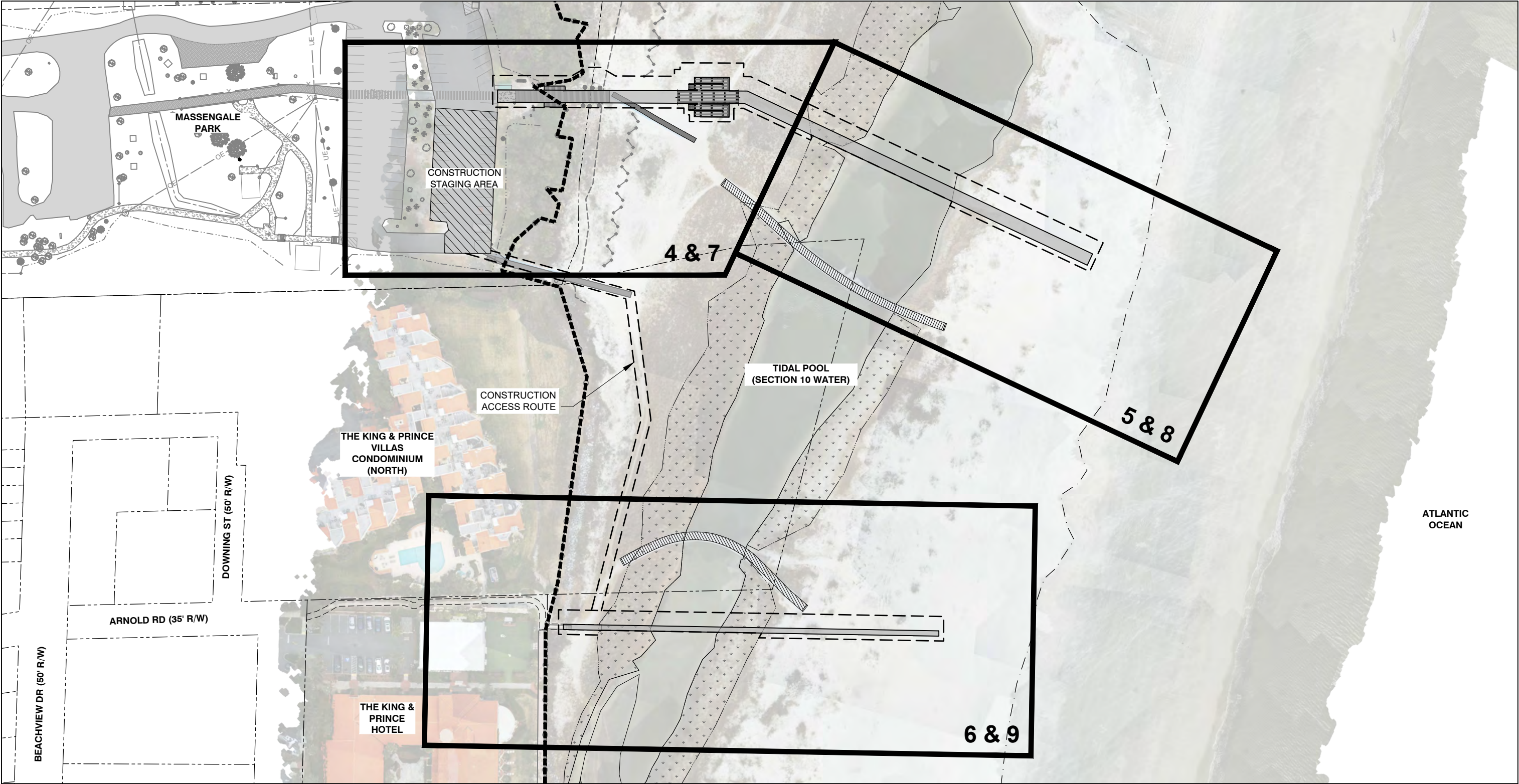


ABBREVIATIONS

CRD	COASTAL RESOURCE DIVISION
CY	CUBIC YARD
EOR	ENGINEER OF RECORD
FT(')	FEET
GA DNR	GEORGIA DEPARTMENT OF NATURAL RESOURCES
HORZ	HORIZONTAL
HTL	HIGH TIDE LINE
IN(")	INCHES
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
N	NORTH
NAD	NORTH AMERICAN DATUM OF 1983
NAVD	NORTH AMERICAN VERTICAL DATUM OF 1988
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NTS	NOT TO SCALE
OHW	ORDINARY HIGH WATER
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
SPA	SHORELINE PROTECTION ACT
SF	SQUARE FEET
TYP	TYPICAL
USACE	US ARMY CORPS OF ENGINEERS
VERT	VERTICAL

SHEET INDEX	
SHEET NO.	SHEET TITLE
1	COVER SHEET
2	NOTES, ABBREVIATIONS, LEGEND, & SHEET INDEX
3	KEY PLAN
4	EXISTING CONDITIONS & CONSTRUCTION ACCESS
5	EXISTING CONDITIONS & CONSTRUCTION ACCESS
6	EXISTING CONDITIONS & CONSTRUCTION ACCESS
7	SCHEMATIC DESIGN
8	SCHEMATIC DESIGN
9	SCHEMATIC DESIGN
10	CROSS SECTIONS & DETAILS
11	CROSS SECTIONS & DETAILS
12	CROSS SECTIONS & DETAILS
13	CROSS SECTIONS & DETAILS
14	CROSS SECTIONS & DETAILS
15	CROSS SECTIONS & DETAILS





LEGEND

	EXISTING CONTOURS		HIGH TIDE LINE
	SPA JURISDICTION LINE		MLW
	PARCEL LINES		MEAN LOW WATER LINE
	TIDAL WETLAND		TEMPORARY CONSTRUCTION LIMITS
	EXISTING BOARDWALK		

NOTES

1. AERIAL IMAGERY OBTAINED FROM ARC SURVEY, DATED FEBRUARY 2026.
2. WETLANDS WERE DELINEATED IN THE IMMEDIATE PROJECT VICINITY BY LONGLEAF CONSULTING, APRIL 2026.



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SAVANNAH, GA, 31401
MOFFATT NICHOL.COM



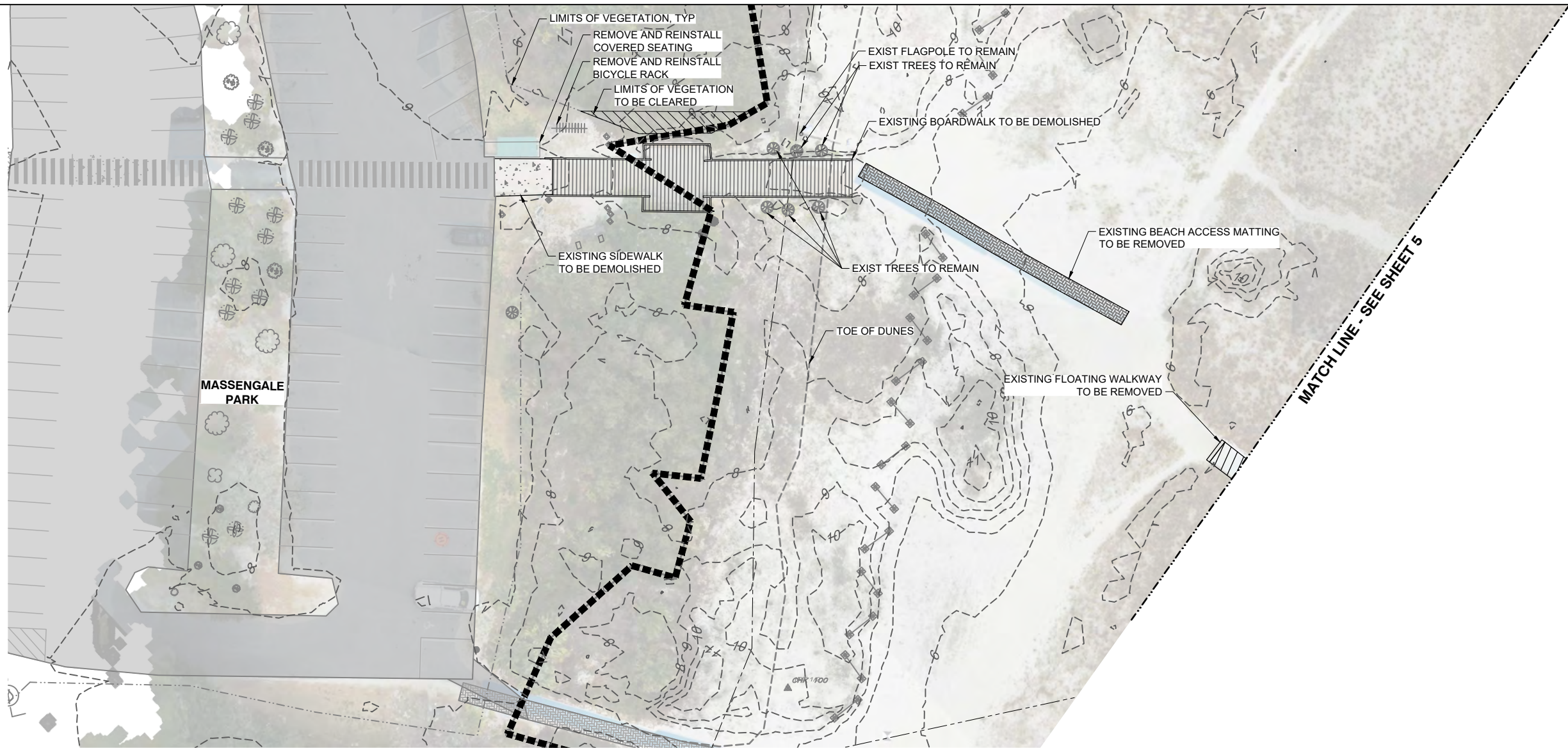
50' 0' 50' 100'
SCALE: 1"=100'

KEY PLAN
GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: EG
CHECKED BY: CRS
REVIEWED BY: AEJ
SUBMITTED BY: ABBY JACOBSON
MOFFATT NICHOL
PROJECT NUMBER: 240281-12
DATE: 07/14/2026 REVISED:



SHEET 3 OF 15



LEGEND

	EXISTING CONTOURS		HIGH TIDE LINE
	SPA JURISDICTION LINE		MLW
	PARCEL LINES		MEAN LOW WATER LINE
	TIDAL WETLAND		
	EXISTING BOARDWALK		

NOTES

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EXISTING CONDITIONS & CONSTRUCTION ACCESS

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA



LEGEND

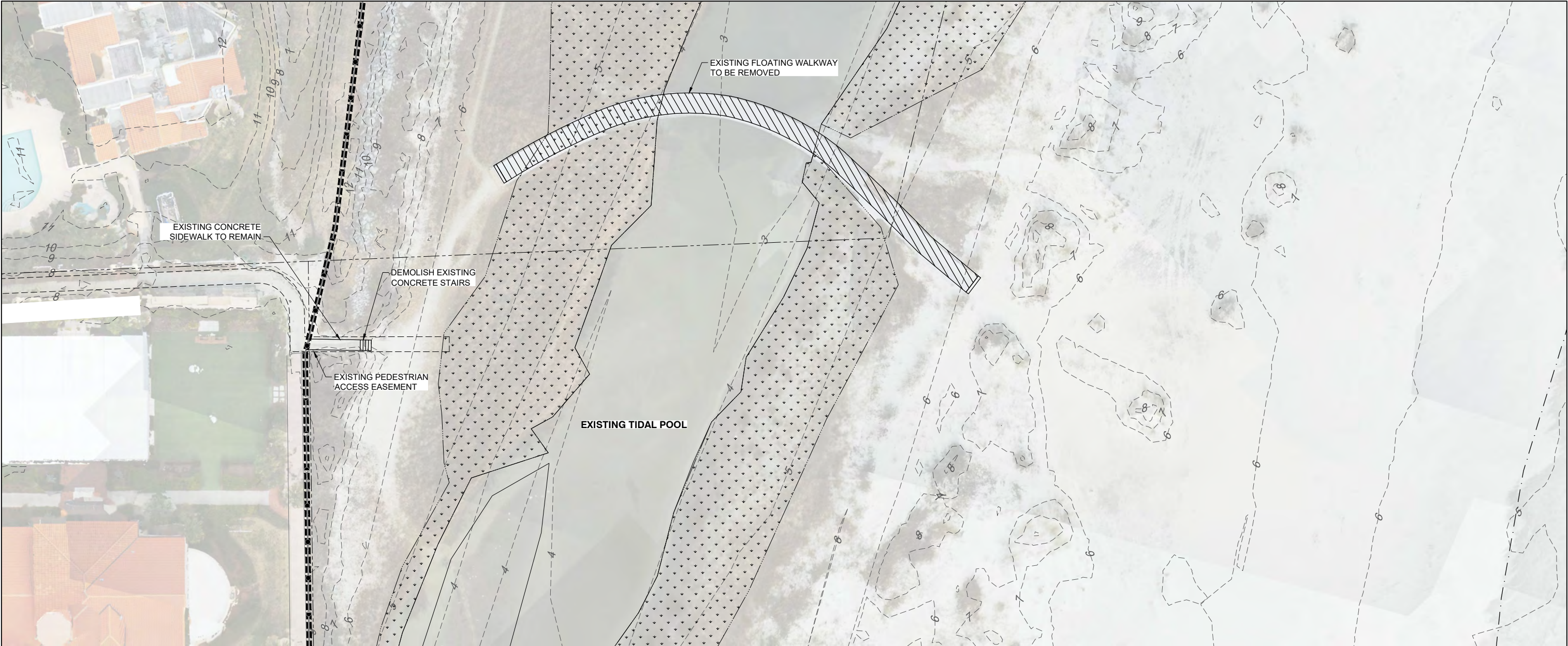
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| | SPA JURISDICTION LINE | | MLW |
| | PARCEL LINES | | MEAN LOW WATER LINE |
| | TIDAL WETLAND | | |
| | EXISTING BOARDWALK | | |

NOTES

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EXISTING CONDITIONS & CONSTRUCTION ACCESS

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA



LEGEND

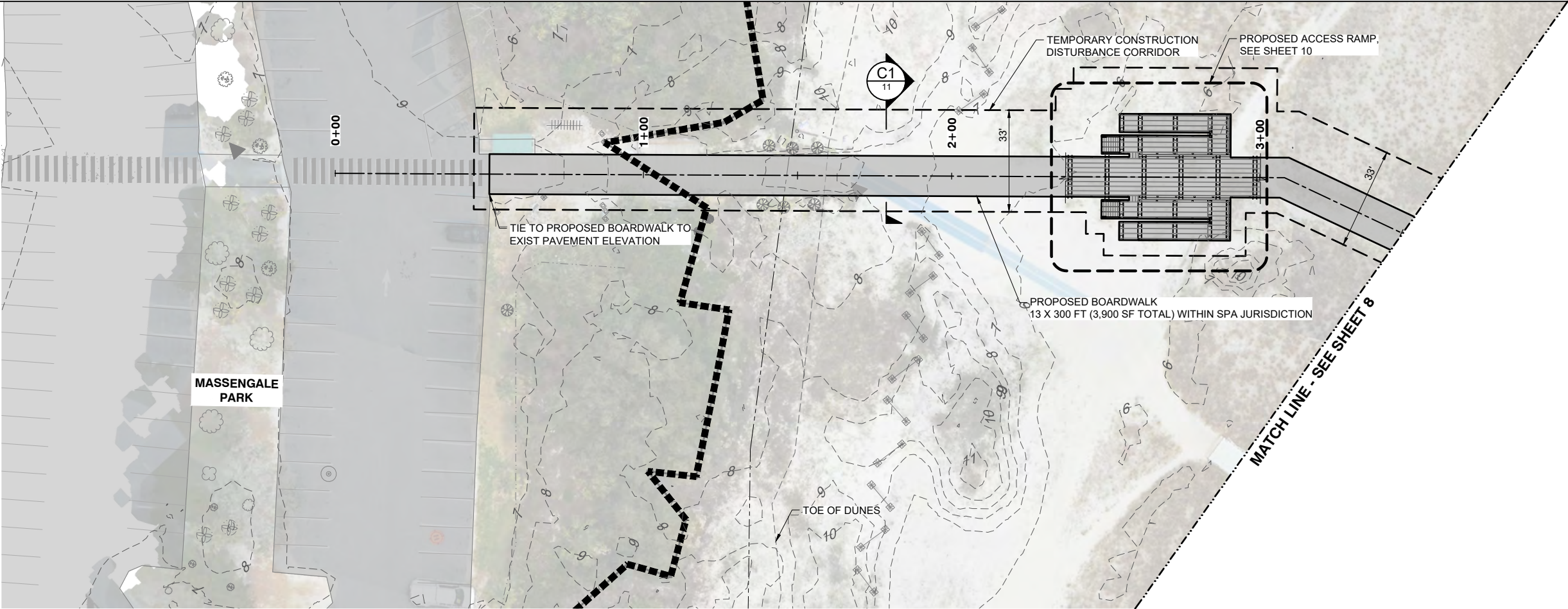
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| | SPA JURISDICTION LINE | | MLW |
| | PARCEL LINES | | MEAN LOW WATER LINE |
| | TIDAL WETLAND | | |
| | EXISTING BOARDWALK | | |

NOTES

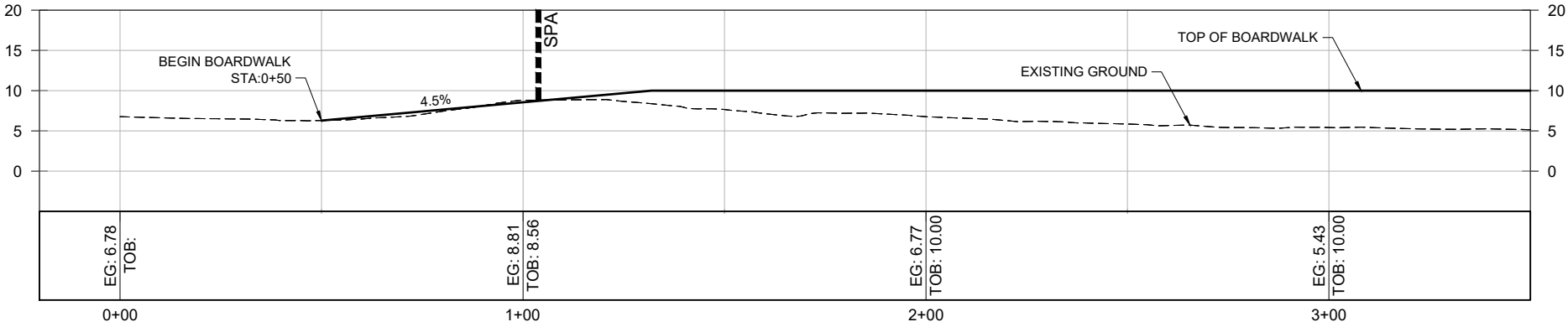
1. AERIAL IMAGERY OBTAINED FROM ARC SURVEY, DATED FEBRUARY 2026.
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EXISTING CONDITIONS & CONSTRUCTION ACCESS

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA



PLAN - BOARDWALK A (0+00 - 3+50)
SCALE: 1" = 40'



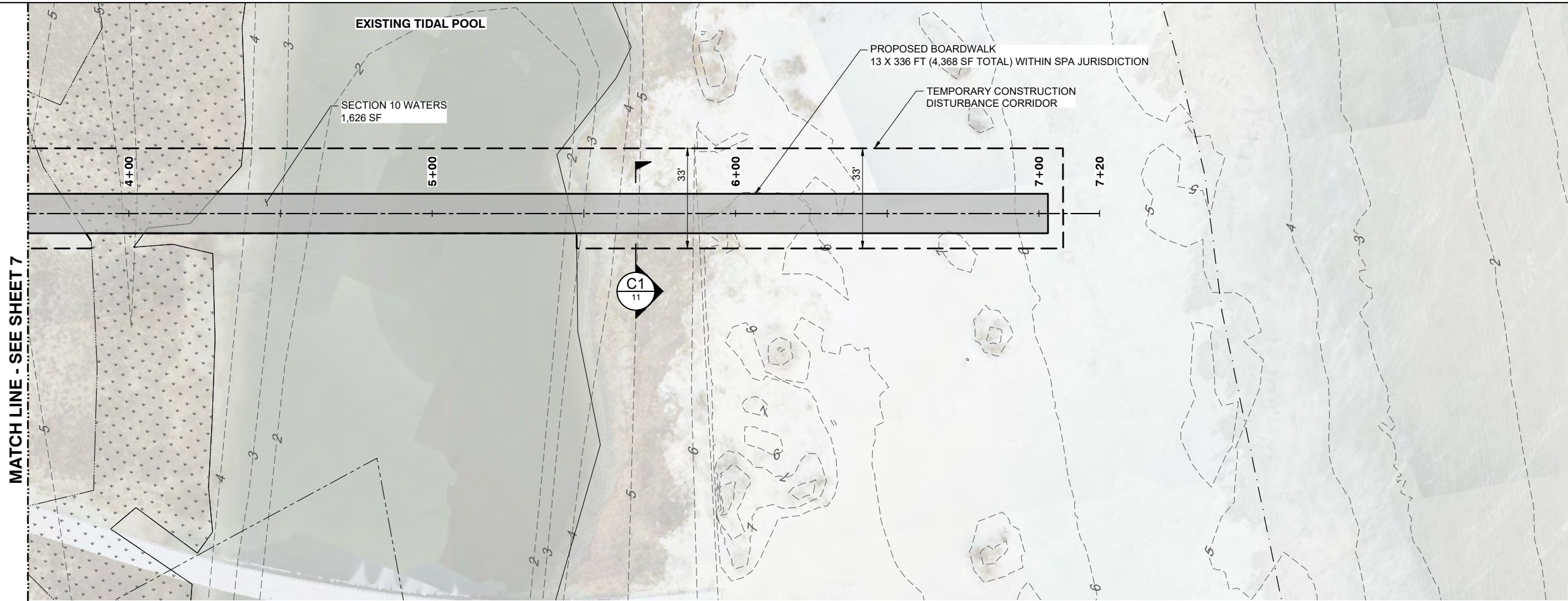
PROFILE - BOARDWALK A (0+00 - 3+50)
SCALE: HORZ.: 1" = 40'
SCALE: VERT.: 1" = 20'

LEGEND

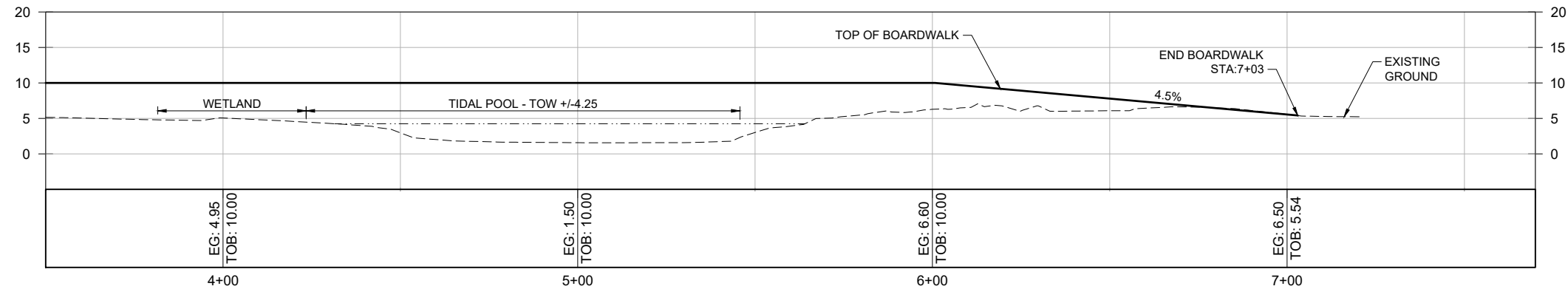
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| | EXISTING CONTOURS | | HIGH TIDE LINE |
| | SPA JURISDICTION LINE | | MLW |
| | PARCEL LINES | | MEAN LOW WATER LINE |
| | TIDAL WETLAND | | |
| | EXISTING BOARDWALK | | |

NOTES

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- WETLANDS WERE DELINEATED IN THE IMMEDIATE PROJECT VICINITY BY LONGLEAF CONSULTING, APRIL 2026.



PLAN - BOARDWALK A (3+50 - 7+50)
SCALE: 1" = 40'



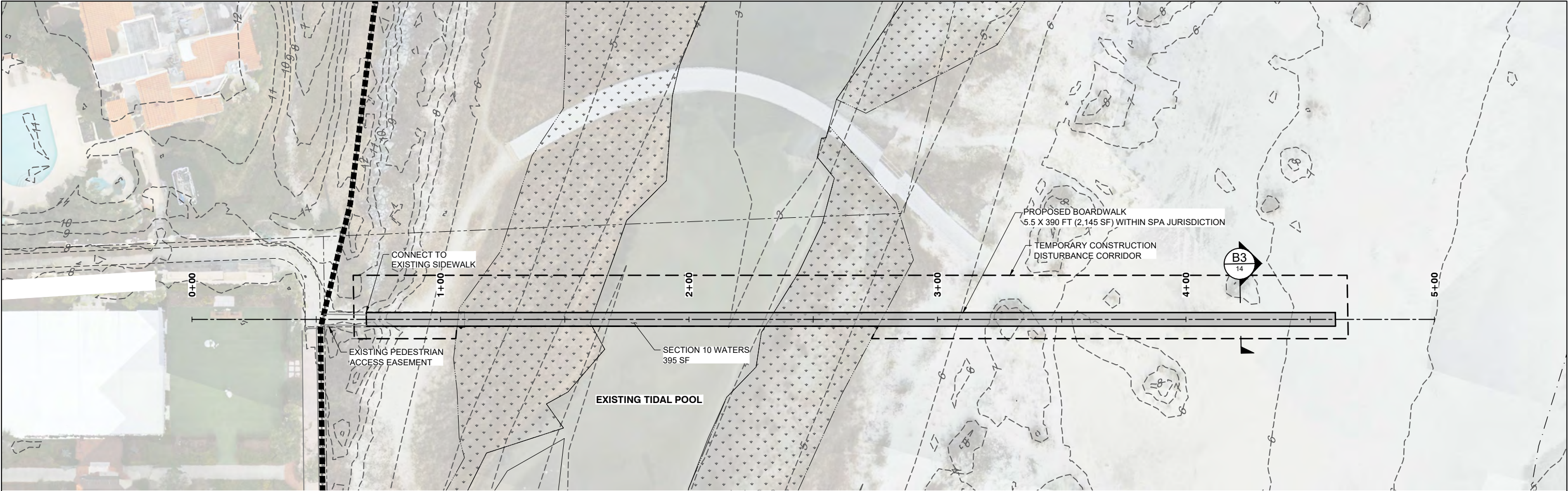
PROFILE - BOARDWALK A (3+50 - 7+50)
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VERT.: 1" = 20'

LEGEND

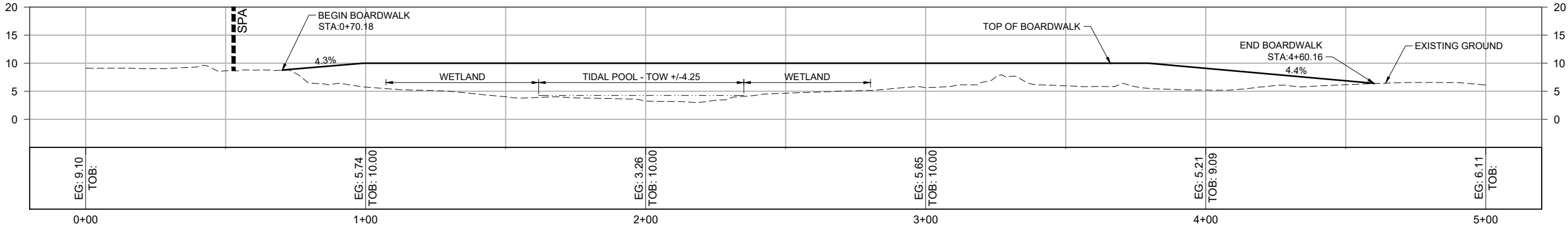
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| | EXISTING CONTOURS | | HIGH TIDE LINE |
| | SPA JURISDICTION LINE | | MLW |
| | PARCEL LINES | | MEAN LOW WATER LINE |
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| | EXISTING BOARDWALK | | |

NOTES

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- WETLANDS WERE DELINEATED IN THE IMMEDIATE PROJECT VICINITY BY LONNGLEAF CONSULTING, APRIL 2026.



PLAN - BOARDWALK B
SCALE: 1" = 40'



PROFILE - BOARDWALK B
SCALE: HORZ.: 1" = 40'
VERT.: 1" = 20'

LEGEND

- | | | | |
|--|-----------------------|--|---------------------|
| | EXISTING CONTOURS | | HIGH TIDE LINE |
| | SPA JURISDICTION LINE | | MLW |
| | PARCEL LINES | | MEAN LOW WATER LINE |
| | TIDAL WETLAND | | |
| | EXISTING BOARDWALK | | |

NOTES

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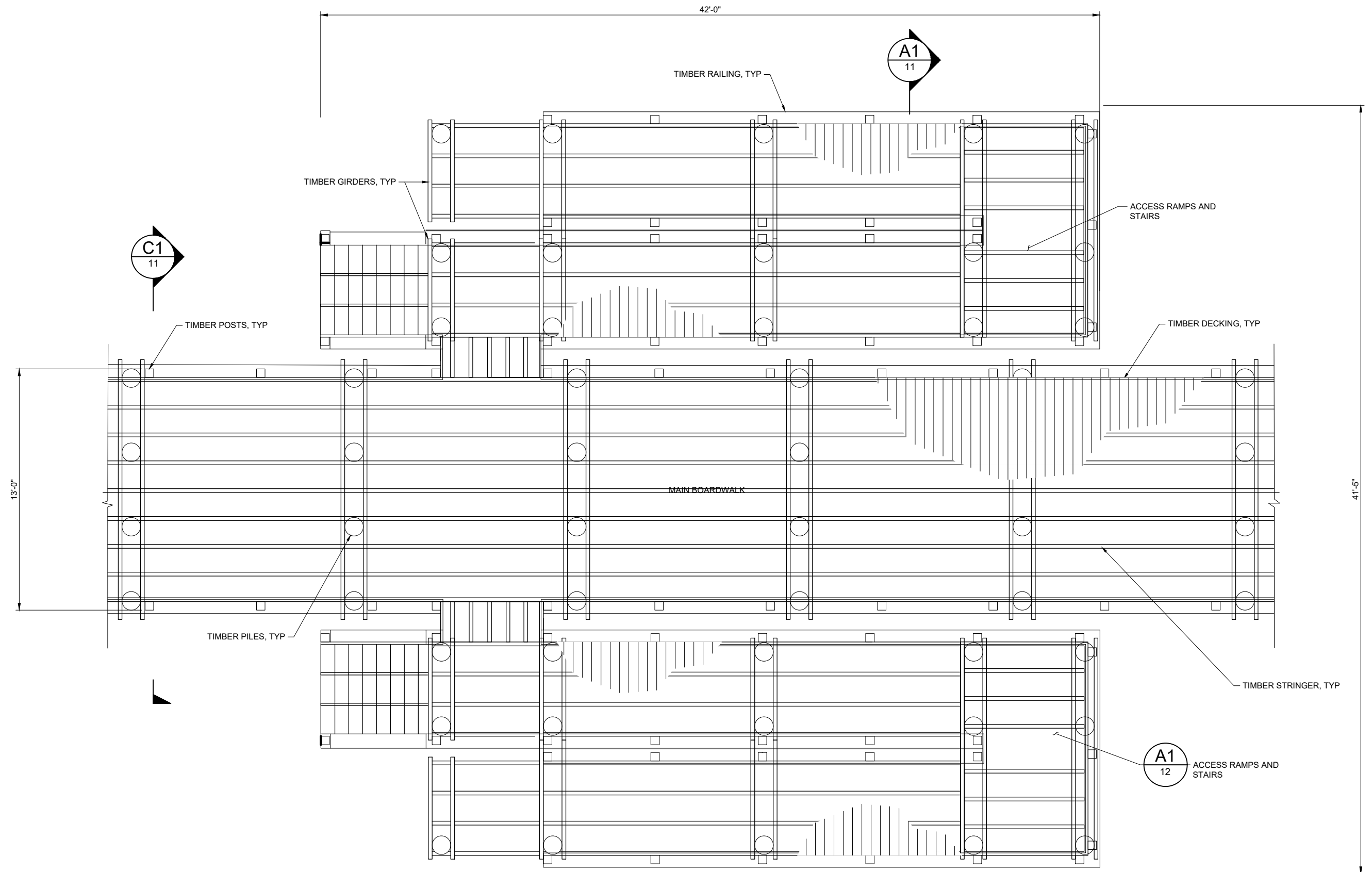
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300 BULL ST., SUITE 200
SAVANNAH, GA, 31401
MOFFATT NICHOL.COM

20' 0' 20' 40'
SCALE: 1"=40'

SCHEMATIC DESIGN
GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: EG
CHECKED BY: CRS
REVIEWED BY: AEJ
SUBMITTED BY: ABBY JACOBSON
MOFFATT NICHOL
PROJECT NUMBER: 240281-12
DATE: 07/14/2026 REVISED:

SHEET 9 OF 15

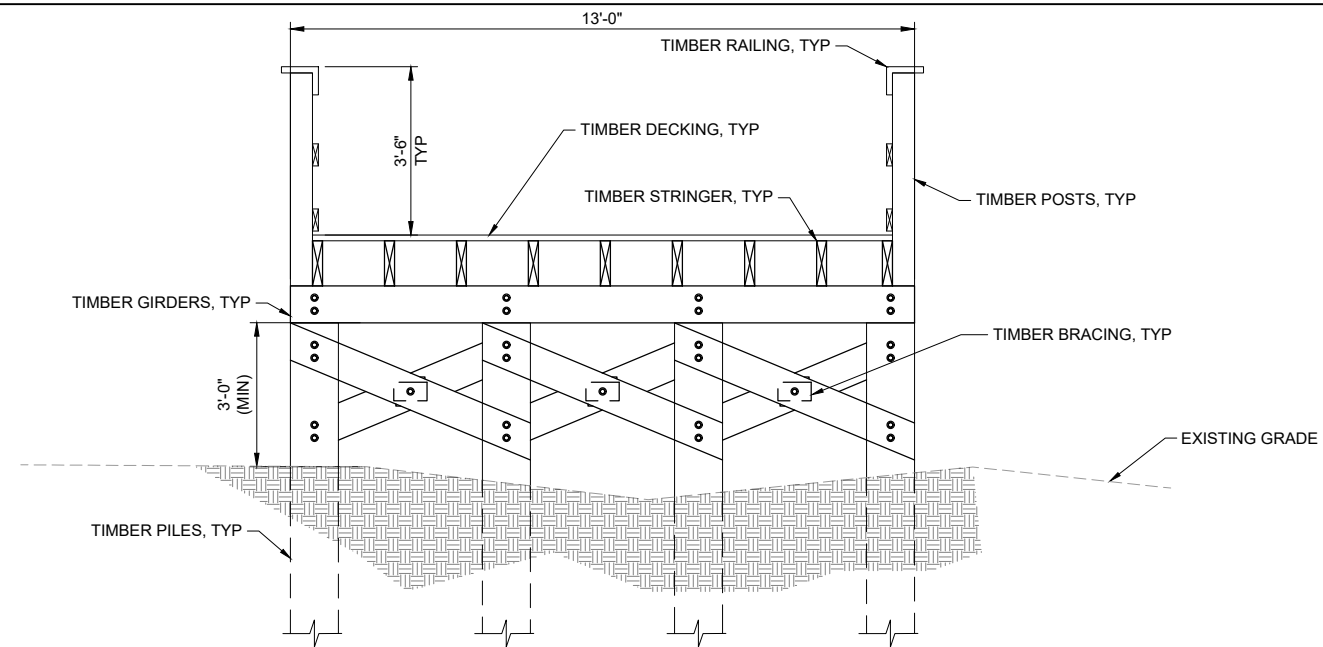


NOTE
FOR ISOMETRIC VIEW SEE SHEET 15

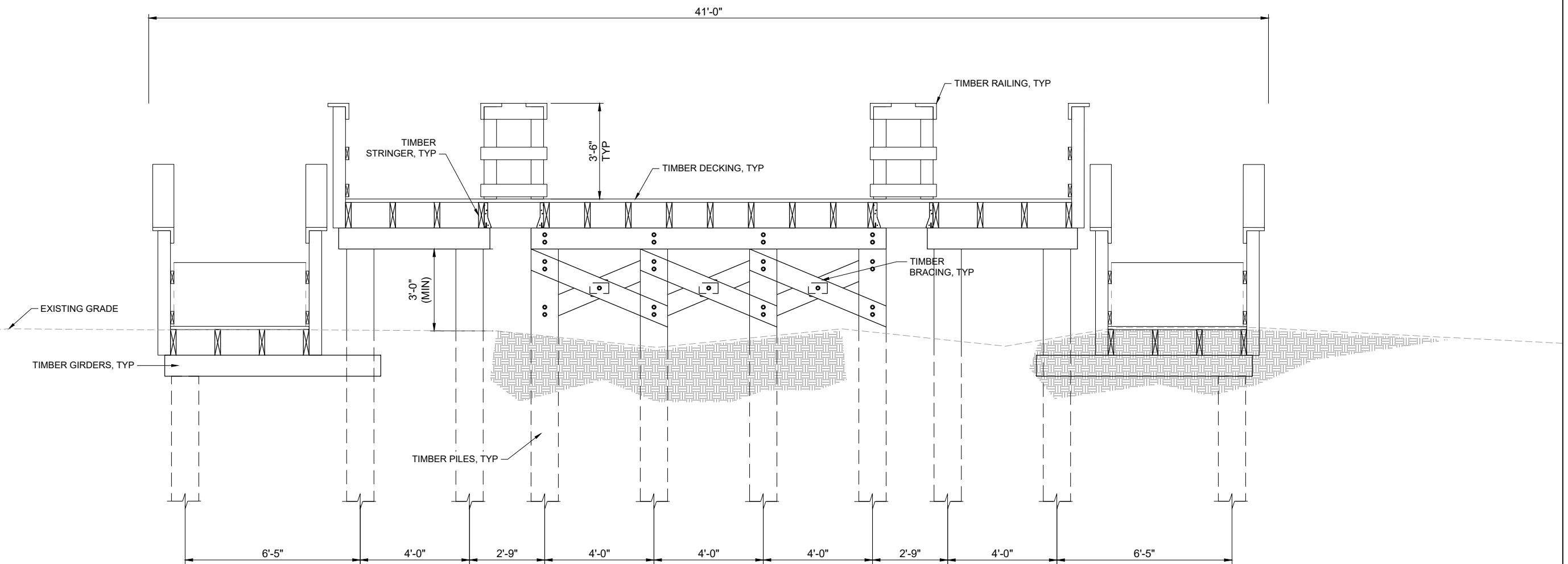
A1
7 **PLAN - BOARDWALK A**
SCALE: 3/8" = 1'-0"

CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA



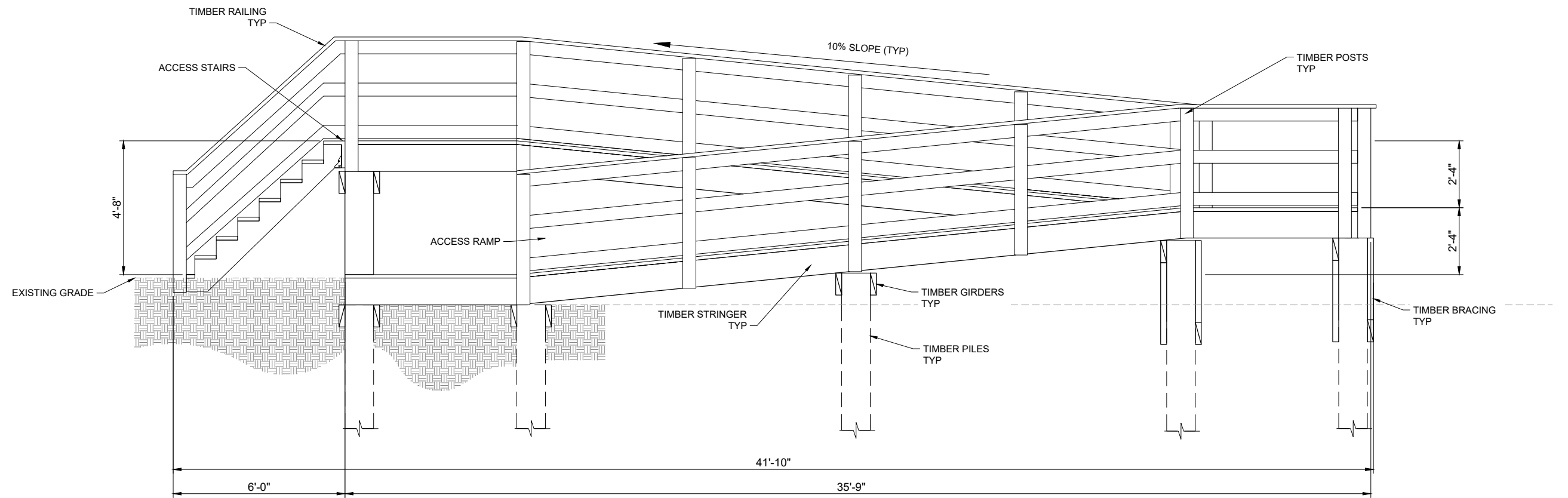
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7, 8, & 10 SCALE: 1/2" = 1'-0"



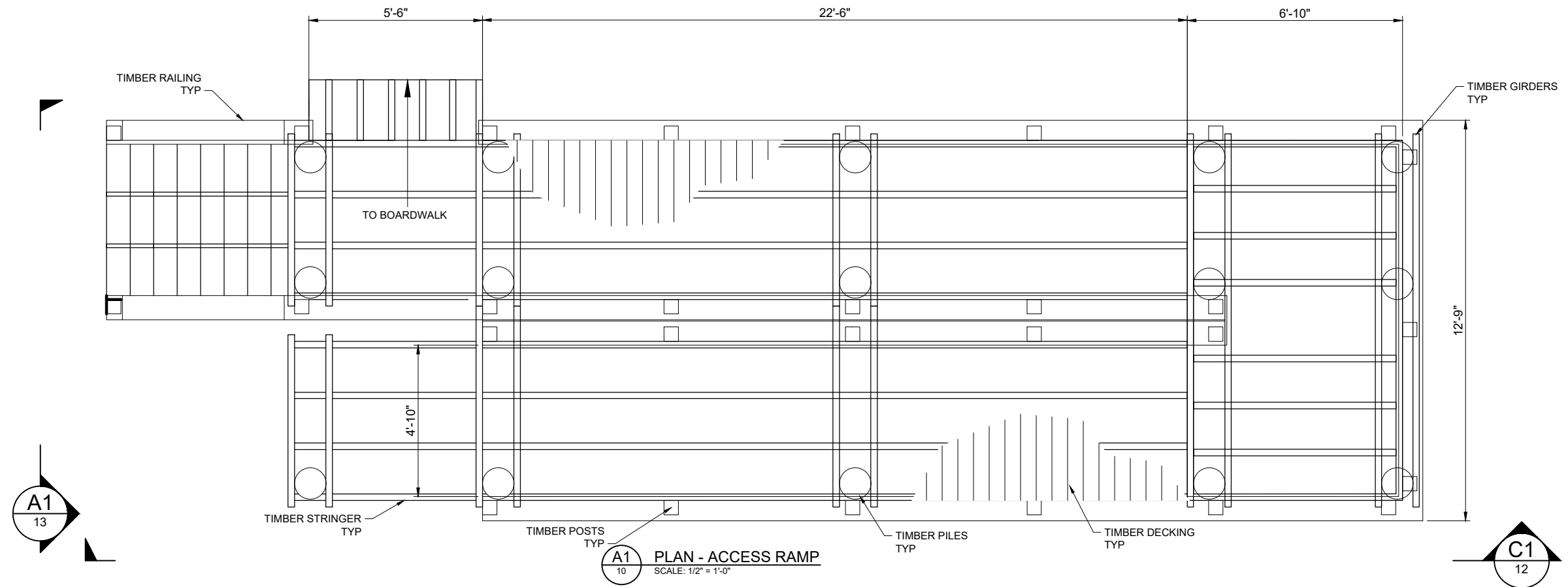
A1 SECTION - BOARDWALK AT ACCESS RAMP
10 SCALE: 1/2" = 1'-0"

CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA



C1
 10 **ELEVATION - ACCESS RAMP**
 SCALE: 1/2" = 1'-0"

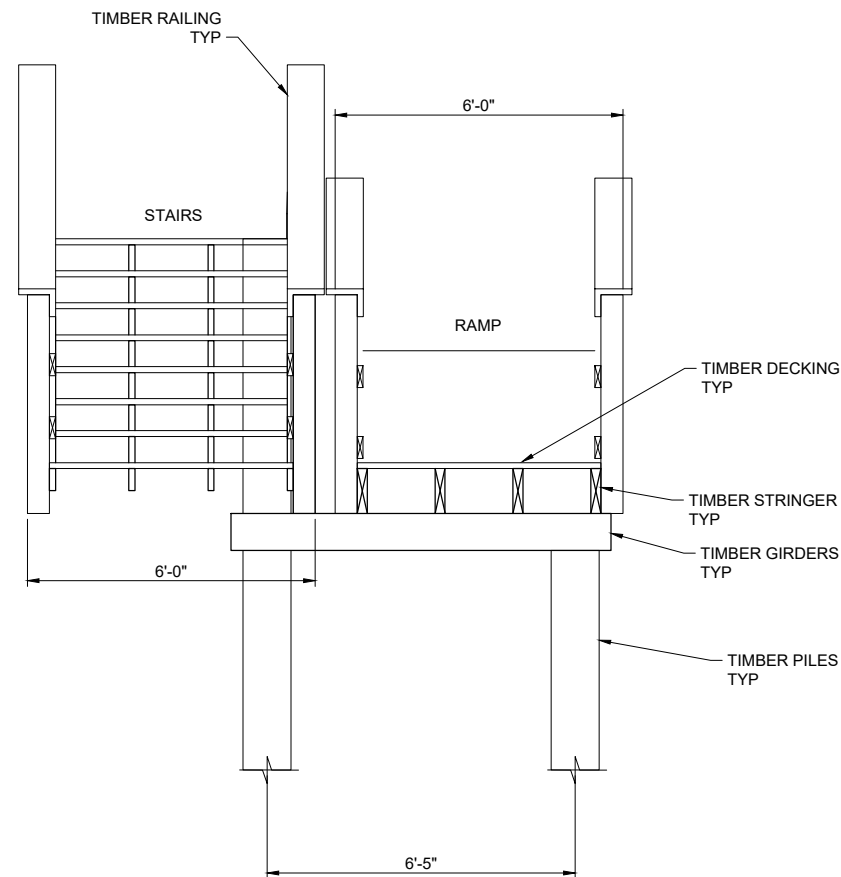


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 10 **PLAN - ACCESS RAMP**
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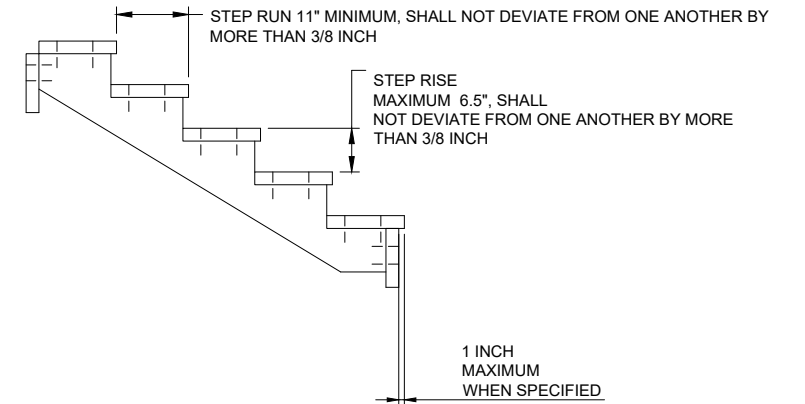
C1
 12

CROSS SECTIONS & DETAILS

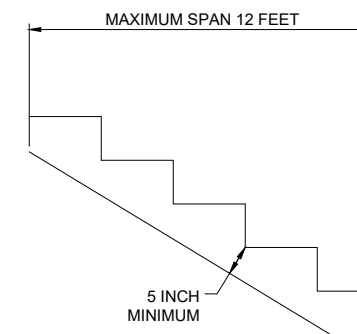
GLYNN COUNTY
 EAST BEACH BOARDWALKS
 ST. SIMONS ISLAND, GEORGIA



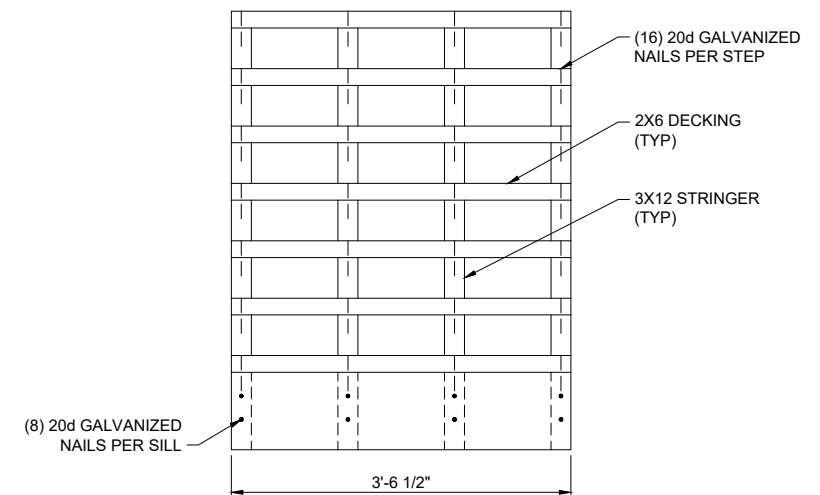
A1 SECTION - DUNE ACCESS
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ELEVATION VIEW

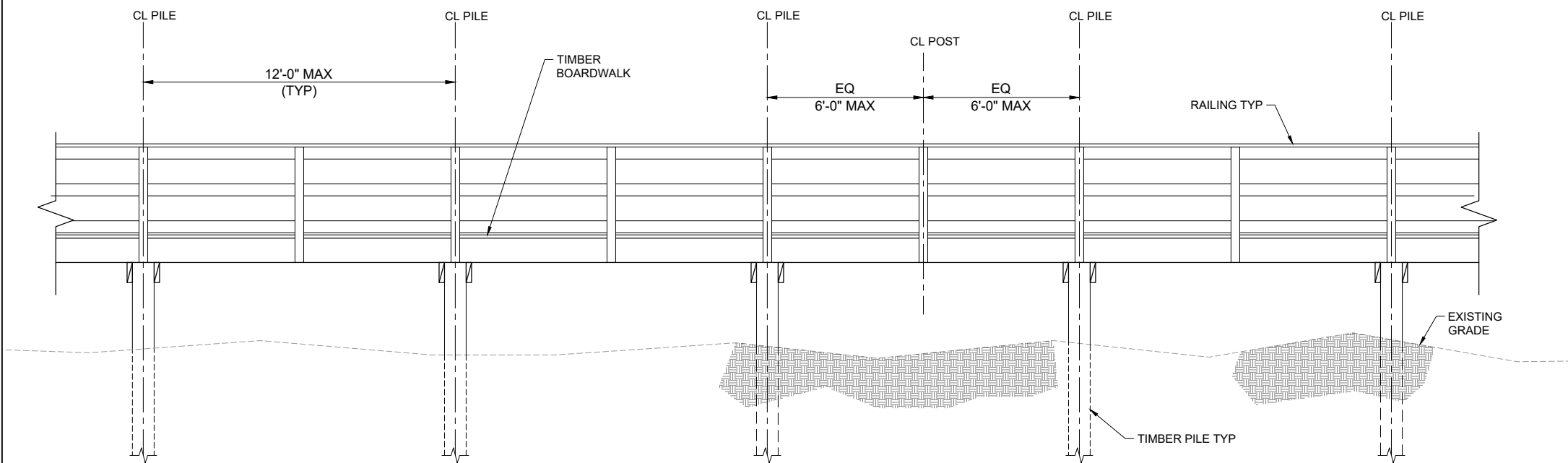


STRINGER DETAILS

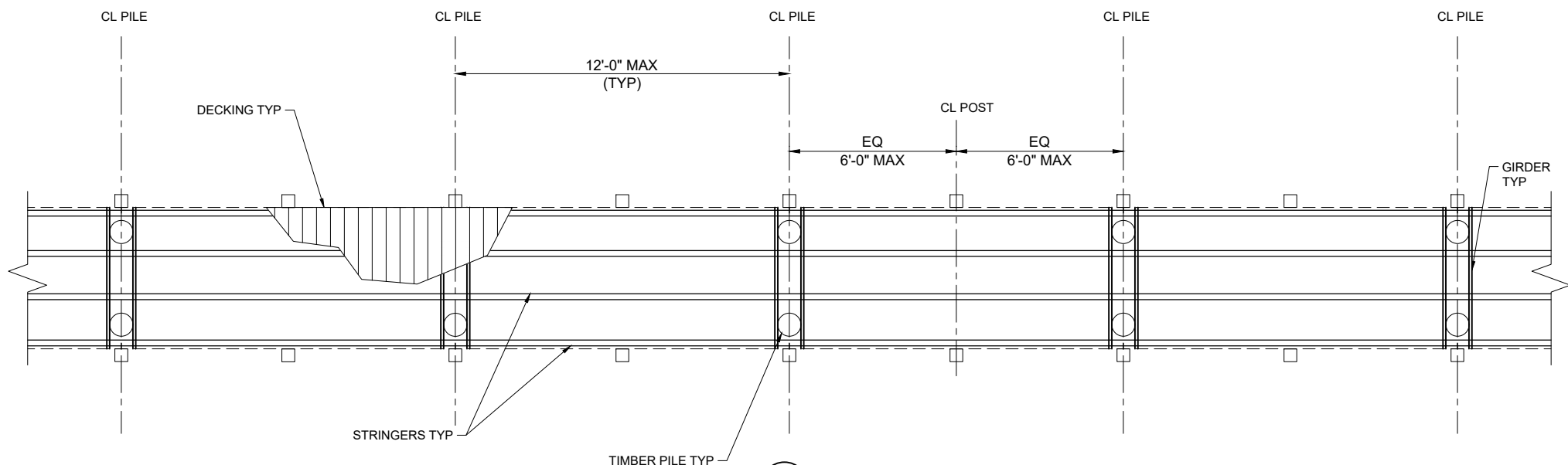


FRONT VIEW

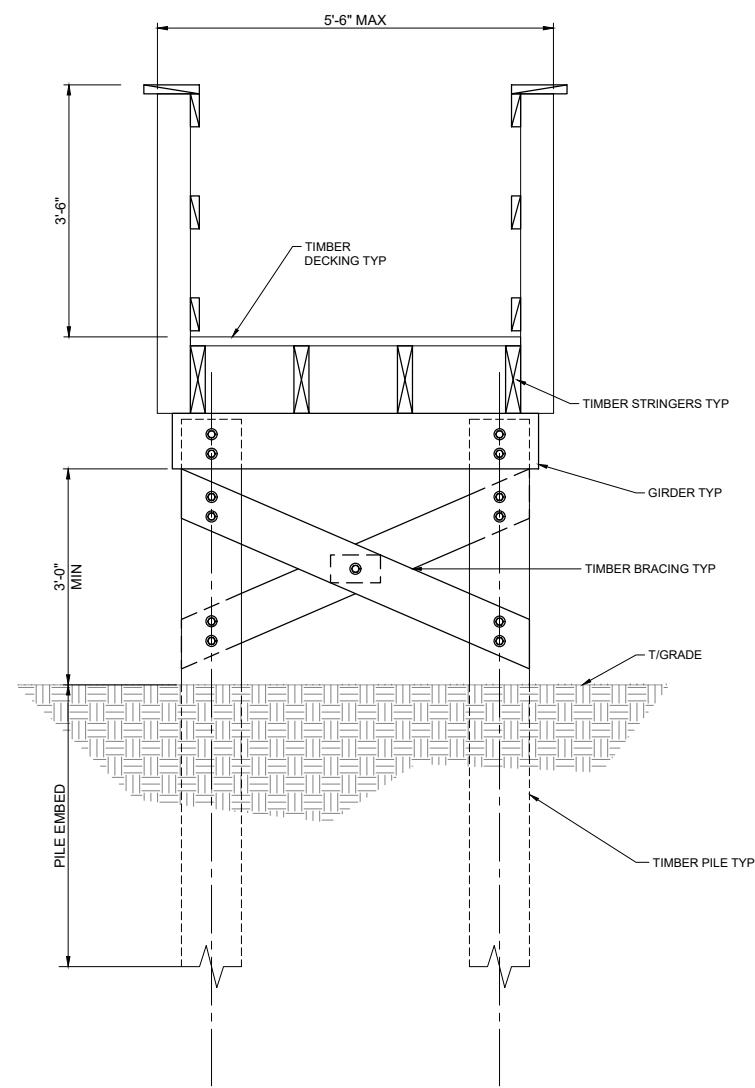
C1 DETAIL - STAIRS
SCALE: 1" = 1'-0"



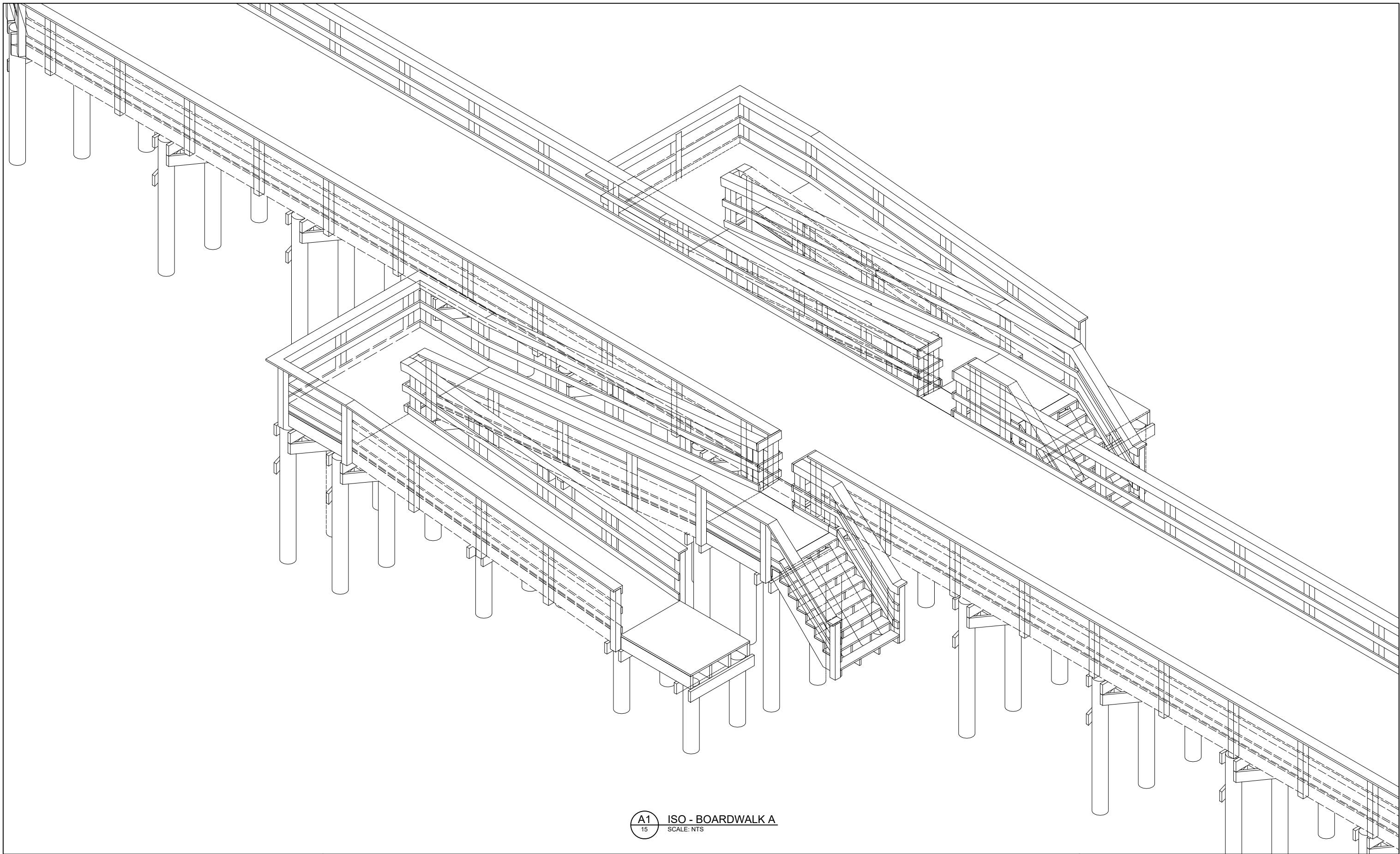
C1 ELEVATION - TYPICAL BOARDWALK B
14 SCALE: 3/8" = 1'-0"



A1 PLAN - TYPICAL BOARDWALK B
9 SCALE: 3/8" = 1'-0"



B3 SECTION - TYPICAL BOARDWALK B
9 SCALE: 3/4" = 1'-0"

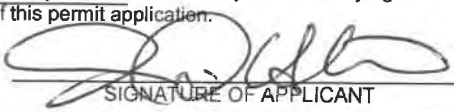


A1 ISO - BOARDWALK A
15 SCALE: NTS

CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH BOARDWALKS
ST. SIMONS ISLAND, GEORGIA

Attachment C: Application for Department of the Army Permit Form

U.S. Army Corps of Engineers (USACE) APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT For use of this form, see 33 CFR 325. The proponent agency is CECW-COR.		Form Approved - OMB No. 0710-0003 Expires: 2027-10-31	
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/SORNs/Index/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 - Jason Middle - Last - Hartman Company - Glynn County E-mail Address - jhartman@glynncounty-ga.gov		8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Stephen Middle - M Last - Bailey Company - Longleaf Consulting E-mail Address - stephen.bailey@longleafconsulting.com	
6. APPLICANT'S ADDRESS: Address- 1725 Reynolds Street City - Brunswick State - GA Zip - 31520 Country - USA		9. AGENT'S ADDRESS: Address- 622 Sea Island Road, Box 144 City - St. Simons Island State - GA Zip - 31522 Country - USA	
7. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 912.554.7469		10. AGENTS PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 706.614.4436	
STATEMENT OF AUTHORIZATION			
11. I hereby authorize, <u>Stephen Bailey</u> 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.  <u>2/15/2026</u> SIGNATURE OF APPLICANT DATE			
NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY			
12. PROJECT NAME OR TITLE (see instructions) East Beach Boardwalks			
13. NAME OF WATERBODY, IF KNOWN (if applicable) Atlantic Ocean		14. PROJECT STREET ADDRESS (if applicable) Address N/A City - State- Zip-	
15. LOCATION OF PROJECT Latitude: °N 31.1396293 Longitude: °W 81.3767398			
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID Municipality Section - Township - Range -			

17. DIRECTIONS TO THE SITE

From I-95 take Exit 38 and go south on GA Spur 25 until it ends at US 17. Go south on US and turn left on the Torras Causeway to St. Simons Island. Stay right after coming on the island and stay on Kings Way, which turns into Ocean Blvd. Continue on Ocean Blvd until turning right into Massengale Park. Access to the project area by beach access from the park to the beach.

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

The project includes construction of two new boardwalks across the tidal slough and wetlands for the public to access the beach and for EMS to have fast, life saving access to the popular beach area in front of Massengale Park.

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

The purpose of the project is to improve and protect public safety and access including ADA access from Massengale Park to the lower beach. The need for the project is the risk to public safety from the current open water and crossing conditions. The need will be met by improving access for the public and for emergency services vehicles in the Massengale Park Area.

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

20. Reason(s) for Discharge

No permanent fill is proposed. Timber piles will be driven in jurisdictional resources for boardwalk construction. Low impact temporary crossings of the tidal pool and wetlands including timber mats and all applicable BMPs will be utilized.

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
0	0	0

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

Acres 0
or
Linear Feet 0

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

Impacts to Waters of the US have been avoided and minimized to the maximum extent practicable to accomplish the project goals and satisfy its purpose and need for public access including ADA access and safety improvements. Compensatory mitigation is not proposed as no permanent fills or loss to Waters of the US are proposed.

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- Crown K/P LLC 201 Arnold Road

City - St. Simons Island

State - GA

Zip - 31522

b. Address-

City -

State -

Zip -

c. Address-

City -

State -

Zip -

d. Address-

City -

State -

Zip -

e. Address-

City -

State -

Zip -

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
GADNR-CRD	SPA Permit		7/16/2026		

* 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 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.

Attachment D: AJD Letter and USACE Wetland and Upland Data Forms



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT
100 W. OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3604

April 23, 2026

Regulatory Division
SAS-2025-00643

Mr. Jason Hartman
Glynn County
1725 Reynolds Street
Brunswick, Georgia 31520

Dear Mr. Hartman:

I refer to a letter dated February 9, 2026, submitted on your behalf by Mr. Stephen Bailey with Longleaf Consulting, requesting an Approved Jurisdictional Determination (AJD) for a 22.36-acre site located on East Beach between Neptune Road and Driftwood Drive, St. Simons Island, Glynn County, Georgia (Latitude 31.13966, Longitude -81.37611). This project has been assigned number SAS-2025-00643 and it is important that you refer to this number in all communication concerning this matter.

We have completed an AJD for this site. Any wetlands on-site were delineated in accordance with criteria contained in the 1987 "Corps of Engineers Wetland Delineation Manual," as amended by the most recent regional supplements to the manual. I have enclosed an "AJD Memorandum for Record," which details whether aquatic resources present on the site are subject to the jurisdiction of the U.S. Army Corps of Engineers and how the Corps determined jurisdiction.

"Tide Pool 1", "Wetland 3", "Wetland 3A", "Wetland 3B", "Wetland 3C", and "Wetland 4" as depicted on the enclosed exhibit entitled, "Figure 5: Aquatic Resources Delineation Map East Beach Tidal Pool Project", dated April 22, 2026, are waters of the United States and are therefore within the jurisdiction of Section 404 of the Clean Water Act (33 United States Code § 1344). The placement of dredged or fill material into Waters of the United States, including mechanized land clearing of jurisdictional wetlands would require prior Department of the Army authorization pursuant to Section 404.

This AJD will remain valid for a period of 5-years unless new information warrants revision prior to that date. You may request an administrative appeal for any AJD under the Corps regulations at 33 Code of Federal Regulations (CFR) Part 331. Enclosed you will find a Notification of Administrative Appeal Options and Process and Request for Appeal form.

The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

If you intend to sell property that is part of a project that requires Department of the Army Authorization, it may be subject to the Interstate Land Sales Full Disclosure Act. The Property Report required by Housing and Urban Development Regulation must state whether, or not a permit for the development has been applied for, issued or denied by the U.S. Army Corps of Engineers (Part 320.3(h) of Title 33 of the CFR).

This communication does not convey any property rights, either in real estate or material, or any exclusive privileges. It does not authorize any injury to property, invasion of rights, or any infringement of federal, state or local laws, or regulations. It does not obviate your requirement to obtain state or local assent required by law for the development of this property. If the information you have submitted, and on which the U.S. Army Corps of Engineers has based its determination is later found to be in error, this decision may be revoked.

Should you have any questions regarding this letter, please contact Mr. Jared Chrisp by email at jared.k.chrisp@usace.army.mil, by telephone at 912-293-1055, or in writing at the letterhead address.

Thank you in advance for completing our on-line Customer Survey Form located at <https://regulatory.ops.usace.army.mil/customer-service-survey/>. We value your comments and appreciate your taking the time to complete a survey each time you interact with our office.

Sincerely,

A handwritten signature in black ink, appearing to read "Jared Chrisp", with a stylized flourish at the end.

Jared K. Chrisp
Project Manager, Coastal Branch

Enclosures

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS
AND REQUEST FOR APPEAL**

Applicant: Mr. Jason Hartman		File Number: SAS-2025-00643	Date: April 23, 2026
Attached is:		See Section below	
☐	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
☐	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
☐	PERMIT DENIAL		C
☒	APPROVED JURISDICTIONAL DETERMINATION		D
☐	PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. The division engineer must receive this form within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Jared K. Chrisp
U.S. Army Corps of Engineers, Savannah District
100 W. Oglethorpe Avenue, Savannah, Georgia 31401

Phone: (912-293-1055
Email: jared.k.chrisp@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

Administrative Appeal Review Officer (Krista Sabin)
CESAD-PDS-O
US Army Corps of Engineers, South Atlantic Division
60 Forsyth Street, Room 10M15
Atlanta, Georgia 30303-8801
krista.d.sabin@usace.army.mil
(904) 314-9631

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:

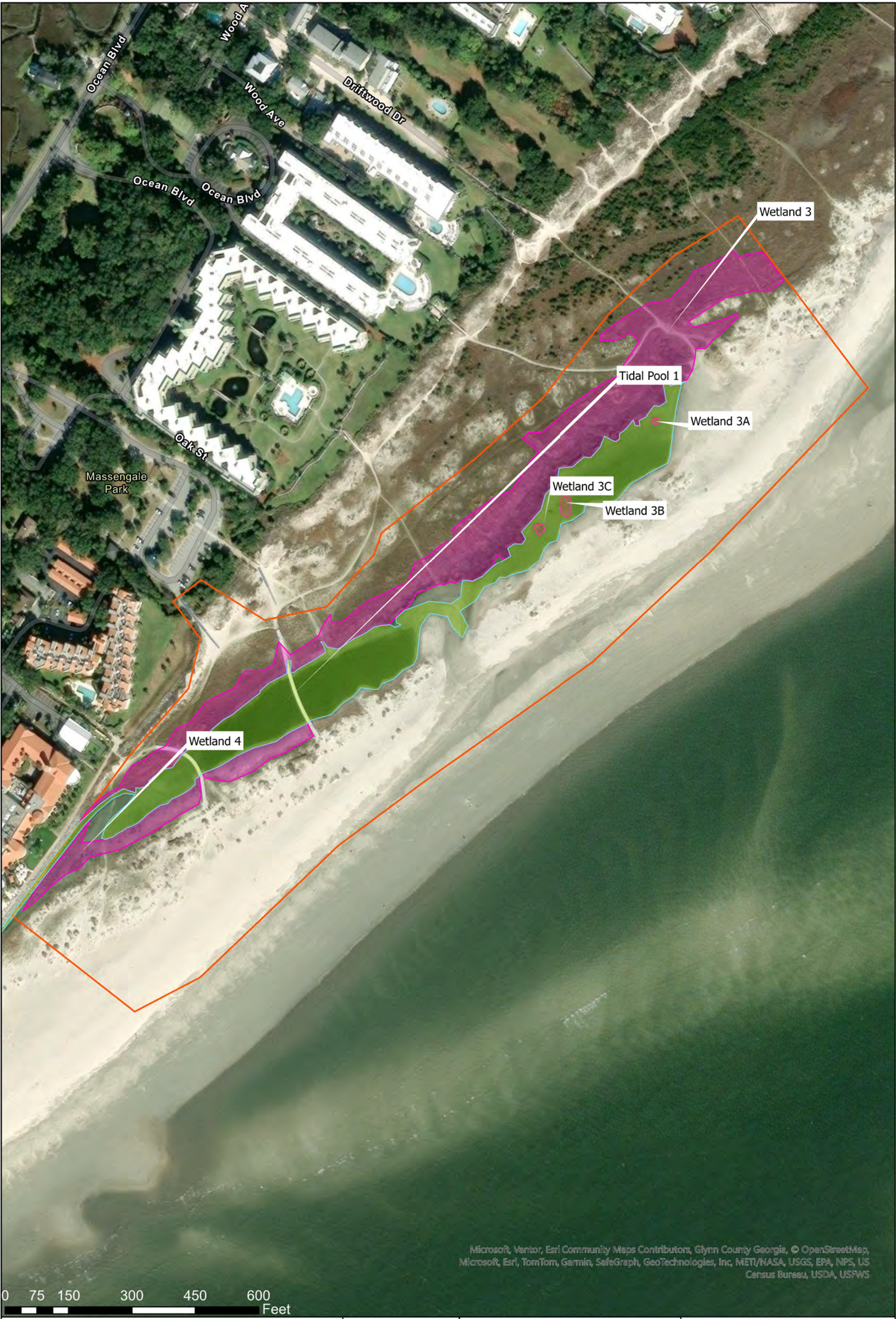


Figure 5: Aquatic Resources Delineation Map
East Beach Tidal Pool Project
Glynn County, Georgia
4/22/2026



Legend

- AJD Review Area
- Wetlands
- Open Water





DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT
100 W. OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3604

SAS-RD-C

23 April 2026

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Pre-2015 Regulatory Regime
Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322
(2023),¹ SAS-2025-00643 (MFR 1 of 1)²

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.³ AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.⁴ For the purposes of this AJD, we have relied on section 10 of the Rivers and Harbors Act of 1899 (RHA),⁵ the Clean Water Act (CWA) implementing regulations published by the Department of the Army in 1986 and amended in 1993 (references 2.a. and 2.b. respectively), the 2008 *Rapanos-Carabell* guidance (reference 2.c.), and other applicable guidance, relevant case law and longstanding practice, (collectively the pre-2015 regulatory regime), and the *Sackett* decision (reference 2.d.) in evaluating jurisdiction.

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. The features addressed in this AJD were evaluated consistent with the definition of “waters of the United States” found in the pre-2015 regulatory regime and consistent with the Supreme Court’s decision in *Sackett*. This AJD did not rely on the 2023 “Revised Definition of ‘Waters of the United States,’” as

¹ While the Supreme Court’s decision in *Sackett* had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.

² When documenting aquatic resources within the review area that are jurisdictional under the Clean Water Act (CWA), use an additional MFR and group the aquatic resources on each MFR based on the TNW, interstate water, or territorial seas that they are connected to. Be sure to provide an identifier to indicate when there are multiple MFRs associated with a single AJD request (i.e., number them 1, 2, 3, etc.).

³ 33 CFR 331.2.

⁴ Regulatory Guidance Letter 05-02.

⁵ USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

SAS-RD-C

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), SAS-2025-00643

amended on 8 September 2023 (Amended 2023 Rule) because, as of the date of this decision, the Amended 2023 Rule is not applicable in this state due to litigation.

1. SUMMARY OF CONCLUSIONS.

- a. Provide a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).

Name of Aquatic Resource	JD or Non-JD	Section 404/Section 10
Wetland 3	JD	Section 404
Wetland 3A	JD	Section 404
Wetland 3B	JD	Section 404
Wetland 3C	JD	Section 404
Wetland 4	JD	Section 404
Tidepool	JD	Section 10/Section 404

2. REFERENCES.

- a. Final Rule for Regulatory Programs of the Corps of Engineers, 51 FR 41206 (November 13, 1986).
- b. Clean Water Act Regulatory Programs, 58 FR 45008 (August 25, 1993).
- c. U.S. EPA & U.S. Army Corps of Engineers, Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States* (December 2, 2008)
- d. *Sackett v. EPA*, 598 U.S. 651, 143 S. Ct. 1322 (2023)

3. REVIEW AREA.

- a. Project Area Size (in acres): 22.36
- b. Center Coordinates of the Project Site (in decimal degrees)
Latitude: 31.13951 Longitude: -81.37619
- c. Nearest City or Town: St. Simons Island
- d. County: Glynn
- e. State: Georgia
- f. Other associated Jurisdictional Determinations: N/A

4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), INTERSTATE WATER, OR THE TERRITORIAL SEAS TO WHICH THE AQUATIC RESOURCE IS CONNECTED.

SAS-RD-C

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), SAS-2025-00643

- a. Name of nearest downstream TNW, Territorial Sea or interstate water: Atlantic Ocean, which is considered the territorial sea.
 - b. Determination based on: This determination was made based on a review of desktop data resources listed in Section 9 of this memorandum and a field visit conducted on April 14, 2026.
5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, INTERSTATE WATER, OR THE TERRITORIAL SEAS
 - a. The tidepool is connected to the Atlantic Ocean during high tide events. The wetlands are directly abutting the tidepool.
6. SECTION 10 JURISDICTIONAL WATERS⁶: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.⁷ N/A
7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the pre-2015 regulatory regime and consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the pre-2015 regulatory regime. The rationale should also include a written description of, or reference to a map in the administrative record that shows, the lateral limits of jurisdiction for each aquatic resource, including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

⁶ 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.

⁷ This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

a. TNWs (a)(1): N/A

Name of Aquatic Resource	Size (in acres)	Description
Tidepool	3.44	This tidepool is directly connected to the Atlantic Ocean during large tide events. The tidepool does not experience daily tidal inundation. However, the tidepool is below the High Tide Line and does connect to the Atlantic Ocean several times annually during spring tides.

b. Interstate Waters (a)(2): N/A

c. Other Waters (a)(3): N/A

d. Impoundments (a)(4): N/A

e. Tributaries (a)(5): N/A

f. The territorial seas (a)(6): N/A

g. Adjacent wetlands (a)(7):

Name of Aquatic Resource	Size (in acres)	Contiguous with or abutting? If so, list water	Describe continuous surface connection
Wetland 3	4.03	Yes, Tidepool	These wetlands are directly abutting a tidally influenced tidepool. During large tide events, parts of these wetlands are inundated by the tide.
Wetland 3A	0.004	Yes, Tidepool	
Wetland 3B	0.26	Yes, Tidepool	
Wetland 3C	0.01	Yes, Tidepool	
Wetland 4	0.3	Yes, Tidepool	

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

- a. Describe aquatic resources and other features within the review area identified as “generally non-jurisdictional” in the preamble to the 1986 regulations (referred to as “preamble waters”).⁸ Include size of the aquatic resource or feature within the review area and describe how it was determined to be non-jurisdictional under the CWA as a preamble water. N/A
- b. Describe aquatic resources and features within the review area identified as “generally not jurisdictional” in the *Rapanos* guidance. Include size of the aquatic resource or feature within the review area and describe how it was determined to

⁸ 51 FR 41217, November 13, 1986.

SAS-RD-C

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), SAS-2025-00643

be non-jurisdictional under the CWA based on the criteria listed in the guidance.
N/A

- c. Describe aquatic resources and features identified within the review area as waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA. Include the size of the waste treatment system within the review area and describe how it was determined to be a waste treatment system. N/A
 - d. Describe aquatic resources and features within the review area determined to be prior converted cropland in accordance with the 1993 regulations (reference 2.b.). Include the size of the aquatic resource or feature within the review area and describe how it was determined to be prior converted cropland. N/A
 - e. Describe aquatic resources (i.e. lakes and ponds) within the review area, which do not have a nexus to interstate or foreign commerce, and prior to the January 2001 Supreme Court decision in “*SWANCC*,” would have been jurisdictional based solely on the “Migratory Bird Rule.” Include the size of the aquatic resource or feature, and how it was determined to be an “isolated water” in accordance with *SWANCC*. N/A
 - f. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the pre-2015 regulatory regime consistent with the Supreme Court’s decision in *Sackett* (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).
N/A
9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.
- a. 1. Date of Office Review: April 13, 2026
2. Date(s) of Field Review: April 14, 2026
 - b. Data sources used to support this determination (included in the administrative record).
 - ☒ Aquatic Resources delineation submitted by, or on behalf of, the requestor: Titled “Aquatic Resources Delineation Map East Beach Tidal Pool Project” and dated April 22, 2026
 - ☒ Photographs: Source: Corps site visit on April 14, 2026
 - ☒ Aerial Imagery: Source: Google Earth

SAS-RD-C

SUBJECT: Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), SAS-2025-00643

- ☒ LIDAR: Source: NOAA; Titled "LIDAR", and dated April 16, 2026
- ☒ USDA NRCS Soil Survey: Titled "Custom Soil Resource Report"
- ☒ USFWS NWI maps: Titled "NWI" and dated April 16, 2026
- ☒ USGS NHD data/maps: Titled "NHD" and dated April 16, 2026
- ☒ Antecedent Precipitation Tool Analysis: January 12, 2025 and April 14, 2026

10. OTHER SUPPORTING INFORMATION. N/A

11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<i>OMB Control #: 0710-0024, Exp: 9/30/2027</i> <i>Requirement Control Symbol EXEMPT:</i> <i>(Authority: AR 335-15, paragraph 5-2a)</i>
--	---

Project/Site: East Beach Water Impoundment City/County: Glynn Sampling Date: 1/12/2025

Applicant/Owner: Glynn County State: GA Sampling Point: Wetland 3

Investigator(s): S. Bailey; C. Bailey Section, Township, Range: _____

Landform (hillside, terrace, etc.): beach Local relief (concave, convex, none): none Slope (%): 0-1

Subregion (LRR or MLRA): LRR T, MLRA 153B Lat: 31.14021 Long: 81.37550 Datum: NAD 83

Soil Map Unit Name: Beaches (Be) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width: 100%; border: none;"> <tr> <td>☐ Surface Water (A1)</td> <td>☒ Aquatic Fauna (B13)</td> </tr> <tr> <td>☒ High Water Table (A2)</td> <td>☐ Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td>☒ Saturation (A3)</td> <td>☐ Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td>☐ Water Marks (B1)</td> <td>☐ Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td>☒ Sediment Deposits (B2)</td> <td>☐ Presence of Reduced Iron (C4)</td> </tr> <tr> <td>☒ Drift Deposits (B3)</td> <td>☐ Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td>☐ Algal Mat or Crust (B4)</td> <td>☐ Thin Muck Surface (C7)</td> </tr> <tr> <td>☐ Iron Deposits (B5)</td> <td>☐ Other (Explain in Remarks)</td> </tr> <tr> <td>☒ Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td>☐ Water-Stained Leaves (B9)</td> <td></td> </tr> </table>		☐ Surface Water (A1)	☒ Aquatic Fauna (B13)	☒ High Water Table (A2)	☐ Marl Deposits (B15) (LRR U)	☒ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Water Marks (B1)	☐ Oxidized Rhizospheres on Living Roots (C3)	☒ Sediment Deposits (B2)	☐ Presence of Reduced Iron (C4)	☒ Drift Deposits (B3)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface (C7)	☐ Iron Deposits (B5)	☐ Other (Explain in Remarks)	☒ Inundation Visible on Aerial Imagery (B7)		☐ Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <table style="width: 100%; border: none;"> <tr> <td>☐ Surface Soil Cracks (B6)</td> </tr> <tr> <td>☐ Sparsely Vegetated Concave Surface (B8)</td> </tr> <tr> <td>☐ Drainage Patterns (B10)</td> </tr> <tr> <td>☐ Moss Trim Lines (B16)</td> </tr> <tr> <td>☐ Dry-Season Water Table (C2)</td> </tr> <tr> <td>☐ Crayfish Burrows (C8)</td> </tr> <tr> <td>☐ Saturation Visible on Aerial Imagery (C9)</td> </tr> <tr> <td>☐ Geomorphic Position (D2)</td> </tr> <tr> <td>☐ Shallow Aquitard (D3)</td> </tr> <tr> <td>☒ FAC-Neutral Test (D5)</td> </tr> <tr> <td>☐ Sphagnum Moss (D8) (LRR T, U)</td> </tr> </table>	☐ Surface Soil Cracks (B6)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Drainage Patterns (B10)	☐ Moss Trim Lines (B16)	☐ Dry-Season Water Table (C2)	☐ Crayfish Burrows (C8)	☐ Saturation Visible on Aerial Imagery (C9)	☐ Geomorphic Position (D2)	☐ Shallow Aquitard (D3)	☒ FAC-Neutral Test (D5)	☐ Sphagnum Moss (D8) (LRR T, U)
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☐ Sphagnum Moss (D8) (LRR T, U)																																	
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____																																
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																	
Remarks:																																	

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Wetland 3

Tree Stratum (Plot size: <u>10</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>10</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Indicators: ☒ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>10</u>)				
1. <i>Fimbristylis castanea</i>	75	Yes	OBL	
2. <i>Spartina alterniflora</i>	25	Yes	OBL	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ 100 = Total Cover				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				
Woody Vine Stratum (Plot size: <u>10</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below.)				

SOIL

Sampling Point: Wetland 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 8/2	100					Sandy	
4-20	10YR 6/1	80	10YR 8/6	20	C	M	Sandy	Prominent redox concentrations
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					² Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)					Indicators for Problematic Hydric Soils³:			
☐ Histosol (A1) ☐ Thin Dark Surface (S9) (LRR S, T, U)					☐ 1 cm Muck (A9) (LRR O)			
☐ Histic Epipedon (A2) ☐ Barrier Islands 1 cm Muck (S12)					☐ 2 cm Muck (A10) (LRR S)			
☐ Black Histic (A3) ☐ (MLRA 153B, 153D)					☐ Coast Prairie Redox (A16) (MLRA 149A)			
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1) (LRR O)					☐ Reduced Vertic (F18)			
☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2)					☐ (outside MLRA 150A, 150B)			
☐ Organic Bodies (A6) (LRR P, T, U) ☐ Depleted Matrix (F3)					☐ Piedmont Floodplain Soils (F19) (LRR P, T)			
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U) ☐ Redox Dark Surface (F6)					☐ Anomalous Bright Floodplain Soils (F20)			
☐ Muck Presence (A8) (LRR U) ☐ Depleted Dark Surface (F7)					☐ (MLRA 153B)			
☐ 1 cm Muck (A9) (LRR P, T) ☐ Redox Depressions (F8)					☐ Red Parent Material (F21)			
☐ Depleted Below Dark Surface (A11) ☐ Marl (F10) (LRR U)					☐ Very Shallow Dark Surface (F22)			
☐ Thick Dark Surface (A12) ☐ Depleted Ochric (F11) (MLRA 151)					☐ (outside MLRA 138, 152A in FL, 154)			
☐ Coast Prairie Redox (A16) (MLRA 150A) ☐ Iron-Manganese Masses (F12) (LRR O, P, T)					☐ Other (Explain in Remarks)			
☐ Iron Monosulfide (A18) ☐ Umbric Surface (F13) (LRR P, T, U)								
☐ Sandy Mucky Mineral (S1) (LRR O, S) ☐ Delta Ochric (F17) (MLRA 151)								
☐ Sandy Gleyed Matrix (S4) ☐ Reduced Vertic (F18) (MLRA 150A, 150B)								
☒ Sandy Redox (S5) ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)								
☐ Stripped Matrix (S6) ☐ Anomalous Bright Floodplain Soils (F20)								
☐ Dark Surface (S7) (LRR P, S, T, U) ☐ (MLRA 149A, 153C, 153D)								
☐ Polyvalue Below Surface (S8) ☐ Very Shallow Dark Surface (F22)								
☐ (LRR S, T, U) ☐ (MLRA 138, 152A in FL, 154)								
Restrictive Layer (if observed): Type: _____ Depth (inches): _____							Hydric Soil Present? Yes ☒ No _____	
Remarks:								

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<i>OMB Control #: 0710-0024, Exp: 9/30/2027</i> <i>Requirement Control Symbol EXEMPT:</i> <i>(Authority: AR 335-15, paragraph 5-2a)</i>
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Project/Site: East Beach Water Impoundment City/County: Glynn Sampling Date: 1/12/2025

Applicant/Owner: Glynn County State: GA Sampling Point: Upland 3

Investigator(s): S. Bailey; C. Bailey Section, Township, Range: _____

Landform (hillside, terrace, etc.): beach Local relief (concave, convex, none): none Slope (%): 0-1

Subregion (LRR or MLRA): LRR T, MLRA 153B Lat: 31.14015 Long: 81.37642 Datum: NAD 83

Soil Map Unit Name: Beaches (Be) NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; padding: 5px;"> Is the Sampled Area within a Wetland? </td> <td style="width: 40%; padding: 5px;"> Yes _____ No <u>X</u> </td> </tr> </table>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>		
Remarks:			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)		<u>Secondary Indicators (minimum of two required)</u> ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5) ☐ Sphagnum Moss (D8) (LRR T, U)	
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; padding: 5px;"> Wetland Hydrology Present? </td> <td style="width: 40%; padding: 5px;"> Yes _____ No <u>X</u> </td> </tr> </table>	Wetland Hydrology Present?	Yes _____ No <u>X</u>
Wetland Hydrology Present?	Yes _____ No <u>X</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Upland 3

Tree Stratum (Plot size: <u>10</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>10</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum (Plot size: <u>10</u>)				
1. <u>Uniola paniculata</u>	<u>35</u>	<u>Yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>18</u> 20% of total cover: <u>7</u>				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: <u>10</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below.)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

SOIL

Sampling Point: Upland 3

[illegible]

Attachment E: Biological Assessment

EAST BEACH BOARDWALKS PROJECT

BIOLOGICAL ASSESSMENT

Prepared for:

Glynn County Engineering Services

1725 Reynolds Street

Brunswick, Georgia 31520

Prepared by:

Longleaf Consulting

622 Sea Island Road, Box 144

St. Simons Island, Georgia 31522

July 2026



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1.0: Introduction

East Beach is located on the Atlantic Ocean shoreline of St. Simons Island, Glynn County, Georgia. Following recent storm events and hurricane-related overwash, a series of tidal pools formed that are landward of the primary beach and dune system. These features have persisted and now function as open water and wetland habitats within the East Beach shoreline environment.

The tidal pools have altered pedestrian access patterns along portions of East Beach. To address public access needs while minimizing impacts to aquatic resources, Glynn County is evaluating the construction of elevated boardwalk structures that would span the tidal pools rather than filling them.

2.0: Proposed Project Description

2.1 Project Location

The proposed East Beach Boardwalks Project is located within Massengale Park on the Atlantic Ocean shoreline of East Beach, St. Simons Island, Glynn County, Georgia (Figure 1). The project area encompasses approximately 6.16 acres of tidal pool, beach, dune, and associated wetland habitats located between the Atlantic Ocean shoreline and existing public beach access and recreational facilities. Subsequent longshore processes have caused significant accretion in the project area that along with the tidal pools and wetlands, have restricted access to the lower beach.

The project area is owned and maintained by Glynn County and is used extensively for public recreation, including pedestrian beach access, wildlife observation, and passive recreational activities. Existing pedestrian circulation through the site is constrained by tidal pools, dense vegetation, and wetland areas, limiting access between portions of the beach and adjacent public facilities.

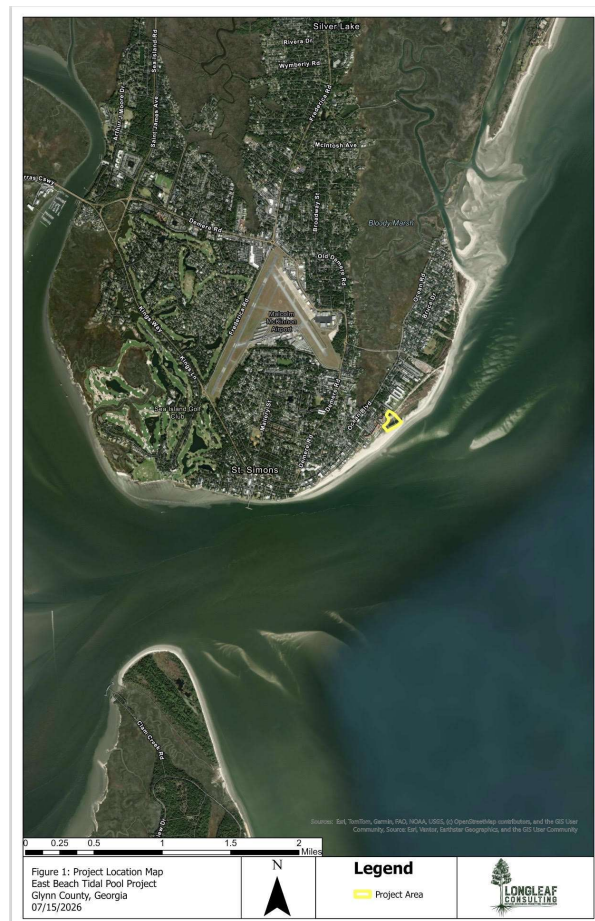


Figure 1: Project location map. All activity will take place on East Beach on Saint Simons Island, Georgia.

2.2 Existing Site Conditions

The project area is located within a coastal barrier island system characterized by sandy beaches, frontal dunes, overwash features, tidal pools, and emergent wetlands. The tidal pools include approximately 3.83 acres of open water and associated fringe wetlands that support a diverse assemblage of coastal wildlife and contribute to habitat diversity along East Beach.

The tidal pools receive hydrologic inputs through precipitation, groundwater interaction, storm surge, and periodic tidal overwash during elevated tidal events. Although water levels fluctuate seasonally and in response to storm events, the pools have become established landscape features supporting aquatic and semi-aquatic vegetation and providing habitat for numerous resident and migratory species.

Surrounding habitats include ocean beach, frontal dune, interdunal depressions, tidal pools, emergent wetlands, and landscaped recreational areas associated with Massengale

Park. Collectively, these habitats provide suitable foraging, resting, nesting, and movement habitat for federally listed shorebirds, sea turtles, wading birds, and other coastal wildlife.

2.3 Proposed Action

The proposed action consists of constructing two elevated timber pedestrian boardwalks to improve public access across the existing tidal pool system while minimizing impacts to aquatic resources and coastal habitats (Figure 2).

Boardwalk A will extend approximately **636 feet** and will generally consist of a **13-foot-wide elevated pedestrian and emergency vehicle structure**, including associated overlooks, access ramps, and stairways where necessary to accommodate existing grades. Boardwalk B will extend approximately **390 feet** and will consist of an elevated **5.5-foot-wide pedestrian boardwalk** connecting existing recreational facilities across the eastern portion of the tidal pool system. Together, the proposed improvements will provide approximately **1,026 linear feet** of elevated pedestrian access while maintaining the existing tidal pool system beneath the structures.

The boardwalks will consist of timber decking supported by timber piles with timber girders, framing members, and handrails consistent with the project design plans. ADA-accessible ramps and stairways will be incorporated where necessary to accommodate changes in elevation and provide public accessibility. Construction will also include removal of the existing floating pedestrian walkway currently located within the project area and restoration of disturbed areas following construction.

The elevated boardwalk design was selected to minimize impacts to existing tidal pools, wetlands, and associated habitats by avoiding permanent filling of aquatic resources and maintaining hydrologic connectivity throughout the project area. Compared to alternatives involving placement of fill within the tidal pool system, the preferred alternative substantially reduces permanent impacts to aquatic habitats while improving pedestrian circulation and public safety.



Figure 2: Aquatic resources delineation map with approximate boardwalk location. Wetlands and waters were field delineated using US Army Corps of Engineers (USACE) and state procedures in December 2025 and January 2026.

2.4 Alternatives Analysis

Several alternatives were evaluated during project planning to improve pedestrian access across the tidal pool system while minimizing environmental impacts.

Under the **No Action Alternative**, no improvements would be constructed, and existing access and safety issues would remain. Although this alternative would avoid construction-related impacts, it would not address the project's purpose of improving public access and safety.

Additional alternatives involving placement of fill within portions of the tidal pool system were considered during project planning. While these alternatives would have provided direct pedestrian access and emergency vehicle access, they would fill portions of the existing tidal pools, reduce available aquatic habitat, alter existing hydrologic conditions, and diminish ecological functions currently provided by tidal pools and wetland areas.

The **Preferred Alternative** consists of constructing elevated timber boardwalks supported by timber piles that span the existing tidal pools and associated wetlands. By elevating the pedestrian facilities above the aquatic resources, the preferred alternative would maintain existing hydrologic connectivity, preserve ecological functions of the tidal pools, minimize impacts to wetlands and open water habitats, and provide safe public and emergency access through the project area. Because it best satisfies the project purpose while minimizing environmental impacts, the elevated boardwalk alternative was selected as the preferred alternative.

2.5 Construction Methods

Construction will be completed using conventional construction equipment and methods appropriate for installation of elevated timber boardwalk structures within a sensitive coastal environment. The boardwalks will be supported by timber piles installed at locations identified on the final engineering plans. Timber girders, framing members, decking, handrails, ramps, and stairways will then be installed to complete each boardwalk segment.

Construction activities will include installation of temporary erosion and sediment control measures, removal of the existing floating walkways, pile installation, placement of structural framing members, installation of timber decking and railings, construction of access ramps and stairways, and restoration of temporarily disturbed areas following project completion. Temporary construction disturbance will be limited to designated work corridors and staging areas identified on the construction plans.

Best Management Practices (BMPs) will be implemented throughout construction to minimize impacts to adjacent wetlands, tidal pools, beach habitats, and dune systems. Temporary disturbances associated with construction activities will be restored following completion of the project in accordance with applicable permit conditions. Typical boardwalk cross sections illustrating the proposed structural configuration, pedestrian width, railing systems, and pile-supported foundation are provided in Figures 3A and 3B.

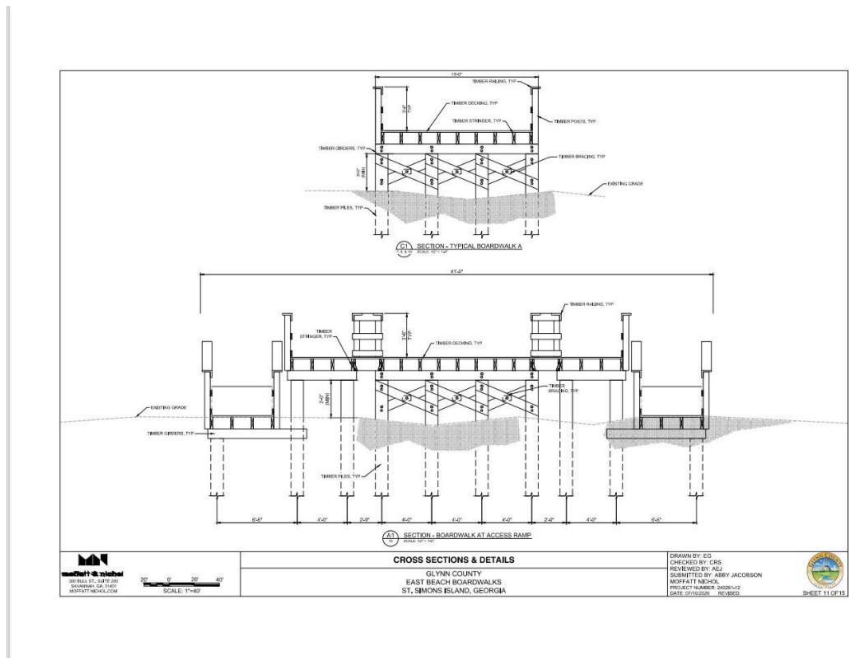


Figure 3A: Typical Cross Section of Boardwalk A at access ramp.

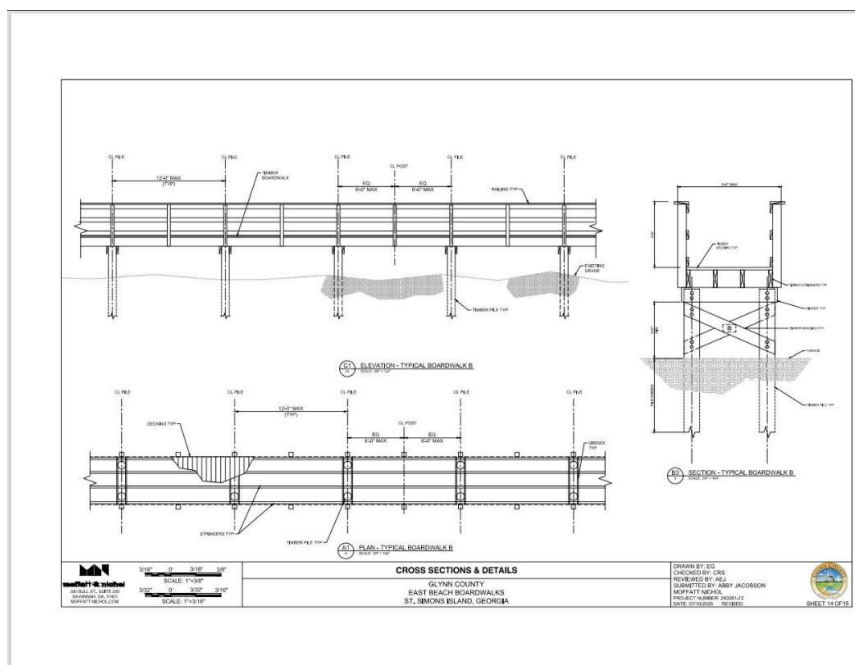


Figure 3B: Typical Cross Section of Boardwalk B.

2.6 Action Area

For purposes of this Biological Assessment, the action area includes all areas that may be affected directly or indirectly by implementation of the proposed project. The action area encompasses the footprints of the proposed boardwalks, temporary construction work

corridors, construction access and staging areas, and adjacent beach, dune, wetland, and tidal pool habitats where temporary disturbances associated with construction activities could occur.

Habitats within the action area include ocean beach, frontal dunes, tidal pools, emergent wetlands, and associated upland recreational areas. These habitats support a variety of resident and migratory wildlife species, including several federally listed species addressed in this Biological Assessment.

3.0: Affected Environment

3.1 Regional Setting

The project area is located on East Beach, St. Simons Island, Georgia, one of Georgia's four principal barrier islands situated along the Atlantic coastline within Glynn County (Figure 3). St. Simons Island is separated from the mainland by an extensive estuarine system consisting of tidal marshes, creeks, and rivers and is bordered to the east by the Atlantic Ocean. The island supports a diverse mosaic of coastal habitats including ocean beaches, frontal dunes, maritime forests, salt marshes, tidal creeks, and freshwater wetlands.

Georgia's barrier islands are dynamic geomorphic systems that are continually shaped by tides, waves, longshore sediment transport, storm surge, and periodic tropical cyclones. These natural processes contribute to the continual erosion, accretion, migration, and reformation of coastal landforms and habitats. Storm overwash events, while often resulting in short-term changes to shoreline morphology, are recognized as important natural processes that create habitat diversity and maintain the ecological function of barrier island systems (Morton and Sallenger 2003; National Park Service 2023).

The East Beach project area represents one such dynamic coastal environment where recent storm activity has significantly influenced existing site conditions.

3.2 Geomorphology and Hydrology

The project area is situated within Georgia's Atlantic Coastal Plain physiographic province and is characterized by low-relief sandy coastal deposits formed through marine and aeolian processes. Surface elevations are generally low and transition between the Atlantic Ocean beach, frontal dunes, overwash flats, and shallow depressional areas occupied by the tidal pool system.

Hydrology within the project area is influenced by precipitation, shallow groundwater, periodic tidal overwash, storm surge, and surface runoff. Water levels within the tidal pools fluctuate in response to seasonal rainfall, groundwater elevations, tide levels, and coastal

storm events. During higher tides and storm surge associated with tropical systems, portions of the tidal pool system may connect with the Atlantic Ocean.

The occurrence of these mapped flood zones is consistent with the dynamic coastal processes that have shaped the existing landscape, including the processes that resulted in the formation of the existing tidal pools. Consequently, periodic coastal flooding and geomorphic change are expected components of the natural system.



3.3 Habitat Communities

The project area supports several distinct habitat communities typical of Georgia's barrier island environments.

Beach Habitat

Beach habitat occupies the eastern portion of the project area adjacent to the Atlantic Ocean and consists primarily of unconsolidated sand subject to regular tidal inundation, wave action, and shoreline migration. This habitat provides important foraging and resting opportunities for migratory shorebirds.

Dune Habitat

Frontal dunes occur landward of the beach and are vegetated by native dune species adapted to salt spray, wind exposure, and shifting sands. Vegetation within these areas contributes to dune stabilization while providing habitat for a variety of wildlife species including nesting habitat for federally protected sea turtles. Dune systems also function as an important natural buffer protecting inland resources from storm surge and coastal flooding.

Tidal Pools and Open Water

The tidal pools represent the dominant habitat within the project area and encompass approximately 3.83 acres of shallow open water areas. These pools vary in depth and hydroperiod and provide habitat for aquatic organisms, wading birds, shorebirds, amphibians, and other wildlife. Their shallow margins create productive transition zones that support both aquatic and terrestrial species.

Emergent Wetlands

Fringe wetlands occur along portions of the tidal pool margins where hydrologic conditions support emergent herbaceous vegetation. Dominant vegetation observed within these wetlands includes smooth cordgrass (*Spartina alterniflora*), saltgrass (*Distichlis spicata*), and saltmarsh fimbry (*Fimbristylis castanea*). These wetlands perform important ecological functions including nutrient cycling, water quality enhancement, sediment retention, and wildlife habitat.

Collectively, the beach, dune, tidal pool, and wetland communities form an interconnected coastal habitat complex that supports a diverse assemblage of resident and migratory wildlife species.

3.4 Existing Wildlife Use

The project area provides habitat for a variety of wildlife species representative of Georgia's barrier island ecosystems. The combination of beach, dune, tidal pool, and wetland habitats supports numerous avian species, reptiles, mammals, amphibians, and aquatic organisms.

The tidal pools provide shallow-water foraging habitat for wading birds, herons, egrets, and shorebirds, while the adjacent beaches provide suitable habitat for migratory species including piping plover (*Charadrius melodus*) and rufa red knot (*Calidris canutus rufa*) during migration and wintering periods. Open sandy beach and dune habitats also provide nesting habitat for several federally protected sea turtle species.

The emergent wetlands associated with the tidal pool margins provide habitat for marsh-dependent birds and other wetland wildlife, while the secondary dune systems support terrestrial species adapted to coastal environments. Although the project area is located within a highly visited and recreational setting, the diversity of habitat types substantially increases the ecological value of the site relative to a typical managed beachfront.

The project area also lies within the broader Atlantic Flyway and provides habitat utilized by migratory birds during seasonal movements along the southeastern Atlantic coast. In addition to federally listed species discussed in Section 5.0, numerous migratory birds protected under the Migratory Bird Treaty Act (16 U.S.C. §§ 703–712) may occur within or adjacent to the action area during portions of the year.

3.5 Surrounding Land Use

Land use surrounding the project area consists primarily of public recreational facilities associated with Massengale Park, public beach access infrastructure, residential development, commercial establishments, and coastal transportation corridors. Despite the developed character of the surrounding landscape, the project area retains important natural coastal habitats that contribute to the ecological integrity of East Beach.

The proposed project has been designed to improve public safety and accessibility while maintaining the natural features of the area. By utilizing elevated boardwalk structures rather than filling the tidal pools, the project preserves the existing habitat mosaic and allows continued ecological function of the coastal wetlands and open water features.

3.6 Tidal Pool Formation and Ecological Function

Rather than representing artificial or excavated features, these pools are naturally occurring geomorphic features formed through coastal processes characteristic of dynamic barrier island systems. Since their formation, the tidal pools have become integrated into the

coastal landscape and now provide ecological functions that were not previously present within this portion of East Beach. The pools support shallow open-water habitat, emergent wetlands, and transition zones that increase habitat heterogeneity and provide foraging opportunities for wading birds, shorebirds, aquatic organisms, and other wildlife. The interface between the pools, beaches, and dunes creates a diverse assemblage of coastal habitats capable of supporting resident species as well as migratory wildlife utilizing the Atlantic Flyway.

Hydrologic conditions within the pools are influenced by precipitation, shallow groundwater, tide levels, and periodic overwash during storm events. These natural processes continue to shape the morphology and ecological function of the pools while maintaining habitat diversity within the project area.

Recognition of the ecological value of these habitats was a primary factor influencing project design. Rather than filling portions of the tidal pool system to facilitate pedestrian access, the preferred alternative utilizes elevated timber boardwalks supported by timber piles that span the pools while maintaining existing hydrologic connectivity and preserving ecological functions.

4.0: Federally Listed Species, Critical Habitat, and Essential Fish Habitat

4.1 Regulatory Review

Pursuant to Section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. §§ 1531–1544), federal agencies are required to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of federally listed threatened or endangered species or result in the destruction or adverse modification of designated critical habitat.

To evaluate the potential for federally listed species to occur within the project area, an official species list was obtained through the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system. In addition, the National Marine Fisheries Service (NMFS) guidance documents, Georgia Department of Natural Resources Coastal Resources Division databases, and available scientific literature describing species distributions and habitat requirements along the Georgia coast.

Species included in this Biological Assessment were selected based on documented occurrences within Glynn County, species identified through the IPaC Official Species List, the presence of suitable habitat within the action area, and consultation requirements associated with coastal development projects.

4.2 Federally Listed Species

The project area provides a diverse assemblage of coastal habitats that may support federally listed species during portions of the year. Beach and dune habitats provide migratory habitat for federally protected shorebirds and nesting habitat for sea turtles, while the tidal pools and associated wetlands provide shallow-water foraging habitat for shorebirds, wading birds and other wildlife. The action area was evaluated to determine whether suitable habitat exists for each federally listed species and whether the proposed project may affect those species.

TABLE 4.1. Federally Listed Species with Potential Occurrence in the Project Area

Species	Common Name	Scientific Name	Status
Mammals	West Indian Manatee	<i>Trichechus manatus</i>	T
Birds	Eastern Black Rail	<i>Laterallus jamaicensis</i> spp.	T
	Piping Plover	<i>Charadrius melodus</i>	T
	Rufa Red Knot	<i>Calidris canutus rufa</i>	T
Reptiles	Eastern Indigo Snake	<i>Drymarchon couperi</i>	T
	Green Sea Turtle	<i>Chelonia mydas</i>	T
	Hawksbill Sea Turtle	<i>Eretmochelys imbricata</i>	E
	Kemp's Ridley Sea Turtle	<i>Lepidochelys kempii</i>	E
	Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	E
	Loggerhead Sea Turtle	<i>Caretta caretta</i>	T
Insects	Monarch Butterfly	<i>Danaus plexippus</i>	PT
Species proposed for listing: Monarch butterfly	Designated Critical Habitat: None	Proposed Critical Habitat: Rufa Red Knot	Key: E = endangered T = threatened PT = proposed threatened

4.3 Critical Habitat

A review of the USFWS IPaC system and available critical habitat mapping was conducted to determine whether designated critical habitat occurs within or adjacent to the action area.

Portions of the Atlantic Ocean shoreline of St. Simons Island including the project area have been designated as critical habitat for piping plover and proposed critical habitat for the rufa red knot. These designated units generally include ocean beaches, overwash areas, mudflats, sandflats, and associated shoreline habitats that provide essential wintering habitat for these species (USFWS 2001).

The project area includes suitable shoreline and adjacent habitats utilized by piping plover and rufa red knot. Because the proposed project consists of elevated boardwalk structures that span the existing tidal pools and avoid permanent filling of aquatic habitats and no loss of existing low-energy shorelines, adverse modification of designated critical habitat is not anticipated. No other designated critical habitats for federally listed species were identified within the action area.

4.4 Essential Fish Habitat

Essential Fish Habitat (EFH) was evaluated pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §§ 1801–1891).

Coastal waters adjacent to St. Simons Island provide EFH for numerous federally managed marine fish and invertebrate species, including shrimp, snapper-grouper species, coastal migratory pelagic species, and highly migratory species. The project area itself consists primarily of recently formed tidal pools located landward of the active beach and is not continually connected to managed estuarine or marine habitats supporting designated EFH.

The proposed project will not involve dredging, channel modification, placement of fill within marine waters, or alteration of estuarine habitats. Accordingly, the proposed action is not expected to substantially affect Essential Fish Habitat or managed fisheries resources.

4.5 Migratory Birds

Numerous migratory bird species protected under the Migratory Bird Treaty Act (MBTA) may utilize the project area throughout the year. Beach habitats, tidal pools, wetlands, and dune communities provide suitable resting, foraging, and loafing habitat for shorebirds, wading birds, gulls, terns, raptors, and passerine species that migrate along the Atlantic Flyway.

Construction activities have the potential to temporarily disturb migratory birds within the project area. Implementation of BMPs, seasonal timing considerations where practicable,

and minimization of habitat disturbance will reduce the potential for impacts to migratory birds protected under the MBTA.

5.0: Species Accounts and Effects Analysis

5.1 Shorebirds

Piping Plover (*Charadrius melodus*)

Species Description and Habitat Requirements

The piping plover is federally listed as threatened and occurs along the Atlantic Coast during the non-breeding season. Wintering individuals occupy sandy ocean beaches, overwash areas, tidal flats, mudflats, and sparsely vegetated shorelines where they forage on marine invertebrates and small crustaceans (USFWS 2001; Elliott-Smith and Haig 2020). Georgia's barrier islands provide important wintering habitat for the Atlantic Coast population, and piping plovers have been documented on numerous beaches throughout Glynn County.

Suitable habitat within the action area consists primarily of the Atlantic Ocean shoreline, sparsely vegetated beach habitat, overwash areas, and the shallow margins of the hurricane-created tidal pools. These habitats provide suitable foraging opportunities and loafing areas during migration and winter.

Occurrence Within the Action Area

The project area contains suitable wintering and migratory habitat for piping plovers and they have been observed recently in the general vicinity of the project area. The species has been documented on barrier island beaches throughout coastal Georgia and may occur seasonally within the action area.

The proposed boardwalk alignment generally traverses the back-beach environment and tidal pool system rather than the active ocean beach. Consequently, suitable beach habitat will remain available during and after project construction.

Effects Analysis

Construction of approximately **1,026 linear feet of elevated timber boardwalk** will result in temporary construction-related noise, human activity, and localized disturbance within portions of the action area. Installation of timber piles, construction of boardwalk decking, and removal of the existing floating walkways may temporarily discourage individual piping plovers from utilizing portions of the project area during active construction.

The preferred alternative avoids permanent filling of the tidal pools and minimizes direct impacts to adjacent beach habitat by utilizing elevated timber pile-supported structures. Existing foraging habitat, shoreline morphology, and hydrologic conditions will remain substantially unchanged following project completion. Temporary construction disturbances are expected to be localized and short in duration.

Implementation of construction BMP's, avoidance of unnecessary disturbance outside approved work areas, and compliance with applicable conservation measures will further minimize the potential for adverse effects.

Effect Determination

May Affect, Not Likely to Adversely Affect

Rufa Red Knot (*Calidris canutus rufa*)

Species Description and Habitat Requirements

The rufa red knot is federally listed as threatened and is a long-distance migratory shorebird that winters and migrates along the Atlantic Coast. During migration and winter, the species utilizes beaches, tidal flats, overwash areas, estuarine shorelines, and shallow coastal wetlands where it feeds on marine invertebrates and horseshoe crab eggs when available (Niles et al. 2008; USFWS 2014). Barrier island beaches along the Georgia coast provide important migratory stopover and wintering habitat for red knots, particularly within areas supporting extensive intertidal foraging habitat.

Occurrence Within the Action Area

Suitable foraging and resting habitat occurs within the project area along the Atlantic Ocean shoreline and around the shallow margins of the tidal pools. While no individuals were observed during field investigations, the action area contains proposed critical habitat characteristics commonly utilized by migrating and wintering red knots.

Effects Analysis

Construction activities associated with the proposed boardwalks will temporarily increase human presence and construction noise within portions of the action area. These temporary disturbances may cause individual birds to relocate to nearby portions of East Beach during active construction.

The project has been specifically designed to avoid permanent impacts to the tidal pools and associated beach habitats by utilizing elevated timber structures. Following

construction, existing shoreline habitat, shallow water habitat, and foraging opportunities will remain available. Because habitat loss is expected to be minimal and temporary construction disturbances are localized, long-term impacts to red knot habitat are not anticipated.

Effect Determination

May Affect, Not Likely to Adversely Affect

5.2 Marsh Birds

Eastern Black Rail (*Laterallus jamaicensis jamaicensis*)

Species Description and Habitat Requirements

The eastern black rail is federally listed as threatened and occupies high-marsh environments, wet meadows, and shallow emergent wetlands characterized by dense herbaceous vegetation and intermittent inundation (USFWS 2019). Suitable habitat generally occurs within upper tidal marshes that remain above normal daily tidal flooding while maintaining saturated soils throughout much of the year. Within coastal Georgia, eastern black rails have been documented in high marsh habitats containing dense graminoid vegetation, shallow standing water, and limited woody vegetation.

Occurrence Within the Action Area

Limited suitable habitat occurs along portions of the tidal pool margins where emergent wetland vegetation has established. However, most of the project area consists of open water, beach habitat, managed recreational areas, and low marsh vegetation that does not qualify as optimal habitat for the species. No eastern black rails were observed during field investigations and according to Georgia DNR Wildlife Resources, no black rails have been seen in Georgia since 2018 (personal communication, 2025).

Effects Analysis

Construction activities may temporarily disturb fringe wetland habitats immediately adjacent to portions of the proposed boardwalk alignment. Temporary increases in human activity and construction noise could discourage use of these habitats during active construction.

The preferred alternative minimizes permanent impacts by spanning the wetland margins with elevated boardwalks supported on timber piles. Existing wetland vegetation, hydrologic conditions, and habitat connectivity will remain intact following project completion.

Because only limited suitable habitat occurs within the action area and permanent habitat alteration is minimal, adverse impacts to eastern black rails are not anticipated.

Effect Determination

May Affect, Not Likely to Adversely Affect

5.3 Marine Mammals

West Indian Manatee (*Trichechus manatus*)

Species Description and Habitat Requirements

The West Indian manatee is federally protected under the Endangered Species Act and Marine Mammal Protection Act. Manatees occur throughout coastal Georgia and utilize estuarine, marine, and freshwater habitats for feeding, migration, and refuge. During warmer months, manatees are commonly observed within tidal rivers, estuaries, nearshore waters, and navigation channels along the Georgia coast (USFWS, 2001). Manatees typically utilize waters with sufficient depth to facilitate movement and access to aquatic vegetation. They are not generally associated with isolated or intermittently connected tidal pools such as those present within the project area.

Occurrence Within the Action Area

Although manatees are known to occur within Glynn County and adjacent coastal waters, the project area does not provide suitable habitat for the species. The tidal pools are shallow, isolated from navigable waters under normal conditions, and do not provide access to marine or estuarine habitats typically utilized by manatees. No manatees were observed during field investigations, and the project area is not expected to support regular manatee use.

Effects Analysis

Construction activities associated with the proposed boardwalks will occur entirely within the existing back-beach environment and tidal pool system. The project does not include dredging, in-water construction within navigable waters, vessel operation, or modification of tidal creeks or estuarine channels. Because suitable manatee habitat is absent from the action area, implementation of the proposed project is not expected to affect the West Indian manatee.

Effect Determination

No Effect

5.4 Pollinators

Monarch Butterfly (*Danaus plexippus*)

Species Description and Habitat Requirements

The monarch butterfly was recently listed as a proposed threatened species under the Endangered Species Act. Monarchs utilize a wide variety of open habitats containing milkweed (*Asclepias* spp.), which serves as the larval host plant, and flowering nectar sources used by adults throughout their annual migration. Along the Georgia coast, monarchs may occur seasonally within beaches, dunes, roadsides, parks, and other open habitats supporting native flowering vegetation.

Occurrence Within the Action Area

The maintained recreational landscape and dune habitats surrounding the tidal pools provide limited suitable nectar resources; however, field observations did not document milkweed within the project area. Consequently, the action area provides only marginal habitat for breeding monarch butterflies, although migrating adults may periodically utilize flowering vegetation within and adjacent to the project area.

Effects Analysis

Construction of the proposed elevated boardwalks will require only limited vegetation clearing and will primarily occur within existing open areas and over the tidal pools. The project is not anticipated to substantially reduce nectar resources or host plants within the action area. Following construction, the majority of existing dune vegetation and landscaped areas will remain intact. Temporary construction disturbance may briefly discourage adult monarch use of portions of the project area; however, suitable habitat will remain available throughout East Beach and adjacent coastal areas.

Effect Determination

May Affect, Not Likely to Adversely Affect

5.5 Reptiles

Eastern Indigo Snake (*Drymarchon couperi*)

Species Description and Habitat Requirements

The eastern indigo snake is federally listed as threatened under the Endangered Species Act and is the longest native snake species in North America. Throughout coastal Georgia, eastern indigo snakes occupy a wide range of habitats, including maritime forests, pine flatwoods, sandhills, coastal dunes, and freshwater and salt marsh ecotones. The species

requires large home ranges and frequently utilizes habitat edges and travel corridors while foraging. During colder months, eastern indigo snakes often seek refuge in gopher tortoise (*Gopherus polyphemus*) burrows or other underground retreats. However, where gopher tortoise burrows are absent, individuals may use mammal burrows, stump holes, root cavities, or other natural refugia (USFWS 2024).

Occurrence Within the Action Area

The project area consists primarily of residential developed areas, tidal pools, beach habitat, dunes, and emergent wetlands. While portions of the dune system and adjacent vegetated areas provide limited upland habitat that could be used for movement or occasional foraging, the project area lacks many of the habitat characteristics associated with resident eastern indigo snake populations and the upland areas are surrounded by developed areas. No eastern indigo snakes or suitable refugia were observed during field investigations.

Effects Analysis

No recent records of this species exist for St. Simons Island or Glynn County. According to the Georgia DNR Biodiversity Portal, eastern indigo snake is likely extirpated in Glynn County. (https://georgiabiodiversity.org/portal/rangemaps?es_id=19291)

Effect Determination

No Effect

5.6 Sea Turtles

Georgia's barrier islands support one of the most significant nesting populations of loggerhead sea turtles along the Atlantic Coast and provide habitat for several additional federally listed sea turtle species. East Beach has historically supported annual nesting activity, making consideration of potential project effects particularly important.

The proposed project area is primarily within the back-beach environment landward of the active nesting beach. The project has been specifically designed to span the tidal pools while avoiding permanent alteration of the existing beach profile.

Loggerhead Sea Turtle (*Caretta caretta*)

Species Description and Habitat Requirements

The loggerhead sea turtle is federally threatened and represents the most common nesting sea turtle species along the Georgia coast. Loggerheads utilize sandy ocean-facing beaches for nesting and nearshore marine environments for foraging and migration. Nesting typically

occurs between May and August, with hatchling emergence extending into the fall months (NMFS and USFWS, 2008).

Occurrence Within the Action Area

Suitable nesting habitat occurs immediately adjacent to the project area along East Beach. Loggerhead nesting has been documented on St. Simons Island, including beaches adjacent to Massengale Park. The tidal pools themselves do not constitute nesting habitat; however, the adjacent beach system may be utilized during nesting and hatchling emergence periods.

Effects Analysis

Construction activities have the potential to temporarily disturb nesting females or hatchlings if work occurs during the nesting season. However, the project has been designed to avoid direct impacts to nesting habitat by utilizing elevated timber boardwalks rather than placing fill within the tidal pools or altering the beach profile.

Construction activities are expected to remain primarily within the back-beach environment, minimizing disturbance to the active nesting beach. Temporary construction impacts will be further reduced through environmental construction monitoring, lighting controls, and coordination with the Georgia Department of Natural Resources Sea Turtle Program, if required. Following construction, the elevated boardwalks will continue to allow natural movement of wildlife beneath the structures while preserving the existing beach morphology and hydrologic processes.

Effect Determination

May Affect, Not Likely to Adversely Affect

Green Sea Turtle (*Chelonia mydas*)

Species Description and Habitat Requirements

The green sea turtle is federally threatened and occurs throughout coastal waters of the southeastern United States. Juveniles and adults utilize nearshore marine habitats, estuaries, tidal creeks, and seagrass systems. Nesting activity occurs less frequently in Georgia than loggerhead nesting but has been documented throughout the Georgia coast (NMFS and USFWS, 1991).

Occurrence Within the Action Area

Suitable nesting habitat occurs along East Beach adjacent to the project area.

Effects Analysis

The proposed project would not permanently fill dune or beach habitat or interfere with nesting habitat availability. Temporary construction-related disturbances could occur if activities coincide with nesting periods. Construction activities are expected to remain primarily within the back-beach environment, minimizing disturbance to the active nesting beach. Temporary construction impacts will be further reduced through environmental construction monitoring, lighting controls, and coordination with the Georgia Department of Natural Resources Sea Turtle Program, if required. Following construction, the elevated boardwalks will continue to allow natural movement of wildlife beneath the structures while preserving the existing beach morphology and hydrologic processes

Effect Determination

May Affect, Not Likely to Adversely Affect

Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)

Species Description and Habitat Requirements

The Kemp's Ridley sea turtle is federally endangered and primarily occupies nearshore Gulf of Mexico waters; however, juveniles and subadults frequently occur throughout the southeastern Atlantic coast, including Georgia. Nesting occurs infrequently within Georgia but has been documented.

Occurrence Within the Action Area

Suitable beach habitat occurs within the action area, although nesting by Kemp's Ridley turtles is uncommon on Georgia's barrier islands. Construction activities are expected to remain primarily within the back-beach environment, minimizing disturbance to the active nesting beach. Temporary construction impacts will be further reduced through environmental construction monitoring, lighting controls, and coordination with the Georgia Department of Natural Resources Sea Turtle Program, if required. Following construction, the elevated boardwalks will continue to allow natural movement of wildlife beneath the structures while preserving the existing beach morphology and hydrologic processes

Effects Analysis

The proposed boardwalk alternative avoids direct impacts to beach habitat and is not expected to adversely affect nesting or movement patterns.

Effect Determination

May Affect, Not Likely to Adversely Affect

Leatherback Sea Turtle (*Dermochelys coria*)

Species Description and Habitat Requirements

The leatherback sea turtle is federally endangered and is the largest living sea turtle species. Leatherbacks occur offshore along the Atlantic coast and occasionally nest on southeastern U.S. beaches.

Occurrence Within the Action Area

Suitable nesting habitat exists along East Beach, although nesting occurrences are rare compared to loggerhead turtles.

Effects Analysis

The proposed project would not permanently fill dune or beach habitat or interfere with nesting habitat availability. Temporary construction-related disturbances could occur if activities coincide with nesting periods. Construction activities are expected to remain primarily within the back-beach environment, minimizing disturbance to the active nesting beach. Temporary construction impacts will be further reduced through environmental construction monitoring, lighting controls, and coordination with the Georgia Department of Natural Resources Sea Turtle Program, if required. Following construction, the elevated boardwalks will continue to allow natural movement of wildlife beneath the structures while preserving the existing beach morphology and hydrologic processes.

Effect Determination

May Affect, Not Likely to Adversely Affect

Hawksbill Sea Turtle (*Eretmochelys imbricata*)

Species Description and Habitat Requirements

The hawksbill sea turtle is federally endangered and is primarily associated with tropical and subtropical marine habitats. Occurrences along the Georgia coast are uncommon and generally involve transient individuals.

Occurrence Within the Action Area

The project area does not provide primary habitat for hawksbill sea turtles, although individuals may occasionally occur within coastal waters.

Effects Analysis

The proposed project would not permanently fill dune or beach habitat or interfere with nesting habitat availability. Temporary construction-related disturbances could occur if activities coincide with nesting periods. Construction activities are expected to remain primarily within the back-beach environment, minimizing disturbance to the active nesting beach. Temporary construction impacts will be further reduced through environmental construction monitoring, lighting controls, and coordination with the Georgia Department of Natural Resources Sea Turtle Program, if required. Following construction, the elevated boardwalks will continue to allow natural movement of wildlife beneath the structures while preserving the existing beach morphology and hydrologic processes

Effect Determination

May Affect, Not Likely to Adversely Affect

6.0: Avoidance and Minimization Efforts

The proposed East Beach Boardwalk Project was developed to minimize impacts to aquatic resources, wildlife habitat, and federally protected species. The preferred boardwalk alternative was selected following evaluation of other access alternatives because it avoids direct filling of the tidal pools, wetland fill impacts, permanent dune impacts, and maintains existing habitat functions and hydrologic connectivity.

6.1 Project Design Avoidance

Avoidance of impacts to the tidal pools was a primary consideration during project planning. Multiple alternatives were evaluated to improve access and safety while minimizing impacts to aquatic resources. The preferred alternative consists of approximately 1,026 linear feet of elevated timber boardwalks supported by timber piles spanning the existing tidal pool system.

By elevating the boardwalks above the existing aquatic habitats, the project avoids permanent filling of tidal pools and substantially reduces impacts to wetlands and open water areas. Existing hydrologic connectivity, wildlife movement, and ecological functions associated with the tidal pools will be maintained following project completion.

Additional avoidance measures incorporated into the project include:

- Elevated timber pile-supported construction.
- Removal of the existing floating pedestrian walkway.
- Preserving existing tidal pool hydrology.

- Minimization of vegetation clearing.
- Avoidance of unnecessary disturbance outside designated construction limits.
- Restoration of temporarily disturbed areas following construction.

The preferred boardwalk alternative was selected in lieu of alternatives involving placement of fill within the tidal pool system. This approach substantially reduces impacts to aquatic resources and preserves the ecological functions currently provided by the tidal pools.

6.2 Construction Best Management Practices

Construction activities will incorporate standard BMPs to minimize impacts to natural resources during project implementation.

BMPs include:

- Installation and maintenance of erosion and sediment control measures prior to construction.
- Delineation of approved construction limits.
- Restriction of equipment operation to designated work areas.
- Proper storage and handling of fuels and lubricants.
- Immediate cleanup of accidental spills.
- Daily inspection of erosion and sediment control measures.
- Proper disposal of construction debris.
- Stabilization and restoration of temporarily disturbed areas following construction.
- Compliance with all applicable federal, state, and local permit conditions.

Implementation of these BMPs will minimize the potential for temporary impacts to adjacent wetlands, tidal pools, and beach habitats.

6.3 Species Protection Measures

Construction activities will incorporate measures intended to minimize potential impacts to federally listed species and other wildlife resources.

General wildlife protection measures include:

- Environmental awareness training for construction personnel.

- Limiting disturbance to the minimum area necessary to complete construction activities.
- Suspension of work if protected wildlife are observed within active construction areas until the animal has voluntarily moved away.
- Proper containment and disposal of construction materials and waste.
- Avoidance of unnecessary disturbance to adjacent habitats.

Shorebird Protection Measures

Potential measures to minimize impacts to piping plover, rufa red knot, eastern black rail, and other migratory birds include:

- Environmental monitoring during construction.
- Restriction of equipment staging to designated work areas.
- Minimization of construction activities during periods of peak shorebird use where practicable.
- Coordination with resource agencies regarding any species-specific conservation measures.

Sea Turtle Protection Measures

Potential measures to minimize impacts to federally listed sea turtles may include:

- Environmental monitoring during construction.
- Compliance with applicable Georgia Department of Natural Resources and U.S. Fish and Wildlife Service sea turtle protection requirements.
- Implementation of construction timing restrictions, if required.
- Use of downward-directed, shielded lighting and minimization of nighttime lighting where practicable.
- Immediate reporting of injured or dead sea turtles to the appropriate resource agencies.

Manatee Protection Measures

Although effects to the West Indian manatee are not anticipated, project activities will comply with any applicable agency requirements regarding protected marine mammals.

7.0: Cumulative Effects

Cumulative effects are those effects resulting from future state, local, or private activities that are reasonably certain to occur within the action area and are considered in conjunction with the effects of the proposed federal action (50 CFR §402.02). East Beach is located within a developed coastal environment that experiences ongoing and increasing recreational use, shoreline management activities, infrastructure maintenance, and natural coastal processes. Existing development adjacent to the project area includes public recreational facilities, pedestrian access infrastructure, residential development, and commercial uses associated with the East Beach area.

The proposed project consists of construction of elevated boardwalks within an area that is already subject to recreational use and intense pedestrian activity. The project does not involve large-scale habitat conversion, dredging, beach nourishment, or shoreline stabilization activities that would substantially alter ecological conditions within the action area. Because the preferred alternative avoids direct filling of the tidal pools and minimizes impacts to wetlands and open water habitats, the project is not anticipated to contribute substantially to cumulative impacts affecting federally listed species or designated critical habitats. Future development and shoreline management activities occurring outside of the project area would be subject to separate environmental review and permitting requirements.

8.0: Effect Determination Summary

Table 8.1 summarizes the anticipated effects of the proposed action on federally listed species with the potential to occur within the action area.

Species Common Name	Status	Determination
West Indian Manatee	Threatened	No Affect
Eastern Black Rail	Threatened	May Affect, Not Likely to Adversely Affect
Piping Plover	Threatened	May Affect, Not Likely to Adversely Affect
Rufa Red Knot	Threatened	May Affect, Not Likely to Adversely Affect
Eastern Indigo Snake	Threatened	No Effect
Green Sea Turtle	Threatened	May Affect, Not Likely to Adversely Affect
Hawksbill Sea Turtle	Endangered	May Affect, Not Likely to Adversely Affect
Kemp's Ridley Sea Turtle	Endangered	May Affect, Not Likely to Adversely Affect

Species Common Name	Status	Determination
Leatherback Sea Turtle	Endangered	May Affect, Not Likely to Adversely Affect
Loggerhead Sea Turtle	Threatened	May Affect, Not Likely to Adversely Affect

9.0: Proposed Mitigation Measures

To further avoid and minimize potential impacts to federally listed species, the following conservation measures are proposed for incorporation into the U.S. Army Corps of Engineers (USACE) permit conditions. These measures are intended to protect sea turtles, piping plovers, and rufa red knots during project construction and are consistent with recommendations provided by USFWS and the Georgia Department of Natural Resources (GADNR).

9.1 Sea Turtle Conservation Measures

To avoid potential impacts to nesting sea turtles, project construction should occur outside of the sea turtle nesting season (May 1 through October 31).

If construction is proposed after August 31 and within the sea turtle nesting season, the project proponent should coordinate with the GADNR to determine whether any active sea turtle nests occur within or adjacent to the project area. Construction activities may proceed if GADNR determines that no active nests are present within the project area or that construction will not adversely affect existing nests.

9.2 Shorebird Conservation Measures

Avoidance and minimization measures for piping plovers and rufa red knots should be implemented in accordance with the **2018 Shorebirds – Effects Determination Guidance for Endangered and Threatened Species (EDGES): Avoidance and Minimization Measures for Red Knots and Piping Plovers for Shoreline Activities**, as applicable to the proposed project.

Proposed measures include the following:

- A qualified species monitor, acceptable to USFWS, shall be present during construction activities.
- Baseline monitoring for piping plovers and rufa red knots shall be conducted twice daily for one week prior to the initiation of construction activities to document species use of the project area.

- Construction activities shall not disturb piping plovers or rufa red knots that are actively foraging, loafing, or roosting.
- Construction activities shall not occur within **150 feet** of piping plovers or rufa red knots.
- The qualified species monitor shall have the authority to temporarily halt construction activities that are inconsistent with permit conditions or these conservation measures.
- During construction, the qualified species monitor shall inspect the project area each morning prior to the commencement of daily work activities.
- Within **45 days** following completion of construction, the qualified species monitor shall prepare a summary documenting observations of federally listed species during construction and submit the report to USACE and USFWS.

10.0: Conclusions

The proposed East Beach Boardwalks Project has been designed to improve public safety and access while avoiding and minimizing impacts to the tidal pool system and associated coastal habitats. Rather than filling the tidal pools, the preferred alternative utilizes elevated timber boardwalks supported by timber piles, thereby preserving existing open water, wetlands, dunes, and hydrologic connectivity.

The project area contains habitats for several federally listed species, including migratory shorebirds, sea turtles, and other protected wildlife. Temporary construction activities may result in localized disturbances; however, implementation of project-specific avoidance measures, BMPs, and species protection measures will minimize these effects. Potential permanent impacts on aquatic habitats and wildlife resources have been substantially reduced through selection of the elevated boardwalk alternative.

Based on the available engineering design information, field investigations, desktop analyses, and the evaluation presented herein, the proposed action is not anticipated to jeopardize the continued existence of federally listed species, result in the destruction or adverse modification of designated critical habitat, or result in a take of federally listed species. The project represents a balanced approach to improving public access while maintaining the ecological integrity and long-term function of the East Beach tidal pool system.

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Attachment F: Phase 1 Cultural Resources Survey Report

Phase I Cultural Resources Survey of the East Beach to Myrtle Street Tidal Pools Project

Glynn County, Georgia



August 2025

Phase I Cultural Resources Survey of the East Beach to Myrtle Street Tidal Pools Project

Glynn County, Georgia

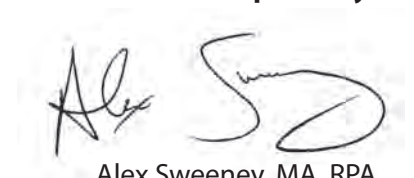
Report

August 2025

Prepared for:

Longleaf Consultation, LLC
St. Simons Island, Georgia

Prepared by:

Two handwritten signatures in black ink. The first signature is 'Alex' and the second is 'Nathan'.

Alex Sweeney, MA, RPA
Principal Investigator

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And

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Project Archaeologist

Brockington and Associates, Inc.

Atlanta • Charleston • Savannah

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Management Summary

Between July 14 and 18, 2025, Brockington and Associates, Inc. (Brockington) conducted an intensive Phase I cultural resources survey for the proposed restoration and filling of an area of East Beach on St. Simons Island in Glynn County, Georgia. The proposed project consists of filling an impounded tidal pool on East Beach with native sand harvested onsite to provide clean fill material. This investigation was carried out on behalf of the Longleaf Environmental Consulting, LLC in partial fulfillment of guidelines established for Section 404 of the Clean Water Act permit. This survey was requested in order to comply with state and federal laws and regulations concerning the management of historic properties affected by development activities. Background research and cultural resources survey were used to identify potentially significant resources within the project's Area of Potential Effects (APE). The current investigation includes an archaeological survey of the 29-acre project tract, and an architectural survey of the project tract and its immediate surrounding viewshed.

Background research identified no previously recorded archaeological sites or historic resources within the project tract. However, four previously recorded archaeological sites (9GN3, 9GN208, 9GN209, and 9GN317) and 116 historic resources are located within a 1.0-km (0.6-mile) radius of the project tract. No previously recorded cultural resources will be impacted by the proposed project.

Brockington's archaeological field survey included systematic visual examination and 30-meter-interval shovel test excavations within the 29-acre project tract. The historic architectural resource field survey involved driving and walking the project APE, with pedestrian inspection of all potentially historic resources. The investigation identified one historic resource within the project's APE: The King and Prince Hotel, which is listed on the National Register of Historic Places (NRHP #04001465). However, the viewshed of the resource consists of a naturally fluctuating sandy shoreline beach and the proposed project will restore the viewshed to its original pre-2019 visual setting. Therefore, the proposed project will have *no adverse effect* on the setting of The King and Prince Hotel (NRHP #04001465).

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1.0 Introduction

Brockington and Associates, Inc. (Brockington) conducted a Phase I cultural resources survey for the proposed restoration and filling of an area of East Beach between July 14 and 18, 2025, in Glynn County, Georgia. This investigation was carried out for Longleaf Environmental Consulting, LLC in partial fulfillment of guidelines established for Section 404 of the Clean Water Act permit. This investigation was requested in order to comply with state and federal laws and regulations concerning the management of historic properties (i.e., archaeological sites, buildings, structures, objects, or districts listed on or eligible for the National Register of Historic Places [NRHP]) affected by development activities. These investigations follow standards and guidelines that comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended). This investigation was conducted by Brockington personnel who meet or exceed the Secretary of Interior's Professional Qualification Standards (36 CFR 61).

The goal of the proposed project is to improve and protect public safety by restoring and filling an area of East Beach that has developed a tidal pool complex over the past several years and is currently an impounded open water area. The proposed project would fill part of the impounded area with native sand harvested onsite to provide clean fill material. The proposed project will directly impact soils that will be mechanically graded, cut, and filled for the proposed project tract. Secondary impacts will occur primarily from the movement of heavy machinery within the tract. Types of impacts may include removal and relocation of soils, clearing of vegetation, and filling activities.

The Area of Potential Effects (APE) is defined archaeologically as well as architecturally. The archaeological APE is the entire 29-acre project tract. The architectural APE is defined as the entire project tract and the immediate viewshed surrounding the project tract.

The project tract is located in the southeastern portion of St. Simons Island. The southern portion of the project tract is immediately east of the King and Prince Beach and Golf Resort. The central portion of the tract is east of Massengale Park and St. Simons

Grand Condominium Resort. The northern portion of the project tract is located east of the Driftwood Drive Public Beach Access. The project tract is bound to the east by the Atlantic Ocean. Figures 1.1 and 1.2 show the location of the project tract.

The project's goals include the identification of all cultural resources located within the APE boundaries. The investigations for this report consist of background archival research to locate previously identified cultural resources, completion of associated fieldwork, and report production. Chapter 2 describes the methods of investigation. The environmental and cultural background of the project area is discussed in Chapter 3. Chapter 4 presents the results and recommendations of the cultural resources survey. The resume of the principal investigator is provided in Appendix A.

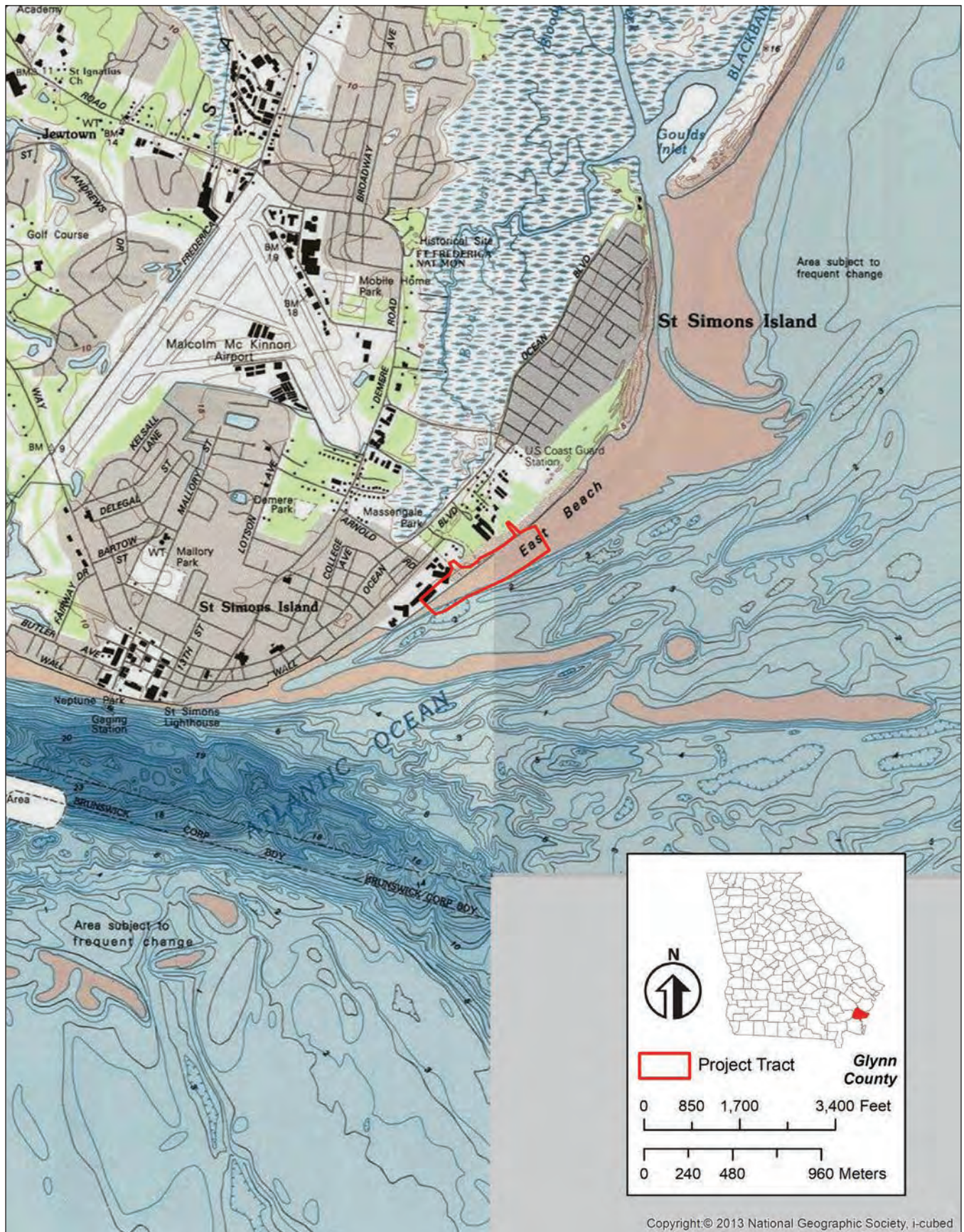


Figure 1.1 Project tract location (1980 Brunswick East and Sea Island, GA United States Geological Survey [USGS] topographic quadrangles).



Figure 1.2 Aerial view of the project tract.

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2.0 Methods of Investigation

The goals of this investigation were to identify cultural resources within the defined APE of the project tract and evaluate the eligibility status of any cultural resources within the APE based upon criteria defined under the NRHP. To accomplish these tasks, Brockington pursued background research and fieldwork in compliance with standards established by the Georgia State Historic Preservation Office (SHPO). Methods employed to complete these tasks are described below.

2.1 Background Research Methods

Background research focused on identifying previously surveyed areas within the APE, documenting previously recorded cultural resources and their locations, and developing pre-contact and post-contact contexts. Background research was initiated with a search of the Georgia's Natural, Archaeological, and Historic Resources GIS (GNAHRGIS) database maintained by the Georgia Archaeological Site File (GASF) and the Historic Preservation Division (HPD) of the Georgia Department of Natural Resources (DNR) for previously recorded archaeological and historic resources within 1.0 kilometer (km) (0.6 mile) of the APE. Digital data obtained from GNAHRGIS were georeferenced to the Universal Transverse Mercator (UTM) system. Maps were produced using ArcMap 10.7 GIS software (Environmental Systems Research Institute, Inc. [ESRI] 2017) to plot the project location on appropriate USGS topographic quadrangles relative to any previously recorded sites. In addition, primary and secondary documents were investigated, including historic maps, aerial photographs, tax records, local histories, technical reports, land patents, and other similar data found locally or online, to provide information regarding past use of the project area.

2.2 Archaeological Field Methods

Archaeological field survey consisted of systematic pedestrian coverage of the entire project tract. During survey, the ground surface was inspected for cultural materials, and shovel testing was

utilized to investigate subsurface cultural deposits. Shovel tests were 30 centimeters (cm) in diameter and placed at 30-meter (100-foot [ft]) intervals in parallel transects spaced 30 meters (100 ft) apart. The shovel tests were typically excavated 10 cm (4 inches) into sterile soil (usually the B horizon) or up to 1.0 meter (3.3 ft) in depth. Shovel tests were not excavated in areas considered to be highly disturbed or on hillsides demonstrating a slope greater than 30 degrees. In addition, shovel tests were not excavated in areas of standing water, or excavation ceased when the tests filled with water. Shovel tests were augmented by visual inspection in areas with good surface visibility. Soils from the shovel tests were screened through one-quarter-inch mesh hardware cloth. Records of each shovel test were kept in field notebooks, including information on content (e.g., presence or absence of artifacts, artifact descriptions) and context (i.e., soil colors and texture descriptions, depth of definable levels, observed features). All shovel tests were backfilled on completion. Figure 2.1 shows the general location of excavated shovel tests within the project tract.

For the purposes of this investigation, archaeological sites are defined according to the *Georgia Standards and Guidelines for Archaeological Surveys* (Georgia Council of Professional Archaeologists [GCPA] 2019:1):

An archaeological site is a concentration of artifacts, ecofacts, or modifications to the landscape that are associated with past human activity and retain their context. An archaeological site must be at least 50 years old and is characterized by any of the following criteria:

- An area yielding three or more artifacts from the same broad cultural period (i.e., historic or prehistoric) on the surface within a 30-meter radius;
- A shovel test that produces two or more artifacts from the same broad cultural period, as long as the artifacts cannot be fitted together (i.e., they are not two pieces of the same artifact);



Figure 2.1 Approximate location of excavated shovel tests.

- A shovel test that produces one artifact and at least one surface artifact from the same broad cultural period within a 20-meter radius from that shovel test;
- An area with visible or historically-recorded cultural features (e.g., shell midden, cemetery, rock shelter, chimney fall, brick walls, piers, earthwork, etc.).

Generally, if a site is encountered, the site boundaries are established by the absence of artifacts or features moving outward on a grid from the defined site center. In areas demonstrating poor surface visibility, two negative shovel tests excavated at short intervals (10 meters [m]) in cardinal directions from positive shovel tests are used to establish a site boundary. The definition of site boundaries also accounts for natural features and/or boundaries (e.g., streams, bluffs, swamps).

Isolated finds are generally small artifact scatters ($n < 3$) and/or locations that have no utility of meaning for a research or other purpose. Deposits of cultural artifacts that have no integrity, such as those in road fill, stream gravels, or other situations where artifacts clearly are redeposited, also should be considered isolated finds. Isolated finds are generally assumed to be ineligible for inclusion in the NRHP; however, recording of these finds during survey included location and environmental data similar to that recorded for archaeological sites. Thus, when isolated materials appear within a test location, additional shovel tests are excavated in order to ascertain whether additional artifacts are in the immediate vicinity and constitute an archaeological site.

2.3 Architectural Field Methods

Project investigators conducted an intensive architectural survey of all aboveground cultural resources located within the proposed project's architectural APE. The architectural APE includes the project tract of the proposed undertaking as well as the project tract's viewshed. The architectural survey is designed to identify, record, and evaluate all historic architectural resources (buildings, structures, objects, designated landscapes, and/or sites with aboveground components) within

the architectural APE. Field survey consisted of a combination of driving and a pedestrian walkover of the survey tract and its viewshed. The criterion used for initial selection of architectural resources to be recorded was the 50-year minimum age necessary for inclusion on the NRHP (i.e., pre-1970 resources were examined). Sources used for age determination and architectural style and type descriptions include Blumenson (1981), Longstreth (1987), McAlester (2015), Poppeliers et al. (1983), and Whiffen (1981).

Detailed photographs and field notes were taken for all architectural resources. Each resource is recorded on a Georgia statewide survey form. The condition and architectural integrity are typically evaluated in the field to facilitate architectural review. Architectural resource condition is described as:

Excellent - Recently restored or rehabilitated; well maintained;

Good - Structurally and cosmetically sound; in need of only routine maintenance;

Fair - Structurally sound but in need of cosmetic repair as well as routine maintenance;

Poor - In need of major structural as well as cosmetic repair and routine maintenance; or

Derelict - Abandoned and beyond economical restoration.

Similarly, resource integrity is described as:

Excellent - All original construction materials and design elements remain intact and unchanged;

Good - The majority of original construction materials remain intact and unchanged except for roofing and other renewable architectural elements;

Fair - A substantial number of original architectural elements have been altered, such as the installation of aluminum, asbestos, or vinyl siding, the replacement of non-historic doors and windows, and the construction of non-historic additions; or

Poor - Original design has been radically altered by non-historic renovations and/or additions.

Architectural resources exhibiting exceptionally poor integrity are generally not recorded.

2.4 Curation

Project maps, field notes, and photographs have been prepared for storage at a federally approved repository for curation based on standards outlined in 36 CFR Part 79 (*Curation of Federally-Owned and Administered Archaeological Collections; Final Rule*). Following completion of the final report of investigations, these materials will be transferred to the University of Georgia's Laboratory of Archaeology in Athens for permanent curation.

2.5 Evaluation of National Register of Historic Places Eligibility

Cultural resources are evaluated based on the criteria for eligibility to the NRHP as specified in Department of Interior Regulations (36 CFR Part 60: National Register of Historic Places). According to 36 CFR Part 60.4 (Criteria for Evaluation), sites can be defined as significant (i.e., eligible for the NRHP) if they "possess integrity of location, design, setting, materials, workmanship, feeling, and association," and if they:

- A. Are associated with events that have made a significant contribution to the broad pattern of history; or
- B. Are associated with the lives of persons significant in the past; or
- C. Embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

Architectural resources within the architectural APE were evaluated for listing on the NRHP. As per 36 CFR Part 60.4, there are four broad evaluative criteria for determining the significance of a resource and its eligibility for the NRHP. The following are guidelines for determining whether a property is significant under the three criteria that usually apply to historic buildings and structures and another two criteria that may be less applicable (adapted from Savage and Pope 1998).

Event: Under Criterion A, the building or structure must be documented to have existed at the time of the event or pattern of events and to have been importantly associated with those events. The association must be conclusive and not tenuous, and the documentation must be through accepted means of historical research. However, these resources are only eligible for listing on the NRHP if they are deemed significant.

Person: Under Criterion B, a building or structure must be associated with a person's productive life, reflecting the time when he or she achieved significance. Properties that pre- or post-date the individual's significant accomplishments are usually not eligible unless there are no other properties that might qualify. The documentation must be through accepted means of historical research such as written or oral history. Properties associated with an important individual should be compared with other properties associated with the same individual to determine which best represent the person's historic contributions.

Design/construction: Under Criterion C, properties are eligible for the NRHP if they are significant for their physical design or construction, including such elements as architecture, landscape architecture, engineering, and artwork. To qualify under this Criterion, a property must satisfy at least one of the following: "Embody the distinctive characteristics of a type, period, or method of construction." Under this requirement, the property must reflect the way it was conceived, designed, or fabricated by a people or culture in past periods of history. "Distinctive characteristics" are the physical features or traits that are repeatedly

encountered in individual types, periods, or methods of construction. “Type, period, and methods of construction” refer to the way certain properties are related to one another by cultural tradition or function, by dates of construction or style, or by choice or availability of materials and technology. “Represent the work of a master.” A master is an individual who is generally recognized as “great” in a field, a craftsman of consummate skill, or an anonymous craftsman whose work is distinguishable from others by its characteristic style and quality. The property must express a particular phase in the development of the master’s career, an aspect of his/her work, or a particular idea or theme in his/her craft. “Possess high artistic values.” Under this requirement, a property is eligible if it articulates a particular concept of design such that it expresses an aesthetic ideal.

Additionally, under Criterion C, properties are eligible for the NRHP if they “Represent a significant and distinguishable entity whose components may lack individual distinction.” This requirement refers to districts. A district may be composed of a variety of resources but derives its importance from constituting a unified entity. Its varied resources are consequently interrelated, conveying a visual sense of the overall historic environment or arrangement of historically or functionally related properties. As for individual buildings or structures, a district must be significant as well as identifiable, and must be important for historical, architectural, archaeological, engineering, or cultural values. Districts will usually achieve significance under the last requirement of Criterion C plus Criterion A, B, additional portions of Criterion C, or D. A district may have both features that lack individual distinction and individually distinctive features that are focal points. None of the components may be distinctive if the grouping is significant as a whole within its historical context. Most of the components, however, must have integrity, as well as the district as a whole. The district can also contain noncontributing elements, the number depending on how the noncontributing elements affect the integrity of the district as a whole.

Information potential: Under Criterion D, resources may be eligible for the National Register

if they have yielded, or may be likely to yield, information important in prehistory or history. Although most often applied to archeological districts and sites, this Criterion can also apply to buildings, structures, and objects that contain important information. For these types of properties to be eligible, they themselves must be, or must have been, the principal source of the important information.

Exceptional Importance: Criteria Consideration G relates to properties achieving significance within the past 50 years and qualifies as eligible if it is of exceptional importance. Properties that have not reached 50 years of age are typically excluded from the National Register because they have not developed sufficient time to accrue historical perspective.

To assist in the primary object of this investigation, i.e., to provide NRHP eligibility assessments of buildings and structures within the architectural APE, several pertinent guidelines and studies were consulted. References used include Savage and Pope (1998), Parker (1985), DNR HPD (n.d.), Messick et al. (2001), and McAlester (2015).

Archaeological properties are usually evaluated relative to Criterion D. As locations of human activities that include physical remains of those activities, archaeological sites are potential sources of important information. However, some archaeological sites, particularly those representing historic period occupation or use, can be considered eligible under Criterion A (if they are associated with specific important events or trends in American history), under Criterion B (if they are associated with important people), or under Criterion C (if important structural elements are preserved) (Savage and Pope 1998; Townsend et al. 1993).

As indicated in 36 CFR Part 60.4(d), archaeological sites “that have yielded, or are likely to yield, information important in prehistory or history” can be eligible for the NRHP. The National Park Service defines two requirements for archaeological sites to be eligible under NRHP Criterion D (Savage and Pope 1998:21):

1. The site must have, or have had, information to contribute to our understanding of human history or prehistory, and
2. The information must be considered important.

The National Park Service provides clarification for the first requirement by stating that an archaeological site is eligible for the NRHP if that site “has been used as a source of data and contains more, as yet unretrieved data” (Savage and Pope 1998:21).

Regarding the second requirement, Glassow (1977) recommends careful consideration of specific site attributes (integrity, clarity, artifact frequency, and artifact diversity) in determining whether an archaeological site contains important information. Butler (1987:821) defines “important information” as the potential of an archaeological site to contribute to current “theoretical and substantive knowledge” of archaeology in the site’s regional setting. In other words, under Criterion D, importance or significance can be defined as research potential. The research potential of an archaeological site lacking architectural remains can be determined by demonstrating that the site retains relatively intact archaeological contexts, such as culturally or temporally diagnostic artifacts, intact features, discrete artifact clusters denoting activity areas, or preserved organic material associated with the site occupation. To be considered eligible, these data should be capable of addressing important research questions by testing hypotheses, supporting current scientific interpretations, or reconstructing cultural chronologies through using appropriate analytical methods.

Glassow (1977) indicates that aspects of integrity are also important in determining NRHP eligibility of archaeological sites. However, because “archaeological sites, in particular, do not exist today exactly as they were formed” (Savage and Pope 1998:46) and information potential relies less on overall condition of the site; therefore, location and association are the most important aspects of integrity for archaeological sites.

3.0 Natural and Cultural Overview

Human adaptation in what we now know as Georgia has changed through time, as the natural and cultural settings have changed. While the physical environment provides humans with the materials necessary for maintaining life, the combination of physical and cultural events and processes presents limitations and/or opportunities for exploitation and adaptation to any given region (Wharton 1989). This chapter presents a brief overview of the natural and cultural setting in the project tract.

3.1 Natural Setting

St. Simons, a barrier island in Glynn County, is located within the Tidal Marine Area of the Coastal Plain province of Georgia (Wharton 1989:9). The island is largely composed of sediments deposited during the Pleistocene and has a mature soil complex that can support a diverse range of plants and animals. The other islands in this complex, Little St. Simons Island and Sea Island, are Holocene formations and offer a comparatively limited range of habitats for coastal wildlife. Of the three, St. Simons is the largest island, measuring approximately 18.5 km (11.5 miles) in length and from 0.8 to 4.0 km (0.5 to 2.5 miles) in width.

Prior to modern alteration of the natural environment, the island ecosystem was probably Maritime Strand Forest. Distinctive vegetation of the Maritime Strand Forest includes live oak, red cedar, cabbage palms, wax myrtle, yaupon, Florida privet, and saw palmetto. Precontact shell middens are common in this habitat (Wharton 1989:186). Hodler and Schretter (1986:16-17) indicate that this area was formed as part of the Barrier Island Sequence, a process whereby:

The advance and retreat of former sea levels have left six shoreline deposit complexes parallel to the present coastline in a steplike progression of decreasing elevations. Slight to moderate dissection of these former levels has allowed marshes to exist in poorly drained low areas.

These Pleistocene depositional episodes formed as sea level fluctuated during periods of continental

glaciation (Hodler and Schretter 1986:26-27). They are considered to represent geologic terraces, based roughly on range of elevation above present mean sea level (i.e., Holocene deposits). In ascending order (from coastline, inland) these complexes are Holocene (0 to 5 ft above mean sea level [amsl]); Silver Bluff (5 to 15 ft amsl); Princess Anne (15 to 25 ft amsl); Pamlico (25 to 45 ft amsl); Talbot (45 to 75 ft amsl); Penholoway (75 to 100 ft amsl); and Wicomico (100 to 160 ft amsl). Topographically, these former shorelines are represented by parallel sequences of ridges (former barrier islands), pine flatwoods (former sea marshes), and stream swamps (old tidal waterways; Hodler and Schretter 1986:27). The project tract, located in the central and coastal side of St. Simons Island, is situated near the convergence of the Holocene and Silver Bluff terraces.

The Coastal Marine Flatlands represent the youngest geologic deposits of Georgia's Coastal Plain. These interbedded sands overlay sandy clay dating to the Miocene and Pliocene epochs (Herrick 1965). Formation of these deposits was primarily sedimentational, with erosion of crystalline rocks from the Piedmont province as the predominant source. Herrick (1965) suggests that pre-existing Coastal Plain sediments (Miocene, Pliocene, and early Pleistocene) may also have contributed to these deposits through erosion and redeposition.

Glynn County ranges in elevation from 0 to 60 m (approximately 0 to 200 ft) amsl. Within the project tract, elevation ranges only slightly from 0 to 2 m (approximately 0 to 6 ft) amsl.

3.1.1 Climate

Glynn County averages approximately 127 cm (50 inches) of precipitation annually. The average annual temperature lies near 66.5°F (19.2°C). Summer high temperatures frequently reach well into the 90s. Winter low temperatures will fall into the mid-30s, but infrequently below freezing. Frost-free days average 270 per year.

Summer and late fall humidity is high, usually between 80 and 90 percent in the afternoon. Winter and early spring humidity is on the whole much lower. Frequency of rainfall is fairly consistent

throughout the year but increases slightly during the late winter/early spring months with strong thundershowers common.

3.1.2 Soils

Soils are generally derived through the weathering, decomposition, and redeposition of Piedmont geological deposits. Hurst et al. (1981) indicate an overall distribution of alluvial unconsolidated sands, clays, and minor marls throughout the Coastal Plain. In general, Hodler and Schretter (1986:36-37) describe “Atlantic Coast Flatwood” (same as Wharton’s [1989] Coastal Marine Flatlands) soils as, “poorly drained, mostly sandy loam to sandy topsoils underlain by marine sands, loams, or clays. Soils generally have a high water table and are used mainly for timber production and pastures.”

Soils in Glynn County consist predominantly of poorly drained, mostly sandy loam to sandy topsoil over marine sands, loams, and clays. The Coastal Plain sediments are Quaternary in the vicinity of the survey tract. According to the United States Department of Agriculture (USDA) soil survey for Glynn County, two different detailed soil types and water are found within the project tract. Most of the project tract (approximately 66 percent) is identified as water by the USDA (2025). Beaches occupy approximately 18 percent of the project tract. Cainhoy fine sand, which covers approximately 5 percent of the project tract, is an excessively drained fine sand located on rises. Table 3.1 summarizes the general characteristics of the detailed soil types, and Figure 3.1 presents their location.

Past settlements and agricultural use tend to favor anhydric (dry) soils over hydric (wet) soils. Therefore, most archaeological sites tend to be situated on drier, anhydric soils. Almost

all of the project tract has soil types that are not favorable for past settlement and containing an archaeological site.

3.1.3 Modern Fauna and Vegetation

Modern fauna of the Coastal Marine Flatlands are summarized by Wharton (1989), and include diverse species of mammals, birds, fish, reptiles, and amphibians. It is expected that a much wider variety of the extant fauna were available for exploitation during pre-contact and early historic period habitation of this area. In addition to the more common species (e.g., white-tail deer, Virginia opossum, pine voles, field mice, short-tailed shrews, gray and fox squirrels, raccoon), less common mammals include the cotton mouse, cottontail rabbit, and nine-banded armadillo (Laerm et al. 1981). Birds of possible food value include dove, quail, turkey, and a variety of ducks, wading, and shore birds. Fishes found in nearby creeks and rivers include bluegill, black crappie, largemouth bass, catfish, yellow sucker, gar, eel, and minnows. A wide variety of snakes including the kingsnake, rat snake, corn snake, southern hognose, coachwhip, pine snake, copperhead, and the pygmy and diamondback rattlesnake are in evidence. Amphibians are the striped and central newt, and several varieties of frogs.

The project tract is primarily located along the beach. A large tidal pool extends through the central portion of the project tract. The majority of the project tract is devoid of vegetation. Some areas along the beach contain sparse grassy vegetation. Sand dunes covered with wild grass and small shrubs are located in the western portion of the project tract. Overall surface visibility within the tract is typically high at 100 percent

Table 3.1 Detailed soil types within the project tract.

Abbreviation	Soil Type	Drainage Class	Landform	Typical Profile	Probability	Acres	Percent in Tract
Be	Beaches	N/A	N/A	N/A	Low	5.2	18.1
CaB	Cainhoy fine sand, 0 to 5 percent slopes	Excessively drained	Rises	Fine sandy over fine sand	High	1.5	5.1
W	Water	N/A	N/A	N/A	Low	18.9	66.3

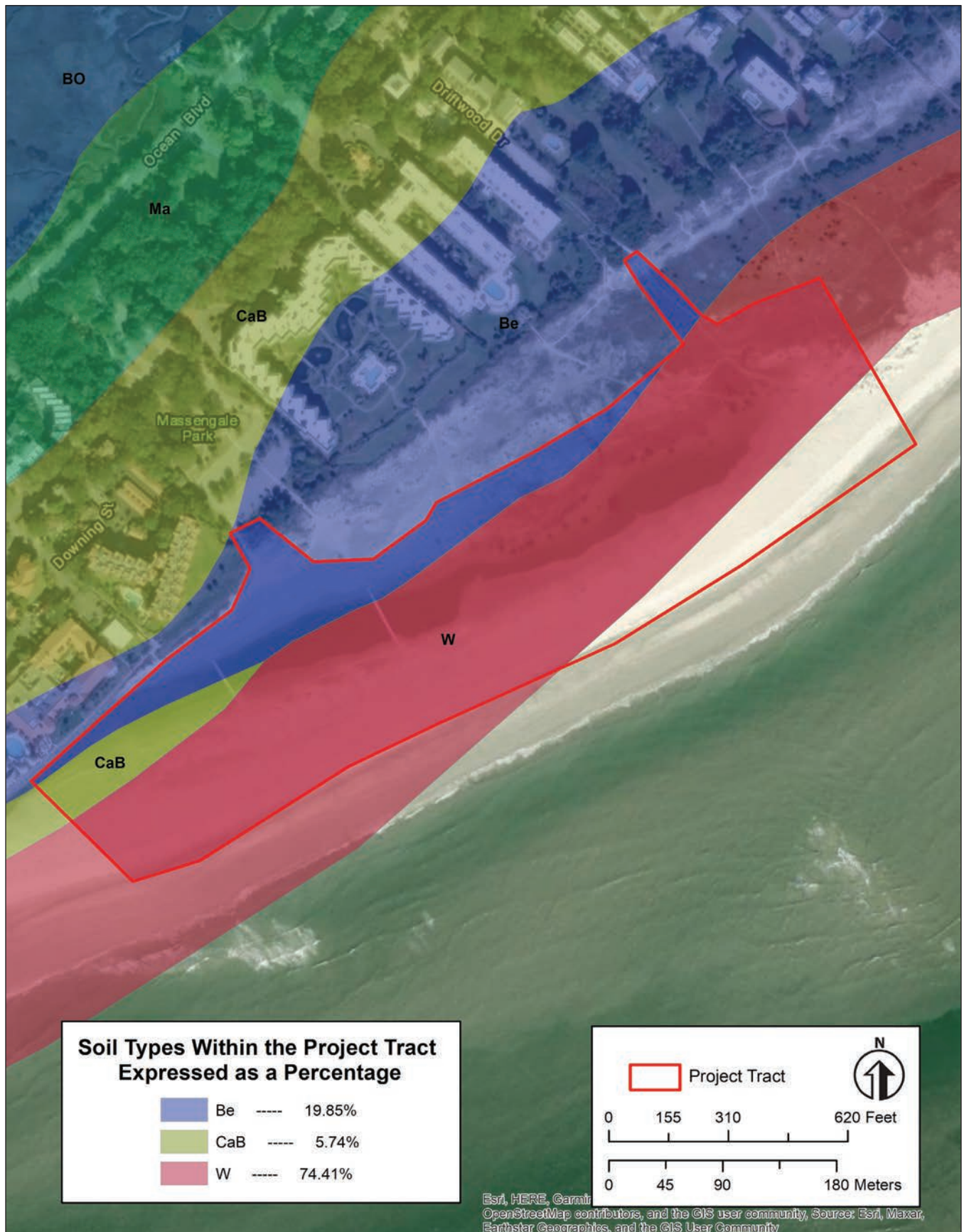


Figure 3.1 Distribution of soils within the project tract.

3.1.4 Paleoenvironment

During the last 10,000 years, modern, somewhat xeric, forest probably covered much of the southeastern United States (Kuchler 1964; Sheehan et al. 1985; Wharton 1989). As the climate continued to warm, increased moisture augmented the northward advance of the oak-hickory forest (Sheehan et al. 1985). In a study by Sheehan et al. (1985) for the Richard B. Russell Multiple Use Area (Savannah River), palynological evidence suggests that spruce, pine, fir, and hemlock rapidly decreased in importance between 9,000 and 4,000 years before present (BP). By the mid-Holocene, the oak-hickory forest was gradually being replaced by pine-dominated woodland (Wharton 1989:12).

From 4,000 years BP to the present, slight cooling and limited increases in precipitation may have been responsible for subtle changes in lowland vegetation. The oak-hickory forests appear to have decreased in area and density and were slowly invaded or replaced by several conifer varieties. Early European explorers reported large pure stands of longleaf pine (*Pinus palustris*) on the Coastal Plain. These stands have been replaced by slash pines (*Pinus elliottii*), particularly in low-lying areas, where planted slash pine is said to dominate nearly 90 percent of the Pleistocene pine flatwoods (Wharton 1989:195).

3.2 Cultural Setting

3.2.1 Overview of the Pre-Contact Era

The pre-contact occupation of the southeastern United States is best described in terms of changes in fundamental social systemics. During much of the past, pre-contact cultures maintained a lifestyle focused on the acquisition of locally available wild resources (hunting and gathering). The extant food and other basic resource procurement technology of the earliest eras favored small, mobile social groups that practiced migratory, or nomadic, lifestyles. During times of economic stress, reliance on secondary resources, along with increased mobilization and trade with neighboring groups, supplemented the diet.

The cultural periods most associated with an intensive hunter-gatherer lifestyle are the Paleoindian (9500 to 8000 BC) and the Archaic (8000 to 1000

BC). These periods are further subdivided into categories based on particular resource procurement strategies, their inter-group relations, and the projectile point typologies developed through the years. The following discussions summarize findings of previous archaeological research in the region. The discussions focus on the Georgia Coastal Plain and emphasize technological change, settlement patterns, and site choice throughout the Pre-Contact era.

Paleoindian Period (9500 to 8000 BC)

Definite human occupation of the southeastern United States began during the Paleoindian period. The beginning of the period occurred during the late Pleistocene, which featured low sea levels and extended shorelines (Anderson et al. 1990). The glacial conditions of the late Pleistocene epoch characterize the early portions of the Paleoindian period, but the more temperate conditions of the early Holocene prevail by the end of the period. Based on data from several sites in western North America, Paleoindians are seen primarily as nomadic hunters. The association of Paleoindian artifacts with the remains of extinct fauna led early researchers to believe Paleoindian subsistence focused on Ice Age megafauna; however, this view has changed. Although megafauna were certainly exploited, wild plant foods and smaller game were probably a significant part of the Paleoindian subsistence strategy.

Native Americans responded to this environment by living in central camps or villages and periodically visiting temporary camps to gather resources (Anderson et al. 1990). This adaptation, referred to as a “collector” or “logistical” strategy, warranted tool assemblages tailored for extended resource procurement (Anderson et al. 1990). Over most of North America, the remnants of the Paleoindian period include a distinctive tool assemblage. Isolated finds of fluted lanceolate projectile points and associated hearths or ephemeral features characterize the Paleoindian period in the Southeast. The fluted lanceolate projectile points average 7.6 cm in length and exhibit parallel or slightly convex sides, concave bases, and a distinctive narrow, vertical flake (a flute) removed from each face of the blade. Other,

somewhat less distinctive features of Paleoindian lithic assemblages include bifacially flaked knives, endscrapers, burins, and graters (Griffin 1967; Kelly 1938; O'Steen et al. 1986).

Perhaps the greatest source of information regarding the Paleoindian period in the Southeast, specifically Georgia, has come from the distribution and variety of projectile points dating to this time. The wide range of projectile point forms allows the Paleoindian period to be divided into three subperiods: Early, Middle, and Late or Transitional. The Early Paleoindian subperiod features large fluted Clovis-like projectile points (Anderson et al. 1990). Smaller variant forms of this basic design can be placed in either the Early or Middle Paleoindian subperiod. The Middle Paleoindian subperiod is characterized by unfluted lanceolate and fluted or unfluted broad blade forms. These include the Cumberland, Suwannee, and Simpson projectile point types (Anderson et al. 1990). The Late Paleoindian subperiod features Dalton, Quad, and Beaver Lake point types, which are smaller than previous forms. They feature ears, concave bases, and basal thinning. Evidence of tool sharpening, often to the point of exhaustion, is present in the serrated edges of Dalton projectile points (Anderson et al. 1990). Such evidence is not found during the earlier Paleoindian subperiods, suggesting this activity is linked to the climatic changes that occurred at the end of the Paleoindian period.

The distribution of Paleoindian projectile points in the Southeast suggests Native Americans occupied smaller areas during this period (Anderson et al. 1990). Portions of the Georgia Coastal Plain show no evidence of settlement until the end of the Paleoindian period and the beginning of the Archaic period. Large numbers of Dalton projectile points located in the lower Southeast and in southern Georgia support this argument (Anderson et al. 1990). There are several theories for the lack of Early and Middle Paleoindian sites along the Georgia coast: avoidance or minimal use, lack of quality lithic materials, and unfavorable environmental conditions (Anderson et al. 1990).

Very little substantial data concerning Paleoindian lifeways are known from the region. What is postulated tends to be adopted from the interpretations of more substantial remains from

the Plains and western North America, assuming nomadic Pleistocene hunter-gatherers maintained a similar pattern of behavior regardless of region. Populations were sparse across most of Georgia. There are, however, some areas with concentrations of Late Paleoindian sites indicating a denser population or repeated seasonal re-use of local habitats. This may be especially true for the Oconee River region (Williams 1994:54, 2000:22-23). Other examples include the Theriault Site, a quarry in the Coastal Plain (Brockington 1971), and the Taylor Hill Site, a stratified deposit near Augusta (Elliott and Doyon 1981). The Taylor Hill Site produced a high number of various stratified stone tools and points, leading archaeologists to interpret the location as a Paleoindian and Archaic residential or logistical camp (Anderson et al. 1990).

During the transition from sparse Paleoindian colonization to higher Archaic population densities, developments in technology mirrored the rise in populations. Smaller corner or side-notched projectile points gradually replaced large, heavy lanceolate types (Anderson et al. 1990; Bullen 1975; Coe 1964; Whatley 1984, 2001). This reflected not only a change in technological innovation but a shift in focus to smaller prey species (as opposed to now-extinct Pleistocene megafauna). It was during the later stages of the Archaic period that fiber-tempered ceramics (e.g., Stallings) developed, indicating a push toward a more sedentary settlement strategy (Fairbanks 1942; Sassaman 1993; Williams and Thompson 1999:120-121).

Access to some necessary resource determined the selection of site localities during periods of intensive hunting and gathering. These resources were mostly prey species, wild plants, and lithics. Natural barriers to movement prevented colonization in some instances. Groups were aggregated according to complex territorial arrangements that evolved early on and probably shrank considerably as populations increased or seasonal rounds developed based on smaller prey species (Anderson and Joseph 1988; Anderson and Sassaman 1996).

One settlement strategy, initially posited by Anderson and Hanson (1988), suggests a seasonal round wherein migration occurred across the Piedmont and Coastal Plain Provinces. The pattern

may have involved winter/spring use of the Coastal Plain and fall/summer use of the Piedmont. The agglomeration of sites near the Fall Line indicate a propensity for fording rivers where they are most shallow (north of the Fall Line) while maintaining such a seasonal round.

Early Archaic Period (8000 to 6000 BC)

The Early Archaic is generally perceived as an adaptive response to the changing post-Pleistocene (Holocene) environment. This period is characterized by a gradual shift in subsistence strategies, with an increasing reliance on hunting small game and the procurement of wild plant foods (Elliott and Sassaman 1995). Relevant research by Chapman and Shea (1981) indicates that the exploitation of a broad range of local resources was achieved much earlier than previously thought. Chapman and Shea (1981) suggest that trends in settlement and subsistence practices throughout the Archaic can best be interpreted as the result of adaptive responses to a variety of cultural and environmental conditions. These factors influenced change within a number of distinct regional settings. While the general density of populations is thought to have increased during the Early Archaic period, there is evidence for the persistence of certain cultural traditions initiated during Paleoindian times. Specifically, the tendency toward the development of subregional technological traditions and the attachment of groups to particular places in the landscape are practices shared by Paleoindian and Early Archaic groups (Anderson 1990; Bridgman Sweeney 2013; Sassaman 2010).

The Early Archaic period is distinguished from the preceding Late Paleoindian period based on the technological change from large, fluted projectile points to simpler, smaller, and more diverse point types. Archaeological remnants diagnostic of this period include ovate, stemmed, and beveled quartz bifaces; corner- and side-notched projectile points; hafted endscrapers; and flaked stone adzes. Chert remained a popular lithic raw material, and diagnostic projectile points of this period include Hardaway, Dalton, Palmer, and Kirk (Coe 1964). In Georgia, the Big Sandy, Palmer-Kirk, Kirk Corner Notched, and Kirk Stemmed are among some of the new projectile point forms being made during

this period. Wear patterns observed on these tools suggest that Native Americans used them to kill, butcher, and skin animals, as well as shape wood (Stanyard n.d.).

Very little is known about the Early Archaic period in the Georgia Coastal Plain. O'Steen's (1983) research in the Oconee River drainage in the Piedmont leads to general inferences concerning Early Archaic settlement and social organization that may be applicable to the project region. She suggests a multilocal settlement system for the Early Archaic, focused on seasonal exploitation of faunal and floral resources and proximity to lithic raw materials. Primary site types consist of seasonally utilized residential base camps, often located at tributary confluences, on high terraces, and at river shoal areas. Smaller, scattered, resource extraction loci often were situated in a variety of ecological zones.

A regional analysis of Early Archaic social group dynamics revealed evidence for interactions among macroband territories throughout the Coastal Plain (Bridgman Sweeney 2013). Social boundaries apparently were relatively permeable, such that large-scale social networks promoted the development of distinct subregional technological traditions (i.e., point "types" known as Taylor, Bolen, and Big Sandy) within the Early Side-Notched Horizon. Early Archaic groups in the Savannah and Ogeechee River drainages evidently interacted most frequently with their contemporaries to the northeast, in the Santee-Cooper River drainages. According to this study, Early Archaic groups regularly practiced cross-drainage movement well beyond their basic economic needs, aggregating with neighboring groups at places such as the Ocmulgee River social boundary area in central Georgia (Bridgman Sweeney 2013). There are no Early Archaic sites known on St. Simons, though there are a few from Glynn County.

Middle Archaic Period (6000 to 4000 BC)

The climatic changes that occurred during the Middle Archaic period influenced settlement, subsistence strategy, and technology (Dragoo 1975:11). Between 6000 and 4000 BC, the post-glacial Altithermal brought a period of warmer and drier conditions. The temperate climate

and abundant food resources provided optimal environmental zones suitable for exploitation by Middle Archaic populations (Elliott and Sassaman 1995). The Middle Archaic period shows an increase in more permanent settlement, particularly in the large river valleys. This is perhaps most indicative of the establishment of intra-regional territories by discrete tribal, ethnic, or familial units. During this period, one begins to see the characteristics of seasonality and continual seasonal rounds within restricted territories. This is expanded in the Late Archaic period.

Three projectile point/knife types dominate the Middle Archaic period. These point types include Stanly (triangular blade point with narrow, straight-sided, vertical stem), Morrow Mountain (isosceles triangle blade with contracting stem), and Guilford (lanceolate point with the widest point near the center) (Coe 1964:35-43). While quartz was widely used throughout the rest of Georgia, usage of chert continued on the coast due to its local availability (Stanyard n.d.). Other artifact types characteristic of this period are ground and polished stone tools (e.g., atlatl hooks, nutting stones, grinding stones and pestles, net sinkers), a variety of bone tools, flaking tools, and scrapers (Ford and Willey 1941:333; Griffin 1967:178; Stoltman 1978:715; White 1988:53).

It is important to note that few Middle Archaic projectile points have been found in sites on the Georgia coast. The reason for their absence comes from the environmental conditions during this time. Dry intervals characterized the mid-Holocene, which may have limited the availability of water along the coast (Elliott and Sassaman 1995). Native Americans, therefore, were less likely to utilize these areas during the Middle Archaic period (Elliott and Sassaman 1995).

Habitation sites during this period were located primarily on well-defined floodplains, while temporary activity areas were often situated on upland ridges (Ford and Willey 1941; Griffin 1967). These sites are described as lithic scatters/hunting camps and are composed of light to dense deposits of quartz and chert thinning flakes and tools. While the few recorded sites indicate little change in habitation location during the Early and Middle Archaic periods in southeastern Georgia, White

(1988) suggests Native American groups utilized a broadening range of resources.

Late Archaic Period (4000 to 1000 BC)

The Late Archaic period is a time of considerable population growth, regional adaptation, and an inter-regional exchange of raw materials (Griffin 1967:178-179). A greater reliance on riverine resources and the varied hunting of large and small game may have pushed Late Archaic populations toward long-term settlement within specific environmental zones (Dragoo 1975:12-13; Elliott and Sassaman 1995; Griffin 1967:180).

The introduction of pottery is the primary development of the Late Archaic distinguishing it from the preceding periods. The Late Archaic is often further divided into pre-ceramic and ceramic phases. In the coastal region of Georgia, fiber-tempered pottery is identified with the St. Simons phase occupation (2200 to 1100 BC). St. Simons can be further divided into subphases (St. Simons I and St. Simons II), which equate to Stallings subphases II and III, respectively, for the interior and coastal regions of South Carolina. St. Simons I ceramics feature fiber tempers and plain surface decorations. St. Simons II ceramics feature surface decorations including incisions, punctations, and grooves (Stanyard n.d.). St. Simons pottery occurs as large flat-bottomed shallow bowls, with jars being a rare occurrence (Sassaman 1993:19). Construction technique is by pinched slabs, though coiling may have been added by the end of the period (Sassaman 1993:66-67). The Stallings ceramic sequence is similar to the St. Simons sequence and is also divided into two subphases: Stallings II and Stallings III (Stanyard n.d.). Stallings II ceramics feature fiber tempers and plain surface decorations. Stallings III ceramics feature surface decorations including punctations, incisions, and grooves. Both Stallings ceramic subphases include simple bowls as the most common vessel form (Stanyard n.d.).

Late Archaic diagnostic lithic artifacts include Savannah River stemmed projectile points (a triangular blade with square shoulders and a vertical stem with straight or concave base; Coe 1964:44), grooved axes, net sinkers, steatite vessels, bone and antler tools, and a variety of shell ornaments (Coe 1964:113; Griffin 1967:180). A smaller variant of

the Savannah River point, the Otarre (Keel 1976), is associated with the later portion of the Late Archaic period (Garrow 1984). Other projectile point types associated with this period include the Elora, Kiokee Creek, and Ledbetter, all of which exhibit the same general designs: triangular blades, straight or slightly contracting stems, and straight bases (Stanyard n.d.).

The subsistence systems remained static between periods, but it appears that settlement becomes increasingly sedentary. The development of fiber-tempered pottery may have been in response to the decrease in nomadic lifestyle, or the prolonged occupation of preferred sites. The majority of Late Archaic sites on the Georgia coast comprise shell middens or shell rings, with few having non-shell contexts (Elliott and Sassaman 1995). The shell middens and shell rings are often located adjacent to major river or stream channels in the seaward areas of estuaries. It is theorized that shell midden sites represent strategically located base camps that provided access to marine and terrestrial resources (Elliott and Sassaman 1995). In observing these coastal sites, it is clear shellfish were an important resource to Native Americans living in the region. The level of their significance, however, remains somewhat unclear. Some archaeologists believe shellfish were a central part of the economy, while others believe shellfish merely supplemented an already diverse marine diet enjoyed by Native American groups (Elliott and Sassaman 1995).

Determining the nature of the relationship between shell middens and shell rings resulted in several different ideas. Jim Michie postulates each shell midden site is associated with one or more shell rings that served as ceremonial centers or were the locations for other social activities (Elliott and Sassaman 1995). Michael Trinkley, on the other hand, believes shell rings, like shell middens, represent intensive occupation locations and served the same purpose as a base camp (Elliott and Sassaman 1995). Chester DePratter argues that the shell middens and rings represent separate, permanent settlements occupied by a small number of families (Elliott and Sassaman 1995).

It is accepted that shell rings were created through the accumulation and merging of individual household middens over time (Elliott

and Sassaman 1995). The shell rings and middens along the Georgia coast contain a variety of animal remains including fish, turtles, deer, raccoons, turkeys, rabbits, squirrels, and opossums. The most common plants found in shell middens and shell rings are hickory nutshells and acorns (Elliott and Sassaman 1995).

At the end of the Late Archaic period, shell midden locations shifted further inland. At the same time, they became smaller and more dispersed (Elliott and Sassaman 1995). This change is linked not only with a rise in sea level and estuary expansion, but also with a sociopolitical collapse that occurred throughout the region during the Late Archaic period (Elliott and Sassaman 1995).

It is inaccurate to determine that changes in faunal procurement strategies or territorial boundaries between and within the Paleoindian and Archaic periods resulted from a single factor (such as climate change). Rather, a complex web of individual yet interdependent factors influenced the path taken in the evolutionary development of hunter-gatherers in the Southeast. The empirical study of Savannah River chiefdoms by Anderson (1994) is a detailed example of the ways in which very complex political and economic forces interact to manifest themselves in different ways. These later period manifestations clearly have their roots in earlier hunter-gatherer societies.

Settlement density in the Georgia Coastal Plain increased during the Late Archaic, while settlement location continues to be somewhat variable. There are at least 10 known Late Archaic sites on St. Simons, six of which are in either the Frederica or Cannon's Point tracts (including one recorded shell ring: 9GN57). But it is very likely that almost all shell middens on the island have a small Late Archaic component. This indicates that the Late Archaic people were fairly widespread and made use of a wide range of habitats.

Early Woodland Period (1000 to 300 BC)

The transition from the Late Archaic to the Early Woodland period was marked by a gradual increase in population and sedentism and by the acquisition of a number of distinctive material and cultural traits. Early Woodland is correlated with increasing intra- and extra-regional trade

(exemplified by more exotic items), developing social hierarchies, technological innovations in ceramics, and a presumed increase in political superstructures. Dwellings become more permanent, situated in denser concentrations, and extended as part of more continuous settlements. The trend increases throughout the Middle and Late Woodland with the addition of mound building and greater emphasis on sedentary agriculture. Technological advances in pottery manufacture became widespread during this period, resulting in increased efficiency and productivity of food processing and storage. Horticultural activities during the Early Woodland period focused on domestication of different plants, such as chenopodium, sunflower, and amaranth (Dragoo 1975:17; Griffin 1967:180; Steinen 1995; Stoltman 1978:715).

A distinct break between Archaic and Woodland lithic artifact types is not always evident. Early Woodland artifact assemblages often contain stemmed (e.g., Swannanoa, Little Bear Creek) and triangular (Yadkin) projectile points (Coe 1964; Justice 1987). Early Woodland artifacts include ground stone manos and mortars, nutting stones, polished slate or copper spearheads, tubular stone pipes, and trade goods, such as red ocher, mica, and shell (Ford and Willey 1941:337; Griffin 1967:183; Stoltman 1978:718).

In addition to lithic artifacts, increasing amounts of pottery appear on Early Woodland sites. Wares are characteristically thick and low fired. Predominant vessel forms have flaring sidewalls, wide mouths, and flat to rounded bases (Griffin 1967:180; Stoltman 1978:717). In the coastal areas of Georgia, the Early Woodland period is represented by Refuge (sand-tempered ceramics exhibiting punctate, incised, dentate stamped, and simple stamped designs) and Deptford (coil-built vessels with simple, linear, and check stamping) ceramics. Refuge ceramics are usually tempered with grit, although some may be tempered with grog (Stanyard n.d.). Smith et al. (1981:86) observe stylistic affinities between many Refuge motifs and those of the Late Archaic St. Simons and Stallings ceramics, suggesting a developmental connection. Deptford ceramics appear to represent a long period of settlement stability, beginning at approximately

500 BC and often coinciding with St. Simons wares (Smith et al. 1981:86).

Early Woodland settlement in the Coastal Plain focused on utilization of floodplain areas and stream-based resources. Smith and Elliott (1985a:138) indicate increases in overall site size and suggest a preference for site locations along Dasher Creek and the bluff overlooking Mill Creek throughout the Woodland period. Fish's (1976:24) results concur with these locational preferences, based on mapped Early and Middle Woodland sites. Garrow (1984:49) recorded nine Early Woodland sites along a transmission tract, predominantly in the Vidalia Uplands section. Numerous Early-Middle Woodland sites were recorded on the upland areas adjacent to small drainages on the Delta Plantation tract in Jasper County, South Carolina (Poplin et al. 1990), northeast of the project area. Survey of the 1,000-hectare Savannah Quarters tract resulted in the identification of no definite Early Woodland sites (Bailey et al. 1997). Investigators of the 2,040-hectare Godley tract identified two Early Woodland sites (9CH872 and 9CH873) (Bailey and Poplin 1997; Hicks 1997; McMakin and Bailey 1997). Surveyors of the 520-hectare Morgan tract identified no definite Early Woodland sites (Fletcher et al. 2003).

Middle Woodland Period (300 BC to AD 700)

The Middle Woodland period represents a time of population growth and increased cultural complexity. Increased site size and density, the appearance of large earthen mounds containing elaborately furnished graves, the emergence of agriculture, the development of ceremonialism, and a complex inter-regional trade network characterize the Middle Woodland period (Dragoo 1975:18-19; Griffin 1967:183; Steinen 1995; Stoltman 1978:717). Native Americans living on the Georgia coast and Coastal Plain during this period usually lived in large permanent villages. Nearby locations along the marsh edges and in interior lands were used for specific activities such as resource gathering and extraction (Stanyard n.d.). The similarities in settlement patterns, subsistence activities, and ceramic decorations suggest that coastal and inland sites regularly communicated and exchanged ideas and resources (Stanyard n.d.).

The artifact assemblages of the Middle Woodland period remain virtually unchanged from the Early Woodland. In the Coastal Plain, medium- to large-stemmed projectile points are still present (i.e., Baker's Creek and Stemmed Copena), as are larger triangular arrow points such as Copena and Yadkin (Cambron and Hulse 1975; Justice 1987). Stone artifacts include stemmed knives, ground stone celts, and rough slate or shale hoes (Caldwell 1958:46; Ford and Willey 1941:337).

Specialized tools, utilized during this period in trade or as grave goods, included copper implements, deer bone awls, beaver and bear teeth, and exotic lithic material (Griffin 1967:183-186; Stoltman 1978:717-718). While Hopewell-influenced artifacts, such as copper panpipes, earspools, cut mica, and platform pipes, have been found in Middle Woodland components in northwest Georgia (Jefferies 1976), Smith and Elliott (1985a:11) cast doubt on the influence of this trade network on cultures of the Georgia Coastal Plain.

Middle Woodland period ceramics in the Coastal Plain exhibit a continuation and refinement of previous forms and motifs. Deptford ceramics feature a variety of decorations including plain, linear check stamped, check stamped, simple stamped, cord marked, and bone incised (Stanyard n.d.). Deptford Simple Stamped and Check Stamped vessels are the material culture markers for this period. However, Garrow (1984:50) notes the presence of cord marked sherds (designated Deptford Cord Marked by DePratter [1979]) at a number of Middle Woodland sites. Deptford ceramics have a fine to medium sand temper and are primarily fashioned into cylindrical jar shapes (Stanyard n.d.). Smith et al. (1981:88) and Fish (1976) suggest the introduction of Wilmington wares (grog tempered and cord marked) near the end of this period.

Surveys in the Georgia Coastal Plain suggest overall population increases and variability in site selection for Middle Woodland settlement. As noted above, Fish (1976) and Smith and Elliott (1985a) agree preferences were shown for settlement in areas with easy access to floodplain and stream resources. Garrow (1984:51) documented 16 sites with Middle Woodland components; three were found in the Coastal Marine Flatlands and 13 were recorded in the Vidalia Uplands. As noted

above, Poplin et al. (1990) recorded Early-Middle Woodland sites on the Delta Plantation tract on the opposite bank of the Savannah River in South Carolina. Investigators of the 1,000-hectare Savannah Quarters tract identified no definite Middle Woodland sites (Bailey et al. 1997). Investigators of the 2,040-hectare Godley tract identified two Middle Woodland sites (9CH872 and 9CH873) (Bailey and Poplin 1997; Hicks 1997; McMakin and Bailey 1997). Surveyors of the 520-hectare Morgan tract identified one Middle Woodland site (9CH1027) (Fletcher et al. 2003).

Late Woodland Period (AD 700 to 900)

The Late Woodland period within the Georgia Coastal Plain has not been documented as extensively as preceding cultural periods. Described as a transitional phase, the Late Woodland represents a continuation and an expansion of previous lifeways (e.g., agriculture, village occupation, ceremonialism; Dragoo 1975:19-20; Steinen 1995; White 1988:87). Despite the relative rarity of habitation sites directly attributable to the Late Woodland period (Caldwell 1958; Garrow 1975; Wauchope 1966), several sites (e.g., Kolomoki in Early County, Georgia) provide data on material culture, architecture, community planning, and subsistence (Sears 1956).

Due to similarities between Late Woodland and Mississippian cultures, some authors (e.g., Fish 1976; Hanson et al. 1981) group these two periods (as they occur in the Coastal Plain) together. At the end of the Woodland period, the scattered populations living along the coast began to be colonized and acculturated by the chiefdom societies living further north and west in the Etowah and Oconee River Valleys (Stanyard n.d.). The subsequent social and economic changes mark the beginning of the Mississippian period in the Georgia coastal zone.

The Late Woodland artifact assemblage, although poorly represented, is reasonably well documented. Medium stemmed projectile points, similar to those associated with the Swift Creek site near Macon, Georgia (Wood et al. 1986), are typical, and small, straight-sided triangular points make their initial appearance (Justice 1987:224-225). Ground stone tools are more common than chipped tools, supporting the continued

importance of plant food processing. Shell and bone were used to make a variety of tools including awls, picks, chisels, adzes, abraders, toggles, and ornaments (Stanyard n.d.).

The ceramic type most associated with the Late Woodland period in the Coastal Plain is Wilmington Cord Marked. This grog (ground sherd) tempered ware developed late in the Middle Woodland but became dominant during the Late Woodland. Other typical Wilmington styles include fabric impression and simple stamping.

Sites with definitive Late Woodland components are not expected to be as common on the Coastal Plain relative to materials from other periods. Garrow (1984:51) recorded four such sites (two in the Coastal Marine Flatlands and two in the Vidalia Uplands) during a transmission line survey in Burke, Screven, Effingham, Chatham, Bryan, Long, Liberty, McIntosh, and Glynn counties. Smith and Elliott (1985a) recorded two sites with Wilmington ceramics. Smith and Elliott (1985b), in their survey near Skidaway Island, identified eight sites, four of which contained Late Woodland components. Bailey et al. (1997) identified no Late Woodland sites during their survey of the 1,000-hectare Savannah Quarters tract. Survey of the 2,040-hectare Godley tract resulted in the identification of one Late Woodland site (9CH872) (Bailey and Poplin 1997; Hicks 1997; McMakin and Bailey 1997). Surveyors of the 520-hectare Morgan tract identified no definite Late Woodland sites (Fletcher et al. 2003).

Mississippian Period (AD 900 to 1700)

The Mississippian period is a time of permanent settlements, increased religious and social complexity, and greater dependency on agricultural practices. An elaborate and complex iconography became widespread throughout the Midwest and Southeast during this time (Dragoo 1975:20-21; Griffin 1967:189-190; Smith 1978; Stoltman 1978:727). Throughout the Southeast, the most dramatic characteristics of this period were the construction of large, fortified villages and flat-topped earthen mounds utilized in political and religious functions. The structures publicly enhanced the social status of political leaders. A vast number of sources focus on the development and collapse of

regional polities (e.g., Anderson 1994; Barker and Pauketat 1992; Blitz 1993; Braley 1996; Byrd 1991; DePratter 1991; Hudson et al. 1985; Marshall 1987; Muller 1997; Rogers and Smith 1995; Schnell and Wright 1993; Smith 1990; Thomas 1993), primarily from a processual perspective, but with a heavy emphasis on social stratification and regional spatial organization. The conclusion of the Mississippian period encompasses the tremendous changes that occurred within Native American culture after European contact.

Mississippian settlements were located primarily along major streams or rivers on large alluvial floodplains that provided easily accessible fertile soils suitable for agricultural activities. Griffin (1967:189) suggests that "it was the gradual shift to a substantial dependence on agriculture that tied the societies to specific localities, emphasized territoriality and ownership of land."

The study of most importance to the area is done by Anderson (1994), reflecting the nearby Savannah River Valley. He focuses on the "cycling" of political power in the region, postulating that changes in the organizational development of particular chiefdoms resulted from a number of primary motivating factors, including regional physiographic structures, climate, resource structure, agricultural/subsistence production, storage technology, tribute mobilization, prestige goods exchange, alliance networking, information flow, territorial boundary maintenance, population change, population movement, ritual institutions, authority structures, factional competition, and the nature of succession. Anderson (1994) addresses the development of chiefdoms in the region from the perspective of materialism and economic motivation, suffused with a strong socioreligious ideal perpetuated by the exchange of exotic prestige goods.

Artifact assemblages during this period become more complex. Pottery is more diversified than during previous cultural periods; there are clear functional differences in form and quality. Cooking bowls and storage containers are the most common form, but polished and decorated vessels also are prevalent. Trade goods include Coastal Plain shell, used in the manufacture of beads, drinking vessels, and elaborately decorated gorgets, as well as flint, copper, wood, and salt

(Griffin 1967:189-191; Stoltman 1978:725-728). Fish (1976:19) lists a variety of small triangular (Caraway, Clements, Uwharrie) and pentagonal (Pee Dee) projectile points found on Mississippian sites in the Coastal Plain.

Mississippian ceramics common in southeastern Georgia are unique in their retention and refinement of a number of previously utilized decorative motifs and in their reintroduction of earlier designs. General agreement has been reached on a Mississippian ceramic sequence for the Georgia coast (Braley 1990; DePratter and Howard 1980; Smith et al. 1981). Depending on the source, the St. Catherine's phase (AD 1000 to 1150) is considered either transitional (Smith et al. 1981:89; Williams and Shapiro 1990), contemporaneous with the Savannah phase (Crook 1984), or the earliest Mississippian manifestation on the Georgia coast (White 1988:108). Differentiated by clay (or fine grog) temper, St. Catherine's vessels generally are cord marked or net impressed; however, plain and burnished plain types have been defined (Stanyard n.d.).

Currently, the Savannah phase (AD 1150 to 1300) is accepted as the initial period of Mississippian occupation in the Georgia Coastal Plain and usually is divided into two sub-phases. According to DePratter and Howard (1980:24), Savannah I (AD 1150 to 1200) includes fine cord marked, plain, and burnished plain surface treatments. While DePratter and Howard (1980) consider check stamping a marker for Savannah II (their sequence consists of three phases), Braley (1990:71) includes check stamping (on large jars) within Savannah I and suggests plain carinated bowls were also produced. Savannah II (AD 1200 to 1300) is defined by the continuation of certain decorative motifs and the addition of complicated stamping (figure eights, figure nines, and bull's eyes; Caldwell and Waring 1939), particularly on large jars (Braley 1990:71).

The Irene phase (AD 1300 to 1450) follows Savannah II and was defined at the type site (9CH1) near Savannah during excavations in the late 1930s (Caldwell and McCann 1941). This period is thought to represent the initial manifestation of the Lamar Culture on the Georgia coast and is called "Climax Mississippian" by Garrow (1984:52). The

Irene phase represents the first clear archaeological manifestation of historically known tribal units (i.e., the Guale). An outgrowth of the traditional settlement pattern, many of the Irene sites located in coastal Georgia correspond to Spanish and French accounts of Guale Indian villages. Irene I (AD 1300 to 1350) ceramics are coarse sand/grit-tempered, exhibiting plain, burnished plain, and complicated stamped (variations on the filfoot cross) surface treatments (DePratter and Howard 1980:24, 31). Braley (1990:71) lists large plain jars and reed punctate or noded rims as defining ceramic attributes. During Irene II (AD 1350 to 1450), incising is added as a surface treatment (bold on carinated bowls, scroll motifs on small jars), and applied or segmented rim strips are seen on large jars.

Based on a number of analyses, Braley (1990:99-100) follows Larson (1958) in suggesting the use of the designation "Pine Harbor Phase" (AD 1450 to 1575) to represent the last Mississippian/Lamar culture manifestation on the upper Georgia coast prior to European contact. Smith et al. (1981:91) describe Pine Harbor as "the temporal equivalent of Irene on the lower Georgia coast [except for] the presence of an additional ceramic type, McIntosh Incised." Other ceramic attributes of this phase are "large jars with reed-punctated applique rim strips... small jars with intricate incised motifs... bold incising... punctuation... carinated bowls with multiple-line incising" (Braley 1990:72).

There are at least six small mounds on St. Simons. Three mounds are on or near the Cannon's Point tract to the north of the project tract. Large shell middens occur both at Frederica and Cannon's Point, which include evidence of structures and domestic features that date to the Mississippian period. The Mississippian occupation of St. Simons was probably the most intensive occupation during the pre-contact time frame.

3.2.2 Overview of the Protohistoric Era

This period encompasses the time after initial contact with Europeans, but before the loss of Native American political control over the region (AD 1540 to 1733). The beginning of this period is signaled by the DeSoto entrada; the period ends with the signing of the Treaty of Yamacraw Bluff (Savannah).

By the mid-1600s, historically known Native American groups such as the Cherokee, Coosa, Creek, Ocuete, Calusa, and Apalachee inhabited Georgia. Unlike earlier Mississippian peoples, these groups did not normally construct mounds, and it appears that there was a trend away from increasing social stratification (the formation of true social classes). There were well-established trade routes that linked individual regions with each other and areas outside the Southeast, but the regional political dominance of specific population centers had changed.

Spanish explorers arrived in Georgia during the second half of the sixteenth century, setting up forts (e.g., Castillo de San Marcos and Santa Elena) and Jesuit missions (e.g., San Diego de Satualache, San Felipe, and Santa Catalina) along the coast (Worth 1995). The explorers traded items such as glass beads, clothing, metal tools, firearms, and rum extensively with the Native American groups they encountered and regularly investigated interior lands. Among the first groups the Spanish encountered were the Guale. The Guale inhabited lagoon and marsh sections of the coast and lived in dispersed settlements along major rivers (Thomas 1993).

Larson (1958) posited the Irene/Pine Harbor phase as representative of the culture of the Guale Indians at the time of initial contact with Spanish explorers and missionaries (approximately AD 1540 to 1600). As contact and settlement intensified, this group became more dependent upon Spanish trade goods, such as metal tools, firearms, and alcohol, and began associating more closely with the expanding Spanish mission system. Increasing assimilation of European lifeways and decimation by European disease led to profound changes in aboriginal lifeways and material culture (Smith 1987). It is likely that disease introduced by the Spanish, and later the English, was responsible for the elimination of a very large percentage of the population (Wood 1989) and perhaps the role of regional polities as it transformed the elaborate political structure of the region. Ongoing warfare between Native American ethnic groups served to further weaken Native American populations already reduced by the effects of warfare with Europeans in the area. The introduction of new European material goods, such as firearms and iron, provided new tools of war

to the Native American groups of the area. By the early seventeenth century, much of the population of coastal Georgia was transferred to mission sites located on barrier islands.

St. Simons Island may have been the site of the southern Guale town of Asao during the late sixteenth century. In 1595, the Catholic church sent Spanish Friar Francisco de Velasco to Asao to establish a mission. In 1597, the Indians rebelled against the idea of Christianity and the missions were destroyed, and most of the friars who served as missionaries were killed, Friar Velasco among them. In retaliation, the Spanish killed many of the Indians, burned the Guale towns, and fired the crops in the field. Widespread famine, which also affected the Spanish, followed. Peace was restored in the area after about 1600, and another mission was established at Asao. Subsequent battles between the English and Spanish for control of the coast, along with pirate raids in the area, eventually caused the Guale Indians living at Asao to move to South Carolina. The entire Guale area was probably abandoned by the end of 1683 (Saunders 2000; Sweeney 2003; Wallace 1975; Worth 1995). The exact location of the Asao Town is not known, and the number of Indian towns on St. Simons Island at that time is not certain. By the early seventeenth century, much of the population of coastal Georgia was transferred to mission sites located on barrier islands.

The Mississippian/Lamar culture recognized for the Georgia coastal area is the Altamaha/Sutherland Bluff phase (AD 1575 to 1700; Braley 1990). Larson (1958) also associates this phase with the Guale during “the period of intensive contact after the establishment of the mission system and prior to its destruction by British raiders from the Carolinas” (Smith et al. 1981:91). Large bell-shaped jars and plates were produced and red firing was applied, probably in imitation of European forms and decoration (i.e., Altamaha/San Marcos Pottery). Loop and strap handles were introduced for the first time to the coastal area. Vessel decorations are primarily simple, line block, or check stamped, plain, or incised with bold or narrow lines. A minority are decorated with rectilinear complicated stamping (Braley 1990:72; DePratter and Howard 1980:31).

3.2.3 Overview of the Historic Era

Colonial Period (1670 to 1783)

By the late 1600s, English expeditions were carried out from the Georgia and South Carolina coasts into the interior and settlements had begun to be established in the region. Charleston, South Carolina, was laid out as early as 1670, and clashes between the English and the Spanish occurred as early as 1702 (near Bainbridge, Georgia). In 1721, Fort King George was established along the Georgia coast, in Darien, which was claimed by both Spain and England. By 1733, Georgia became a Trustee colony under the direction of James Oglethorpe, one of a group of London philanthropists interested in settling a portion of the American colonies with the poor and disadvantaged of England. In that year, Savannah had also been established. Hostilities between the Spanish and English culminated in the Battle of Bloody Marsh (1742) near Frederica (Deagan 1975; Fairbanks 1956; Honerkamp 1980; Horvath et al. 1991). The English were victorious, and after negotiations in 1764, Spain agreed to a new territorial boundary (the current south Georgia state line). The English expansion began a new colonial period in Georgia, which was to introduce sizeable populations of European settlers much further into the interior, particularly in the Savannah River Valley (McEwan 1994; Hodler and Schretter 1986; Wood 1989).

Between 1721 and 1776, the English established military stations as far north as Elbert County and as far in the interior from the Savannah River as Greene County. Many were established to provide protection to the settlers and to supply military expeditions into the far reaches of Georgia. Predictably, clashes between settlers and native residents were fairly common during the Colonial period. The Georgia colony developed and grew, despite initial limitations placed on land ownership, labor, production, and trade by the Trustees (Boorstin 1958:88-95). By 1750, the Trustees had repealed many of the restrictions and allowed industrious colonists to accumulate larger tracts of land. This paved the way for the establishment of plantations and expansion of agricultural land. While slavery initially was prohibited, expansion of land holdings and the need for additional labor forced the

Trustees to allow enslaved Africans into the colony after 1750. By the 1770s, Georgia had become an important agricultural colony. Although the silk industry had failed, rice had become an exportable cash crop for the coastal regions, and cotton was growing in importance on interior uplands. Early on, rice was developed using irrigation methods in inland swamps, but later in the eighteenth-century, rice planting shifted to tidewater regions, where the effect of tidal ebb and flow on rivers could be used to inundate and drain fields, guaranteeing an adequate water supply. This complex technology of diking and draining major river valley swamps required intensive labor for construction, maintenance, and crop production, and encouraged the slave trade (Clifton 1978:xi-xii). The system of cultivation was to remain in use into the twentieth century.

Antebellum Period (1783 to 1861)

The Antebellum period saw the full establishment of the plantation economy that confirmed the position of the Southeast coast as one of the richest regions of the country. A major factor in this was the introduction of cotton cultivation. The production of short staple cotton opened up that area of sparse development to the plantation system. The first crop is said to have been grown on Hilton Head Island in 1790. The wealth produced from rice and cotton supported in considerable splendor the substantial cities of Charleston and Savannah. Both cities served as entrepôts for the marketing of the plantation crops. An aristocratic planter class was created, based on the essential labor of enslaved Africans which the plantation could not function without.

In the coastal counties, white population decreased while the enslaved black population increased during the time period; throughout this period, whites were in the minority. For two of the three inland counties, whites remained the majority, but populations remained relatively stable. Garrow (1984) attributes these differences to variability in agricultural economy. Coastal plantation residents, who focused on sea island cotton and rice, found it necessary to maintain large enslaved labor pools, while inland farms, with short staple cotton as a primary crop, tended to be smaller, family-run operations with less use for enslaved labor. On St. Simons

Island, 14 plantations were established after the revolutionary war, with several additional plantations located on the mainland in Brunswick and along the Altamaha River. Plantations near the project tract include Hamilton Plantation to the west on Gascoigne's Bluff and James Gould's St. Black Banks Plantation to the east and St. Clair Plantation to the north (Bruce n.d.).

Agricultural production prior to 1780 was focused on coastal areas, where rice, sea island cotton, and indigo were the major cash crops, and the plantation system became firmly established. Expansion of existing coastal plantations, development of upland cotton varieties, and the invention of the cotton gin in the late eighteenth century all made movement into inland areas both practical and necessary.

Observations by White (1849) indicate continuation of agricultural trends from the previous period. Lower coastal counties continued to produce rice and Sea Island cotton but began to substitute sugar cane for indigo as a cash crop. Subsistence crops on island and mainland farms and plantations included corn, potatoes, apricots, and figs.

The Civil War and Reconstruction (1861 to 1870)

Georgia's wartime governor, Joseph E. Brown, recognized the strategic importance of St. Simons as early as January 1861. Not only did it overlook the entrance to Brunswick Harbor, but it also provided agricultural fields, supplies, and a hideaway for blockade runners. Brown stationed an artillery unit from Macon at Fort Frederica to guard the harbor. Due to inactivity, however, the unit was soon removed, and the island remained relatively unprotected until President Abraham Lincoln issued a blockade order in April. Throughout 1861, Confederate troops were deployed to the Brunswick vicinity, totaling almost 2,000 by the fall.

The island itself was protected by 1,500 Georgia troops under the command of Colonel Carey M. Stiles. Most of these troops were stationed on the southern end of the island, near old Fort St. Simon's. Constructed by enslaved labor, the earthworks consisted of bombproof shelters, ammunition magazines, and 12 embrasures. As 1861 drew to a close, the two batteries included

one 10-inch columbiad, one 8-inch columbiad, two 42-pounder guns, and five 32-pounder guns (Heard 1938:249-252).

In December 1861, the fear of attack caused panic among the plantation residents. A hurried evacuation ensued, which left the island largely abandoned except for the remaining Confederate troops. By early 1862, General Robert E. Lee ordered St. Simons abandoned and the guns redeployed, believing Savannah to be in a more precarious situation than the ports at Brunswick and Darien. The Confederates dynamited the lighthouse that guarded Brunswick harbor, leaving the island to the Federals, who began their occupation on March 9, 1862 (Heard 1938:252-254).

Commander Sylvanus W. Godon of the U.S.S. *Mohican* found only three whites on the island, no enslaved individuals, and all of the plantations deserted. The U.S. Navy was commanded to gather and supply the enslaved, designated as "contraband." Finding it impracticable to send those from the Brunswick vicinity to already established colonies at Hilton Head and Fernandina, Godon then designated a settlement on St. Simons. The first blacks to be relocated came from Colonel's Island and were housed at Thomas Butler King's plantation, Retreat, and later at Gascoigne's Bluff. The colony continued to grow as the Confederates lost ground on the Georgia Coast.

War, blockade, and occupation terminated the plantation economy and the social system based upon it. Destruction of mills, loss of seed stock, neglect of fields that required constant maintenance (especially in rice plantations), loss of a cheap labor force, and competition with other agricultural areas inhibited redevelopment after 1865, though rice and long staple cotton production lingered into the twentieth century. During and at the end of the war, properties were confiscated by the government for failure to pay taxes and, in some cases, with the title transferred to freedmen. In large part, the former enslaved economy was replaced by one based on tenant farmers, creating a new settlement pattern of dispersed structures on small holdings. The economy of the latter part of the nineteenth century shriveled, and much of the coastal region reverted to a subsistence base.

Postbellum Agriculture and Adaptation (1870 to 1925)

After the war, life returned to St. Simons. It took several years to resolve the property ownership issues, but most of the plantation lands were divided into smaller tenant farms. Many of the former enslaved established new communities along Frederica Road and in the center of the island. Many of the large tracts of land, including The Frederica and Cannon's Point tracts to the north, were largely abandoned. Wild pigs established themselves in the overgrown plantation lands and hunting them and other wild game became the most common activity that occurred. Many of the plantation houses at Butler Point, Pike's Bluff, and Cannon's Point fell into ruins. People on St. Simons lived in a rural setting during the Postbellum period, making a living mostly from subsistence farming and fishing.

Following Reconstruction, the railroads which had been destroyed by Federal troops were rebuilt and refurbished, and the export of agricultural products became an important part of the economy. Specifically, cotton soon regained its position as the major cash crop and remained as such until the 1920s, when the boll weevil reached the area. It should be noted that large tracts of land were also set aside as hunting preserves, military reservations, and forest holdings, partly because land was otherwise of such little value. Industrial growth (centered on textiles) followed at a slower rate and was focused around Savannah. Other industries which exhibited growth that was often seen in more rural areas included various grain milling operations, tanneries, distilleries, brick manufacture, fertilizers, and lumber. However, continuation of cotton monoculture generally worked to the exclusion of developments in food production or industry, resulting in increased severity of the economic depressions occurring in the late 1870s, the middle 1890s, and the 1930s.

St. Simons Island became a summer resort. Unlike most of the restricted Georgia coastal islands, St. Simons was open to everyone. There were two hotels, two boarding houses, and numerous cottages for rent. The island, which was served by two steamship lines, was in use by tourists from May through October (Irvine 1902).

Mid-Twentieth Century Recovery and Diversification (1930 to present)

The decade of the 1930s was a time of hardship brought about by the worldwide depression. Jobs and cash were scarce, and many of the small farmers lost their property. Finally, the increased demand for food and manufactured products brought about by the advent of the Second World War ended the depression and led to a further diversification in agricultural crops. New industry also brought changes in the business and industrial community as a whole.

McKinnon Airfield was constructed on St. Simons Island during the late 1930s. It was built by Glynn County for the use of the U.S. Navy as a training base. Site 9GN1 was discovered during construction of the airport (Bennell n.d.).

4.0 Cultural Resources Survey Results

4.1 Background Research Results

Brockington staff consulted GNAHRGIS to obtain information regarding previous cultural resources investigations and to determine the locations of eligible or potentially eligible cultural resources located within 1.0 km (0.6 mile) of the project tract. Background research revealed that no previously recorded archaeological sites, historic resources, or previous investigations are located within the project tract. However, four previously recorded archaeological sites and 116 historic resources have been recorded in the vicinity of the project tract. Tables 4.1 and 4.2 briefly summarize their results. Figure 4.1 presents the location of previously recorded archaeological sites and historic resources.

4.1.1 Previously Recorded Archaeological Sites

Background research conducted on GNAHRGIS identified no previously recorded archaeological sites within the APE for the proposed project. However, four previously recorded archaeological sites are located within the vicinity of the project tract. Site 9GN3 is a pre-contact mound and village site with unknown pre-contact components. Site 9GN208 is a twentieth-century historic structure. Site 9GN209 is a twentieth-century garbage dump site. Site 9GN317 is a tabby house that dates from the late eighteenth to twentieth centuries.

According to the Georgia archaeological site forms, Sites 9GN3, 9GN209, and 9GN317 have an unknown NRHP status and Site 9GN208 is recommended not eligible for the NRHP. None of these four previously recorded archaeological sites are located within an area of direct or indirect effect for the proposed project. Therefore, further

management considerations of these four nearby previously recorded archaeological sites, regardless of their NRHP eligibility status, are unnecessary.

4.1.2 Previously Recorded Historic Resources

According to GNAHRGIS, no previously recorded historic resources are located within the project tract. However, 116 historic resources have been recorded within a 1.0-km radius of the project tract. The majority of these previously recorded historic resources (n=101) are houses that were constructed sometime between 1910 and 1960. Other previously recorded historic resources include the U.S. Coast Guard Station, the King and Prince Hotel, the Ocean View Guest Cottage, three Multiple Housing Units, the Crab Trap Restaurant, the Sea Haven Inn, Emanuel Baptist Church, and four non-specified buildings. The U.S. Coast Guard Station and the King and Prince Hotel are listed on the NRHP. GNAHRGIS does not provide a specific NRHP recommendation for the remaining 114 nearby previously recorded historic resources.

4.1.3 Previously Recorded Cultural Resources Investigations

According to GNAHRGIS, no previous investigations are located within the project tract or within a 1.0-km radius of the current project tract.

Table 4.1 Previously recorded archaeological sites in the vicinity of the project tract.

Site Number	Site Type	Temporal Association	NRHP Eligibility Status	Situation
9GN3	Pre-contact mound and village	Unknown pre-contact	Unknown	Within 1.0 km
9GN208	Historic structure	20th century	Not eligible	Within 1.0 km
9GN209	Historic garbage dump	20th century	Unknown	Within 1.0 km
9GN317	Tabby house	Late 18th - 20th century	Unknown	Within 1.0 km

Table 4.2 Previously recorded historic resources in the vicinity of the project tract.

GNAHRGIS ID	Resource Type	Construction Date	Situation	NRHP Recommendation
225430	Building	Unknown	Within 1.0 km	Unknown
225435	Building	Unknown	Within 1.0 km	Unknown
225443	Building	Unknown	Within 1.0 km	Unknown
225447	Building	Unknown	Within 1.0 km	Unknown
225448	House	Unknown	Within 1.0 km	Unknown
225476	House	Unknown	Within 1.0 km	Unknown
249349	US Coast Guard Station	Unknown	Within 1.0 km	Listed
249505	King and Prince Hotel	Unknown	Within 1.0 km	Listed
275511	House	1940	Within 1.0 km	Unknown
275785	House	1960	Within 1.0 km	Unknown
275789	House	1930	Within 1.0 km	Unknown
275790	House	1930	Within 1.0 km	Unknown
275800	House	1940	Within 1.0 km	Unknown
275806	House	1930	Within 1.0 km	Unknown
275807	House	1960	Within 1.0 km	Unknown
275808	House	1960	Within 1.0 km	Unknown
275809	House	1940	Within 1.0 km	Unknown
275849	House	1930	Within 1.0 km	Unknown
275850	House	1930	Within 1.0 km	Unknown
275854	House	1960	Within 1.0 km	Unknown
275870	House	1950	Within 1.0 km	Unknown
275872	House	1960	Within 1.0 km	Unknown
275875	House	1930	Within 1.0 km	Unknown
275876	House	1925	Within 1.0 km	Unknown
275877	House	1950	Within 1.0 km	Unknown
275878	House	1960	Within 1.0 km	Unknown
275881	House	1930	Within 1.0 km	Unknown
275886	House	1940	Within 1.0 km	Unknown
275889	House	1925	Within 1.0 km	Unknown
275892	House	1925	Within 1.0 km	Unknown
276010	House	1960	Within 1.0 km	Unknown
276014	House	1956	Within 1.0 km	Unknown
276018	House	1938	Within 1.0 km	Unknown
276020	House	1960	Within 1.0 km	Unknown
276021	House	1960	Within 1.0 km	Unknown
276023	House	1960	Within 1.0 km	Unknown
276025	House	1930	Within 1.0 km	Unknown
276027	House	1930	Within 1.0 km	Unknown
276029	House	1929	Within 1.0 km	Unknown
276253	House	1930	Within 1.0 km	Unknown
276255	House	1930	Within 1.0 km	Unknown
276259	House	1930	Within 1.0 km	Unknown
276260	House	1960	Within 1.0 km	Unknown
276262	House	1930	Within 1.0 km	Unknown
276265	House	1940	Within 1.0 km	Unknown
276267	House	1930	Within 1.0 km	Unknown

Table 4.2 Previously recorded historic resources in the vicinity of the project tract. (continued)

GNAHRGIS ID	Resource Type	Construction Date	Situation	NRHP Recommendation
276270	House	1940	Within 1.0 km	Unknown
276272	House	1930	Within 1.0 km	Unknown
276275	House	1940	Within 1.0 km	Unknown
276279	House	1935	Within 1.0 km	Unknown
276450	House	1930	Within 1.0 km	Unknown
276452	House	1960	Within 1.0 km	Unknown
276453	House	1960	Within 1.0 km	Unknown
276454	House	1960	Within 1.0 km	Unknown
276455	House	1930	Within 1.0 km	Unknown
276456	House	1930	Within 1.0 km	Unknown
276458	House	1930	Within 1.0 km	Unknown
35898	House	1930	Within 1.0 km	Unknown
35900	House	1930	Within 1.0 km	Unknown
35901	House	1930	Within 1.0 km	Unknown
35902	House	1910	Within 1.0 km	Unknown
35903	House	1930	Within 1.0 km	Unknown
35904	House	1930	Within 1.0 km	Unknown
35905	House	1920	Within 1.0 km	Unknown
35906	House	1937	Within 1.0 km	Unknown
35907	House	1937	Within 1.0 km	Unknown
35908	House	1930	Within 1.0 km	Unknown
35909	House	1937	Within 1.0 km	Unknown
35910	House	1937	Within 1.0 km	Unknown
35911	House	1930	Within 1.0 km	Unknown
35912	House	1930	Within 1.0 km	Unknown
35913	House	1930	Within 1.0 km	Unknown
35914	House	1937	Within 1.0 km	Unknown
35915	House	1910	Within 1.0 km	Unknown
35916	House	1940	Within 1.0 km	Unknown
35917	House	1920	Within 1.0 km	Unknown
35918	House	1920	Within 1.0 km	Unknown
35919	House	1937	Within 1.0 km	Unknown
35920	King and Prince Hotel	1920	Within 1.0 km	Unknown
35921	Ocean View Guest Cottage	1890	Within 1.0 km	Unknown
35922	House	1937	Within 1.0 km	Unknown
35923	House	1920	Within 1.0 km	Unknown
35924	Crab Trap Restaurant	1930	Within 1.0 km	Unknown
35925	Store	1920	Within 1.0 km	Unknown
35926	Multiple Housing Units	1900	Within 1.0 km	Unknown
35927	House	1937	Within 1.0 km	Unknown
35928	House	1930	Within 1.0 km	Unknown
35929	House	1920	Within 1.0 km	Unknown
35930	House	1920	Within 1.0 km	Unknown
35931	House	1930	Within 1.0 km	Unknown
35932	House	1930	Within 1.0 km	Unknown
35933	House	1920	Within 1.0 km	Unknown

Table 4.2 Previously recorded historic resources in the vicinity of the project tract. (continued)

GNAHRGIS ID	Resource Type	Construction Date	Situation	NRHP Recommendation
35934	House	1930	Within 1.0 km	Unknown
35935	House	1930	Within 1.0 km	Unknown
35936	House	1930	Within 1.0 km	Unknown
35937	House	1930	Within 1.0 km	Unknown
35938	House	1930	Within 1.0 km	Unknown
35939	House	1937	Within 1.0 km	Unknown
35940	Multiple Housing Units	1920	Within 1.0 km	Unknown
35941	House	1937	Within 1.0 km	Unknown
35942	House	1930	Within 1.0 km	Unknown
35943	House	1937	Within 1.0 km	Unknown
35944	Multiple Housing Units	1930	Within 1.0 km	Unknown
35945	House	1927	Within 1.0 km	Unknown
35946	House	1927	Within 1.0 km	Unknown
35947	House	1920	Within 1.0 km	Unknown
35948	House	1920	Within 1.0 km	Unknown
35949	House	1930	Within 1.0 km	Unknown
35950	House	1930	Within 1.0 km	Unknown
35951	House	1930	Within 1.0 km	Unknown
35952	Sea Haven Inn	1920	Within 1.0 km	Unknown
35954	House	1930	Within 1.0 km	Unknown
35956	Emanuel Baptist Church	1904	Within 1.0 km	Unknown
35957	House	1920	Within 1.0 km	Unknown
35958	House	1920	Within 1.0 km	Unknown
36006	House	1920	Within 1.0 km	Unknown

4.2 Environmental Profile of the Tract

The project tract is located in the southeastern portion of St. Simons Island along East Beach and is situated between Neptune Drive and Olive Way. The natural topography is relatively flat and low, with elevations ranging from 0 to 2.0 m amsl. The project tract is primarily located along the beach. A large tidal pool extends through the central portion of the project tract. The majority of the project tract is devoid of vegetation. Some areas along the beach contain sparse grassy vegetation. Sand dunes covered with wild grass and small shrubs are located in the western portion of the project tract. Overall surface visibility within the tract is typically high at 100 percent. Figures 4.2 through 4.7 present typical views of the project tract.

4.3 Archaeological Survey Results

Our survey consisted of several pedestrian transects spaced at 30-m (100-ft) intervals across the entire project tract. A total of 128 shovel test locations were placed within the project tract (see Figure 2.1), 25 of which could be not excavated due to inundation.

Soils varied throughout the study tract. Many of the excavated shovel tests consisted of grayish-brown sandy from 0 to 30 cm, underlain by dark gray sand that extended below and into the water table. Other shovel tests consisted of white sand from 0 to 40 cm, underlain by a grayish-brown sand to 60 cm, which was underlain by a dark grayish brown sand into the water table. The water table was reached anywhere from 20 to 100 cm below the ground surface.

None of the excavated shovel tests contained cultural materials. Therefore, no archaeological resources were identified during the archaeological field survey.



Figure 4.2 Typical view of project tract, facing east.



Figure 4.3 Typical view of project tract, facing southwest.



Figure 4.4 View of project tract, facing southwest.



Figure 4.5 View of project tract, facing southeast.



Figure 4.6 View of the project tract and inundated tidal pool, facing southwest.



Figure 4.7 View of the project tract and inundated tidal pool, facing east.

4.4 Historic Resources Survey Results

In July 2025, Brockington conducted a survey for any above-ground architectural properties within the East Beach to Myrtle Street Tidal Pools Project tract and its viewshed (architectural APE). Due to the limited above-ground impact of the project (i.e., filling in tidal pools within the beachfront) and limited visibility within the surrounding area due to intervening buildings and vegetation, Brockington determined that the viewshed would be limited to the boundary of the project tract and all immediately adjacent properties (all of which are adjacent to the northwestern boundary of the project tract). We recorded all properties older than 50 years of age through digital photography and researched each property using local tax assessor records, historic maps and aerials, and informant interviews, if possible.

The project tract is located on East Beach in the southeastern portion of St. Simons Island, Glynn County, Georgia, within an area of the shoreline currently occupied by tidal pools.

Historic maps and aerials show the project tract occupied by a sandy shoreline beach from at least 1951 through 2025, with the beachline fluctuating with tidal and erosion activity. Aerial photographs indicate that the immediately adjacent parcels have been occupied by residential and commercial buildings and wooded land since 1951. The buildings were concentrated along the southeastern portion of the project tract in 1951, but commercial buildings (primarily hotels and resorts) incrementally expanded to the northeast, replacing the wooded land, through 2007. By 2007, the entire northwestern boundary of the project tract faced residential and commercial buildings with some heavily wooded lots. The architectural APE has remained relatively unchanged since 2007; however, the tidal pools within the project tract formed at some point between the 2019 and 2021 aerial photographs. The built environment consists largely of early to late twentieth- and early twenty-first-century residential and commercial building stock.

Background research identified one previously recorded architectural resource (The King and Prince Hotel [NRHP #04001465]) within the APE. The King and Prince Hotel is a hotel building that has been previously determined eligible for and is listed in the NRHP. During the field survey, we identified no new architectural resources within the architectural APE (Figure 4.8). Table 4.3 summarizes the previously identified architectural resource within the architectural APE. Additional details and an NRHP assessment for the resource are provided below.

Table 4.3 Summary of the previously recorded resource within the architectural APE.

Resource ID	Name	Cultural Affiliation	Description	Location	NRHP Status / Recommendation
NRHP #04001465 / GAHPD Resource IDs 35920 and 249505	The King and Prince Hotel	1941-1954	Spanish Colonial Revival Hotel	201 Arnold Road	Eligible; NRHP-Listed / No Adverse Effect



Figure 4.8 Location of the surveyed resource within the architectural APE.

4.4.1 Previously Identified Resources

4.4.1.2 The King and Prince Hotel

(NRHP#04001465)

Date: 1941

Address: 201 Arnold Road

Style/Type: Spanish Colonial Revival Commercial Building (Hotel)

NRHP Status: NRHP-Listed

The King and Prince Hotel (NRHP#04001465) is a two- and three-story hotel building of the Spanish Colonial Revival architectural style, constructed in 1941. The resource is listed in GNAHRGIS (Resource IDs 35920 and 249505) as being unevaluated for the NRHP by the Georgia DNR HPD, but is listed in the NRHP. According to National Park Service (NPS) records, the hotel was evaluated and listed in the NRHP (NRHP #04001465) on January 12, 2005, due to its associations with mid-twentieth-century entertainment and recreation and its significance as an example of the Spanish Colonial Revival style (NPS 2004; National Register Information System [NRIS] 2025). The resource sits on a parcel measuring approximately 2.9 acres at 201 Arnold Road, approximately 60 ft north of the project tract at its closest point (see Figure 4.8). According to tax assessor records, the property is currently owned by Crown KP Hotel, LLC.

During the early twentieth century, St. Simons Island developed from a collection of summer cottages located near a lighthouse at the southern end of the island into a summer resort destination for wealthy tourists. Morgan T. Wynne of Atlanta opened the King and Prince Beach Club in 1935, and the club was popular for its big band entertainment and outdoor dancing. After the destruction of the King and Prince Club in a 1937 fire, Wynne organized a corporation to raise money to replace the club building with a larger hotel facility (NPS 2004). The King and Prince Hotel was completed in 1941 and opened on July 2, 1941. By December 1941, the United States had joined World War II on the side of the Allies, and German U-Boats were active off the coast of Georgia. The King and Prince Hotel was occupied by the U.S. Navy from 1941 to 1945 and was utilized as a Navy training facility and radar station. After the war, the hotel resumed

its commercial operations in 1947; however, the Navy and other military personnel stationed at St. Simons Island had come to appreciate the resort location. The returning military personnel and their families jumpstarted the postwar transition of St. Simons Island and the King and Prince Hotel from a getaway for the wealthy into a middle-class tourist destination (Historic Hotels of America [HHA] 2025).

The hotel continued operations throughout the mid- and late twentieth century under a succession of owners; however, by the mid-1970s the hotel was showing its age despite a 1972 renovation, causing its popularity with tourists to wane. The hotel underwent a bank foreclosure by 1975 but was purchased by new owners and renovated again in the 1980s, adding a large two-story atrium to the hotel. These renovations were conducted with respect to preserving the Spanish Colonial Revival architecture of the hotel building, and in 1995, the National Historic Trust for Historic Preservation listed the King and Prince Hotel in its Historic Hotels of America program (NPS 2004). Further substantial renovations, rehabilitations, and expansions of the hotel building in 2003 were conducted with the oversight and certification of the NPS Technical Preservation Services Branch, and the hotel was listed in the NRHP in 2005 (HHA 2025). The King and Prince Hotel underwent another large renovation project from 2010 to 2013 that updated common area facilities and added the new ECHO restaurant while preserving the Spanish Colonial Revival architecture (The King and Prince Beach and Golf Resort [KPBGR] 2025). As of 2025, the King and Prince Hotel remains in operation.

The original hotel building was constructed on an inverted P-shape foundation, with a square 'loop' around a central courtyard and a wing extending southwest from the southwestern elevation of the loop at the southern corner. The 1980s renovation expanded the original wing to the northwest, forming a square central atrium roughly the same width as the loop. A four-story wing containing guest room bays was added during the same renovation period, extending southwest from the northwest corner of the atrium, forming the current footprint of the expanded hotel building.

The hotel features brick construction clad in beige stucco. The design of the building includes multiple towers and Monterey-style balconies cantilevered on wooden joists with sawn ends. A one-story solarium, part of the original hotel design, extends southeast from the northeast corner of the hotel. The building makes heavy use of arched windows and arcades, with the arcades supported by round white columns. The gabled roofs feature mission-style pediments and dormers and are clad in red terracotta roofing tiles. While the entire building is composed of multiple elements of connecting wings, arcades, rounded towers, and courtyards, all elements, including the non-historic expansions and renovations, have been constructed to match the Spanish Colonial Revival style of the original hotel and form a cohesive, if sprawling, whole.



Figure 4.9 Northern view of The King and Prince Hotel (NRHP #04001465), southeast elevation.



Figure 4.10 Eastern view of The King and Prince Hotel (NRHP #04001465), northwest elevation, southwestern corner.



Figure 4.11 Southeastern view of The King and Prince Hotel (NRHP #04001465), northwest elevation, central atrium.



Figure 4.12 South oblique view of The King and Prince Hotel (NRHP #04001465), northwestern corner.



Figure 4.13 Northern view of The King and Prince Hotel (NRHP #04001465), southeast elevation, northeast corner.



Figure 4.14 Western view of The King and Prince Hotel (NRHP #04001465), southeast elevation, central atrium.



Figure 4.15 Northeastern view of The King and Prince Hotel (NRHP #04001465), central atrium.



Figure 4.16 Northwestern view of The King and Prince Hotel (NRHP #04001465), southeast elevation, southeastern corner.

NRHP Status and Recommendation

According to the NRHP registration form for The King and Prince Hotel (NRHP #04001465) (NPS 2004), the hotel was listed in the NRHP under Criterion A (*events*) for its associations with entertainment and recreation as a mid-twentieth-century beach resort hotel on St. Simons Island. The hotel was also listed under Criterion C (*architecture*) as a rare extant example of early to mid-twentieth-century Spanish Colonial Revival architecture in Georgia. The specific period of significance listed for the resource is 1941 to 1954.

The 1941 to 1954 period corresponds with the hotel's operation as a tourist resort on East Beach at St. Simon's Island. As noted above, the hotel's period of service as a U.S. Navy installation during World War II exposed military personnel to the recreational qualities of St. Simons Island and played a significant role in the island's transition from an upper-class getaway into a middle-class vacation destination. The hotel has continued to provide entertainment and recreation opportunities for vacationing tourists

from its reopening to the public in 1947 to the modern day in 2025. These associations qualify The King and Prince Hotel as eligible for listing in the NRHP under Criterion A (*events*).

Archival research did not identify any known important individuals that have associations with The King and Prince Hotel. Therefore, this resource is not eligible for the NRHP under Criterion B (*person*). Also, there are no indications that the property is likely to yield information on important research questions in history. Therefore, this resource is not eligible for the NRHP under Criterion D (*information potential*).

The hotel building retains its original materials and design elements within the original hotel structure, and all renovations and expansions were conducted with care to match the materials and design of the original building as much as possible. The latest large renovation projects in 2003 and 2010–2013 were done in cooperation with the NPS Technical Preservation Services Branch to ensure the preservation of the hotel's architectural integrity. Despite the expansion of the original footprint

and the non-historic additions, these efforts have resulted in the hotel retaining integrity of location, setting, association, design, workmanship, materials, and feeling. Therefore, The King and Prince Hotel qualifies as eligible for listing in the NRHP under Criterion C (*architecture*).

While our investigations did not include a detailed survey within the historic property, The King and Prince Hotel was listed in the NRHP under Criteria A (*events*), and C (*architecture*) and is **NRHP eligible**. Due to the nature of the proposed project (filling in tidal pools on a coastline beach), physical effects would not occur because the project tract is located outside of the NRHP-eligible boundary of the resource. Based on the current project parameters and assumptions as well as our observations conducted on-site, it is our opinion that the proposed project may be partially visible from within the boundaries of the historic property (see Figure 4.8). However, the portion of the viewshed potentially impacted by the proposed project consists of a naturally fluctuating sandy shoreline beach as evidenced by historic aerial photographs, and the infill of the tidal pools would restore the original pre-2019 visual setting of the property. Therefore, it is our opinion that the proposed project will have **no adverse effect** on the setting of The King and Prince Hotel (NRHP #04001465).

116 historic resources are located within a 1.0-km (0.6-mile) radius of the project tract. No previously recorded cultural resources will be impacted by the proposed project.

Brockington's archaeological field survey included systematic visual examination and 30-m-interval shovel test excavations within the project tract. The historic architectural resource field survey involved driving and walking the project APE, with pedestrian inspection of all potentially historic resources. Our investigation identified one historic resource (The King and Prince Hotel [NRHP #04001465]) within the project's APE. The King and Prince Hotel is listed on the NRHP. However, the proposed project will have **no adverse effect** on the setting of The King and Prince Hotel (NRHP #04001465) since the viewshed of the resource consists of a naturally fluctuating sandy shoreline beach and the proposed project will restore the viewshed to its original pre-2019 visual setting.

4.5 Project Summary and Recommendations

Between July 14 and 18, 2025, Brockington conducted a Phase I cultural resources survey of the proposed restoration and filling of an area of East Beach on St. Simons Island in Glynn County, Georgia. The survey was conducted in partial fulfillment of guidelines established for Section 404 of the Clean Water Act on behalf of Longleaf Environmental Consulting, LLC. The current investigation includes an archaeological survey of the 29-acre tract and an architectural survey of the project tract and its immediate surrounding viewshed.

Background research conducted on GNAHRGIS identified no previously recorded archaeological sites or historic resources within the project tract. However, four previously recorded archaeological sites (9GN3, 9GN208, 9GN209, and 9GN317) and

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Appendix A

Resume of the Principal Investigator

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ALEX Y. SWEENEY, RPA 989569

SAVANNAH OFFICE BRANCH MANAGER/PROJECT MANAGER/SENIOR ARCHAEOLOGIST

EDUCATION

M.A. in Anthropology (2003), University of South Carolina

B.S. in Anthropology (1997), Radford University

APPOINTMENTS/OFFICES

Georgia National Register of Historic Places Review Board Member (2014-2018)

AREAS OF SPECIALIZATION

Contact and Post-Contact Studies

Prehistoric and Historic Ceramic Analysis

Historical Documentation

Archaeological Spatial Analysis

Integrated Cultural Resources Management Plans

Cultural Resources Impact Analysis

PROFESSIONAL AND COMMITTEE MEMBERSHIPS

Register of Professional Archaeologists (RPA)

Society of American Military Engineers

Conference Society for Georgia Archaeology

Society of American Archaeology

Southeastern Archaeological Conference

Society of Historical Archaeology

PROFESSIONAL POSITIONS

Brockington and Associates, Inc.: Branch Manager, Project Manager, Senior Archaeologist (1997-present)

SELECT PROJECTS

- 2024 Principal Investigator, *Cultural Resources Assessment Reconnaissance of the Southpoint West Tract, Jasper County, South Carolina*. Prepared for Forestar, Mount Pleasant, South Carolina.
- 2024 Principal Investigator, *Literature Review for the East Argent Tract, Parcel 15-C, Jasper County, South Carolina*. Prepared for Hoyer Investment Company, Mount Pleasant, South Carolina.
- 2023 Principal Investigator, *Cultural Resources Reconnaissance-Brunswick Golden Isles Airport Tracts GRAD Certification, Glynn County, Georgia*. Prepared for Golden Isles Development Authority, Brunswick, Georgia.
- 2023 Principal Investigator, *Literature Review for the Royal Tract, Chatham County, Georgia*. Prepared for Resource and Land Consultants, LLC, Savannah, Georgia.
- 2023 Principal Investigator, *Dean Island Tract Cultural Resources Report Review, Glynn County, Georgia*. Prepared for Atlas Materials, Inc., Claymont, Delaware.
- 2023 Principal Investigator, *Phase I Cultural Resources Survey and Assessment of Effects of the 1.21-acre Terrestrial and 5.5-acre Underwater City Lights Marina Project Tract, Chatham County, Georgia*. Prepared for IGY Savannah, LLC, Savannah, Georgia.
- 2023 Principal Investigator, *Literature Review for the Lakeside Dam Project, Bibb County, Georgia*. Prepared for Moffat and Nichol, Atlanta, Georgia.
- 2023 Principal Investigator, *Phase I Cultural Resources Survey and Assessment of Effects of the Proposed Buc-ee's Travel Center & Brunswick Highway 99, LLC Recreational Vehicle Park, Glynn County, Georgia*. Prepared for Kimley Horn, Jacksonville, Florida.
- 2023 Principal Investigator, *Lennar Bloomingdale Tracts Desktop Literature Review, Chatham County, Georgia*. Prepared for Lennar, Charleston, South Carolina.
- 2023 Principal Investigator, *Chatham County Tract Desktop Literature Review, Chatham County, Georgia*. Prepared for Bald Eagle Partners, Bethesda, Maryland.
- 2023 Principal Investigator, *Eastman-Dodge County Tract Desktop Literature Review, Dodge County, Georgia*. Prepared for Thomas & Hutton Engineering Co., Savannah, Georgia.

- 2023 Principal Investigator, *Development of Predictive Model and Selective Testing for Hartwell Dam and Lake Project and J.S. Thurmond Dam and Lake, Columbia, Elbert, Franklin, Hart, Lincoln, McDuffie, Stephens, and Wilkes Counties, Georgia; and Abbeville, Anderson, McCormick, Oconee, and Pickens Counties, South Carolina.* Prepared for the U.S. Army Corps of Engineers, Savannah District.
- 2022 Principal Investigator, *Cultural Resources Reconnaissance of the Forward Fitzgerald Site, GRAD Certification, Ben Hill County, Georgia.* Prepared for the Fitzgerald and Ben Hill County Development Authority, Fitzgerald, Georgia.
- 2022 Principal Investigator, *Exit 42 at Buc-ee's Cultural Resources Survey, Glynn County, Georgia.* Prepared for Kimley Horn, Jacksonville, Florida.
- 2022 Principal Investigator, *Colonels Island Terminal Berth 4 Realignment Cultural Resources Reconnaissance and Literature Review, Glynn County, Georgia.* Prepared for Moffat and Nichol, Savannah, Georgia.
- 2022 Principal Investigator, *Class III Archaeological Survey of 1,600 Acres at the Limestone Hills Training Area, Montana Army National Guard, Broadwater County, Montana.* Prepared for USACE-Omaha District.
- 2022 Principal Investigator, *Cultural Resources Compliance Data Gap Analysis of the Alpena CRTC and Grayling Range, Alpena and Otsego Counties, Michigan.* Prepared for the National Guard Bureau, Air National Guard Readiness Center, Joint Base Andrews on behalf of the U.S. Army Corps of Engineers, Tribal Nations Technical Center of Expertise.
- 2022 Principal Investigator, *Phase I Cultural Resources Survey of the Project Jane Tract, Newton County, Georgia.* Prepared for Thomas & Hutton Engineering Co., Savannah, Georgia.
- 2022 Principal Investigator, *Cultural Resources Compliance Data Gap Analysis of Hulman Field and ANG Properties at Camp Atterbury and Jefferson Proving Ground, Bartholomew, Johnson, Ripley, and Vigo Counties, Indiana.* Prepared for the National Guard Bureau, Air National Guard Readiness Center, Joint Base Andrews on behalf of the U.S. Army Corps of Engineers, Tribal Nations Technical Center of Expertise.
- 2022 Principal Investigator, *Cultural Resources Compliance Data Gap Analysis of the 182nd Airlift Wing (Peoria Air National Guard Base), Peoria County, Illinois.* Prepared for the National Guard Bureau, Air National Guard Readiness Center, Joint Base Andrews on behalf of the U.S. Army Corps of Engineers, Tribal Nations Technical Center of Expertise.
- 2022 Principal Investigator, *Cultural Resources Compliance Data Gap Analysis of the Abraham Lincoln Capital Airport Air National Guard Base, Sangamon County, Illinois.* Prepared for the National Guard Bureau, Air National Guard Readiness Center, Joint Base Andrews on behalf of the U.S. Army Corps of Engineers, Tribal Nations Technical Center of Expertise.
- 2022 Principal Investigator, *Cultural Resources Compliance Data Gap Analysis of the IN ANG 122nd Fighter Wing, Allen County, Indiana.* Prepared for the National Guard Bureau, Air National Guard Readiness Center, Joint Base Andrews on behalf of the U.S. Army Corps of Engineers, Tribal Nations Technical Center of Expertise.
- 2022 Principal Investigator, *Cultural Resources Compliance Data Gap Analysis of the W.K. Kellogg Air National Guard Base, Calhoun County, Michigan.* Prepared for the National Guard Bureau, Air National Guard Readiness Center, Joint Base Andrews on behalf of the U.S. Army Corps of Engineers, Tribal Nations Technical Center of Expertise.
- 2022 Principal Investigator, *Cultural Resources Compliance Data Gap Analysis of the IL ANG 126th Air Refueling Wing at Scott Air Force Base, St. Clair County, Illinois.* Prepared for the National Guard Bureau, Air National Guard Readiness Center, Joint Base Andrews on behalf of the U.S. Army Corps of Engineers, Tribal Nations Technical Center of Expertise.
- 2022 Principal Investigator, *Phase IA Archaeological Survey, Colonel Frank Marion Williams Memorial USARC/AMSA #47, Miami-Dade County, Florida.* Prepared for SIA Solutions, LLC, Houston, Texas, the U.S. Army Reserve Installation Management Directorate, and U.S. Army Corps of Engineers, Louisville District.
- 2022 Principal Investigator, *Phase IB Archaeological Survey, SGT George Lenkalis U.S. Army Reserve Center, Luzerne County, Pennsylvania.* Prepared for SIA Solutions, LLC, Houston, Texas, the U.S. Army Reserve Installation Management Directorate, and U.S. Army Corps of Engineers, Louisville District.
- 2022 Principal Investigator, *Phase I Cultural Resources Survey of the Georgia Steamship Phase III Road Improvements Project, Chatham County, Georgia.* Prepared for AECOM Technical Services, Savannah, Georgia and Georgia Ports Authority, Garden City, Georgia.
- 2022 Principal Investigator, *Stravinski Development Bryan County Tract Desktop Cultural Resources Literature Review, Bryan County, Georgia.* Prepared for Stravinski Development, Madera, California.

- 2022 Principal Investigator, *Shearwater Bluff Archaeological Inspection Letter Report, Beaufort County, South Carolina*. Prepared for Forino Co., Hardeeville, South Carolina
- 2022 Principal Investigator, *Cultural Resources Reconnaissance of the Blitch Cemetery, Bryan County, Georgia*. Prepared for Thomas & Hutton Engineering, Inc., Savannah, Georgia.
- 2021 Principal Investigator, *Phase 1A Archaeological Survey, BG John W. Middleton/East Windsor US Army Reserve Center (CT003)*. Prepared for SIA Solutions, LLC, Houston, Texas, the U.S. Army Reserve Installation Management Directorate, and U.S. Army Corps of Engineers, Louisville District.
- 2021 Principal Investigator, *Phase 1A Archaeological Sensitivity Assessment and Phase 1B Archeological Survey, Rio Grande City Vacant Land (TX234), Starr County, Texas*. Prepared for SIA Solutions, LLC, Houston, Texas, the U.S. Army Reserve Installation Management Directorate, and U.S. Army Corps of Engineers, Louisville District.
- 2021 Principal Investigator, *Phase I Cultural Resources Survey and Assessment of Effect on the Hutchinson Island Container Terminal Tract, Chatham County, Georgia*. Prepared for Sligh Environmental Consultants, Savannah, Georgia, on behalf of Moffat & Nichol, Savannah, Georgia, and the Georgia Ports Authority, Savannah, Georgia.
- 2021 Principal Investigator, *Selfridge ANGB Phase II Archaeological Testing, Macomb County, Michigan*. Prepared for Air National Guard Bureau, and USACE-TNTCX East – Albuquerque District.
- 2021 Project Manager, *Merritt Land Holdings Phase I Archaeological Resources Survey, Chatham County, Georgia*. Prepared for Sligh Environmental and Kimley Horn, Savannah.
- 2021 Principal Investigator, *Intensive Archaeological Surveys and Site Examinations, Deer Horn Hill Top Site (19-BN-513) and Site 19-BN-652, Otis National Guard Base, Barnstable County, Massachusetts*. Prepared for National Guard Bureau, Air National Guard Readiness Center on behalf of the U.S. Army Corps of Engineers, Albuquerque District, Tribal Nations Center of Expertise.
- 2021 Project Manager, *Hutchinson Island Port Expansion Phase I Cultural Resources Survey and Assessment of Effects, Chatham County, Georgia*. Prepared for Georgia Ports Authority, Savannah.
- 2021 Project Manager, *Old Augusta Road Access Road Cultural Resources Survey, Chatham County, Georgia*. Prepared for Resource Land Consultants and Old Augusta Land Company, Springfield, Georgia.
- 2021 Project Manager, *Class III Cultural Resources Inventory of the Streit Drop Zone, Chouteau County, Montana*. Prepared for Air National Guard Bureau, and USACE-TNTCX East – Albuquerque District.
- 2021 Principal Investigator, *Savanna Army Depot LRA Parcel 20 Phase I Archaeological Survey, Carroll County, Illinois*. Prepared for USACE-Louisville District.
- 2020 Project Manager, *UT Air National Guard Base Integrated Cultural Resources Management Plan Update, Salt Lake County, Utah*. Prepared for Air National Guard Bureau, and USACE-TNTCX East – Albuquerque District.
- 2020 Project Manager, *Integrated Cultural Resources Management Plan Update 2020 – 2024, USAG Okinawa*. Prepared for the US Army Corps of Engineers, Japan Engineers District and US Army Garrison Okinawa, Directorate of Public Works, Torii Station, Japan.
- 2020 Project Manager, *SeaPoint Industrial Complex Phase I Cultural Resources Survey and Assessment of Effect, Chatham County Georgia*. Prepared for Sligh Environmental and SeaPoint Industrial Complex, Savannah.
- 2020 Project Manager, *Norfolk Southern Tract Phase I Cultural Resources Survey and Assessment of Effect, Chatham County Georgia*. Prepared for Resource and Land Consultants and CenterPoint Properties, Oak Brook, Illinois.
- 2020 Principal Investigator, *Wiggins Tracts Phase II Archaeological Testing, Chatham County, Georgia*. Prepared for Better Life Properties, Savannah.
- 2019 Project Manager, *Gerry US Army Reserve Center (NY025) Phase 1B Archaeological Survey, Chautauqua County, New York*. Prepared for Army Reserve Installation Management Directorate, Fort Belvoir, 99th RD, and USACE-Louisville District.
- 2019 Project Manager, *William H. Seward US Army Reserve Center (NY039) Phase 1B Archaeological Survey, Onondaga County, New York*. Prepared for Army Reserve Installation Management Directorate, Fort Belvoir, 99th RD, and USACE-Louisville District.
- 2019 Project Manager, *Jecelin US Army Reserve Center (MD005) Determination of Eligibility/Testing Plan, Baltimore City, Maryland*. Prepared for Army Reserve Installation Management Directorate, Fort Belvoir, 99th RD, and USACE-Louisville District.

- 2019 Principal Investigator, *SGT George Lenkalis US Army Reserve Center (PA097) Phase 1A Archaeological Survey, Luzerne County, Pennsylvania*. Prepared for Army Reserve Installation Management Directorate, Fort Belvoir, 99th RD, and USACE-Louisville District.
- 2019 Project Manager, *Archaeological Data Recovery Investigations at 9GE1660 and 9GE166: Two Archaic Sites, Greene County, Georgia*. Prepared for Reynolds Lake Oconee, Greensboro.
- 2019 Principal Investigator, *Phase I Cultural Resources Survey and Assessment of Effects of the Proposed Robins Solar Generation Project Tract, the Wellston Substation, and the Wellston-Robins AFP #4 115 kV Transmission Line Corridor, Bibb and Houston Counties, Georgia*. Prepared for Georgia Power Company, Atlanta, and Robins Air Force Base, Warner Robins.
- 2019 Project Manager, *Cultural Resources Survey of Champney Island, Altamaha Waterfowl Management Area, McIntosh County, Georgia*. Prepared for The Georgia Department of Natural Resources, Fort Valley.
- 2019 Program Manager, *Architectural Protection Plan, Commander Fleet Activities Sasebo, Japan*. Prepared for NAVFAC Far East, Japan.
- 2019 Project Manager, *Phase I Archaeological Resources Survey of the Truman Linear Park Phase IIB Trail, Chatham County, Georgia*. Prepared for Georgia Department of Transportation, Atlanta.
- 2019 Principal Investigator, *Phase I Cultural Resources Survey of the Benton Boulevard Extension Phase II Project Corridor, Chatham County, Georgia*. Prepared for Sligh Environmental Consultants, Savannah.
- 2019 Project Manager, *Historic Context for the Altamaha Waterfowl Management Area, McIntosh County, Georgia*. Prepared for The Georgia Department of Natural Resources, Fort Valley.
- 2019 Principal Investigator, *PFC Harry J. Fridley US Army Reserve Center (VA020) Phase 1B Archaeological Survey, Alleghany County, Virginia*. Prepared for Army Reserve Installation Management Directorate, Fort Belvoir, 99th RD, and USACE-Louisville District.
- 2019 Principal Investigator, *PFC Harry J. Fridley US Army Reserve Center (VA020) Architectural Survey and Assessment, Alleghany County, Virginia*. Prepared for Army Reserve Installation Management Directorate, Fort Belvoir, 99th RD, and USACE-Louisville District.
- 2019 Project Manager, *Cultural Resources Update and Assessment of Effects for the Cross-Terminal Road Relocation Project, Chatham County, Georgia*. Prepared for the Georgia Ports Authority, Savannah, Georgia.
- 2018 Program Manager, *Cultural Resources Survey of the Georgia International Rail Park, Effingham County, Georgia*. Prepared for Resource and Land Consultants, Savannah.
- 2018 Principal Investigator, *Phase I Intensive Cultural Resources Survey and Phase II Archaeological Testing for the 1,411.7-acre Bryan County OEM Site, Bryan County, Georgia*. Prepared for the Savannah Economic Development Authority, Savannah.
- 2018 Principal Investigator, *Phase I Intensive Cultural Resources Survey for the 20.0-acre Love's Travel Stop and Country Store Project Tract, Bryan County, Georgia*. Prepared for Love's Hospitality, Oklahoma City, Oklahoma.
- 2018 Principal Investigator, *Cultural Resources Reconnaissance for the Murray South Industrial Park, GRAD Certification, Murray County, Georgia*. Prepared for Thomas & Hutton, Savannah.
- 2018 Author, *Cultural Continuity and Change: Archaeological Research at Yamasee Primary Towns in South Carolina*. Book chapter-The Yamasee Indians: From Florida to South Carolina. University of Nebraska Press, Lincoln.
- 2018 Principal Investigator, *Archaeological Sensitivity Assessment and Phase I Archaeological Survey of the Charles J. Milbrandt (Aberdeen) AFRC, 88th Readiness Division, Brown County, South Dakota*. Prepared for USAR, 88th RD and USACE-Louisville District.
- 2018 Principal Investigator, *Archaeological Sensitivity Assessment and Phase I Archaeological Survey of the Antelope Flats (WY010/5660A) US Army Reserve Center, 88th Readiness Division, Natrona County, Wyoming*. Prepared for USAR, 88th RD and USACE-Louisville District.
- 2018 Principal Investigator, *Archaeological Sensitivity Assessment and Phase I Archaeological Survey of the Lewis & Clark (Bismarck) US Army Reserve Center, 88th Readiness Division, Burleigh County, North Dakota*. Prepared for USAR, 88th RD and USACE-Louisville District.

- 2018 Principal Investigator, *Archaeological Sensitivity Assessment and Phase I Archaeological Survey of Select 88th Readiness Division, US Army Reserve Centers in Utah, Cache, Salt Lake, Utah, and Weber Counties, Utah*. Prepared for USAR, 88th RD and USACE-Louisville District.
- 2018 Principal Investigator, *Archaeological Sensitivity Assessment and Phase I Archaeological Survey of Select US Army Reserve Centers 88th RSC Facilities in Montana, Lewis and Clark and Yellowstone Counties, Montana*. Prepared for USAR, 88th RD and USACE-Louisville District.
- 2018 Principal Investigator, *Archaeological Sensitivity Assessment and Phase I Archaeological Survey of Select 88th Readiness Division, U.S. Army Reserve Centers in Colorado, Adams and Jefferson Counties, Colorado*. Prepared for USAR, 88th RD and USACE-Louisville District.
- 2018 Principal Investigator, *Archaeological Sensitivity Assessment and Phase I Archaeological Survey of Select 88th Readiness Division, U.S. Army Reserve Centers in Missouri, Buchanan, Cass, Franklin, Jasper, and St. Francois Counties, Missouri*. Prepared for USAR, 88th RD and USACE-Louisville District.
- 2017 Project Manager, *Genuine Parts Expansion, Kent County, Michigan*. Prepared for Genuine Parts Company, Atlanta, Georgia.
- 2017 Program Manager, *Georgia Ports Authority Multimodal Connector, Chatham County, Georgia*. Prepared for Moffat & Nichol, Savannah, Georgia.
- 2017 Project Manager, *Cultural Resources Survey of the 190-Acre Imerys Mine Expansion, Macon County Georgia*. Prepared for Imerys Primary Raw Material Sourcing, Andersonville, Georgia.
- 2017 Program Manager, *Cultural Resources Survey of over 6500 Acres, Phase II Testing of Six Archaeological Sites, and Delineation of 18 Archaeological Sites at U.S. Army Garrison, Fort Stewart, Georgia*. Prepared for FS/HAAF Cultural Resource Management Specialist and the USACE, Savannah.
- 2016 Author, *The Yamasee Indians of Early Carolina*. Book chapter-Archaeology in South Carolina, Exploring the Hidden Heritage of the Palmetto State.
- 2016 Author, *Chibaryio! Navigating Cultural Resources Compliance on U.S. Military Installations in Japan*. Presentation presented at the Society of American Archaeology Conference, Orlando Florida.
- 2016 Project Manager, *Vogtle Transmission Line Site Condition Assessments, Burke County, Georgia*. Prepared for Georgia Power Company, Atlanta, Georgia.
- 2016 Project Manager, *Cadley Road GRAD Investigation, Warren County, Georgia*. Prepared for Resource and Land Consultants, Savannah, Georgia.
- 2016 Project Manager, *Cultural Resources Survey of 6.34 Acres of the Savannah State University Italian Club Tract, Chatham County, Georgia*. Prepared for Savannah State University, Georgia.
- 2016 Project Manager, *Cultural Resources Survey of 2.5 Acres of the Savannah State University Expansion Tract, Chatham County, Georgia*. Prepared for Savannah State University, Georgia.
- 2016 Program Manager, *Cultural Resources Data Recovery Excavations at Colonels Island, Glynn County, Georgia*. Prepared for the Georgia Ports Authority.
- 2015 Project Manager, *Cultural Resources Survey of the Red Bluff Plantation Tract, Jasper County, South Carolina*. Prepared for American Timberlands Company, Pawleys Island, South Carolina.
- 2015 Project Manager, *AREP Solar Farms Project, Tattnall County, Georgia*. Prepared for Scatek Solar North America.
- 2015 Author, *The Yamasee Capitals of South Carolina: Archaeological Research at Pocotaligo and Altamaha Town*. Presentation presented at the Yamasee Indians: From Florida to South Carolina Conference.
- 2015 Program Manager, *Bryan County Industrial Tract, Bryan County, Georgia*. Prepared for the Georgia Board of Economic Development.
- 2015 Project Manager, *Archaeological Inventory of the Kanna Watershed, Kin-cho, Okinawa Prefecture, Japan*. Prepared for the United States Marine Corps, Base Camp Smedley D. Butler.
- 2015 Project Manager, *Integrated Cultural Resources Management Plan Update for Colorado U.S. Army Reserve Centers*. Prepared for the 88th Regional Support.
- 2015 Project Manager, *Integrated Cultural Resources Management Plan Update for North Dakota U.S. Army Reserve Centers*. Prepared for the 88th Regional Support.

- 2015 Project Manager, *Integrated Cultural Resources Management Plan Update for South Dakota U.S. Army Reserve Centers*. Prepared for the 88th Regional Support.
- 2015 Project Manager, *Integrated Cultural Resources Management Plan Update for Montana U.S. Army Reserve Centers*. Prepared for the 88th Regional Support.
- 2015 Project Manager, *Integrated Cultural Resources Management Plan Update for Utah U.S. Army Reserve Centers*. Prepared for the 88th Regional Support.
- 2015 Program Manager, *Phase I Archaeological Survey – Test Digs at Torii Station, Okinawa Prefecture, Japan*. Prepared for the Department of the Army, United States Army Garrison Okinawa, Directorate of Public Works, Torii Station, Japan.
- 2014 Project Manager, *Archaeological Testing for the 1st of the 1st / Special Forces Group Augmentation Facility, Yomitan-son, Okinawa Prefecture, Japan*. Prepared for the for the Department of the Army, United States Army Garrison Okinawa, Directorate of Public Works, Torii Station, Japan.
- 2014 Project Manager, *Integrated Cultural Resources Management Plan Update for USAG Okinawa Facilities*. Prepared for the Department of the Army, United States Army Garrison Okinawa, Directorate of Public Works, Torii Station, Japan.
- 2014 Project Manager, *Cultural Resources Survey of Four U.S. Army Reserve Centers, Grand Traverse, Jackson, Kent, and Marquette Counties, Michigan*. Prepared for the 88th RSC.
- 2014 Project Manager, *Integrated Cultural Resources Management Plan Update for Michigan U.S. Army Reserve Centers*. Prepared for the 88th RSC.
- 2014 Research for the *Historical Architectural Documentation of Significant Buildings and Structures on Multiple USAG Japan Facilities, Hiroshima, Kanagawa, and Tokyo Prefectures, Japan*. Prepared for the for the Department of the Army, United States Army Garrison Japan, Directorate of Public Works, Camp Zama, Japan.
- 2014 Co-author and Senior Archaeologist, *Integrated Cultural Resources Management Plan Update for all USAG Japan DPW facilities, Kanagawa, Hiroshima, and Tokyo Prefectures*. Prepared for the Department of the Army, United States Army Garrison Japan, Directorate of Public Works, Camp Zama, Japan.
- 2013 Project Manager, *Cultural Resources Reconnaissance Assessment and Archival Research of 184 Acres on Hutchinson Island, Chatham County, Georgia*. Prepared for the Georgia Ports Authority.
- 2013 Project Manager, *Cultural Resources Survey of the SR119 Road Widening, Liberty County, Georgia*. Prepared for Thomas & Hutton Engineering.
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- 2013 Project Manager, *Cultural Resources Survey of the Coastal Heritage Multi-Use Trail, Chatham County, Georgia*. Prepared for the Coastal Heritage Society.
- 2012 Project Manager, *Cultural Resources Survey of the Griffin Park Phase II Residential Development, Liberty County, Georgia*. Prepared for Dryden Enterprises, Inc.
- 2012 Project Manager, *Cultural Resources Survey of the Boundary Street Improvements, Beaufort County, South Carolina*. Prepared for the City of Beaufort, Beaufort County, and the South Carolina Department of Transportation.
- 2012 Project Manager, *Cultural Resources Reconnaissance Assessment of 321 Acres within the Phinizy Swamp Phase II Mitigation Bank, Richmond County, Georgia*. Prepared for Georgia for Resource and Land Consultants.
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- 2012 Project Manager, *Cultural Resources Survey of the Truman Linear Park Trail, Chatham County, Georgia*. Prepared for Thomas and Hutton Engineering and the Chatham County Board of Commissioners.
- 2012 Project Manager, *Cultural Asset Survey Data Recovery Excavations at One SATCOM Facility, Torii Station, Okinawa Prefecture, Japan*. Prepared for the Department of the Army, United States Army Garrison Okinawa, Directorate of Public Works, Torii Station, Japan.

- 2012 Project Manager, *Cultural Resources Reconnaissance Assessment of 479 acres within the Lucinda Bay Mitigation Bank, Effingham, County, Georgia*. Prepared for Resource and Land Consultants.
- 2012 Program Manager, *Inventory of Historic Structures and Traditional Cultural Properties/ Archaeological Inventory Survey Planning, Chatan-cho, Kadena-cho, Naha-shi, Uruma-shi, Yomitan-son, Okinawa Prefecture, Japan*. Prepared for the for the Department of the Army, United States Army Garrison Okinawa, Directorate of Public Works, Torii Station, Japan.
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- 2011 Project Manager, *Cultural Resources Survey of Chatham County Mitigation Bank*. Prepared for the Chatham County Department of Engineering.
- 2011 Program Manager, *Archaeological Testing for two SATCOM Facilities, Torii Station, Okinawa Prefecture, Japan*. Prepared for the Department of the Army, United States Army Garrison Okinawa, Directorate of Public Works, Torii Station, Japan.
- 2011 Program Manager, *Cultural Resources Survey Located within the U.S. Army Garrison Fort Stewart and Hunter Army Airfield, Bryan, Chatham, and Liberty Counties, Georgia*. Prepared for the FS/HAAF Cultural Resource Management Specialist and the U.S. Army Corps of Engineers, Savannah District.
- 2011 Program Manager, *Cultural Resources Survey and Archaeological Testing at U.S. Army Garrison Fort Stewart, Bryan, Evans, Liberty, and Tattnall Counties, Georgia*. Prepared for the FS/HAAF Cultural Resource Management Specialist and the Army Environmental Command.
- 2011 Project Manager, *Section 110 Archaeological Survey of Selected Tracts Located at Lake Hartwell and Richard B. Russell Reservoirs, Multiple Counties in Georgia and South Carolina*. Prepared for the U.S. Army Corps of Engineers, St. Louis and Savannah Districts.
- 2010 Project Manager, *Cultural Resources Survey of 414 Acres within the Fellsmere Farms Tract, Indian River County, Florida*. Prepared for the St. Johns River Water Management District in Palm Bay, Florida
- 2010 Project Manager, *Cultural Resources Survey of 1,500 Acres at U.S. Army Garrison Fort Stewart, Bryan and Liberty Counties, Georgia*. Prepared for the FS/HAAF Cultural Resource Management Specialist and the Army Environmental Command.
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- 2009 Project Manager, *Archaeological Testing of Site 9GN262 on the Jekyll Island Development Tract A, Glynn County, Georgia*. Prepared for the Jekyll Island Authority.
- 2009 Project Manager, *Archaeological Testing of Nine Sites at U.S. Army Garrison Fort Stewart, Bryan and Liberty Counties, Georgia*. Prepared for the FS/HAAF CRMS and the U.S. Army Corps of Engineers, Savannah District.
- 2009 Senior Archaeologist, *Inventory of Historic Structures and Traditional Cultural Properties/ Archaeological Inventory Survey Planning at USAG-Japan Facilities, Kanagawa, Tokyo, and Hiroshima Prefectures, Japan*. Prepared for the Department of the Army, United States Army Garrison Japan, Directorate of Public Works, Camp Zama, Japan.
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- 2008 Project Manager, *Cultural Resources Survey of the Concrete Sand Mine Tract, Evans County, Georgia*. Prepared for Sligh Environmental.

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- 2008 Project Manager, *Cultural Resources Survey of the Oak Grove Tract, Chatham County, Georgia*. Prepared for Resource and Land Consultants.
- 2008 Project Manager, *Cultural Resources Survey of the Military Utilities Consolidation Corridor, Beaufort County, South Carolina*. Prepared for the Beaufort-Jasper Water & Sewer Authority, Okatie, South Carolina.
- 2008 Project Manager, *Cultural Resources Survey and Testing of the Camak Prospect Tract, Warren County, Georgia*. Prepared for APAC Mid-South, Inc.
- 2007 Project Manager, *North Marco Sewer Monitoring and Testing, Marco Island, Florida*. Prepared for the City of Marco, Florida.
- 2007 Project Manager, *Cultural Resources Survey and Evaluative Testing of the Fellsmere Farms Tract, Indian River County, Florida*. Prepared for the St. Johns River Water Management District in Palm Bay, Florida
- 2007 Project Manager, *Cultural Resources Survey and Evaluative Testing of the West Point Economic Development Tract, Troup County, Georgia*. Prepared for the Georgia Department of Economic Development
- 2007 Project Manager, *Altamaha Town Data Recovery Excavations (38BU20/1206 and 38BU1605), Bluffton, Beaufort County, South Carolina*. Prepared for Heyward Point, Okatie, South Carolina.
- 2006 Principal Investigator, *Intensive Cultural Resources Survey for the Proposed U.S. Army Reserve Center, Sioux Falls, Minnehaha County, South Dakota*. Report Prepared for USACE-Mobile District.
- 2006 Principal Investigator, *Archaeological Sensitivity Assessment and Phase I Archaeological Survey of the Charles J. Milbrandt (Aberdeen) AFRC, 88th Readiness Division, Brown County, South Dakota*. Report Prepared for USAR, 88th RD and USACE-Louisville District.
- 2006 Project Manager, *Cultural Resources Survey and Evaluative Testing of the Bridge Replacement along Road S-19 over the Little River, McCormick County, South Carolina*. Prepared for the South Carolina Department of Transportation
- 2006 Project Manager, *Cultural Resources Survey of the I-85 and I-985 HOV and SOV Expansion, Gwinnett and Barrow Counties, Georgia*. Prepared for the Georgia Department of Transportation
- 2006 Project Manager, *Evaluative Testing of Five Archaeological Sites at Heyward Point, Beaufort County, South Carolina*. Prepared for Heyward Point LLC, Bluffton, South Carolina
- 2006 Project Manager, *Archaeological Resources Survey at James J. O'Rourke Memorial U.S. Army Reserve Center, Bay County, Michigan*. Prepared for the 88th Regional Readiness Command and the U.S. Army Corps of Engineers, Mobile District.
- 2006 Project Manager, *Cultural Resources Survey of 23 Bridge Replacements in South Carolina*. Prepared for the South Carolina Department of Transportation
- 2005 Project Manager, *Cultural Resources Survey at Camp Blanding Joint Training Facility, Starke, Florida*. Prepared for the US Army Corps of Engineers, Mobile District.
- 2005 Project Manager, *Cultural Resources Survey at Sandford-R.L. Evans Florida Army National Guard Armory, Seminole County, Florida*. Prepared for the U.S. Army Corps of Engineers, Mobile District.
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- 2005 Project Manager, *Cultural Resources Survey at Eustis Florida Army National Guard Armory, Lake County, Florida*. Prepared for the U.S. Army Corps of Engineers, Mobile District.
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- 2005 Project Manager, *Cultural Resources Survey at Leesburg Florida Army National Guard Armory, Lake County, Florida*. Prepared for the U.S. Army Corps of Engineers, Mobile District.
- 2005 Project Manager, *Cultural Resources Survey at Crestview Florida Army National Guard Armory, Okaloosa County, Florida*. Prepared for the U.S. Army Corps of Engineers, Mobile District.
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- 2004 Project Manager, *Cultural Resources Survey of the Proposed Expansion at the Mohawk Industrial Site, Gordon County, Georgia*. Prepared for the City of Calhoun, Georgia.
- 2003 Project Manager, *Palmetto Bluff Data Recovery (38BU1768), Bluffton, Beaufort County, South Carolina*. Prepared for Palmetto Bluff LLC, Bluffton, South Carolina.
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