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MEMORANDUM

Date: April 15, 2022

To: Donald Whipple, AICP
From: Emily Drahos, PWD, PWS
Subject: Battle Road Apartments Investigation
CC: Kim Mikel (City of Hampton), Taylor Sprenkle (WRA), Lynn Allsbrook (WRA)

Work Order Number: 19282-003
Contract Number: 19282
Project: Battle Road Apartments

Mr. Whipple:
On March 16, 2022, WRA conducted a site visit and third party review of a previous wetland delineation conducted at the proposed Battle Road Apartments Site (aka Sarah Bonwell Hudgins property). The previous delineation was conducted by Wetland Studies and Solutions, Inc. (WSSI) on August 30, 2021. Additionally, WRA conducted a site reconnaissance of the Hampton School Board Parcel (PIN 5000038) directly north of the proposed Battle Roads Apartments Site to investigate if the RPA previously determined by the City on the Mallory property (based off the delineation depicted on the AES figure dated November 21, 2017) extended to the Battle Road Apartments Site (see Attachment 1) . Below are our findings.

- In our professional opinion, the wetland delineation lines depicted on WSSI's RPA figure, dated December 14, 2021, are correct. Please note that WSSI's wetland delineation lines are subject to USACE confirmation.
- Based on our site reconnaissance, the attached documentation, AES's figure dated November 21, 2017, and the City's previous RPA determination on the AES wetlands, it is our opinion that the entire School Board Parcel (PIN 5000038) is made up of non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, as defined in the City's zoning ordinance. Please note that the site reconnaissance conducted on the School Board Parcel does not constitute a formal wetland delineation or jurisdictional determination. A formal wetland delineation involves the preparation of a delineation report and a jurisdictional determination requires submittal of a delineation report to regulatory agencies for their approval.
- Based on our site reconnaissance, AES's figure dated November 21, 2017, and the City's previous RPA determination on the AES wetlands, the RPA would extend through the School Board Parcel (PIN 5000038) to the proposed Battle Roads Apartments site (see Attachment 1). It is our opinion that the green wetlands depicted on WSSI's wetland delineation figure, dated December 14, 2021, would be nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow. The pink wetlands (isolated wetlands) depicted on WSSI's figure would not be connected by surface flow and would not be contiguous to tidal wetlands or water bodies with perennial flow; therefore, these isolated wetlands would not be RPA features. Please note that the isolated nature of wetlands is determined by USACE and is subject to USACE confirmation.

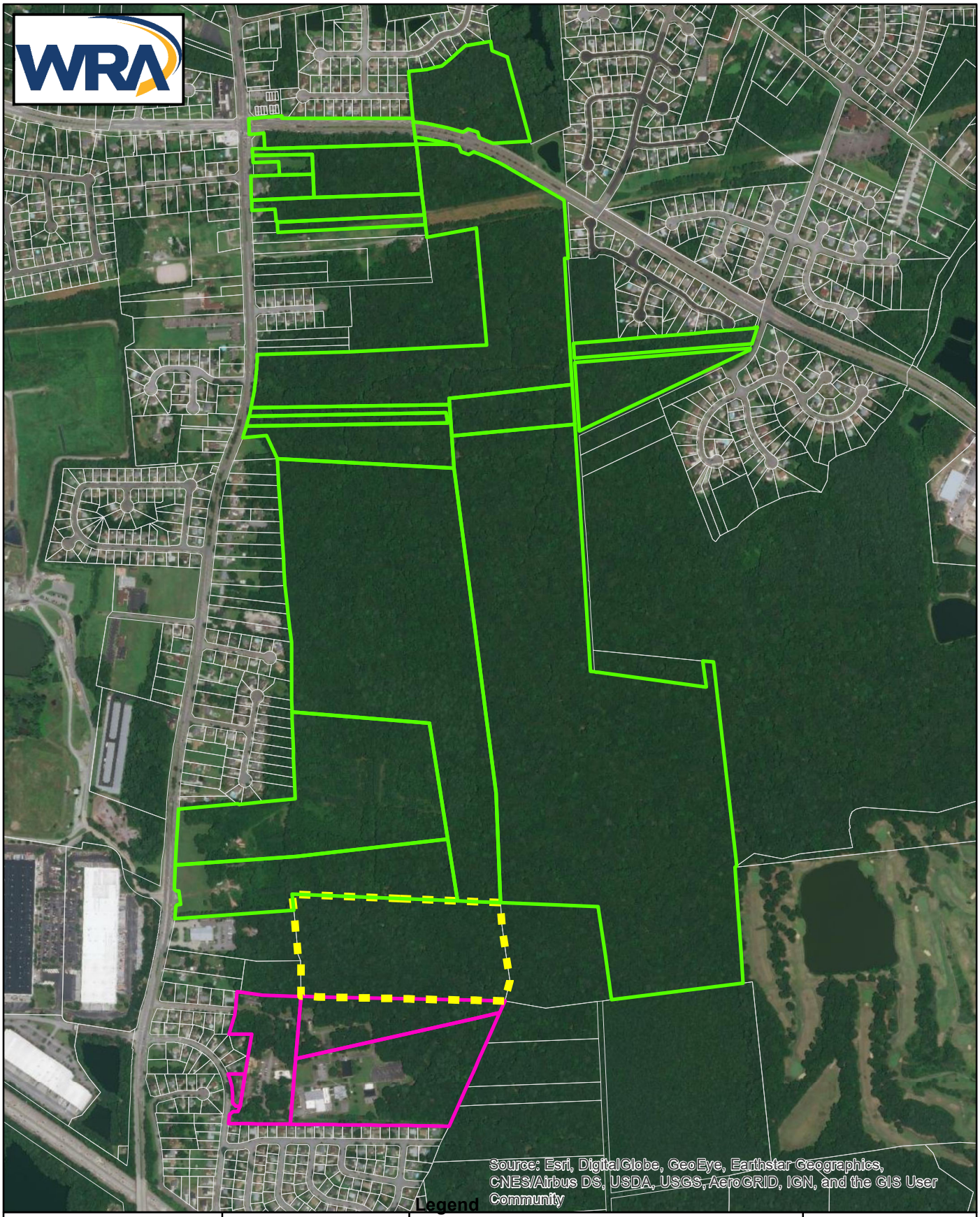
Please contact me at edrahos@wrallp.com or 804-327-5227 if you have any questions or require any additional information.

Thank you,

Emily C. Drahos

Emily C. Drahos

Attachment 1: Project Vicinity



Legend

- Mallory Property - Approx. AES Delineation Area
- Hampton School Board Parcel (PIN 5000038)
- Battle Road Apartments Site - WSSI Delineation Area
- Parcels

Source: Hampton Roads Planning District Commission

WRA Project No.: 19282-003	0 500 1,000 Feet 1 inch = 1,000 feet	**Exhibit 1:** Project Vicinity
Title: **Battle Road Apts Investigation** City of Hampton, Virginia		
Date: 3/25/2022		

Attachment 2: School Board Parcel Data Point

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Battle Road Apartments RPA Investigation City/County: City of Hampton Sampling Date: 03/16/2022

Applicant/Owner: City of Hampton State: VA Sampling Point: FDP-Wet-1

Investigator(s): ED, LK Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2%

Subregion (LRR or MLRA): LRR T; MLRA 153B Lat: 37.070863 Long: -76.420984 Datum: NAD 1983

Soil Map Unit Name: Tomotley-Urban land complex, 0 to 2 percent slopes NWI classification: PFO

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ 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 _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ 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 along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ✔ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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 _____	Depth (inches): 2"
Water Table Present?	Yes ✔	No _____	Depth (inches): 0"
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): 0"

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Microtopographic relief and buttressed trunks.

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

Sampling Point: FDP-Wet-1

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	25	Yes	FAC
2. *Quercus bicolor*	20	Yes	FACW
3. *Quercus alba*	15	Yes	FACU
4. *Acer rubrum*	10	No	FAC
5. *Liquidambar styraciflua*	5	No	FAC
6.			
7.			
8.			
	75	= Total Cover	

50% of total cover: 37.5 20% of total cover: 15

Sapling/Shrub Stratum (Plot size: 30 feet)			
1. *Liquidambar styraciflua*	15	Yes	FAC
2. *Acer rubrum*	10	Yes	FAC
3. *Vaccinium fuscatum*	10	Yes	FACW
4. *Ilex opaca*	5	No	FAC
5.			
6.			
7.			
8.			
	40	= Total Cover	

50% of total cover: 20 20% of total cover: 8

Herb Stratum (Plot size: 30 feet)			
1. *Chasmanthium laxum*	15	Yes	FACW
2. *Smilax rotundifolia*	1	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	16	= Total Cover	

50% of total cover: 8 20% of total cover: 3.2

Woody Vine Stratum (Plot size: 30 feet)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 86% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A =

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)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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.

Hydrophytic Vegetation Present? Yes ✔ No ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: FDP-Wet-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100					Sandy loam	
4-8	10YR 3/1	50					Sandy loam	Mixed matrix
	10YR 4/2	50					Sandy loam	
8-16	10YR 6/1	90	10YR 6/6	10	C	M	Sandy loam	
16-18	10YR 6/1	80	10YR 6/6	10	C	M	Sandy clay loam	
			7.5Y 5/8	10	C	M	Sandy clay loam	

[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.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks: