

**FLOODWAY "NO-RISE / NO-IMPACT" CERTIFICATION**

This document is to certify that I am duly qualified engineer licensed to practice in the State of

South Carolina

(State)

*Joshua Kide*

~~Waccamaw~~ Christenson Piling Structure

the fact that proposed

(TMS 138-20-01-032)

(Name of Development)

will not impact the base flood

elevations, floodway elevations, and floodway widths on

Waccamaw River

(Name of Stream)

at published

cross sections in the Flood Insurance Study for,

Horry County

(Name of community)

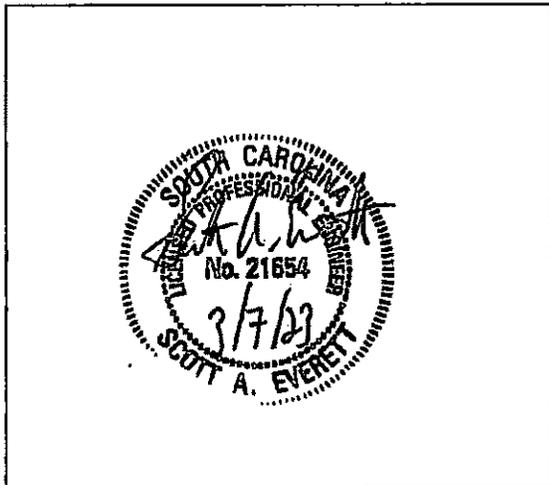
, dated

March 7, 2023

(Date)

and will not impact the base flood elevations, floodway elevations, and floodway widths at the

unpublished cross-sections in the area of the proposed development.



**SEAL, SIGNATURE AND DATE**

Scott A. Everett, PE

Name

Owner/Engineer

Title

Everett Engineering, LLC

165 Everett Place

Brittons Neck, SC 29546

Address

**FOR COMMUNITY USE ONLY:**

Community Approval

Approved

Disapproved

Community Official's Name

Community Official's Signature

Title

FEMA, MT  
DTD.09/2004

**Michelle Christenson New Residence  
No Rise/No Impact Calculations**

1) **Pre-Construction Conditions:**

Flood Flow is from the right to left of the lot;

Cleared lot Width- 90.5' Average (also P- wetted perimeter)

BFE = 17.0'; Av. Ground Elev. = 6.7'; 100-YR Flow Velocity = 1.3 fps (FIS)

Overbank Roughness value (n) = 0.150;

a) Cross-section in flow:  $90.5' \times (17.0 - 6.7) = 932.1 \text{ SF} = A$

So, overbank  $Q = AV, = 932.1 \times 1.3 = \underline{1,211.7 \text{ CFS}}$

2) **Solve for Velocity Increase due to Overbank Roughness Decrease:**

$V_{pre} n_{pre} = V_{post} n_{post}$ , where  $n_{post} = 0.035$ ;

a)  $(1.3) (0.150) = V_{post} (0.035)$

b)  $V_{post} = (1.3)(0.150) / (0.035)$

$V_{post} = 5.57 \text{ fps}$

3) **Post-Construction Conditions:**

- a) Reduction in cross-sectional area (A) for the 12" round pilings of the new House  
(34 total columns standing independently)

$(0.785) (34) (10.3') = 274.9 \text{ SF}$

- b) Reduction in cross-sectional area (A) for the stairway area at the ground level

$(0.5 \times 0.5) (2) (10.3') + (0.5 \times 0.5) (4) (4') = 9.15 \text{ SF}$

**Total Area = 284.05 SF**

So, Post Construction overbank  $Q = AV,$

$= (932.1 - 284.05) \times 5.57 = \underline{3,609.6 \text{ CFS}}$

Therefore, the Construction will result in no reduction in overbank flow, and no increase in backwater elevation.