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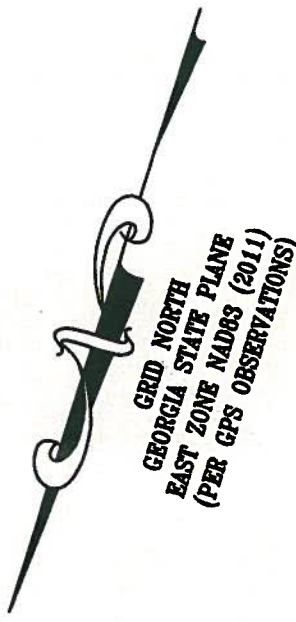
GA DNR  
 SEP 27 2017  
 Marsh & Shore Mgt. Program

SALTWATER WETLAND EXHIBIT  
 GLYNN MIDDLE SCHOOL SIDEWALK CONNECTOR  
 26TH GA MILITIA DISTRICT  
 BRUNSWICK, GLYNN COUNTY, GEORGIA  
 Prepared for:  
 CITY OF BRUNSWICK

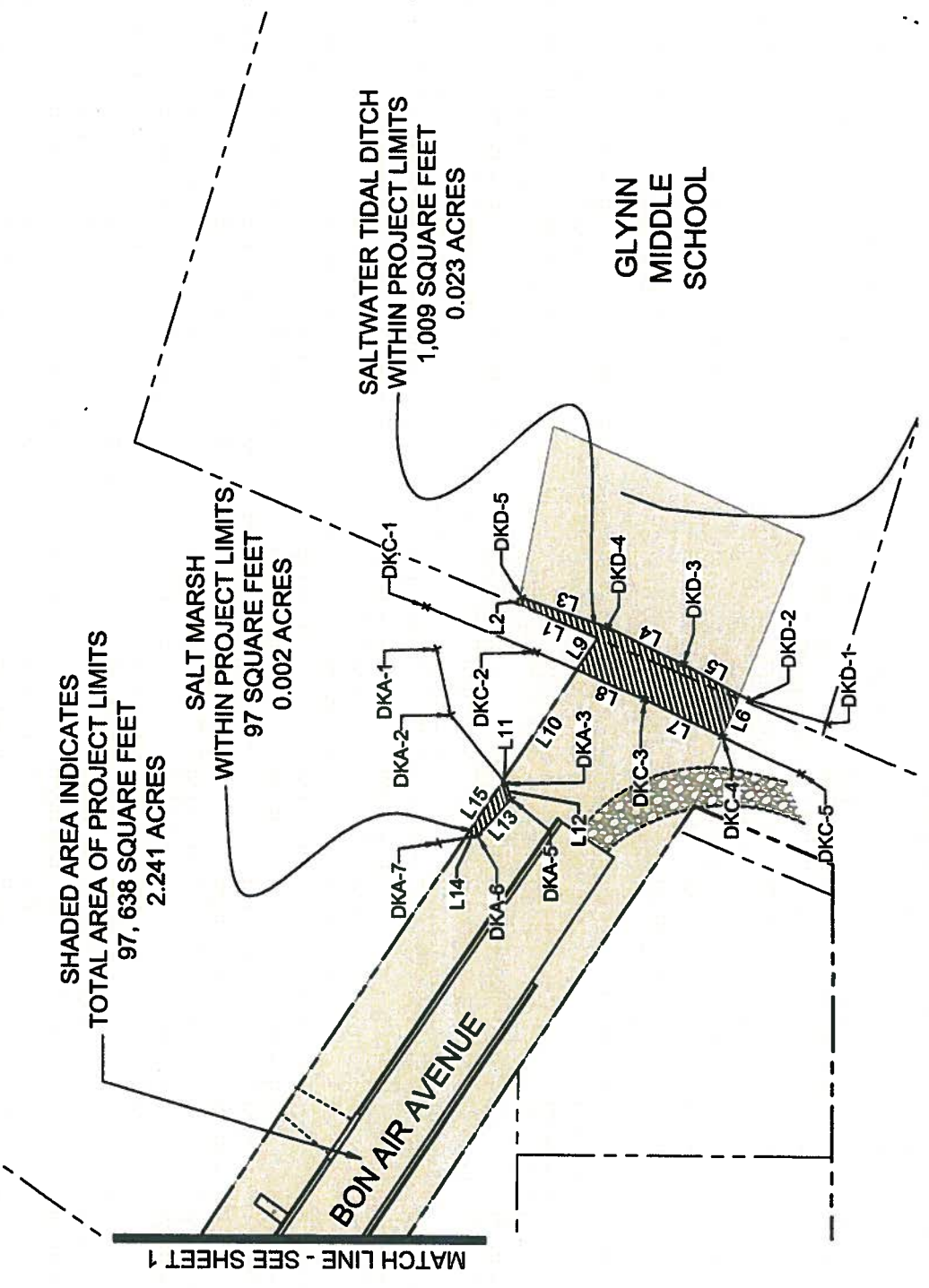
PROJECT NO.: 11-5001  
 DRAWN BY: ANA  
 DESIGNED BY: ANA  
 SURVEYED BY: JAHJ  
 SURVEY DATE: 01/30/2017  
 CHECKED BY: NTS  
 SCALE: NTS  
 DATE: 07/26/2017

SHEET 2 OF 2

LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	S85° 08' 20"E	30.05
L2	S06° 40' 15"E	2.37
L3	N89° 31' 56"W	32.28
L4	N82° 46' 52"W	29.27
L5	N80° 37' 25"W	22.26
L6	N04° 34' 53"E	15.64
L7	S83° 13' 26"E	29.96
L8	S85° 08' 20"E	25.79
L9	S16° 06' 33"W	13.06
L10	N16° 06' 33"E	45.85
L11	N57° 31' 38"W	1.39
L12	N37° 44' 59"W	5.62
L13	N24° 22' 17"E	17.33
L14	N62° 00' 45"E	4.72
L15	S16° 06' 33"W	24.14



- SURVEY NOTES**
1. BASIS OF BEARINGS AND HORIZONTAL CONTROL WAS OBTAINED UTILIZING GPS (GLOBAL POSITIONING SYSTEMS). THE EQUIPMENT USED TO OBTAIN THIS DATA WAS A CHAMPION TKO RECEIVER WITH A SCEPTER II DATA COLLECTOR RECEIVING RTK CORRECTIONS VIA A VERIZON JETPACK MFI 6620L FROM THE eGPS SOLUTIONS REAL TIME NETWORK. THE TECHNIQUE USED WAS RTK CORRECTED MEASUREMENTS FROM A TRIMBLE VRS REAL TIME NETWORK OPERATED BY eGPS SOLUTIONS, INC.
  2. THIS PROJECT IS LOCATED IN ZONE AET3.0, A SPECIAL FLOOD HAZARD AREA PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP NO. 13127C, PANEL 0238F; EFFECTIVE DATE: SEPTEMBER 06, 2006.
  3. THE TERM "CERTIFICATION" AS USED IN BOARD RULE 180-6-.09(2) AND (3) AND RELATING TO PROFESSIONAL SURVEYING SERVICES AS DEFINED IN O.C.G.A. 43-15-2(6) AND (11) SHALL MEAN A SIGNED STATEMENT BASED UPON FACTS AND KNOWLEDGE KNOWN TO THE REGISTRANT AND IS NOT A GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED.
  4. THIS SURVEY IS VALID ONLY IF PRINT HAS THE ORIGINAL SIGNATURE OF THE SURVEYOR.
  5. THE WETLAND DELINEATION FLAGS AS SHOWN HEREON WERE PLACED BY KRISTEN DEASON, ENVIRONMENTAL SERVICES, INC. (ESI) OF SAVANNAH, GA. ON JANUARY 12, 2017.
  6. ALL WETLANDS ARE UNDER THE JURISDICTION OF THE U.S. ARMY CORPS OF ENGINEERS AND/OR THE STATE OF GEORGIA DEPARTMENT OF NATURAL RESOURCES. LOT OWNERS ARE SUBJECT TO PENALTY BY LAW FOR DISTURBANCE TO THESE PROTECTED AREAS WITHOUT PROPER PERMIT APPLICATION AND APPROVAL.



**SURVEYOR'S CERTIFICATE**  
 TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS SURVEY WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR TOPOGRAPHIC/SPECIAL SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-07-07 OF THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS. THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY AND IS NOT TO BE RECORDED OR USED TO CONVEY PROPERTY.

*Christopher M. Young*  
 CHRISTOPHER M. YOUNG, RLS  
 GEORGIA L.S. REG. NO. 3356  
 07/26/17  
 DME

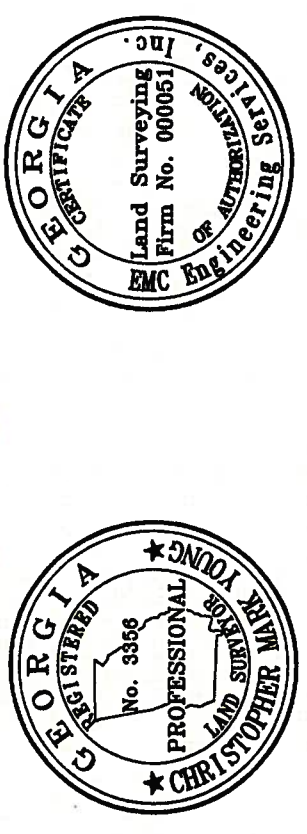






Photo 1: Tidal Ditch

GA DNR

SEP 27 2017

Marsh & Shore Mgt. Program



Photo 2: Saltwater Marsh



**ENVIRONMENTAL  
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Photo Sheet 1

**City of Brunswick - Glynn Middle Sidewalk**  
Chatham County, Georgia

Project: ES16007.00

Date: July 2017

Drwn/Chkd: KHD/MJD

Figure: PS-1

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17 October 2017

Mr. Josh Noble  
Coastal Resources Division  
Georgia Department of Natural Resources  
1 Conservation Way Suite 300  
Brunswick, GA 31520

**Re: City of Brunswick  
Sidewalk & Pedestrian Bridge Construction  
Glynn County, Georgia  
NWP #14**

**ES16007.00**

Dear Mr. Burgess:

On behalf of the City of Brunswick, Environmental Services, Inc., (ESI) respectfully submits the attached Nationwide Permit (NWP) #14 to perform work associated with the construction of a new sidewalk and pedestrian bridge over a tidal ditch adjacent to Johnson Street, Ocean Avenue, and Bon Air Avenue, located within the City of Brunswick within Glynn County, Georgia (Appendix 1, Figure 1).

This follows a submittal, dated 14 September 2017, for a Joint Permit Application. After this initial submittal, the U.S. Army Corps of Engineers requested to change our submittal format of to a Nationwide Permit (NWP), specifically NWP #14 for Linear Transportation Projects.

At your earliest convenience, I request that you review this material and initiate processing this permit application as appropriate. Should you have any questions, please feel free to call me at the number listed above. In advance, we appreciate your assistance with this project.

Sincerely yours,

ENVIRONMENTAL SERVICES, INC.



Michael J. DeMell  
Sr. Vice President II & Technical Director



Kristen Deason  
Senior Scientist

MD/ks  
ES16007.00/CoverLetter\_CRD

Xc: Mr. Garrow Alberson, City Engineer, City of Brunswick  
Mr. Kip Goodbread, Brunswick Branch Manager, EMC Engineering Services, Inc.

RECEIVED

OCT 23 2017

GA DNR

ENVIRONMENTAL SERVICES, INC.

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Phone 912-236-4711 \* Fax 912-236-3668

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17 October 2017

Department of the Army  
Attention: CESAS-RD Mr. Shaun Blocker  
Savannah District Corps of Engineers  
100 West Oglethorpe Avenue  
Savannah, Georgia 31401

Subject: **City of Brunswick  
Sidewalk & Pedestrian Bridge Construction NWP #14  
Glynn County, Georgia**

**ES16007.00**

Dear Mr. Blocker:

On behalf of the City of Brunswick, Environmental Services, Inc., (ESI) is submitting the enclosed Nationwide Permit (NWP) 14 application for the construction of a new sidewalk and pedestrian bridge over a tidal ditch adjacent to Johnson Street, Ocean Avenue, and Bon Air Avenue, located within the City of Brunswick within Glynn County, Georgia (Figure 1). Also attached is a request for a Delineation Review of Aquatic Resources to verify the wetland delineation associated with this project study area. Please see supporting application materials, figures, and photos attached.

A previous Joint Application was submitted to your office, dated 14 September 2017, based on guidance from the Georgia Department of Natural Resources (GADNR) that a Coastal Marshlands Protection Act (CMPA) minor alteration permit would be required. ESI was informed by Mr. Shaun Blocker by telephone on 10 October 2017 that the U.S. Army Corps of Engineers (USACE) would need to process this project under a Nationwide Permit (NWP) #14 for Linear Transportation Projects.

All design standards and application materials remain consistent to those as submitted within the Joint Application mentioned above. Attached you will find additional paperwork needed to process this project under a NWP#14, with the same information as previously provided.

The proposed 40' aluminum pedestrian bridge will span a tidally influenced man-made ditch, with concrete footings on either side. No work is being proposed within jurisdictional areas, meaning that no wetland impacts are being proposed, including the exclusion of any beams, supports, or piles. The only "impact", which is considered so by the GADNR, is permanent shading of 129.45 square feet of vegetated marsh.

At your earliest convenience, we respectfully request the use of NWP 14 for the construction of the pedestrian bridge. Please contact ESI if you require a field visit to inspect the project study area. In advance, we thank you for your timely review of this project and if you should have any questions or require additional information, please do not hesitate to call.

Sincerely,

ENVIRONMENTAL SERVICES, INC.



Michael J. DeMell  
Sr. Vice President II & Technical Director



Kristen Deason  
Senior Scientist

GA DNR

MD/Ad  
ES16007.00 / NWP\_DELreview\_cvr\_ltr.docx  
Xc: Mr. Garrow Alberson, City Engineer, City of Brunswick  
Mr. Kip Goodbread, Brunswick Branch Manager, EMC Engineering Services, Inc.

OCT 23 2017

Marsh & Shore Mgt. Program

U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT  
2017 PRE-CONSTRUCTION NOTIFICATION (PCN)  
FOR USE OF CERTAIN NATIONWIDE PERMITS (NWP)

USE OF NWP NUMBER 14 Date 10/16/2017

APPLICANT/PROPERTY OWNER City of Brunswick c/o Garrow Alberson

Phone(hm/bus) 912-267-5500 FAX 912-267-5549 E-Mail galberson@cityofbrunswick-ga.gov

Address 601 Gloucester Street City Brunswick State GA Zip Code 31520

AGENT/CONSULTANT Environmental Services, Inc.

Phone(hm/bus) 912-236-4711 FAX 912-236-3668 E-Mail kdeason@esinc.cc

Address 101 Estus Drive Suite B City Savannah State GA Zip Code 31404

PROJECT LOCATION/ADDRESS Johnston St, Ocean Ave, and Bon Air Ave

City Brunswick County Glynn Subdivision N/A Lot N/A

Latitude 31.141046 Longitude -81.480971 Hydrologic Map Cataloging Unit 03070203

Nearest Named Stream, River or Other Waterbody Fancy Bluff Creek

EXISTING SITE CONDITIONS The proposed pedestrian bridge is proposed to cross a +/- 9.73' wide tidally influenced man-made ditch, which is over 800' from the closest navigable channel, and separated by the 2-lane Lanier Blvd and the 4-lane Ocean Highway. The sides of the ditch are currently mowed and maintained. The Remainder of the project area consist of existing road right of way infrastructure.

PROJECT DESCRIPTION Since the Glynn Middle School was constructed around 2008, there has been an increasing need for a safe pedestrian access route from the school to the adjoining residential subdivision. The proposed project will consist of a 40' aluminum pedestrian bridge suspended over a tidally influenced man-made ditch with footings on either side (no use of pilings, supports, or beams).

MEASURES TAKEN TO AVOIDANCE/MINIMIZE IMPACTS TO WATER OF U.S.  
The proposed project is the most direct and safest route to provide pedestrian access from Glynn Middle School to the residential community north of the school. All other All other alternatives aquatic resources and would have taken more resources to construct.

GA DNR

OCT 23 2017

APPENDIX B

**PROJECT AREA AND IMPACT INFORMATION**

	PROJECT AREA		IMPACTS TO US WATERS	
	ACRES	LINEAR FEET	ACRES	LINEAR FEET
<b>TOTAL PROJECT AREA</b>	2.241	N/A	N/A	N/A
<b>UPLAND</b>	2.216	N/A	N/A	N/A
<b>WETLAND</b>	0.002	N/A		N/A
<b>OPEN WATER</b>		N/A		N/A
<b>PERENNIAL STREAM</b>				
<b>INTERMITTENT STREAM</b>				
<b>EPHEMERAL STREAM</b>				
<b>MAN-MADE DITCHES</b>	0.023		* (see attached)	

**MAPS, DRAWINGS AND OTHER INFORMATION.** Include information to address answers provided.

1. PCN submitted to the Georgia EPD? (RC A and Appendix A) Yes  No
2. PCN submitted to the Georgia CRD? (RC A and Appendix A) Yes  No
3. Is the project on or adjacent to a state water, where buffer variance is required? Yes  No
4. Is the project within 10 miles of a 303(d) listed stream? Yes  No
5. Is the project located in or adjacent to a trout stream? Yes  No
6. Is there a water quality management plan for the project site? Yes  No
7. Is a copy of the FWS Initial Project Scoping (IPaC) attached to the PCN? (GC 18) Yes  No   
<http://ecos.fws.gov/ipac/>
8. Are oysters located within the project area? Yes  No
9. Are cultural resources located on or near the project site? (GC 20(c)) Yes  No   
<http://www.nr.nps.gov/>
10. Is compensatory mitigation required? (GC 32(b)(6), GC 23 & RCs H.1–H.5) Yes  No
11. Are culverts proposed in streams or wetlands? (RC C.4 and E.1-8) Yes  No
12. Is in-stream/wetland storm water management proposed? (RC C.5) Yes  No
13. Is the project phased, with future wetland/stream impacts planned? Yes  No
14. Have authorized wetland/stream impacts occurred on the project site? Yes  No
15. Have unauthorized wetland/stream impacts occurred on the project site? Yes  No
16. Is the project located within 5 miles of an airport? Yes  No

**IMPORTANT NOTES:**

1. For a PCN to be complete for processing, information required at NWP General Condition (GC) 32(b) and Savannah District 2017 NWP Regional Conditions C must be included.
2. All maps and drawings that are attached to this PCN must be submitted on 8 ½ X 11-inch paper. Supplemental maps and drawings larger than 8 ½ X 11 may also be submitted for clarity.

**U.S. Army Corps of Engineers, Savannah District  
2017 Pre-Construction Notification (PCN)**

*Supplemental Information*

**3. Is the project on or adjacent to a state water, where buffer variance is required?**

NO

The proposed pedestrian bridge will cross a 0.023-acre tidal man-made ditch located south of Bon Air Avenue, running east/west and perpendicular to Lanier Blvd. A tidal ditch like this would typically be subject to state water buffer requirements, however since this is a linear transportation project, this 0.023-acre marsh is considered exempt from a buffer variance.

There is another 0.002-acre salt marsh area, which is north of the ditch and adjacent to Bon Air Avenue. The proposed pedestrian sidewalk will run adjacent to this salt marsh, but will not have any direct impacts on it. The sidewalk will have a minimum distance of no less than 9.95 feet between the edge of sidewalk to the salt marsh boundary. However, even though no impacts will be taking place within this 0.002-acre salt marsh, there would have to be an applicable 25-foot state water buffer measured from the jurisdictional limits. However, due to the method of construction, a drainage structure along the eastern side of the sidewalk, was necessary, and is depicted on the *Pedestrian Bridge Plan & Profile*. Construction of this drainage structure makes this exempt from a buffer variance.

**4. Is the project within 10 miles of a 303(d) listed stream?**

YES

The project is located within 10 miles of listed 303(d) streams, including those listed below:

- Brunswick River – impaired due to metals (other than mercury)
- Back River – impaired due to pesticides
- East River, St. Andrews Beach, and Clam Creek Beach – impaired due to pathogens
- Yellow Bluff Creek – impaired due to organic enrichment/oxygen depletion
- Terry and Dupree Creeks – impaired due to organic enrichment/oxygen depletion and pesticides

**6. Is there a water quality management plan for the project site?**

YES

A typical Erosion, Sediment, and Pollution Control Plan will be in place according to normal Best Management Practices (BMPs), which will utilize silt fencing, hay bale check dams, outlet protection-stone, mulching, in addition to temporary and permanent grass seeding.

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**9. Are cultural resources located on or near the project site?**

NO

The lands adjoining the project to the north consist of a series paved roads and single-family residential homes. The tidal feature being crossed is a man-made drainage feature. Located to the south is the recently developed Glynn Middle School. Therefore, the likelihood that cultural resources exist in these areas is low and impacts to cultural resources are not expected to occur as a result of this project.

\* The waterway will not be impacted at all except for the shading effect that the bridge will have over 129.45-square feet of vegetated marsh. No work is proposed within any jurisdictional area; including the absence of beams, supports, or piles. All equipment will remain in the uplands and the bridge will be set from the uplands.

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Photo 1: Pedestrian foot path adjacent to ditch, view from Bon Air Avenue



Photo 2: Pedestrian foot path adjacent to ditch, view from Lanier Blvd



**ENVIRONMENTAL SERVICES, INC.**

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Photo Sheet 1

**City of Brunswick - Glynn Middle Sidewalk**

Glynn County, Georgia

Project: ES16007.00

Date: Sep. 2017

Drwn/Chkd: KHD/MJD

Figure: **PS-1**



Photo 3: Sample Aluminum Slatted Pedestrian Bridge



Photo 4: Sample Aluminum Slatted Pedestrian Bridge



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Photo Sheet 2

**City of Brunswick - Glynn Middle Sidewalk**

Glynn County, Georgia

Project: ES16007.00

Date: Sep. 2017

Drwn/Chkd: KHD/MJD

Figure: PS-2



Photo 5: Tidal ditch, facing upstream from pedestrian bridge crossing



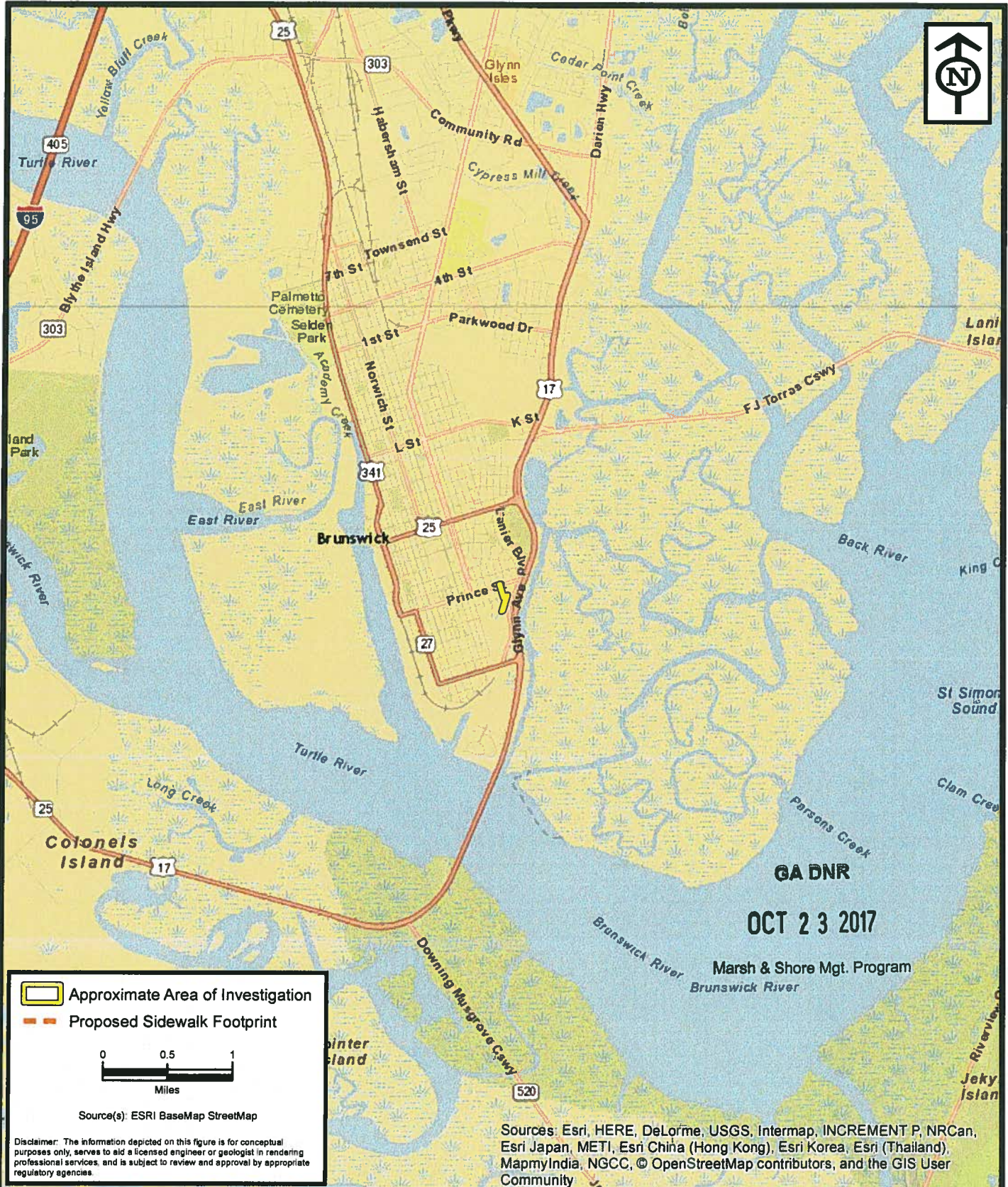
Photo 6: Tidal ditch, facing downstream from pedestrian bridge crossing



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Photo Sheet 3  
**City of Brunswick - Glynn Middle Sidewalk**  
Glynn County, Georgia

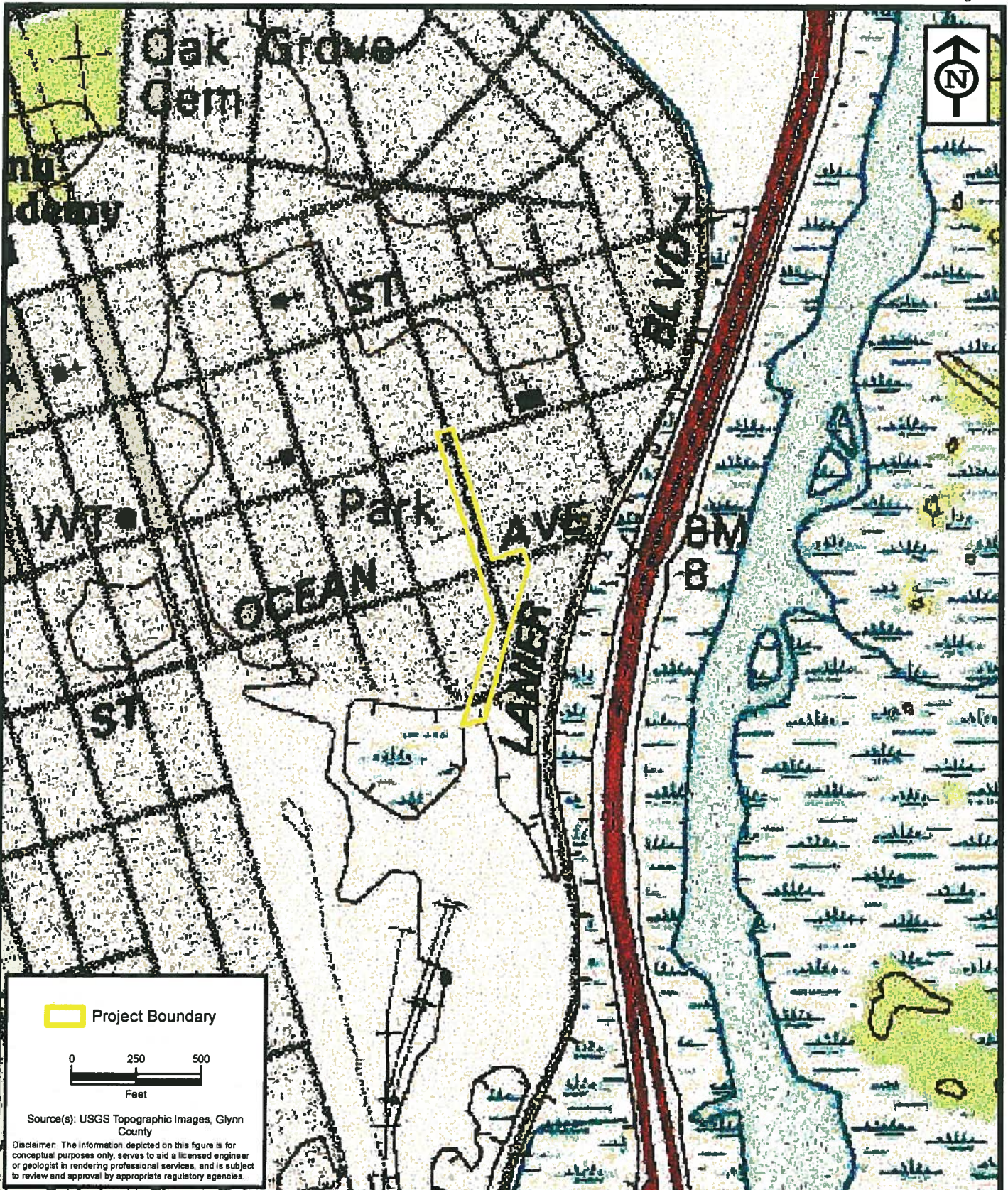
Project:	ES16007.00
Date:	Sep. 2017
Drwn/Chkd:	KHD/MJD
Figure:	PS-3




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Project Vicinity  
**City of Brunswick - Glynn Middle Sidewalk**  
 Glynn County, Georgia

Project: ES16007.00  
 Date: Jan. 2017  
 Drwn/Chkd: KHS/MJD  
 Figure: 1



 Project Boundary

0 250 500  
Feet

Source(s): USGS Topographic Images, Glynn County

Disclaimer: The information depicted on this figure is for conceptual purposes only, serves to aid a licensed engineer or geologist in rendering professional services, and is subject to review and approval by appropriate regulatory agencies.

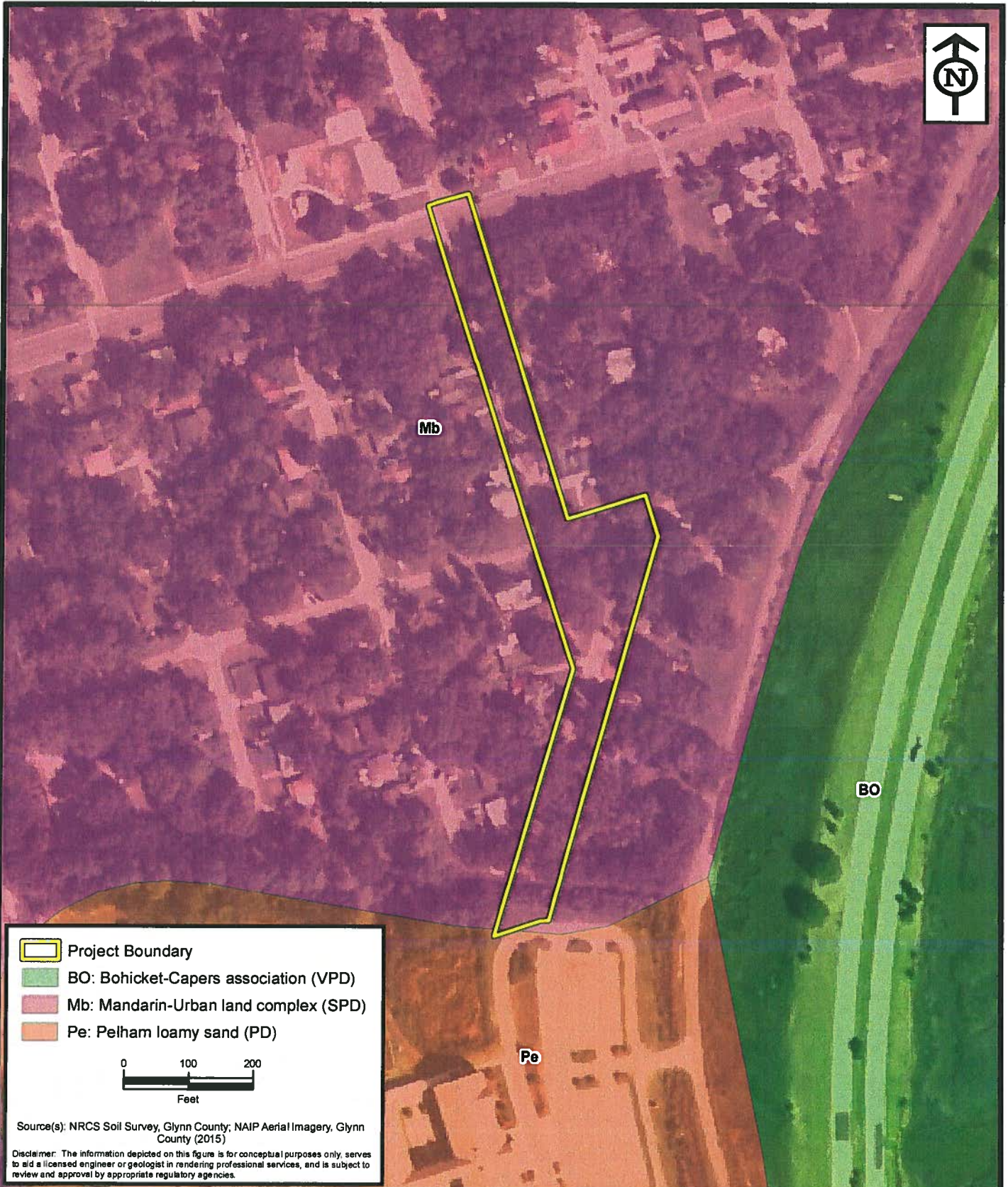






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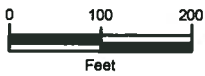
USGS Topographic Images  
**City of Brunswick - Glynn Middle Sidewalk**  
Glynn County, Georgia

Project:	ES16007.00
Date:	July 2017
Drwn/Chkd:	KHS/MJD
Figure:	2





-  Project Boundary
-  BO: Bohicket-Capers association (VPD)
-  Mb: Mandarin-Urban land complex (SPD)
-  Pe: Pelham loamy sand (PD)



Source(s): NRCS Soil Survey, Glynn County; NAIP Aerial Imagery, Glynn County (2015)

Disclaimer: The information depicted on this figure is for conceptual purposes only, serves to aid a licensed engineer or geologist in rendering professional services, and is subject to review and approval by appropriate regulatory agencies.

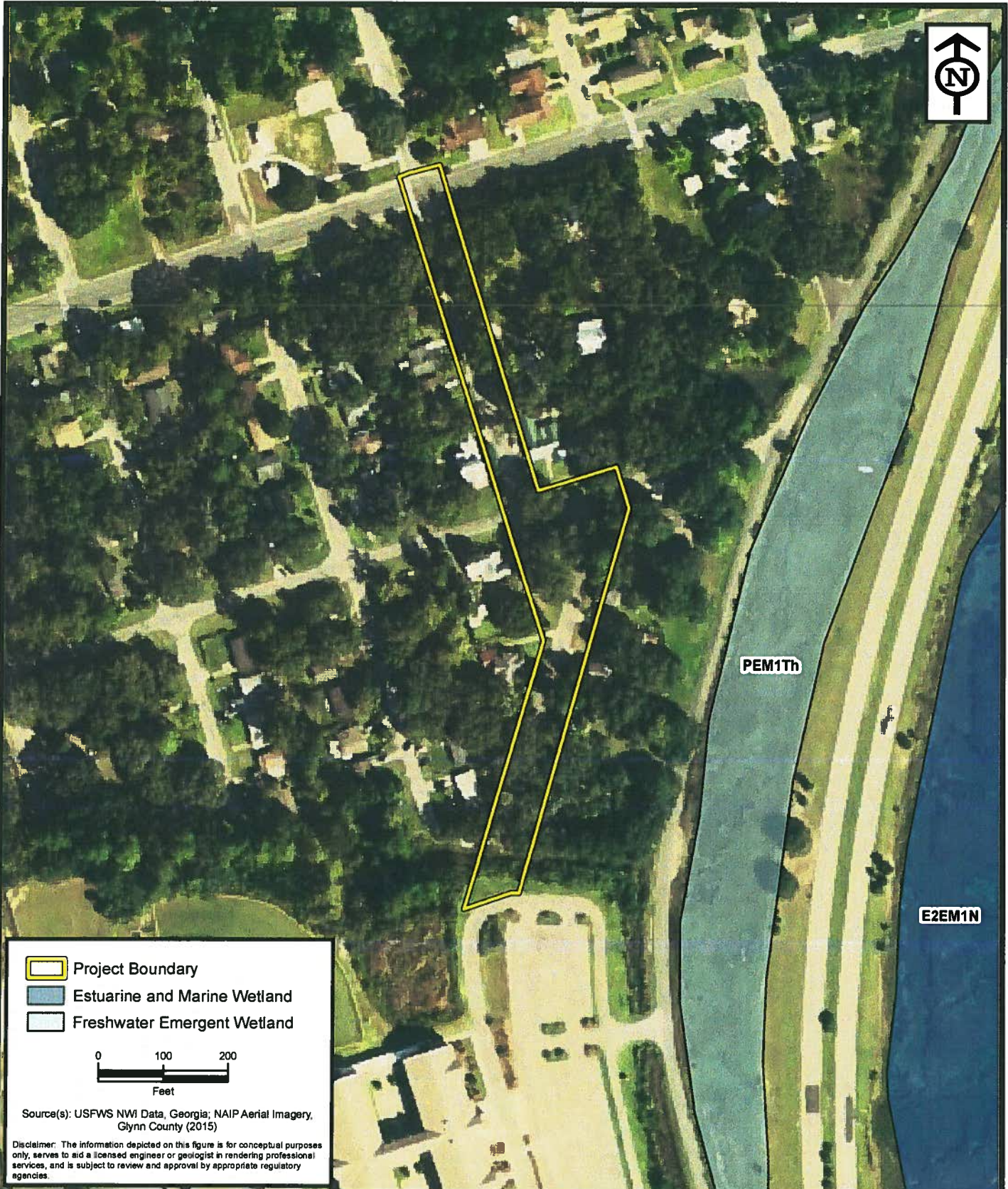


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NRCS Soil Survey  
**City of Brunswick - Glynn Middle Sidewalk**  
Glynn County, Georgia

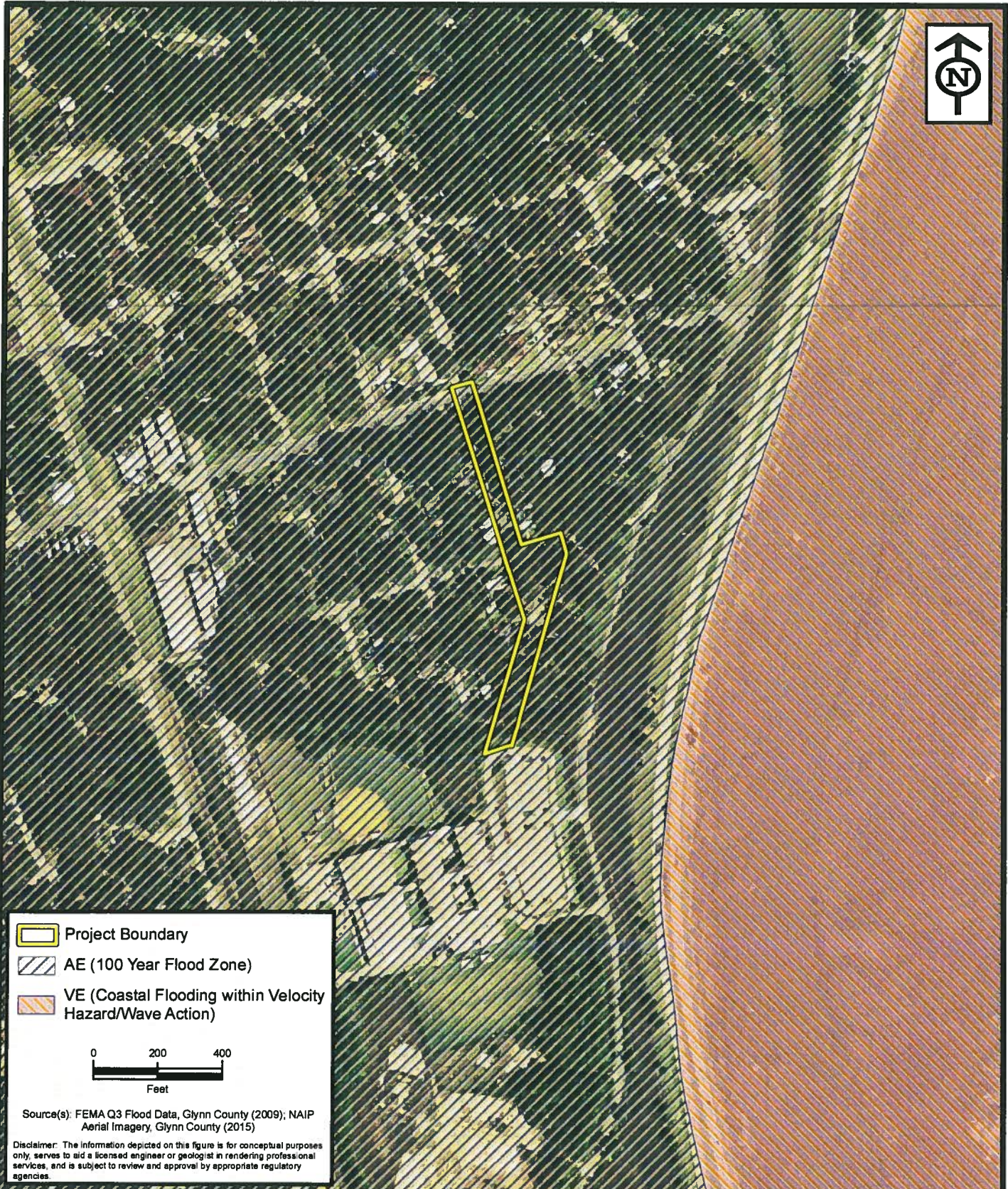
Project:	ES16007.00
Date:	July 2017
Drwn/Chkd:	KHS/MJD
Figure:	3






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National Wetland Inventory (NWI) Data  
**City of Brunswick - Glynn Middle Sidewalk**  
 Glynn County, Georgia

Project:	ES16007.00
Date:	July 2017
Drwn/Chkd:	KHS/MJD
Figure:	4



 Project Boundary  
 AE (100 Year Flood Zone)  
 VE (Coastal Flooding within Velocity Hazard/Wave Action)

0      200      400  
 Feet

Source(s): FEMA Q3 Flood Data, Glynn County (2009); NAIP Aerial Imagery, Glynn County (2015)

Disclaimer: The information depicted on this figure is for conceptual purposes only, serves to aid a licensed engineer or geologist in rendering professional services, and is subject to review and approval by appropriate regulatory agencies.



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FEMA Flood Zone Data

**City of Brunswick - Glynn Middle Sidewalk**

Glynn County, Georgia

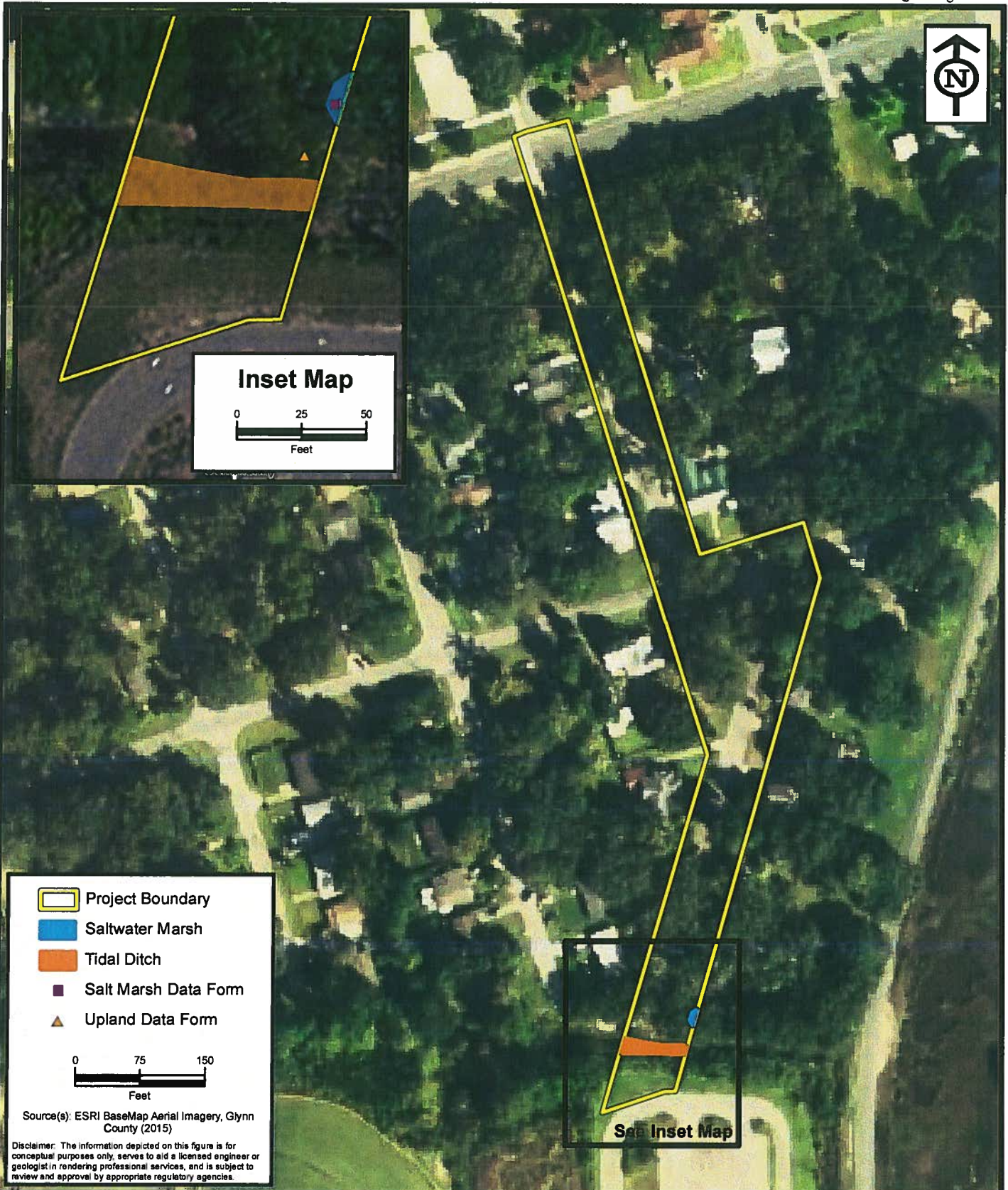
Project:	ES16007.00
Date:	July 2017
Drwn/Chkd:	KHS/MJD
Figure:	5

OCT 23 2017

OCT 23 2017

Marsh & Shore Mgt. Program

Marsh & Shore Mgt. Prog



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Approximate Wetland Sketch  
**City of Brunswick - Glynn Middle Sidewalk**  
 Glynn County, Georgia

Project:	ES16007.00
Date:	July 2017
Drwn/Chkd:	KHS/MJD
Figure:	6



**GA DNR**

**OCT 23 2017**

**Marsh & Shore Mgt. Program**

**Photo 1: Tidal Ditch**



**Photo 2: Saltwater Marsh**



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Photo Sheet 1

**City of Brunswick - Glynn Middle Sidewalk**  
Chatham County, Georgia

Project: ES16007.00

Date: July 2017

Drwn/Chkd: KHD/MJD

Figure: **PS-1**

NO.	REVISION DESCRIPTION	BY	DATE

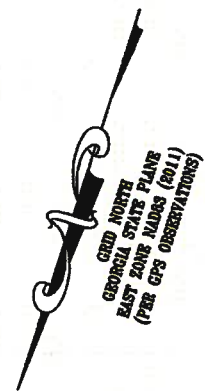
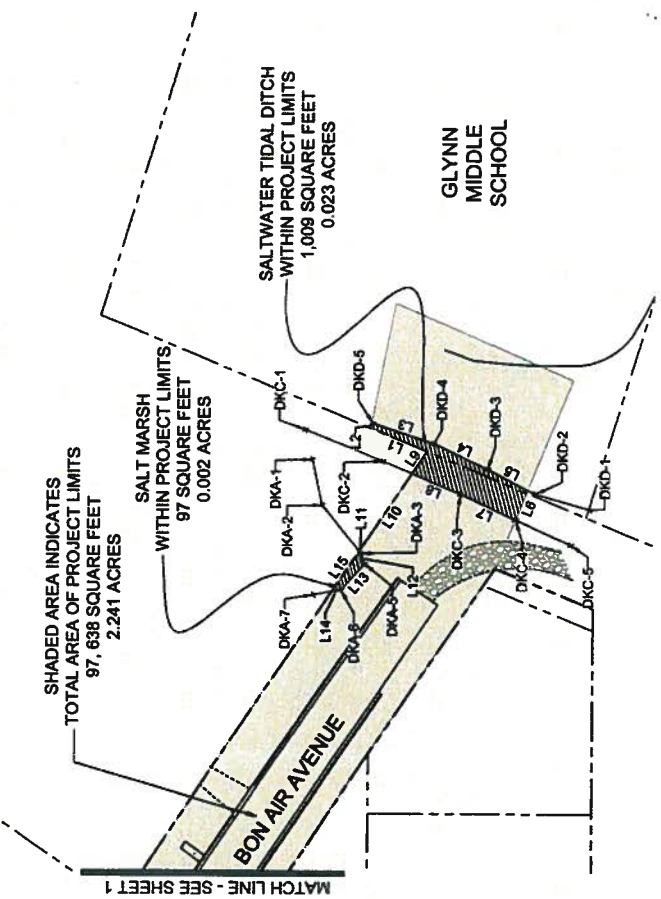
EMC ENGINEERING  
 3000 Peachtree Industrial Blvd.  
 Atlanta, GA 30328  
 (404) 412-2222  
 www.emceng.com

PROJECT: SALTWATER WETLAND EXHIBIT  
 LOCATION: 26TH GA MILITARY DISTRICT  
 BRUNSWICK, GA  
 CITY OF BRUNSWICK

PROJECT NO.: 2017-001  
 DESIGNED BY: JMM  
 DRAWN BY: JMM  
 CHECKED BY: JMM  
 DATE: 07/26/17

SHEET 2 OF 2

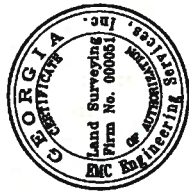
LINE TABLE		
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L11	N57° 31' 38"W	1.39
L12	N37° 44' 59"W	5.62
L13	N24° 22' 17"E	17.33
L14	N62° 00' 45"E	4.72
L15	S16° 06' 33"W	24.14



- SURVEY NOTES**
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  3. THE TERM "CERTIFICATION" AS USED IN BOARD RULE 180-6-.09(2) AND (3) AND RELATING TO PROFESSIONAL SURVEYING SERVICES AS DEFINED IN O.C.G.A. 43-15-2(G) AND (1) SHALL MEAN A SIGNED STATEMENT BASED UPON FACTS AND KNOWLEDGE KNOWN TO THE REGISTRANT AND IS NOT A GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED.
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  5. THE WETLAND DELINEATION FLAGS AS SHOWN HEREON WERE PLACED BY KRISTEN DEASON, ENVIRONMENTAL SERVICES, INC. (ES) OF SAVANNAH, GA. ON JANUARY 12, 2017.
  6. ALL WETLANDS ARE UNDER THE JURISDICTION OF THE U.S. ARMY CORPS OF ENGINEERS AND/OR THE STATE OF GEORGIA DEPARTMENT OF NATURAL RESOURCES. LOT OWNERS ARE SUBJECT TO PENALTY BY LAW FOR DISTURBANCE TO THESE PROTECTED AREAS WITHOUT PROPER PERMIT APPLICATION AND APPROVAL.

SURVEYOR'S CERTIFICATE  
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*Christopher M. Young*  
 CHRISTOPHER M. YOUNG, RLS  
 GEORGIA L.S. REG. NO. 3356  
 07/26/17  
 DME




GA DNR

OCT 23 2017

Marsh & Shore Mgt. Program

**GLYNN MIDDLE SCHOOL SIDEWALK CONNECTOR**  
 26TH GA MILITIA DISTRICT  
 BRUNSWICK, GLYNN COUNTY, GEORGIA  
 Prepared for:  
 CITY OF BRUNSWICK

PROJECT NO.: 17-0601  
 DRAWING NO.: 17-0601-01  
 SURVEYED BY: JML  
 SURVEY DATE: 07/26/17  
 CHECKED BY: JML  
 SCALE: 1"=40'  
 DATE: 07/26/17

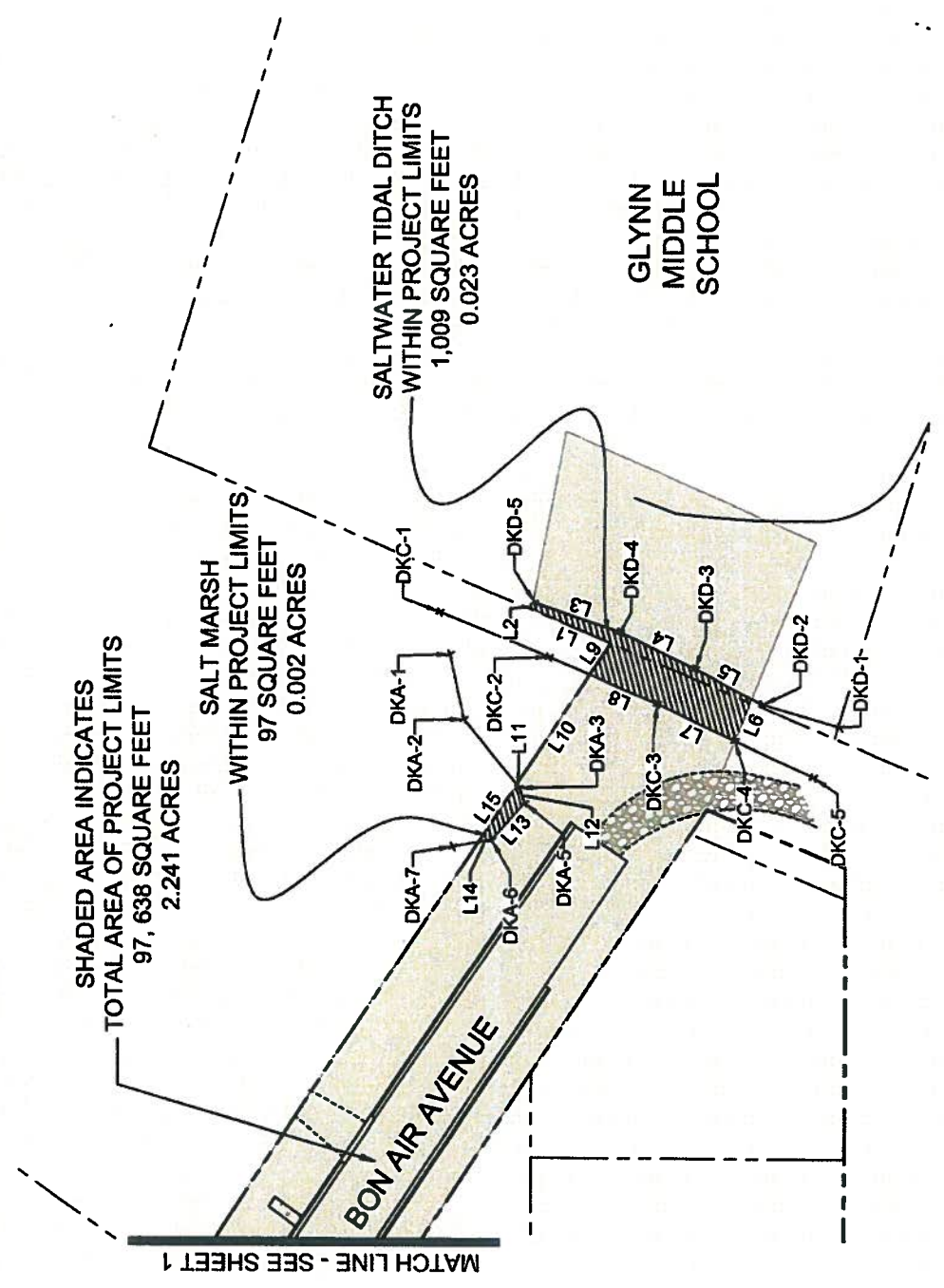


**EMC ENGINEERING**  
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 Brunswick, GA 31520  
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 Fax: (912) 233-4500  
 brunswick@emc-eng.com  
 www.emc-eng.com

ENVIRONMENTAL  
 OFFICE LOCATIONS: SAVANNAH, ATLANTA, AUGUSTA, BRUNSWICK,  
 COLUMBUS, SAVANNAH, STATESBORO, AND VALDOSTA

NO.	REVISION DESCRIPTION	BY	DATE

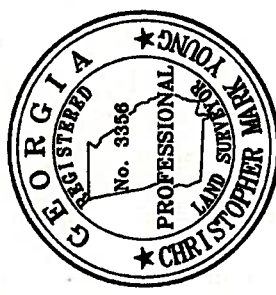
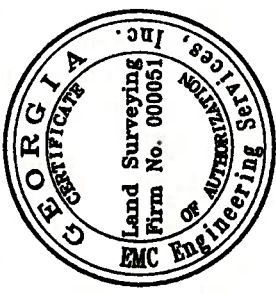
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LINE#	DIRECTION	LENGTH
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L2	S06° 40' 15"E	2.37
L3	N89° 31' 56"W	32.28
L4	N82° 46' 52"W	29.27
L5	N80° 37' 25"W	22.26
L6	N04° 34' 53"E	15.64
L7	S83° 13' 26"E	29.96
L8	S85° 08' 20"E	25.79
L9	S16° 06' 33"W	13.06
L10	N16° 06' 33"E	45.85
L11	N57° 31' 38"W	1.39
L12	N37° 44' 59"W	5.62
L13	N24° 22' 17"E	17.33
L14	N62° 00' 45"E	4.72
L15	S16° 06' 33"W	24.14



**GRID NORTH**  
**GEORGIA STATE PLANE**  
**EAST ZONE NAD83 (2011)**  
**(PER GPS OBSERVATIONS)**

**SURVEYOR'S CERTIFICATE**  
 TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS SURVEY WAS PREPARED IN CONFORMITY WITH THE TECHNICAL STANDARDS FOR TOPOGRAPHIC/SPECIAL SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-07-.07 OF THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS. THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY AND IS NOT TO BE RECORDED OR USED TO CONVEY PROPERTY.

*Christopher M. Young*  
 CHRISTOPHER M. YOUNG, RLS  
 GEORGIA L.S. REG. NO. 3356  
 DATE: 07/26/17




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NO.	REVISION DESCRIPTION	BY	DATE

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 Fax: (912) 223-4990  
 www.emc-eng.com  
 brunswick@emc-eng.com

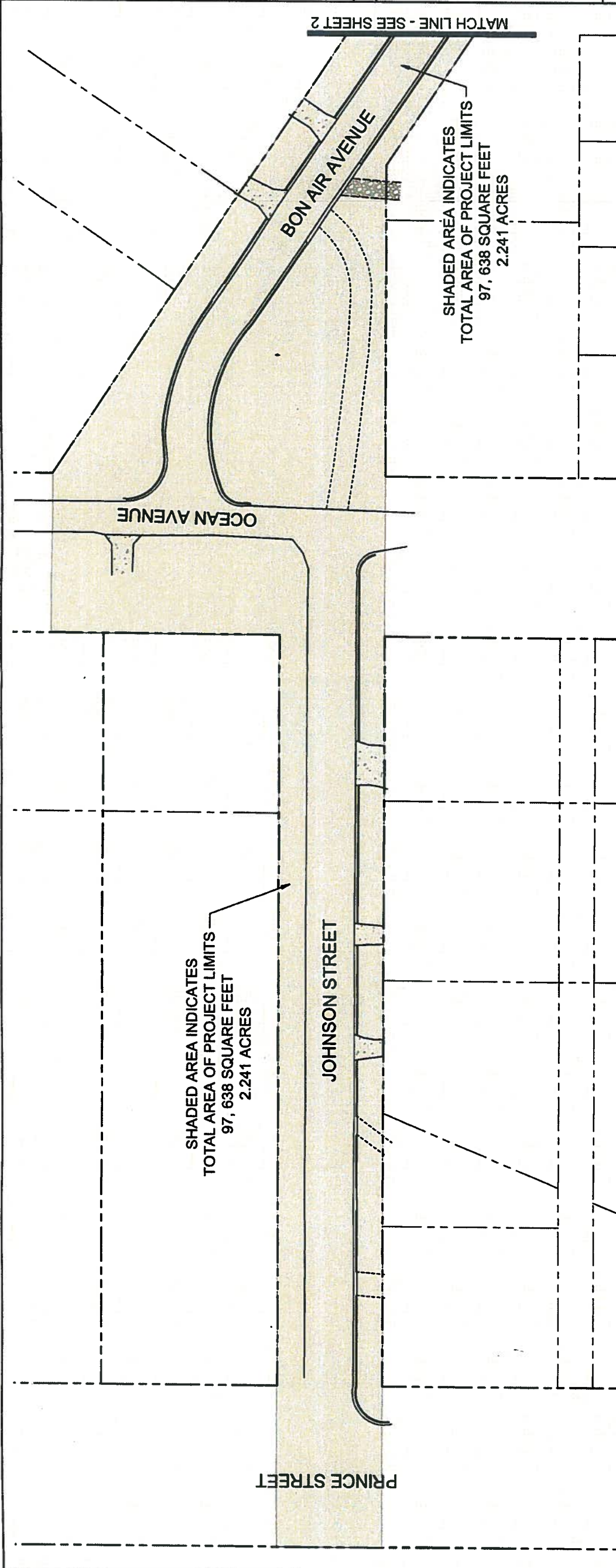


ENVIRONMENTAL  
 SURVEYING  
 OFFICE LOCATIONS: ALABAMA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, FLORIDA, GEORGIA, ILLINOIS, INDIANA, IOWA, KANSAS, MISSISSIPPI, MISSOURI, MONTANA, NEBRASKA, NEVADA, NEW YORK, NORTH CAROLINA, NORTH DAKOTA, OHIO, OKLAHOMA, SOUTH CAROLINA, TEXAS, VIRGINIA, WISCONSIN, WYOMING

SALTWATER WETLAND EXHIBIT  
 26TH GA MILITIA DISTRICT  
 BRUNSWICK, GLYNN COUNTY, GEORGIA  
 Prepared for:  
 CITY OF BRUNSWICK

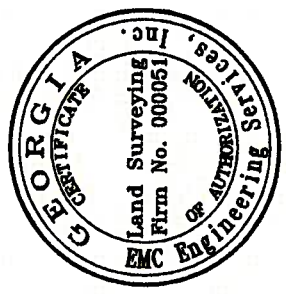
PROJECT NO.:	1725001
DRAWN BY:	CHT
DESIGNED BY:	N/A
SURVEYED BY:	JW/JH
SURVEY DATE:	01/20/2017
CHECKED BY:	CHT
SCALE:	NTS
DATE:	07/26/2017

SHEET 1 OF 2



SURVEYOR'S CERTIFICATE  
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 GEORGIA L.S. REG. NO. 3356  
 DATE 07/26/17



GRID NORTH  
 GEORGIA STATE PLANE  
 EAST ZONE NAD83 (2011)  
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ENVIRONMENTAL SERVICES, INC.  
101 Estus Drive Suite B  
Savannah, GA 31404

Phone 912-236-4711 \* Fax 912-236-3668

[www.environmentalservicesinc.com](http://www.environmentalservicesinc.com)

17 October 2017

Mr. Josh Noble  
Coastal Resources Division  
Georgia Department of Natural Resources  
1 Conservation Way Suite 300  
Brunswick, GA 31520

**Re: City of Brunswick  
Sidewalk & Pedestrian Bridge Construction  
Glynn County, Georgia  
NWP #14**

**ES16007.00**

Dear Mr. Burgess:

On behalf of the City of Brunswick, Environmental Services, Inc., (ESI) respectfully submits the attached Nationwide Permit (NWP) #14 to perform work associated with the construction of a new sidewalk and pedestrian bridge over a tidal ditch adjacent to Johnson Street, Ocean Avenue, and Bon Air Avenue, located within the City of Brunswick within Glynn County, Georgia (Appendix 1, Figure 1).

This follows a submittal, dated 14 September 2017, for a Joint Permit Application. After this initial submittal, the U.S. Army Corps of Engineers requested to change our submittal format of to a Nationwide Permit (NWP), specifically NWP #14 for Linear Transportation Projects.

At your earliest convenience, I request that you review this material and initiate processing this permit application as appropriate. Should you have any questions, please feel free to call me at the number listed above. In advance, we appreciate your assistance with this project.

Sincerely yours,

ENVIRONMENTAL SERVICES, INC.



Michael J. DeMell  
Sr. Vice President II & Technical Director



Kristen Deason  
Senior Scientist

MD/ks  
ES16007.00/CoverLetter\_CRD

Xc: Mr. Garrow Alberson, City Engineer, City of Brunswick  
Mr. Kip Goodbread, Brunswick Branch Manager, EMC Engineering Services, Inc.

RECEIVED

OCT 23 2017

GA DNR

ENVIRONMENTAL SERVICES, INC.

101 B Estus Drive  
Savannah, GA 31404

Phone 912-236-4711 \* Fax 912-236-3668

www.environmentalservicesinc.com

17 October 2017

Department of the Army  
Attention: CESAS-RD Mr. Shaun Blocker  
Savannah District Corps of Engineers  
100 West Oglethorpe Avenue  
Savannah, Georgia 31401

Subject: **City of Brunswick  
Sidewalk & Pedestrian Bridge Construction NWP #14  
Glynn County, Georgia**

**ES16007.00**

Dear Mr. Blocker:

On behalf of the City of Brunswick, Environmental Services, Inc., (ESI) is submitting the enclosed Nationwide Permit (NWP) 14 application for the construction of a new sidewalk and pedestrian bridge over a tidal ditch adjacent to Johnson Street, Ocean Avenue, and Bon Air Avenue, located within the City of Brunswick within Glynn County, Georgia (Figure 1). Also attached is a request for a Delineation Review of Aquatic Resources to verify the wetland delineation associated with this project study area. Please see supporting application materials, figures, and photos attached.

A previous Joint Application was submitted to your office, dated 14 September 2017, based on guidance from the Georgia Department of Natural Resources (GADNR) that a Coastal Marshlands Protection Act (CMPA) minor alteration permit would be required. ESI was informed by Mr. Shaun Blocker by telephone on 10 October 2017 that the U.S. Army Corps of Engineers (USACE) would need to process this project under a Nationwide Permit (NWP) #14 for Linear Transportation Projects.

All design standards and application materials remain consistent to those as submitted within the Joint Application mentioned above. Attached you will find additional paperwork needed to process this project under a NWP#14, with the same information as previously provided.

The proposed 40' aluminum pedestrian bridge will span a tidally influenced man-made ditch, with concrete footings on either side. No work is being proposed within jurisdictional areas, meaning that no wetland impacts are being proposed, including the exclusion of any beams, supports, or piles. The only "impact", which is considered so by the GADNR, is permanent shading of 129.45 square feet of vegetated marsh.

At your earliest convenience, we respectfully request the use of NWP 14 for the construction of the pedestrian bridge. Please contact ESI if you require a field visit to inspect the project study area. In advance, we thank you for your timely review of this project and if you should have any questions or require additional information, please do not hesitate to call.

Sincerely,

ENVIRONMENTAL SERVICES, INC.



Michael J. DeMell  
Sr. Vice President II & Technical Director



Kristen Deason  
Senior Scientist

GA DNR

OCT 23 2017

MD/kd  
ES16007.00 / NWP\_DELreview\_cvr\_itr.docx  
Xc: Mr. Garrow Alberson, City Engineer, City of Brunswick  
Mr. Kip Goodbread, Brunswick Branch Manager, EMC Engineering Services, Inc.

Marsh & Shore Mgt. Program

U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT  
2017 PRE-CONSTRUCTION NOTIFICATION (PCN)  
FOR USE OF CERTAIN NATIONWIDE PERMITS (NWP)

USE OF NWP NUMBER 14 Date 10/16/2017

APPLICANT/PROPERTY OWNER City of Brunswick c/o Garrow Alberson

Phone(hm/bus) 912-267-5500 FAX 912-267-5549 E-Mail galberson@cityofbrunswick-ga.gov

Address 601 Gloucester Street City Brunswick State GA Zip Code 31520

AGENT/CONSULTANT Environmental Services, Inc.

Phone(hm/bus) 912-236-4711 FAX 912-236-3668 E-Mail kdeason@esinc.cc

Address 101 Estus Drive Suite B City Savannah State GA Zip Code 31404

PROJECT LOCATION/ADDRESS Johnston St, Ocean Ave, and Bon Air Ave

City Brunswick County Glynn Subdivision N/A Lot N/A

Latitude 31.141046 Longitude -81.480971 Hydrologic Map Cataloging Unit 03070203

Nearest Named Stream, River or Other Waterbody Fancy Bluff Creek

EXISTING SITE CONDITIONS The proposed pedestrian bridge is proposed to cross a +/- 9.73' wide tidally influenced man-made ditch, which is over 800' from the closest navigable channel, and separated by the 2-lane Lanier Blvd and the 4-lane Ocean Highway. The sides of the ditch are currently mowed and maintained. The Remainder of the project area consist of existing road right of way infrastructure.

PROJECT DESCRIPTION Since the Glynn Middle School was constructed around 2008, there has been an increasing need for a safe pedestrian access route from the school to the adjoining residential subdivision. The proposed project will consist of a 40' aluminum pedestrian bridge suspended over a tidally influenced man-made ditch with footings on either side (no use of pilings, supports, or beams).

**MEASURES TAKEN TO AVOIDANCE/MINIMIZE IMPACTS TO WATER OF U.S.**

The proposed project is the most direct and safest route to provide pedestrian access from Glynn Middle School to the residential community north of the school. All other All other alternatives aquatic resources and would have taken more resources to construct.

GA DNR

OCT 23 2017

APPENDIX B

**PROJECT AREA AND IMPACT INFORMATION**

	PROJECT AREA		IMPACTS TO US WATERS	
	ACRES	LINEAR FEET	ACRES	LINEAR FEET
<b>TOTAL PROJECT AREA</b>	2.241	N/A	N/A	N/A
<b>UPLAND</b>	2.216	N/A	N/A	N/A
<b>WETLAND</b>	0.002	N/A		N/A
<b>OPEN WATER</b>		N/A		N/A
<b>PERENNIAL STREAM</b>				
<b>INTERMITTENT STREAM</b>				
<b>EPHEMERAL STREAM</b>				
<b>MAN-MADE DITCHES</b>	0.023		* (see attached)	

**MAPS, DRAWINGS AND OTHER INFORMATION.** Include information to address answers provided.

1. PCN submitted to the Georgia EPD? (RC A and Appendix A) Yes  No
2. PCN submitted to the Georgia CRD? (RC A and Appendix A) Yes  No
3. Is the project on or adjacent to a state water, where buffer variance is required? Yes  No
4. Is the project within 10 miles of a 303(d) listed stream? Yes  No
5. Is the project located in or adjacent to a trout stream? Yes  No
6. Is there a water quality management plan for the project site? Yes  No
7. Is a copy of the FWS Initial Project Scoping (IPaC) attached to the PCN? (GC 18) Yes  No   
<http://ecos.fws.gov/ipac/>
8. Are oysters located within the project area? Yes  No
9. Are cultural resources located on or near the project site? (GC 20(c)) Yes  No   
<http://www.nr.nps.gov/>
10. Is compensatory mitigation required? (GC 32(b)(6), GC 23 & RCs H.1–H.5) Yes  No
11. Are culverts proposed in streams or wetlands? (RC C.4 and E.1-8) Yes  No
12. Is in-stream/wetland storm water management proposed? (RC C.5) Yes  No
13. Is the project phased, with future wetland/stream impacts planned? Yes  No
14. Have authorized wetland/stream impacts occurred on the project site? Yes  No
15. Have unauthorized wetland/stream impacts occurred on the project site? Yes  No
16. Is the project located within 5 miles of an airport? Yes  No

**IMPORTANT NOTES:**

1. For a PCN to be complete for processing, information required at NWP General Condition (GC) 32(b) and Savannah District 2017 NWP Regional Conditions C must be included.
2. All maps and drawings that are attached to this PCN must be submitted on 8 ½ X 11-inch paper. Supplemental maps and drawings larger than 8 ½ X 11 may also be submitted for clarity.

U.S. Army Corps of Engineers, Savannah District  
2017 Pre-Construction Notification (PCN)

*Supplemental Information*

**3. Is the project on or adjacent to a state water, where buffer variance is required?**

NO

The proposed pedestrian bridge will cross a 0.023-acre tidal man-made ditch located south of Bon Air Avenue, running east/west and perpendicular to Lanier Blvd. A tidal ditch like this would typically be subject to state water buffer requirements, however since this is a linear transportation project, this 0.023-acre marsh is considered exempt from a buffer variance.

There is another 0.002-acre salt marsh area, which is north of the ditch and adjacent to Bon Air Avenue. The proposed pedestrian sidewalk will run adjacent to this salt marsh, but will not have any direct impacts on it. The sidewalk will have a minimum distance of no less than 9.95 feet between the edge of sidewalk to the salt marsh boundary. However, even though no impacts will be taking place within this 0.002-acre salt marsh, there would have to be an applicable 25-foot state water buffer measured from the jurisdictional limits. However, due to the method of construction, a drainage structure along the eastern side of the sidewalk, was necessary, and is depicted on the *Pedestrian Bridge Plan & Profile*. Construction of this drainage structure makes this exempt from a buffer variance.

**4. Is the project within 10 miles of a 303(d) listed stream?**

YES

The project is located within 10 miles of listed 303(d) streams, including those listed below:

- Brunswick River – impaired due to metals (other than mercury)
- Back River – impaired due to pesticides
- East River, St. Andrews Beach, and Clam Creek Beach – impaired due to pathogens
- Yellow Bluff Creek – impaired due to organic enrichment/oxygen depletion
- Terry and Dupree Creeks – impaired due to organic enrichment/oxygen depletion and pesticides

**6. Is there a water quality management plan for the project site?**

YES

A typical Erosion, Sediment, and Pollution Control Plan will be in place according to normal Best Management Practices (BMPs), which will utilize silt fencing, hay bale check dams, outlet protection-stone, mulching, in addition to temporary and permanent grass seeding.

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OCT 23 2017

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**9. Are cultural resources located on or near the project site?**

NO

The lands adjoining the project to the north consist of a series paved roads and single-family residential homes. The tidal feature being crossed is a man-made drainage feature. Located to the south is the recently developed Glynn Middle School. Therefore, the likelihood that cultural resources exist in these areas is low and impacts to cultural resources are not expected to occur as a result of this project.

\* The waterway will not be impacted at all except for the shading effect that the bridge will have over 129.45-square feet of vegetated marsh. No work is proposed within any jurisdictional area; including the absence of beams, supports, or piles. All equipment will remain in the uplands and the bridge will be set from the uplands.

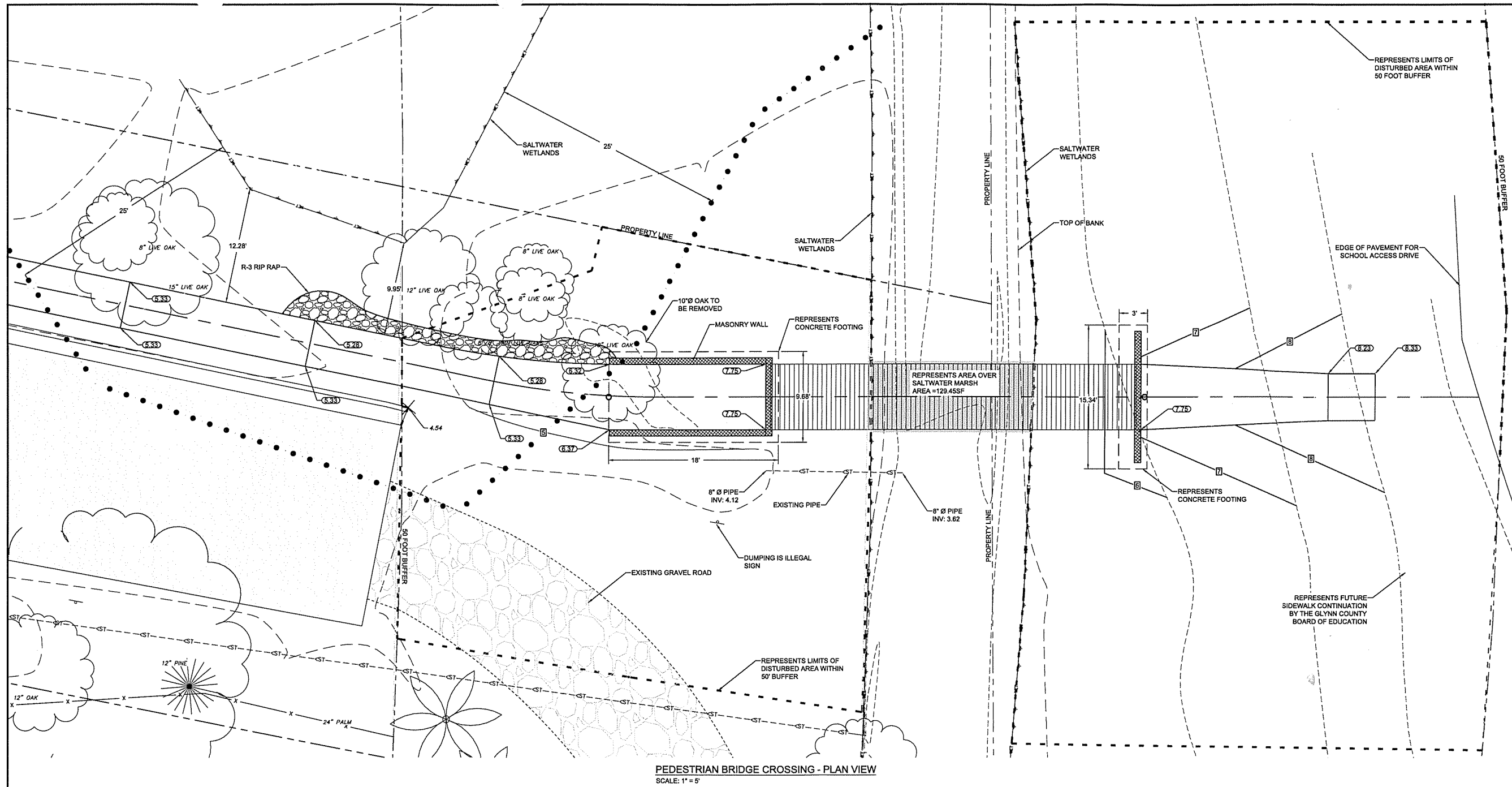
**GA DNR**

**OCT 23 2017**

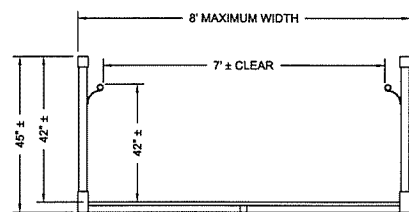
Marsh & Shore Mgt. Program



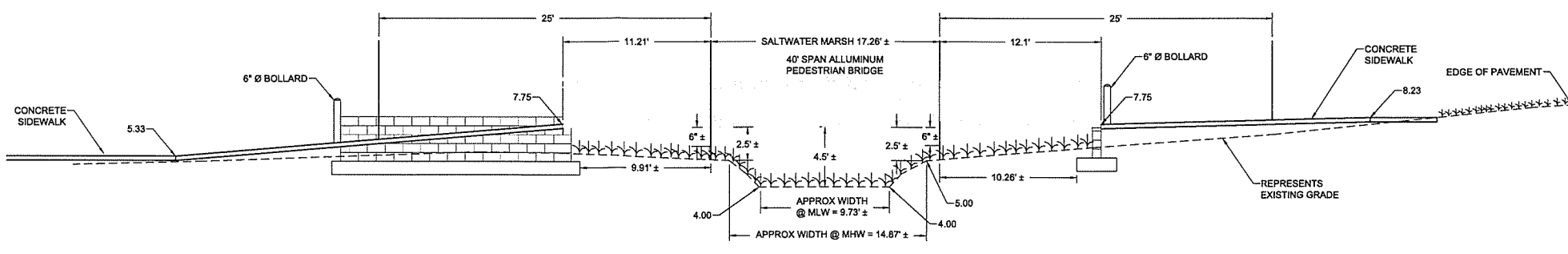




PEDESTRIAN BRIDGE CROSSING - PLAN VIEW  
SCALE: 1" = 5'

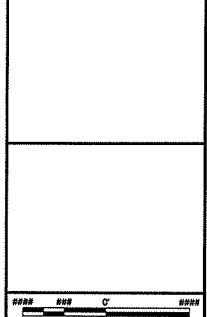


PEDESTRIAN BRIDGE CROSSING - SECTION VIEW  
SCALE: 1" = 2'



PEDESTRIAN BRIDGE CROSSING - PROFILE VIEW  
SCALE: 1" = 5'

NO.	REVISION DESCRIPTION	BY	DATE



**EMC ENGINEERING SERVICES, INC.**  
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 brunswick@emc-eng.com  
 www.emc-eng.com

**EMC**  
 CIVIL  
 MARINE  
 ENVIRONMENTAL

OFFICE LOCATIONS: ALBANY, ATLANTA, AUGUSTA, BRUNSWICK, COLUMBUS, SAVANNAH, STATESBORO, AND VALDOSTA

PEDESTRIAN BRIDGE PLAN & PROFILE  
**GLYNN MIDDLE SCHOOL SIDEWALK**  
 26th GA MILITIA DISTRICT  
 BRUNSWICK, GLYNN COUNTY, GEORGIA  
 Prepared for:  
 CITY OF BRUNSWICK

PROJECT NO.:	17-5001
DRAWN BY:	KBG
DESIGNED BY:	KBG
SURVEYED BY:	EMC BWK
SURVEY DATE:	2017
CHECKED BY:	JMM
SCALE:	NOTED
DATE:	05/15/2017

SHEET  
**1**  
 OF 1

GA DNR

OCT 23 2017

Marsh & Shore Mgt. Program



Photo 1: Pedestrian foot path adjacent to ditch, view from Bon Air Avenue



Photo 2: Pedestrian foot path adjacent to ditch, view from Lanier Blvd



**ENVIRONMENTAL SERVICES, INC.**  
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(912) 236-3668 Fax  
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Photo Sheet 1  
**City of Brunswick - Glynn Middle Sidewalk**  
Glynn County, Georgia

Project: ES16007.00  
Date: Sep. 2017  
Drwn/Chkd: KHD/MJD  
Figure: **PS-1**



Photo 3: Sample Aluminum Slatted Pedestrian Bridge



Photo 4: Sample Aluminum Slatted Pedestrian Bridge



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Photo Sheet 2

**City of Brunswick - Glynn Middle Sidewalk**

Glynn County, Georgia

Project: ES16007.00

Date: Sep. 2017

Drwn/Chkd: KHD/MJD

Figure: **PS-2**



Photo 5: Tidal ditch, facing upstream from pedestrian bridge crossing



Photo 6: Tidal ditch, facing downstream from pedestrian bridge crossing



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Photo Sheet 3

**City of Brunswick - Glynn Middle Sidewalk**

Glynn County, Georgia

Project: ES16007.00

Date: Sep. 2017

Drwn/Chkd: KHD/MJD

Figure: **PS-3**