



December 5, 2024

TO: **SAGA Construction Inc.**  
1314 S Croatan Hwy  
Kill Devil Hills, NC 27948

Attn: Mr. Fred Vollat

RE: Construction Materials Testing Services  
**Waterside Villages Phases 2 & 4**  
Grandy, North Carolina  
Terracon Project No: K5241002  
Report No. 1

Dear Mr. Vollat:

As requested, a representative of **Terracon** visited the project site between the dates of April 17, 2024, and November 11, 2024. The purpose of our visits was to observe and evaluate the roadway construction activities with respect to Aggregate Base Course (ABC) and Asphalt placement.

The roadway pavement section is understood to require at least 6 inches of ABC materials overlain by 2 inches of surface mix asphalt (Type RS-9.5B). The project specifications required testing of the ABC and asphalt materials be performed for quality assurance, in accordance with the NCDOT requirements. As such, this report includes the evaluation of the ABC materials and asphalt materials placed within the roadway alignment as they relate to thickness, density, aggregate gradation, and asphalt content. The requested scope of services did not include the evaluation of the existing subgrade soils and/or structural fill materials placed to establish the design grade elevations, if required.

### **SCOPE OF SERVICES**

For this project, **Terracon** has performed the following tasks:

- Performed bulk soil sampling from the on-site stockpile of the imported structural fill and aggregate base course materials used as ABC within the observed roadway alignments. The sample was returned to our Elizabeth City, NC laboratory for natural moisture, full sieve, and Proctor testing in general accordance with NCDOT requirements. The laboratory test results indicated the imported ABC materials were in general accordance with NCDOT requirements with respect to gradation. The results of these testing procedures are provided on the "Moisture Density Relationship Proctor Curve" and "Particle Size Distribution" test report sheets attached to this report.

- During our April 17, 2024 site visit, compaction testing was performed on the in place structural fill placed for the project. The test results indicated an the materials were compacted to at least 99%.
- During our June 3, 2024 and November 11, 2024 site visits, compaction and thickness testing procedures were performed and indicated that the ABC materials were compacted to 100%. The thickness test results indicated an in-place ABC thickness ranging from approximately 6 inches to 6.25 inches.
- Performed coring operations at fourteen (14) locations with the use of a 6-inch diameter core barrel within the requested roadway alignment. The core locations were randomly established in the field by a **Terracon** representative prior to initiating the coring operations.
- Performed laboratory testing procedures at **Terracon's** laboratory located in Elizabeth City, NC. The laboratory testing procedures consisted of average core specimen thickness and bulk specific gravity as well as asphalt content and asphalt aggregate gradation analysis. The laboratory test procedures were executed in general accordance with NCDOT testing procedures. The specific gravity (density) and thickness test results are provided in the following table (Table I – Asphalt Laboratory Test Results). The asphalt content test results are provided in “Table II – Asphalt Content Test Results” and the asphalt aggregate gradation analysis test results are provided on the attached “Particle Size Distribution” sheets.

**Table I– Asphalt Laboratory Test Results**

Sample #	Sample Location <sup>(1)</sup>	Asphalt Type	Average Sample Thickness (in.)	Specific Gravity	Percent Compaction (Min. 90%) <sup>(2-5)</sup>
C-1	See Location Plan	RS-9.5B	1.77	2.132	89.3%
C-2	See Location Plan	RS-9.5B	2.61	2.313	96.8%
C-3	See Location Plan	RS-9.5B	3.37	2.270	95.0%
C-4	See Location Plan	RS-9.5B	3.76	2.194	91.8%
C-5	See Location Plan	RS-9.5B	3.18	2.178	91.2%
C-6	See Location Plan	RS9.5B	2.40	2.212	92.6%
C-7	See Location Plan	RS-9.5B	2.08	2.237	93.6%
C-8	See Location Plan	RS-9.5B	2.59	2.174	91.0%
C-9	See Location Plan	RS-9.5B	1.88	2.232	93.4%
C-10	See Location Plan	RS-9.5B	2.60	2.255	94.4%
C-11	See Location Plan	RS-9.5B	2.14	2.200	92.1%
C-12	See Location Plan	RS-9.5B	2.54	2.180	91.3%



C-13	See Location Plan	RS-9.5B	2.52	2.158	90.3%
C-14	See Location Plan	RS-9.5B	2.84	2.172	90.9%
<b>Average</b>		<b>RS-9.5B</b>	<b>2.59</b>	<b>2.207</b>	<b>92.4%</b>

Note (1) = Locations provided in the table above are considered to be approximate.

Note (2) = Percent compaction based on the Rice specific gravity values of 2.389 for Type RS-9.5B (JMF: 20-0508-031), furnished by Allan Myers Chesapeake.

Note (4) = Minimum percent compaction requirement: 90% for Types RS-9.5B.

**Table II – Asphalt Content Test Results**

<b>Sample # and Asphalt Type</b>	<b>Sample Location</b>	<b>Asphalt Content (%)<sup>(1)</sup></b>
C-2 RS-9.5B	See Location Plan	5.3
C-5 RS-9.5B	See Location Plan	5.3
C-10 RS-9.5B	See Location Plan	5.2
C-14 RS-9.5B	See Location Plan	5.3

Note (1) = Percent asphalt requirement for Type RS-9.5B is 6.3% +/- 0.7% per the JMF: 20-0508-031 furnished by Allan Myers Chesapeake and the NCDOT allowable tolerance.

Construction Materials Testing Services Report  
Waterside Villages Phases 2 & 4 ■ Grandy, NC  
December 5, 2024 ■ Terracon Project No: K5241002



We appreciate the opportunity to offer our services to you, and trust that you will call our Elizabeth City office with any questions that you may have.

Respectfully Submitted,  
**Terracon**

A handwritten signature in black ink, appearing to read 'Gerald W. Stalls Jr.', written in a cursive style.

Gerald W. Stalls Jr., P.E.  
Senior Project Engineer  
NC Lic. #034336

*Brad Gallop*

Isaac B. Gallop  
Department Manager Materials

Attachments: Moisture Density Relationship Proctor Curve(s)  
Particle Size Distribution Test Report(s):  
Aggregate Base Course (ABC)  
Asphalt Cores C-2, C-5, C-10, & C-14



# SAMPLE PICK-UP REPORT

**Report Number:** K5241002.0003  
**Service Date:** 04/17/24  
**Report Date:** 12/05/24 Revision 1 - update  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
Elizabeth City, NC 27909-7731  
252-335-9765

## Client

SAGA Construction Inc  
Attn: Fred Vollat  
1314 S Croatan Hwy  
Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
101 Bowsprit Lane  
Grandy, NC

Project Number: K5241002

As requested, a representative of Terracon was onsite on this date to obtain a proctor sample. A Tan sand proctor was picked up and returned to our laboratory for testing.

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**Services:** Pickup samples from the project site and return them to the office for testing and/or processing.

**Terracon Rep.:** Christian Mitchell

**Reported To:**

**Contractor:** SAGA

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:** \_\_\_\_\_

Brad Gallop  
Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

**FIELD DENSITY TEST REPORT**

**Report Number:** K5241002.0004  
**Service Date:** 04/17/24  
**Report Date:** 12/05/24 Revision 1 - Proctor  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
 Elizabeth City, NC 27909-7731  
 252-335-9765

**Client**

SAGA Construction Inc  
 Attn: Fred Vollat  
 1314 S Croatan Hwy  
 Kill Devil Hills, NC 27948

**Project**

Waterside Villages Phases 2 & 4  
 101 Bowsprit Lane  
 Grandy, NC

Project Number: K5241002

**Material Information**

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Opt. Water Content (%)	Max. Lab Density (pcf)	Water Content (%)	Compaction (%)
2	K5241002.0011	Tan Silty SAND	ASTM D698	13.2	113.0		Min 95.0

**Field Test Data**

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Density (pcf)	Percent Compaction (%)
<b>Roadway subgrade</b>									
1	Bridge View Drive South	6" BFG	2	12	118.9	6.2	5.5	112.7	99.7
2	Bridge View Drive South	6" BFG	2	12	121.1	5.8	5.0	115.3	100+
3	admirals view drive	6" BFG	2	12	121.6	7.4	6.5	114.2	100+
4	cove lane	6" BFG	2	4	120.1	5.4	4.7	114.7	100+
5	cove lane	6" BFG	2	12	121.1	5.9	5.1	115.2	100+
6	genoa court	6" BFG	2	12	120.6	6.7	5.9	113.9	100+
7	keel drive	6" BFG	2	12	121.6	8.6	7.6	113.0	100.0
8	yacht club lane south	6" BFG	2	4	122.8	7.4	6.4	115.4	100+
9	transom drive south	6" BFG	2	4	119.9	7.1	6.3	112.8	99.8
10	transom drive south	6" BFG	2	12	120.0	4.9	4.3	115.1	100+

**Datum:**

**Std. Cnt. M:** 687 **Std. Cnt. D:** 2158

**S/N:** 75685

**Make:** Troxler

**Model:** 3430

**Last Cal. Date:** 02/01/2024

**Comments:** Test and/or retest results on this report meet project requirements as noted above.

**Services:** Perform in-place moisture and density retests as requested or as required by the project specifications to determine degree of compaction and material moisture condition.

**Terracon Rep.:** Christian Mitchell

**Reported To:**

**Contractor:** SAGA

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:**

Brad Gallop  
 Project Manager

**Test Methods:** ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# FIELD DENSITY TESTING REPORT



**Report Number:** K5241002.0004  
**Service Date:** 04/17/24  
**Report Date:** 12/05/24 Revision 1 - Proctor  
**Task:** Earthwork and Site Paving

106 Capital Trace, Unit E  
Elizabeth City, NC 27909-7731  
252-335-9765

## Client

SAGA Construction Inc  
Attn: Fred Vollat  
1314 S Croatan Hwy  
Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
101 Bowsprit Lane  
Grandy, NC

Project Number: K5241002

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**Services:** Perform in-place moisture and density retests as requested or as required by the project specifications to determine degree of compaction and material moisture condition.

**Terracon Rep.:** Christian Mitchell

**Reported To:**

**Contractor:** SAGA

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:** \_\_\_\_\_

Brad Gallop  
Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# FIELD DENSITY TEST REPORT

**Report Number:** K5241002.0006  
**Service Date:** 06/03/24  
**Report Date:** 06/05/24  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
 Elizabeth City, NC 27909-7731  
 252-335-9765

## Client

SAGA Construction Inc  
 Attn: Fred Vollat  
 1314 S Croatan Hwy  
 Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
 101 Bowsprit Lane  
 Grandy, NC

Project Number: K5241002

## Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Opt. Water Content (%)	Max. Lab Density (pcf)	Water Content (%)	Compaction (%)
1	K5241002.0001	PENDING PROCTOR		16.0	119.5		

## Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Density (pcf)	Percent Compaction (%)
1	Stone Road base	FG	1	4	133.7	4.5	3.5	129.2	100+
2	Stone road base	FG	1	4	136.8	5.6	4.3	131.2	100+
3	Stone road base	FG	1	4	133.4	4.8	3.7	128.6	100+
4	Stone road base	FG	1	4	136.5	5.9	4.5	130.6	100+
5	Stone road base	FG	1	4	135.0	5.6	4.3	129.4	100+
6	Stone Rock base	FG	1	4	138.5	5.3	4.0	133.2	100+
7	Stone Road Base	FG	1	4	130.6	6.0	4.8	124.6	100+
8	Stone road base	FG	1	4	133.2	5.6	4.4	127.6	100+

**Datum:** Final grade

**S/N:** 32487

**Make:** Troxler

**Model:** 3430

**Std. Cnt. M:** 717 **Std. Cnt. D:** 1803

**Last Cal. Date:** 07/01/2023

**Comments:** Proctor not Completed.

**Services:** Perform in-place moisture and density retests as requested or as required by the project specifications to determine degree of compaction and material moisture condition.

**Terracon Rep.:** Jb Griffin

**Reported To:**

**Contractor:** S&S

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:**

\_\_\_\_\_  
 Brad Gallop  
 Project Manager

**Test Methods:** ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



# SAMPLE PICK-UP REPORT

**Report Number:** K5241002.0007  
**Service Date:** 06/03/24  
**Report Date:** 06/05/24  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
Elizabeth City, NC 27909-7731  
252-335-9765

## Client

SAGA Construction Inc  
Attn: Fred Vollat  
1314 S Croatan Hwy  
Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
101 Bowsprit Lane  
Grandy, NC

Project Number: K5241002

## Sample Information

Terracon was requested to perform a sample pickup of the following materials:

Material Type/Description	Source	Sample Location	Sample Type	Sampling Procedure	Proposed Use
Aggregate -ABC Stone	On site	Stock pile	Bulk	Stockpile	Road base

## Sample Delivery

Samples were obtained and delivered to a Terracon laboratory on 6/3/2024 for testing as requested.

**Services:** Pickup samples from the project site and return them to the office for testing and/or processing.

**Terracon Rep.:** Jb Griffin

**Reported To:**

**Contractor:**

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:** \_\_\_\_\_

Brad Gallop  
Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# SAMPLE PICK-UP REPORT

**Report Number:** K5241002.0007  
**Service Date:** 06/03/24  
**Report Date:** 06/05/24  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
Elizabeth City, NC 27909-7731  
252-335-9765

## Client

SAGA Construction Inc  
Attn: Fred Vollat  
1314 S Croatan Hwy  
Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
101 Bowsprit Lane  
Grandy, NC

Project Number: K5241002

## Sample Information

Terracon was requested to perform a sample pickup of the following materials:

Material Type/ Description	Source	Sample Location	Sample Type	Sampling Procedure	Proposed Use
Aggregate -ABC Stone	On site	Stock pile	Bulk	Stockpile	Road base

## Sample Delivery

Samples were obtained and delivered to a Terracon laboratory on 6/3/2024 for testing as requested.

**Services:** Pickup samples from the project site and return them to the office for testing and/or processing.

**Terracon Rep.:** Jb Griffin

**Reported To:**

**Contractor:**

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:** \_\_\_\_\_

Brad Gallop  
Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# PARTICLE SIZE DISTRIBUTION REPORT

**Report Number:** K5241002.0008  
**Service Date:** 06/17/24  
**Report Date:** 06/21/24  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
 Elizabeth City, NC 27909-7731  
 252-335-9765

## Client

SAGA Construction Inc  
 Attn: Fred Vollat  
 1314 S Croatan Hwy  
 Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
 101 Bowsprit Lane  
 Grandy, NC

Project Number: K5241002

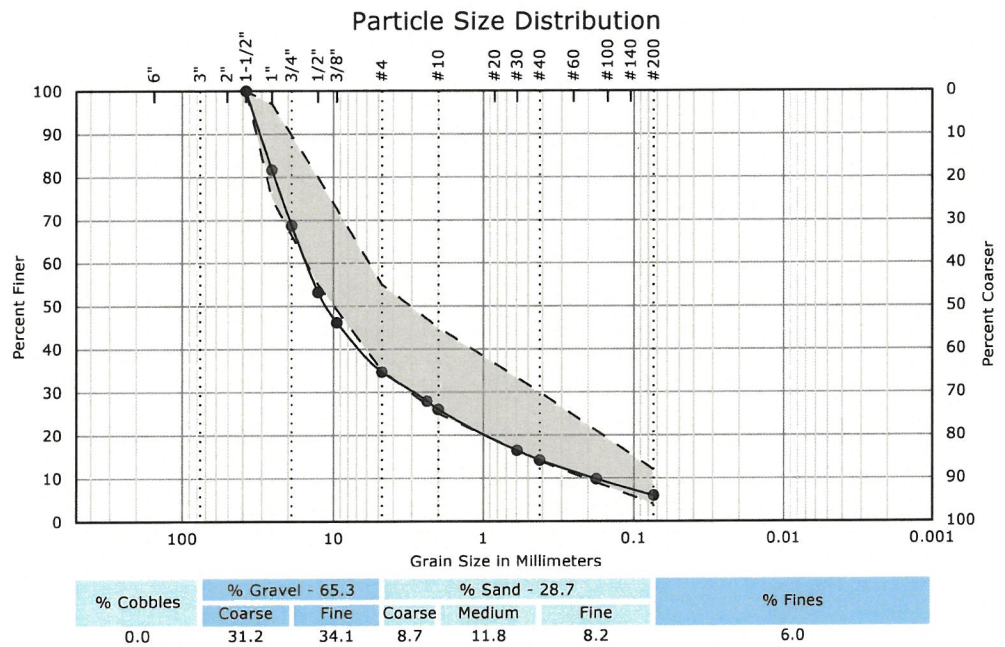
## Sample Information

**Sample Type:** Bulk  
**Sample Location:**  
**Sample Description:** ABC Stone  
**USCS:** Well-graded gravel with silt and sand (GW-GM)

## Laboratory Test Data

**Test Method:** ASTM D6913  
**Method:** B  
**Atterberg Limits:** Non-Plastic  
**Sample Preparation:** Oven Dried  
**Sieving Method:** Single Sieve-Set Sieving

Sieve Size	Percent Finer	Spec.*	Pass (X=Fail)
1-1/2"	100	100-100	
1"	82	75-97	
3/4"	69		
1/2"	53	55-80	x
3/8"	46		
#4	35	35-55	
#8	28		
#10	26	25-45	
#30	16		
#40	14	14-30	
#80	10		
#200	6	4-12	



\*  $D_{60} = 15.31$      $D_{30} = 2.90$      $D_{10} = 0.185$      $C_c = 3.0$      $C_u = 82.9$      $FM =$

## Comments:

## Services:

**Terracon Rep.:** Kim Overton

**Reported To:**

**Contractor:** S&S

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:**

Brad Gallop  
 Project Manager

## Test

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# LABORATORY COMPACTION CHARACTERISTICS OF SOIL REPORT



106 Capital Trace, Unit E  
Elizabeth City, NC 27909-7731  
252-335-9765

**Report Number:** K5241002.0009  
**Service Date:** 06/17/24  
**Report Date:** 12/05/24      Revision 1 - proctor  
**Task:** Earthwork and Site Paving

## Client

SAGA Construction Inc  
Attn: Fred Vollat  
1314 S Croatan Hwy  
Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
101 Bowsprit Lane  
Grandy, NC

Project Number: K5241002

## Material Information

**Source of Material:**  
**Proposed Use:** Road Subgrade

## Sample Information

**Sample Date:**  
**Sampled By:**  
**Sample Location:**

**Sample Description:** ABC Stone

## Laboratory Test Data

**Test Procedure:** ASTM D1557  
**Test Method:** Method C  
**Sample Preparation:** Wet  
**Rammer Type:** Manual

	Result	Specifications
<b>Liquid Limit:</b>	Non-plastic	
<b>Plastic Limit:</b>	Non-plastic	
<b>Plasticity Index:</b>	Non-plastic	
<b>In-Place Moisture (%):</b>	2.7	
<b>Passing #200 (%):</b>	6.0	

**Oversized Particles (%):** 30.4  
**Moisture (%):** 1.3  
**Sieve for Oversize Fraction:** 3/4

**Assumed Bulk Specific Gravity of Oversized Particles:** 2.7

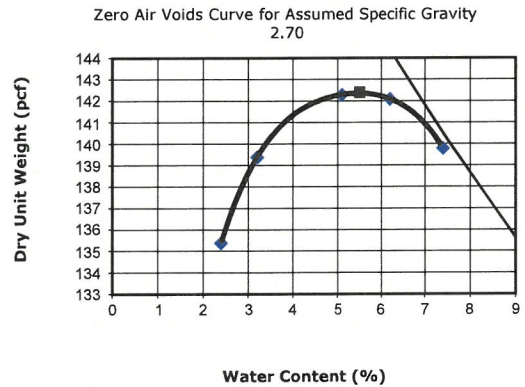
### Corrected for Oversized Particles (ASTM D4718)

**Maximum Dry Unit Weight (pcf):** 142.4  
**Optimum Water Content (%):** 5.5

### Uncorrected Values

**Maximum Dry Unit Weight (pcf):** 133.3  
**Optimum Water Content (%):** 7.4

## USCS:



## Comments:

**Services:** Moisture-Density Relations

**Terracon Rep.:** Kim Overton

**Reported To:**

**Contractor:** SAGA

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:** \_\_\_\_\_

Brad Gallop  
Project Manager

**Test Methods:** ASTM D698, ASTM D4318, ASTM D4647, ASTM D4718

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# PARTICLE SIZE DISTRIBUTION REPORT

**Report Number:** K5241002.0010  
**Service Date:** 06/21/24  
**Report Date:** 06/21/24  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
 Elizabeth City, NC 27909-7731  
 252-335-9765

## Client

SAGA Construction Inc  
 Attn: Fred Vollat  
 1314 S Croatan Hwy  
 Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
 101 Bowsprit Lane  
 Grandy, NC

Project Number: K5241002

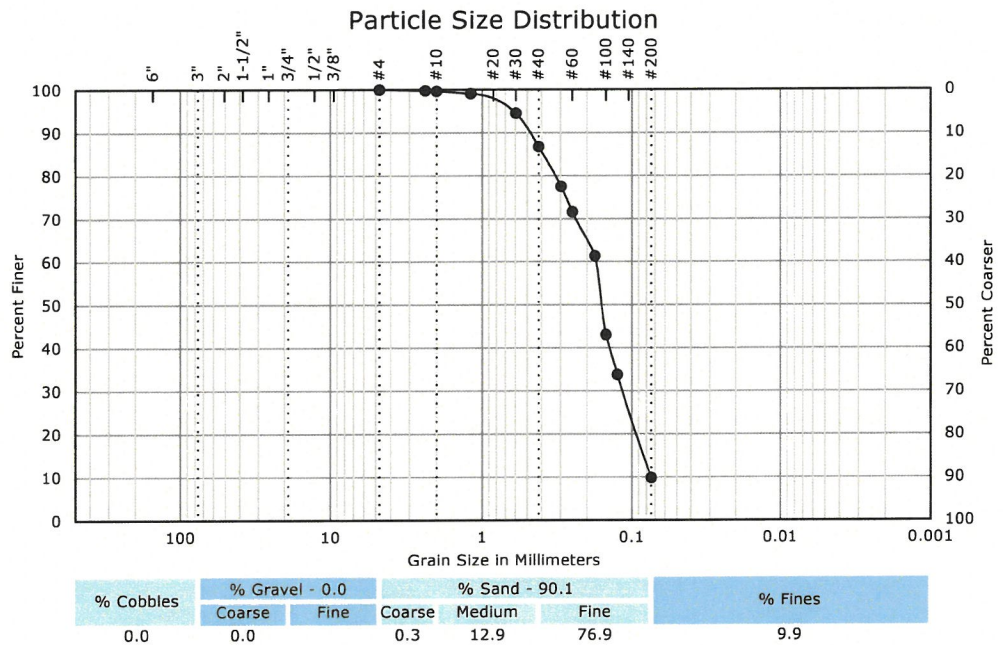
## Sample Information

**Sample Type:** Bulk  
**Sample Location:** Stockpile  
**Sample Description:** Tan Silty SAND  
**USCS:** Poorly-graded sand with silt (SP-SM)

## Laboratory Test Data

**Test Method:** ASTM D6913  
**Method:** B  
**Atterberg Limits:** Non-Plastic  
**Sample Preparation:** Oven Dried  
**Sieving Method:** Single Sieve-Set Sieving

Sieve Size	Percent Finer	Spec.*	Pass (X=Fail)
#4	100		
#8	100		
#10	100		
#16	99		
#30	95		
#40	87		
#50	77		
#60	72		
#80	61		
#100	43		
#120	34		
#200	10		



$D_{60} = 0.17$      $D_{30} = 0.12$      $D_{10} = 0.074$      $C_c = 1.1$      $C_u = 2.3$      $FM = 0.86$

## Comments:

## Services:

**Terracon Rep.:** Kim Overton

**Reported To:**

**Contractor:**

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:**

\_\_\_\_\_  
 Brad Gallop  
 Project Manager

## Test

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

**LABORATORY COMPACTION CHARACTERISTICS OF SOIL REPORT**



106 Capital Trace, Unit E  
Elizabeth City, NC 27909-7731  
252-335-9765

**Report Number:** K5241002.0011  
**Service Date:** 06/21/24  
**Report Date:** 12/05/24 Revision 1 - Proctor  
**Task:** Earthwork and Site Paving

**Client**

SAGA Construction Inc  
Attn: Fred Vollat  
1314 S Croatan Hwy  
Kill Devil Hills, NC 27948

**Project**

Waterside Villages Phases 2 & 4  
101 Bowsprit Lane  
Grandy, NC

Project Number: K5241002

**Material Information**

**Source of Material:**  
**Proposed Use:** Site Fill

**Sample Information**

**Sample Date:**  
**Sampled By:**  
**Sample Location:** Stockpile  
  
**Sample Description:** Tan Silty SAND

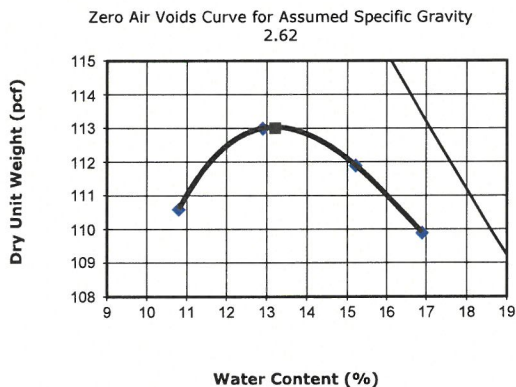
**Laboratory Test Data**

**Test Procedure:** ASTM D698  
**Test Method:** Method A  
**Sample Preparation:** Wet  
**Rammer Type:** Manual  
**Maximum Dry Unit Weight (pcf):** 113.0  
**Optimum Water Content (%):** 13.2

**Liquid Limit:**  
**Plastic Limit:**  
**Plasticity Index:**  
**In-Place Moisture (%):** 2.4  
**Passing #200 (%):** 4.2

**USCS:**

Result	Specifications
--------	----------------



**Comments:**

**Services:** Moisture-Density Relations

**Terracon Rep.:** Kim Overton

**Reported To:**

**Contractor:** SAGA

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:** \_\_\_\_\_

Brad Gallop  
Project Manager

**Test Methods:** ASTM D698, ASTM D4318, ASTM D4647, ASTM D4718

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# FIELD DENSITY TEST REPORT

**Report Number:** K5241002.0012  
**Service Date:** 11/05/24  
**Report Date:** 12/05/24 Revision 1 - detail  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
 Elizabeth City, NC 27909-7731  
 252-335-9765

## Client

SAGA Construction Inc  
 Attn: Fred Vollat  
 1314 S Croatan Hwy  
 Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
 101 Bowsprit Lane  
 Grandy, NC

Project Number: K5241002

## Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Opt. Water Content (%)	Max. Lab Density (pcf)	Water Content (%)	Compaction (%)
1	K5241002.0009	ABC Stone	ASTM D698	5.5	142.4		

## Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Density (pcf)	Percent Compaction (%)
<b>Phases 2 &amp; 4</b>									
1	Bridgeview dr south; near lot 51	2"BFG	1	6	150.3	7.8	5.5	142.5	100+
2	Bridgeview dr south; near lot 69	2"BFG	1	6	150.7	8.3	5.8	142.4	100.0
3	Admerils view dr; near lot 59	2"BFG	1	6	152.5	8.5	5.9	144.0	100+
4	Admerils view dr; near lot 63	2"BFG	1	6	151.4	8.3	5.8	143.1	100+
5	Cove lane; near lot 79	2"BFG	1	6	151.2	7.7	5.4	143.5	100+
6	Cove lane; near lot 71	2"BFG	1	6	152.2	8.1	5.6	144.1	100+
7	Genoa Court between lots 89 & 90	2"BFG	1	6	152.7	8.0	5.5	144.7	100+
8	Keel drive 50' from intersection of Genoa Court	2"BFG	1	6	152.6	8.0	5.5	144.6	100+
9	Keel drive near lot 86	2"BFG	1	6	151.8	8.5	5.9	143.3	100+
10	Yacht Club lane south; near lot 96	2"BFG	1	6	151.7	8.2	5.7	143.5	100+
11	Yacht club lane south	2"BFG	1	6	152.8	8.0	5.5	144.8	100+
12	Howyard lane	2"BFG	1	6	152.2	8.1	5.6	144.1	100+
13	Bowsprit lane south	2"BFG	1	6	152.8	8.0	5.5	144.8	100+

**Datum:** Final grade

**Std. Cnt. M:** 5      **Std. Cnt. D:** 142

**S/N:** 32487      **Make:** Troxler

**Model:** 3430

**Last Cal. Date:** 07/01/2023

## Comments:

**Services:** Perform in-place moisture and density retests as requested or as required by the project specifications to determine degree of compaction and material moisture condition.

**Terracon Rep.:** John Berry

**Reported To:**

**Contractor:** SAGA

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:**

Brad Gallop  
 Project Manager

**Test Methods:** ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# CORING-THICKNESS REPORT



**Report Number:** K5241002.0013  
**Service Date:** 11/11/24  
**Report Date:** 11/13/24  
**Task:** Earthwork and Site Paving

106 Capital Trace, Unit E  
 Elizabeth City, NC 27909-7731  
 252-335-9765

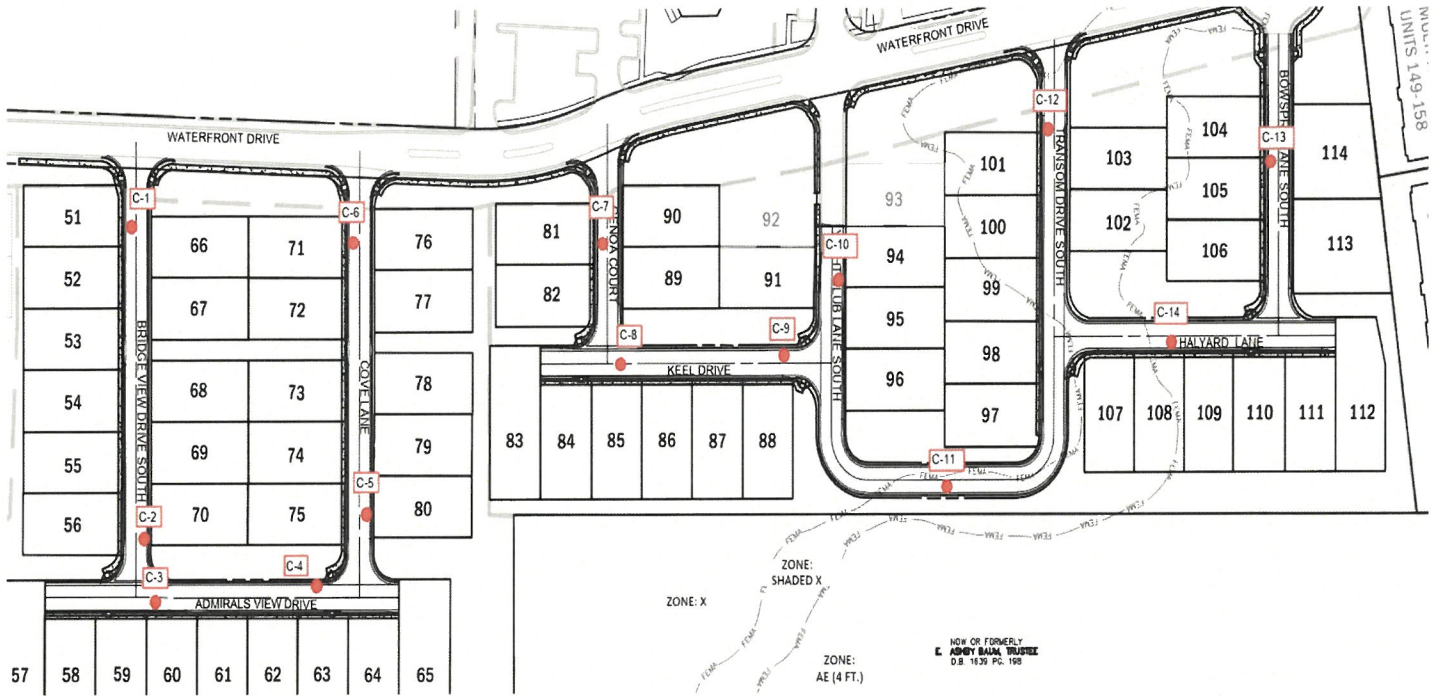
## Client

SAGA Construction Inc  
 Attn: Fred Vollat  
 1314 S Croatan Hwy  
 Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
 101 Bowsprit Lane  
 Grandy, NC

Project Number: K5241002



## Services:

**Terracon Rep.:** Christian Mitchell  
**Reported To:**  
**Contractor:**  
**Report Distribution:**  
 (1) SAGA Construction Inc, Fred Vollat

## Reviewed By:

Brad Gallop  
 Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



# PARTICLE SIZE DISTRIBUTION REPORT

**Report Number:** K5241002.0014  
**Service Date:** 12/02/24  
**Report Date:** 12/05/24  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
 Elizabeth City, NC 27909-7731  
 252-335-9765

## Client

SAGA Construction Inc  
 Attn: Fred Vollat  
 1314 S Croatan Hwy  
 Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
 101 Bowsprit Lane  
 Grandy, NC

Project Number: K5241002

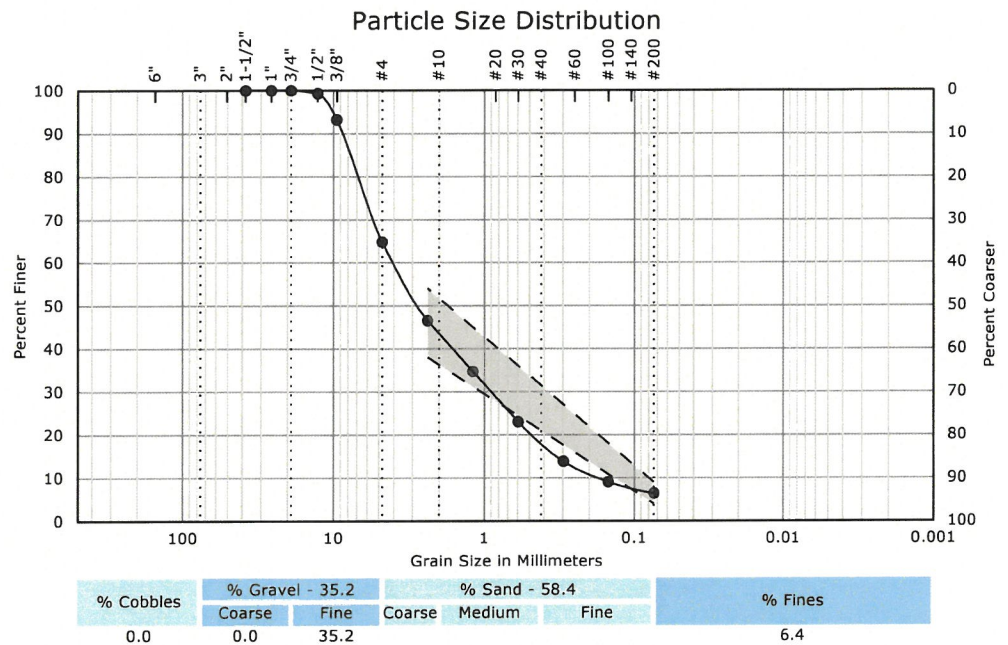
## Sample Information

**Sample Type:** Core  
**Sample Location:** C-2  
**Sample Description:** RS9.5B  
**USCS:** Well-graded sand with silt and gravel (SW-SM)

## Laboratory Test Data

**Test Method:** ASTM D6913  
**Method:** B  
**Atterberg Limits:** Non-Plastic  
**Sample Preparation:** Oven Dried  
**Sieving Method:** Single Sieve-Set Sieving

Sieve Size	Percent Finer	Spec.*	Pass (X=Fail)
1-1/2"	100		
1"	100		
3/4"	100		
1/2"	99		
3/8"	93		
#4	65		
#8	47	38-54	
#16	35		
#30	23		
#50	14		
#100	9		
#200	6	4-9	



*	$D_{60} = 4.07$	$D_{30} = 0.90$	$D_{10} = 0.177$	$C_c = 1.1$	$C_u = 23.0$	$FM = 4.15$
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**Comments:** Asphalt Content 5.3% JMF 20-0508-031

## Services:

**Terracon Rep.:** Kim Overton

**Reported To:**

**Contractor:** SAGA

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:**

Brad Gallop  
 Project Manager

## Test

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# PARTICLE SIZE DISTRIBUTION REPORT

**Report Number:** K5241002.0015  
**Service Date:** 12/02/24  
**Report Date:** 12/05/24  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
 Elizabeth City, NC 27909-7731  
 252-335-9765

## Client

SAGA Construction Inc  
 Attn: Fred Vollat  
 1314 S Croatan Hwy  
 Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
 101 Bowsprit Lane  
 Grandy, NC

Project Number: K5241002

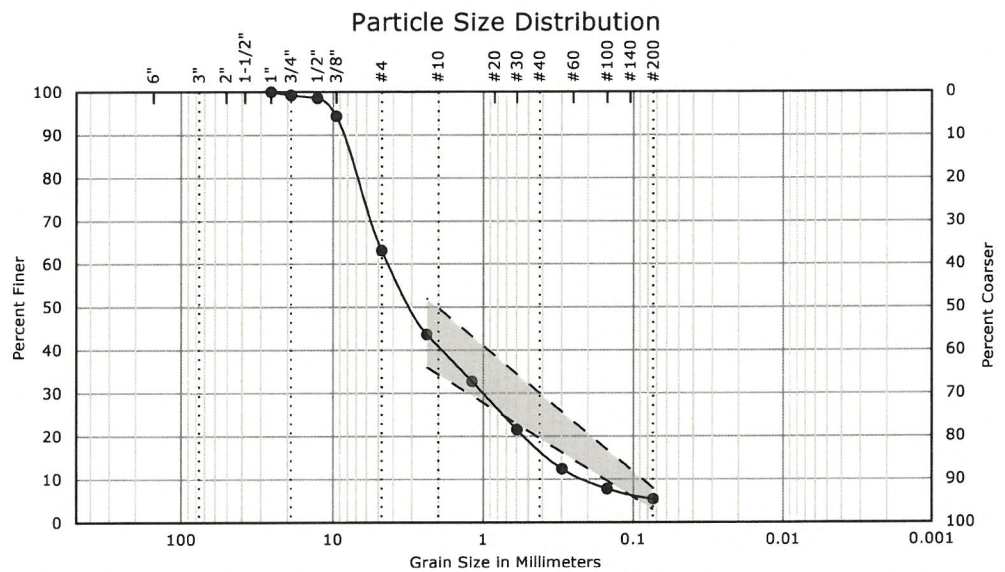
## Sample Information

**Sample Type:** Core  
**Sample Location:** C-5  
**Sample Description:** RS 9.5B  
**USCS:** Well-graded sand with silt and gravel (SW-SM)

## Laboratory Test Data

**Test Method:** ASTM D6913  
**Method:** B  
**Atterberg Limits:** Non-Plastic  
**Sample Preparation:** Oven Dried  
**Sieving Method:** Single Sieve-Set Sieving

Sieve Size	Percent Finer	Spec.*	Pass (X=Fail)
1"	100		
3/4"	99		
1/2"	99		
3/8"	94		
#4	63		
#8	44	36-52	
#16	33		
#30	21		
#50	12		
#100	8		
#200	5	3-8	



% Cobbles	% Gravel - 36.9		% Sand - 57.7			% Fines
	Coarse	Fine	Coarse	Medium	Fine	
0.0	0.8	36.2				5.4

\*  $D_{60} = 4.35$      $D_{30} = 1.00$      $D_{10} = 0.223$      $C_c = 1.0$      $C_u = 19.5$      $FM = 4.25$

**Comments:** Asphalt Content 5.3% JMF 20-0508-031

## Services:

**Terracon Rep.:** Kim Overton

**Reported To:**

**Contractor:** SAGA

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:**

Brad Gallop  
 Project Manager

## Test

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# PARTICLE SIZE DISTRIBUTION REPORT

**Report Number:** K5241002.0016  
**Service Date:** 12/02/24  
**Report Date:** 12/05/24  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
 Elizabeth City, NC 27909-7731  
 252-335-9765

## Client

SAGA Construction Inc  
 Attn: Fred Vollat  
 1314 S Croatan Hwy  
 Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
 101 Bowsprit Lane  
 Grandy, NC

Project Number: K5241002

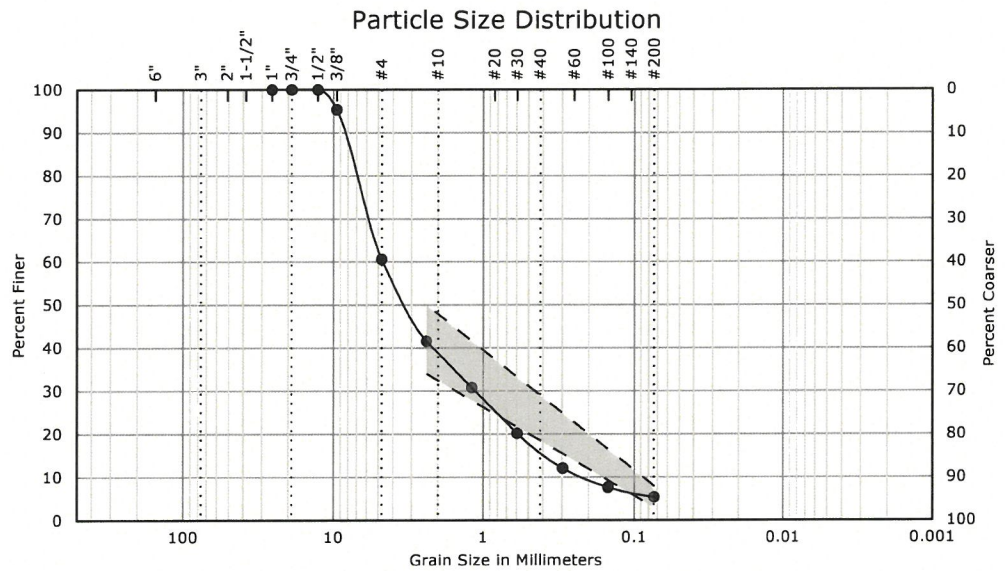
## Sample Information

**Sample Type:** Core  
**Sample Location:** C-10  
**Sample Description:** RS 9.5B  
**USCS:** Well-graded sand with silt and gravel (SW-SM)

## Laboratory Test Data

**Test Method:** ASTM D6913  
**Method:** B  
**Atterberg Limits:** Non-Plastic  
**Sample Preparation:** Oven Dried  
**Sieving Method:** Single Sieve-Set Sieving

Sieve Size	Percent Finer	Spec.*	Pass (X=Fail)
1"	100		
3/4"	100		
1/2"	100		
3/8"	95		
#4	61		
#8	42	34-50	
#16	31		
#30	20		
#50	12		
#100	8		
#200	5	3-8	



\*  $D_{60} = 4.69$      $D_{30} = 1.13$      $D_{10} = 0.228$      $C_c = 1.2$      $C_u = 20.6$      $FM = 4.32$

**Comments:** Asphalt Content 5.2% JMF 20-0508-031

## Services:

**Terracon Rep.:** Kim Overton

**Reported To:**

**Contractor:** SAGA

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:**

Brad Gallop  
 Project Manager

## Test

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# PARTICLE SIZE DISTRIBUTION REPORT

**Report Number:** K5241002.0017  
**Service Date:** 12/02/24  
**Report Date:** 12/05/24  
**Task:** Earthwork and Site Paving



106 Capital Trace, Unit E  
 Elizabeth City, NC 27909-7731  
 252-335-9765

## Client

SAGA Construction Inc  
 Attn: Fred Vollat  
 1314 S Croatan Hwy  
 Kill Devil Hills, NC 27948

## Project

Waterside Villages Phases 2 & 4  
 101 Bowsprit Lane  
 Grandy, NC

Project Number: K5241002

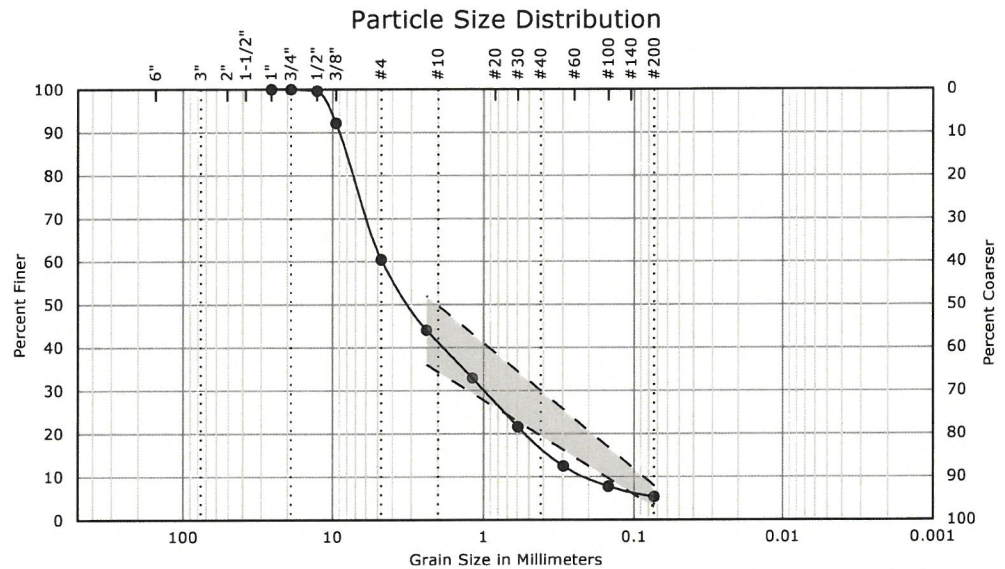
## Sample Information

**Sample Type:** Core  
**Sample Location:** C-10  
**Sample Description:** RS 9.5B  
**USCS:** Poorly-graded sand with silt and gravel (SP-SM)

## Laboratory Test Data

**Test Method:** ASTM D6913  
**Method:** B  
**Atterberg Limits:** Non-Plastic  
**Sample Preparation:** Oven Dried  
**Sieving Method:** Single Sieve-Set Sieving

Sieve Size	Percent Finer	Spec.*	Pass (X=Fail)
1"	100		
3/4"	100		
1/2"	100		
3/8"	92		
#4	60		
#8	44	36-52	
#16	33		
#30	22		
#50	12		
#100	8		
#200	5	3-8	



\*  $D_{60} = 4.69$      $D_{30} = 0.99$      $D_{10} = 0.218$      $C_c = 1.0$      $C_u = 21.5$      $FM = 4.29$

**Comments:** Asphalt Content 5.3% JMF 20-0508-031

## Services:

**Terracon Rep.:** Kim Overton

**Reported To:**

**Contractor:** SAGA

**Report Distribution:**

(1) SAGA Construction Inc, Fred Vollat

**Reviewed By:**

Brad Gallop  
 Project Manager

## Test

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

# Currituck County

Public Services Department

**Will Rumsey, Utilities Manager**



444 Maple Rd.  
Maple NC 27956  
Phone 252-232-6061  
Fax 252-453-3721  
Email: will.rumsey@CurrituckCountyNC.gov

Dec 5 ,2024  
Waterside Villages  
New Sections #2 and #4  
Grandy, NC 27939

This letter serves notice that HHL D, LLC performed a pressure test, vacuum test and mandrel test on Sections #2 and #4 of the newly constructed collections system underground utility on 5/20/24 and 5/21/24. The test required passed. Cleaning of laterals and trunk lines was completed on all sections and the old section was inspected by Currituck County and is in good working order.

However, let it be noted that damage has occurred to collections system since these tests HHL D, LLC performed. County staff is working with SAGA Homes and HHL D, LLC to correct these damages caused by an outside contractor. County staff will camera the lines and laterals again to make sure no damage has occurred underground as well as check for sand and dirt entering the collections system. Testing again may be an option once the collections system is checked for damages. This will be a collaborative decision made by Currituck County, Saga Homes and HHL D, LLC.

Sincerely,

A handwritten signature in black ink, appearing to read "Will Rumsey".

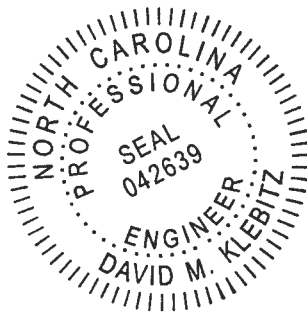
Will Rumsey  
Utilities Manager  
Currituck County

**Fast Track Engineering Certification**

Permit No. WQ0024044

X Partial                      \_\_\_ Final

To: N.C. Division of Water Quality  
Washington Regional Office  
943 Washington Square Mall  
Washington, NC 27889




I, David M. Klebitz, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe periodically the construction of the project,

**Wastewater Collection System Extension to serve Phase 4 of  
Waterside Villages of Currituck, Currituck County, North Carolina**

for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the wastewater collection system extension described above was observed to be built within substantial compliance and intent of this permit; 15A NCAC 2H .200; the Division of Water Quality’s Gravity Sewer Minimum Design Criteria adopted February 12, 1996 as applicable; the Division’s Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 as applicable; and other supporting materials.

Attached are the following documents, in accordance with the fast-track certification procedures:

- One copy of the project record drawings of two wastewater collection system extensions installed along Bridge View Drive South, Admirals View Drive and Cove Lane in Phase 4 of Waterside Villages of Currituck. The extensions connect to the development’s existing gravity sewer system and include (4) manholes, approximately 892 linear feet of 8” gravity main and (30) service connections.
- It is to be noted that, after satisfactory testing of the extensions was complete, installation of a separate underground utility by an outside contractor resulted in damage to multiple service laterals. The utility and property owner are working to correct these damages and additional inspections and testing may be required by the utility prior to the extensions being placed in service.

Signature  Registration No. 042639  
Date 12/6/2021

April 10, 2017

Ms. Donna Voliva, Senior Planner  
Currituck County Department of Planning & Inspections  
153 Courthouse Road, Suite 110  
Currituck, NC 27929

Re: Waterside Villages Lot 92 Open Space

---

Dear Donna:

This is to affirm that WSV Holdings agrees to plat and dedicate the open space associated with the Waterside recreation site in connection with the approval of the next lots that will be platted in this phase of the development, and that no additional lots will be platted (other than the exempt parcel that will be platted temporarily for building permit purposes, which will become the future Lot 91) until the required additional open space has been dedicated.

We agree that this will be a condition of the approval to record lot 92.

Sincerely yours,

WSV Holdings, LLC

By 

BK 1792 PG 844 - 848 (5)

DOC# 392610

This Document eRecorded:

12/06/2024 11:47:17 AM

Tax: \$0.00

Fee: \$26.00

Currituck County, North Carolina

Natalie R. Twiddy, Register of Deeds

Currituck County Land Transfer Tax: 0.00 County Excise Tax: 1985 Sessions Law Chapter 670 (HB 215)

LAND TRANSFER NUMBER: \_\_\_\_\_

1% LAND TRANSFER FEE: \$0.00

EXCISE TAX: \$0.00

PARCEL NO. 108E000CLUB0000

REAL ESTATE TAXES PAID: Paid through 2023

Prepared by and return to:

E. Crouse Gray, Jr., Attorney at Law,

**a licensed North Carolina Attorney.**

**Delinquent taxes, if any are to be paid by the closing attorney to the County Tax Collector upon disbursement of closing proceeds.**

GRAY & LLOYD, L.L.P.

3120 North Croatan Highway, Suite 101

Kill Devil Hills, North Carolina 27948

www.grayandlloyd.com

File No. 12337-008

All or a portion of the property conveyed herein does not include the primary residence of the Grantor.

NORTH CAROLINA, CURRITUCK COUNTY

**THIS NON-WARRANTY DEED** made this the 5<sup>th</sup> day of December, 2024, by and between **WSV HOLDINGS, LLC, a North Carolina limited liability company** and **WSV DEVELOPMENT, LLC, a North Carolina limited liability company**, PO Box 90, Kill Devil Hills, NC 27948 Grantors and **WATERSIDE VILLAGES OF CURRITUCK COMMUNITY ASSOCIATION, INC.**, PO Box 1807, Nags Head, North Carolina 27959, Grantee:

The designation Grantor and Grantee as used herein shall include said parties, their heirs, and successors and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

Submitted electronically by "Gray & Lloyd, LLP"  
in compliance with North Carolina statutes governing recordable documents  
and the terms of the submitter agreement with the Currituck County Register of Deeds.



WITNESSETH:

THAT the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey, unto the Grantee in fee simple, all that certain lot or parcel of land situated in Poplar Branch Township, Currituck County, North Carolina, and more particularly described as follows:

See Exhibit "A" (attached)

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

The Grantor makes no warranty, expressed or implied, as to title to the property hereinabove described.

IN WITNESS WHEREOF, the Grantors have hereunto set their hands and seals the day and year first above written.

WSV Holdings, LLC

By: [Signature] (SEAL)  
Prem Gupta, Manager

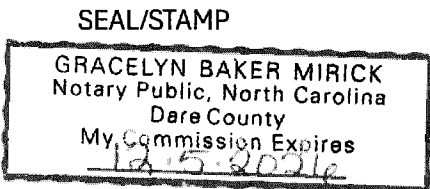
STATE OF NORTH CAROLINA  
COUNTY OF Dare

I, a Notary Public of the State aforesaid, hereby certify that **Prem Gupta** personally came before me this day and acknowledged the execution of the foregoing instrument, all in his capacity as a manager in, and in the name and for and on behalf of WSV Holdings, LLC, a limited liability company organized under the laws of the State of North Carolina.

Witness my hand and official stamp or seal this the 5<sup>th</sup> day of December, 2024.

Gracelyn Baker Mirick  
NOTARY PUBLIC

My Commission Expires: 12.5.2026  
Registration Number: \_\_\_\_\_



WSV Development, LLC

By:  (SEAL)  
Prem Gupta, Manager

STATE OF NORTH CAROLINA  
COUNTY OF Dare

I, a Notary Public of the State aforesaid, hereby certify that **Prem Gupta** personally came before me this day and acknowledged the execution of the foregoing instrument, all in his capacity as a manager in, and in the name and for and on behalf of WSV Development, LLC, a limited liability company organized under the laws of the State of North Carolina.

Witness my hand and official stamp or seal this the 5<sup>th</sup> day of December, 2024.

GRACELYN BAKER MIRICK  
Notary Public, North Carolina  
Dare County  
My Commission Expires  
12.5.2026

Gracelyn Baker Mirick  
NOTARY PUBLIC

My Commission Expires: 12.5.2026  
Registration Number: \_\_\_\_\_

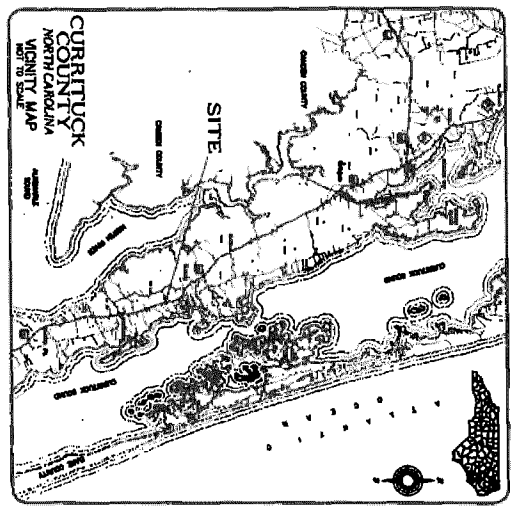
EXHIBIT" A" - CLUBHOUSE PARCEL

BEGINNING at an iron rod or other monument, said iron rod or other monument being located in and on the northwestern edge of the 45' right-of-way of Waterfront Drive, as the same is intersected by the northeastern property line of that lot or parcel of land now or formerly owned by Walnut Island Sanitary District as recorded in Deed Book 327, Page 98, Currituck County Public Registry.

From said beginning point turning and running along the northeastern boundary line of the Walnut Island Sanitary District north 46 deg 11 min 53 sec West 293.45' to a point; thence turning and running north 41 deg 09 min 37 sec East 20.19' to a point; thence turning and running north 41 deg 04 min 05 sec West 53.19' to a point; thence and turning and running north 03 deg 55 min 55 sec East 16.97' to a point; thence turning and running north 48 deg 42 min 16 sec East 63.06' to a point; thence turning and running north 43 deg 06 min 05 sec West 39.39' to a point, thence turning and running along a curve to the left, said curve having a radius of 69.00' for an arc length of 167.03 feet, being a tangent of 183.07' on a chord of 129.13' with a chord bearing of north 26 deg 26 min 01 sec East, to a point; thence turning and running north 43 deg 32 min 46 sec West 20.59' to a point; thence turning and running north 46 deg 27 min 01 sec East 7.23' to a point, said point being located in the corner of Lot 163, Phase 1A, Waterside Villages as shown on map or plat recorded in Plat Cabinet I, Slide 365, Currituck County Public Registry; thence turning and running along the property line of Lot 163, Phase 1A, south 43 deg 32 min 46 sec East 100.00 feet to a point; thence turning and running along the boundary line of Lot 163, Phase 1A, north 46 deg 27 min 14 sec East 52.00 feet to a point, said point being located on the boundary line of Lot 132, Phase 1, Waterside Villages, as shown on map or plat recorded in Plat Cabinet I, Slide 256, Currituck Public Registry; thence turning and running along the boundary line of Lot 132 Phase 1, south 43 deg 32 min 46 sec East, 44.45' to a point; thence turning and running along the boundary line of Lot 132, Phase 1, north 46 deg 27 min 14 sec East 100.00 ' to a point, said point being located on the southwestern edge of the 30' right-of way of Yacht Club Lane North; thence turning and running along the southwestern edge of the 30' right-of way of Yacht Club Lane North, South 43 deg 32 min 46 sec East 210.17' to a point; thence turning and running along a curve to the right, said curve having a radius of 25.00' for an arc length of 33.74' being a tangent of 20' with a chord of 31.24' and a chord bearing of south 04 deg 52 min 58 sec East to a point, said point being located on the northwestern edge of the 45' right-of way of Waterfront Drive; thence turning and running south 33 deg 46 min 50 sec West 126.46' to a point; thence turning along a curve to the left, then continuing along the northwestern edge of the 45' right-of way of Waterfront Drive, said curve having a radius of 492.50' for an arc length of 96.99' being a tangent of 48.65' on a chord of 96.83' with a chord bearing of south 28 deg 08 min 19 sec West to a point; thence continuing along a curve to the right, said curve having a radius of 277.50' for an arc length of 112.79' being a tangent of 57.19' with a chord of 112.02' on a chord bearing of south 34 deg 08 min 28 sec West to a point; thence continuing along the northwestern edge of the 45' right-of-way of Waterfront Drive south 45 deg 47 min 07 sec West 20.95' to the point and place of BEGINNING.

References made to that certain map or plat entitled in part "Waterside Villages Clubhouse, Poplar Branch Township, Currituck County", North Carolina as built survey by Bissell Professional Group which is attached hereto as Exhibit "B" and incorporated in by reference.

Exhibit B

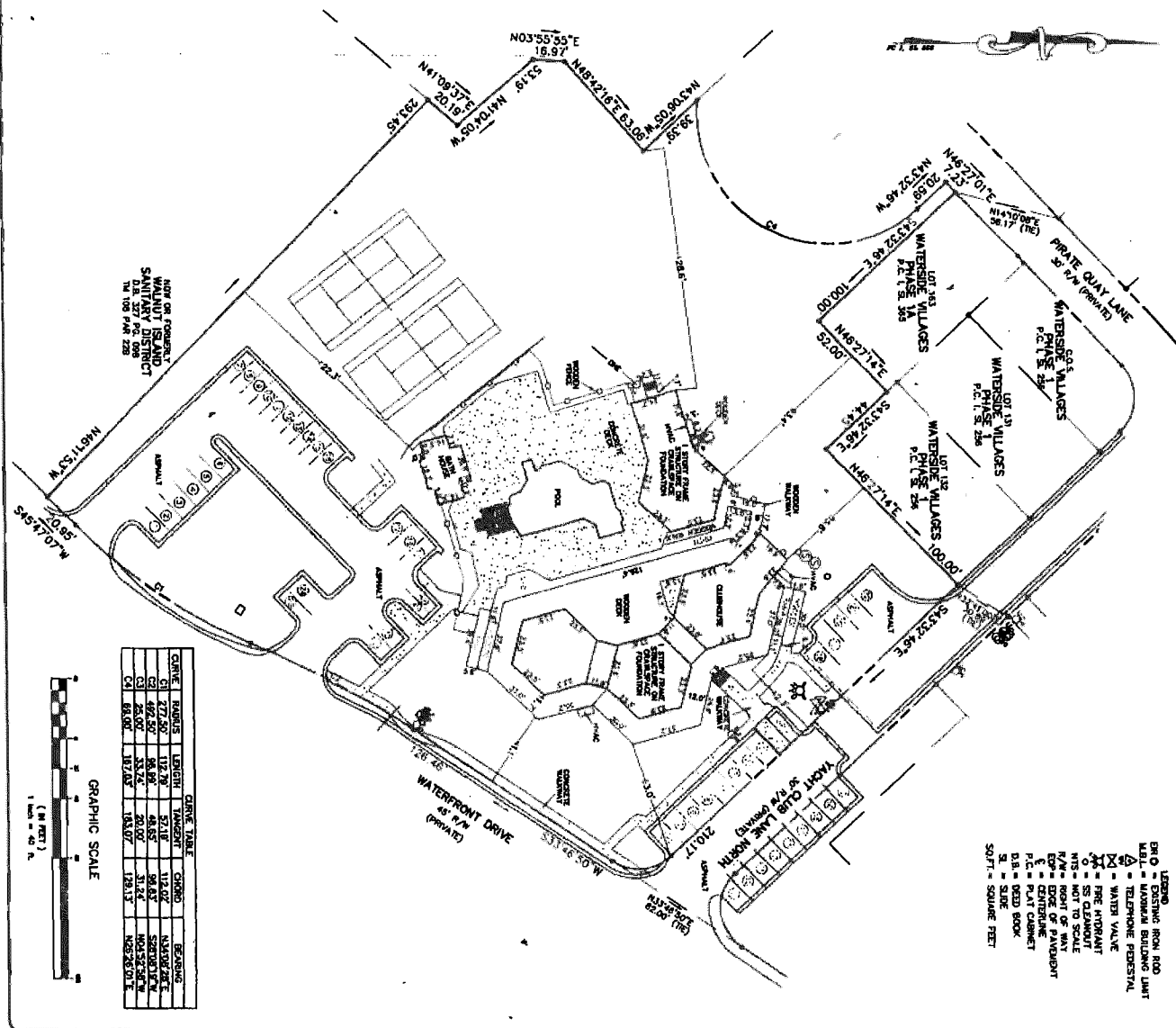
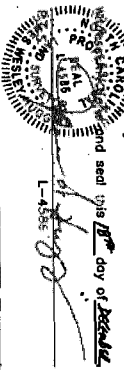


- NOTES:
1. AREA DETERMINED BY COORDINATE METHOD.
  2. IRON PINS AT ALL LOT CORNERS UNLESS OTHERWISE NOTED HEREON. ANY WHERE NOT LOCATED BY THIS SURVEY, FURTHER EVALUATION MAY BE REQUIRED.
  3. NO RECOVERABLE NCS MONUMENTS APPEAR TO BE WITHIN 2000' OF THE SUBJECT PROPERTY SHOWN HEREON. SURVEY IS SUBJECT TO ANY FACTS THAT MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.
  4. REVISION DATE: 12/19/2005 (select to change by read)
  5. BE DISTANCED BY A FULL AND ACCURATE TITLE SEARCH.
  6. FURN. ZONE: ZONE X, PANEL #70078 9821
- LOT COVERAGE: (select to change by read)
- |                 |                   |
|-----------------|-------------------|
| WOODS:          | 8,729.70 SQ. FT.  |
| GRASS:          | 14,123.08 SQ. FT. |
| ASPHALT:        | 1,924.72 SQ. FT.  |
| POOL:           | 1,924.72 SQ. FT.  |
| TOTAL COVERAGE: | 36,708.81 SQ. FT. |

**SURVEYORS CERTIFICATE**

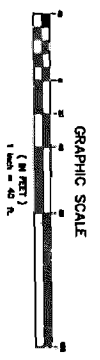
I, James W. Huggins, certify that this plot was drawn under my supervision from an actual survey made under my supervision from P.C. 154,236, that the 10,000 sq. ft. boundaries not actually surveyed are shown as broken lines plotted from information found in existing records and that this map was prepared in accordance with section 1800 of the State Code, 1999, Registration Rules Standards of Practice.

and seal this 1<sup>st</sup> day of December 20 05



- LEGEND
- ERC - EXISTING IRON ROD
  - ECB - EXISTING BUILDING LIMIT
  - △ - TELEPHONE PERSPECTIVE
  - ▽ - WATER VALVE
  - W - WATER
  - FR - FRONT YARD
  - SR - SIDE YARD
  - HW - HOLE TO SCALE
  - R/W - RIGHT OF WAY
  - ED - EDGE OF PARADIGM
  - P.L. - PLAT CORNER
  - D.S. - DEED BOOK
  - SI - SURE
  - SQ.FT. - SQUARE FEET

CURVE	TOUGHS	LENGTH	BACKSIGHT	SIGHT	FORESIGHT
C1	472.52	58.78	84.52	84.52	180.52
C2	25.00	33.74	30.00	31.74	105.52
C3	18.00	17.74	18.00	18.13	105.52



DATE	BY	REVISIONS
12-19-05	JWH	AS BUILT
12-19-05	JWH	AS BUILT
12-19-05	JWH	AS BUILT

NO.	DATE	DESCRIPTION	BY

**WATERSIDE VILLAGES CLUBHOUSE**

POPULAR BRANCH TWP. CURRITUCK COUNTY, NORTH CAROLINA

**AS BUILT SURVEY**

**BISSELL**

Bissell Professional Group  
 2813 North Croatan Highway  
 Box 188, New Hope  
 20511 New Hope, North Carolina 27848  
 919-588-2888  
 FAX (919) 981-1780

Engineers, Planners, Surveyors  
and Environmental Specialists

“THIS MAP MAY NOT BE A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS AND HAS NOT BEEN REVIEWED FOR COMPLIANCE WITH RECORDING REQUIREMENTS FOR PLATS.”

**DRAFT**

**WATERSIDE VILLAGES PHASE 2 & 4 BOND COMPUTATION**

**12-11-24**

PH 2 Street Trees: (55) Trees x \$150/tree	= \$8,250 x 115%	= \$ 9,487.50
PH 4 Street Trees: (44) Trees x \$150/tree	= \$6,600 x 115%	= \$ 7,590.00
Street Lights: (Receipt Attached): =		= \$ 0.00
PH 2 Property Line Swales: (27) swales x \$200/swale	= \$5,400 x 115%	= \$ 6,210.00
PH 4 Property Line Swales: (22) swales x \$200/swale	= \$4,400 x 115%	= <u>\$ 5,060.00</u>
	<b>TOTAL:</b>	<b>\$28,347.50</b>



**ALPHA-ADVANTAGE INC.**  
891 Emeline Ln  
Kitty Hawk, NC 27949 USA  
2524413766  
alphaadvantage@yahoo.com  
www.alpha-advantage.com

## Estimate

### ADDRESS

WATERSIDE VILLAGE  
SAGA CONSTRUCTION  
PO BOX 90  
KILL DEVIL HILLS, NC 27948

**ESTIMATE # 3025**

**DATE 12/10/2024**

---

### PROJECT ADDRESS

Waterside Village Grandy

ACTIVITY	QTY	RATE	AMOUNT
<b>**WATERSIDE PHASE 2 &amp; 4*</b>			
<b>LANDSCAPING:PLANT INSTALLATION</b>	1	150.00	150.00
INSTALLATION OF PLANT MATERIAL - INSTALLATION OF (1) SHADE OR ORNAMENTAL TREE WITH 1.5" CALIPER AS REQUIRED BY CURRITUCK COUNTY. INCLUDES DELIVERY, INSTALLATION, SOIL ENHANCER & TIME RELEASED FERTILIZER.			
SUBTOTAL			150.00
TAX			0.00
TOTAL			<b>\$150.00</b>

Accepted By

Accepted Date



**ALPHA-ADVANTAGE INC.**  
891 Emeline Ln  
Kitty Hawk, NC 27949 USA  
2524413766  
alphaadvantage@yahoo.com  
www.alpha-advantage.com

## Estimate

### ADDRESS

WATERSIDE VILLAGE  
SAGA CONSTRUCTION  
PO BOX 90  
KILL DEVIL HILLS, NC 27948

**ESTIMATE # 3024**

**DATE 12/10/2024**

---

### PROJECT ADDRESS

Waterside Village Grandy

ACTIVITY	QTY	RATE	AMOUNT
**WATERSIDE PHASE 2 & 4*			
<b>LANDSCAPING:LANDSCAPE PREP</b>	1	200.00	200.00
LANDSCAPE PREP - CREATE SWALES PER COMMON PROPERTY LINE AS SHOWN ON APPROVED SITE PLAN. PRICE IS PER SHARED SWALE BETWEEN HOUSES ALONG PROPERTY LINE AND AT THE BEGINNING OR END OF A GROUP OF HOUSES TOGETHER.			
SUBTOTAL			200.00
TAX			0.00
TOTAL			<b>\$200.00</b>

Accepted By

Accepted Date

February 29, 2024

Construction Payment Invoice



WSV HOLDINGS, LLC  
WATERFRONT  
GRANDY, NC 27939

**Dominion Energy Information**  
Work Request No. 10671972  
Point of Contact: Morgen S Hand

**Total Amount Due: \$5,599.25**  
**Account No : 250000648205**

To avoid delay in the start of your project please pay upon receipt.

**Payment Options**

**U.S. Mail**

Include "Account No." on your check and mail payment to: Dominion Energy North Carolina  
P.O. Box 26543  
Richmond, VA 23290-0001

**Authorized Payment Centers**

For an Authorized Payment Center near you visit DominionEnergy.com and search "Payment Centers," or call 1-866-366-4357.  
Convenience fee of \$1.50 will be charged by a third-party service provider.  
All Authorized Payment locations accept cash and money order.  
Some locations may accept personal or business checks at their discretion.  
Obtain a paper receipt for your records.

**Credit Card, Debit Card, Purchasing Card or eCheck\***

Pay online at DominionEnergy.com, search "Pay My Bill," or call 1-866-366-4357.

**Convenience fee and transaction limits.**

- \$14.95 per transaction for non-residential customers (up to \$15,000 per transaction)
- Fee charged by Paymentus Corporation, a third-party vendor.

Retain your payment confirmation number for your records.

\*eCheck Option only available over the phone

.....  
Please detach and return this payment coupon with your check made payable to Dominion Energy North Carolina .

**Construction Payment Coupon**

**Notification Date: February 29, 2024**

**Please Pay Upon Receipt**  
**\$5,599.25**

**Amount Enclosed**

[Empty box for amount enclosed]

**Account No. 250000648205**

WSV HOLDINGS, LLC  
WATERFRONT  
GRANDY, NC 27939

Send Payment to:

**Dominion Energy North Carolina**  
**P.O. BOX 26543**  
**RICHMOND, VA 23290-0001**

222 250000648205 3000559925 3000559925 61



**From:** DoNotReplyDominionEnergy@paymentus.com  
**Sent:** Friday, March 22, 2024 10:16 AM  
**To:** Asta Gudmundsdottir  
**Subject:** Payment Confirmation for Dominion Energy Virginia / North Carolina



**Thank you for your payment to Dominion Energy. It has been accepted.**

Confirmation number: **3538970546**  
Payment date: **Mar 22, 2024, 10:16:25 AM**  
Payment amount: **\$5,599.25**  
Service fee: **\$14.95**  
Total amount charged: **\$5,614.20**

Payment status: **ACCEPTED**

**Account Information**

Account type: **Non-Residential (VA NC)**  
Account number: **250000648205**  
Payment method: **Credit Card**

**Payment Method Information**

Card type: **Visa**  
Card number: **\*\*\*\*\*2216**

**Please do not reply to this email. This message was sent to you using an automated system. It is not monitored for replies.** View our [Privacy Policy](#) and [Legal Terms and Conditions](#). Questions? [Contact Us](#).

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EXHIBIT "B"

BASIS FOR STREET TREE BONDING

IN PLACE AS OF 9/2012



LEGEND

SHADE TREES

- BALD CYPRESS
- DARLINGTON OAK
- GINKGO PRINCETON SEA
- GOLDEN RAIN TREE
- LIVE OAK
- LOBLOLLY PINE
- BLOODGOOD LONDON PLANE
- GREEN VASE ZELKOVA

ORNAMENTAL TREES

- BURFORD HOLLY
- WEEPING CHERRY
- PURPLE CREPE MYRTLE
- RED BUCKEYE
- KWANSAN CHERRY
- SAUCER MAGNOLIA
- SWEET BAY MAGNOLIA
- VITEK
- WAX MYRTLE
- TREE-FORM WAX MYRTLE

MISCELLANEOUS

- STREET LIGHT

PLEASE CHECK AROUND  
WATER SIDE:  
OVERALL TREE  
PLANTING PLAN

62 trees  
on this  
page

PH 4 STREET TREES - 14

SISKA  
AURAND

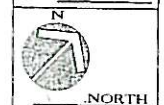
landscape architecture  
master planning  
site design  
333 West 24th Street  
Durham, Virginia 22617  
757.627.1627  
siska@durhamlandscape.com

OFFICIAL SEAL

NOT FOR CONSTRUCTION

STREET TREES -  
WATERSIDE VILLAGES OF CURRITUCK  
NORTH CAROLINA  
CURRITUCK COUNTY

SCALE 1"=50'-0"  
DRAWN BY JTB  
DESIGNED BY CDA  
CHECKED BY CDA  
DATE 01/30/04  
REVISION 11/08/04



DRAWING:  
L1  
SHEET 1 of 2

# EXHIBIT "B"



- LEGEND**
- SHADE TREES**
- BALD CYPRESS
  - DARLINGTON OAK
  - GINKGO 'PRINCETON SENTRY'
  - GOLDEN RAIN TREE
  - LIVE OAK
  - LOBLOLLY PINE
  - 'BLOODGOOD' LONDON PLANE
  - 'GREEN VASE' ZELKOVA
- ORNAMENTAL TREES**
- BURFORD HOLLY
  - WEEPING CHERRY
  - PURPLE CREPE MYRTLE
  - RED BUCKEYE
  - KWANSAN CHERRY
  - SAUCER MAGNOLIA
  - SWEET BAY MAGNOLIA
  - VITEX
  - WAX MYRTLE
  - TREE-FORM WAX MYRTLE
- MISCELLANEOUS**
- STREET LIGHT

- PH 4 STREET TREES - 30
- PH 2 STREET TREES - 49
- ALREADY BONDED W/ LOTS 92 & 93 - 4

**SISKA AURAND**

Landscape architecture  
-Master planning  
-Site design

323 West 24th Street  
Waco, Virginia 22617  
703.827.1437  
e-mail: dsaurand@siskaurand.com

OFFICIAL SEAL

NOT FOR CONSTRUCTION

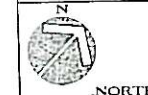
## WATERSIDE VILLAGES OF CURRITUCK

-STREET TREES-

NORTH CAROLINA

CURRITUCK COUNTY

SCALE	1"=50'-0"
DRAWN	JTB
DESIGNED	CDA
CHECKED	CDA
DATE	01/30/04
REVISION	11/08/04



DRAWING:

**L2**

SHEET 2 of 9

EXHIBIT "B"

**SISKA AURAND**  
 -landscape architecture  
 -master planning  
 -site design  
 123 West 24th Street  
 Norfolk, Virginia 23517  
 757.627.1467  
 siska@siskaaurand.com

OFFICIAL SEAL

NOT FOR CONSTRUCTION

-STREET TREES-  
**WATERSIDE VILLAGES OF CURRITUCK**  
 CURRITUCK COUNTY  
 NORTH CAROLINA

SCALE: 1"=50'-0"  
 DRAWN: JTB  
 DESIGNED: GDA  
 CHECKED: GDA  
 DATE: 01/30/04  
 REVISION: 11/08/04

NORTH  
 DRAWING:  
**L3**  
 SHEET 2 of 2

LEGEND

SHADE TREES

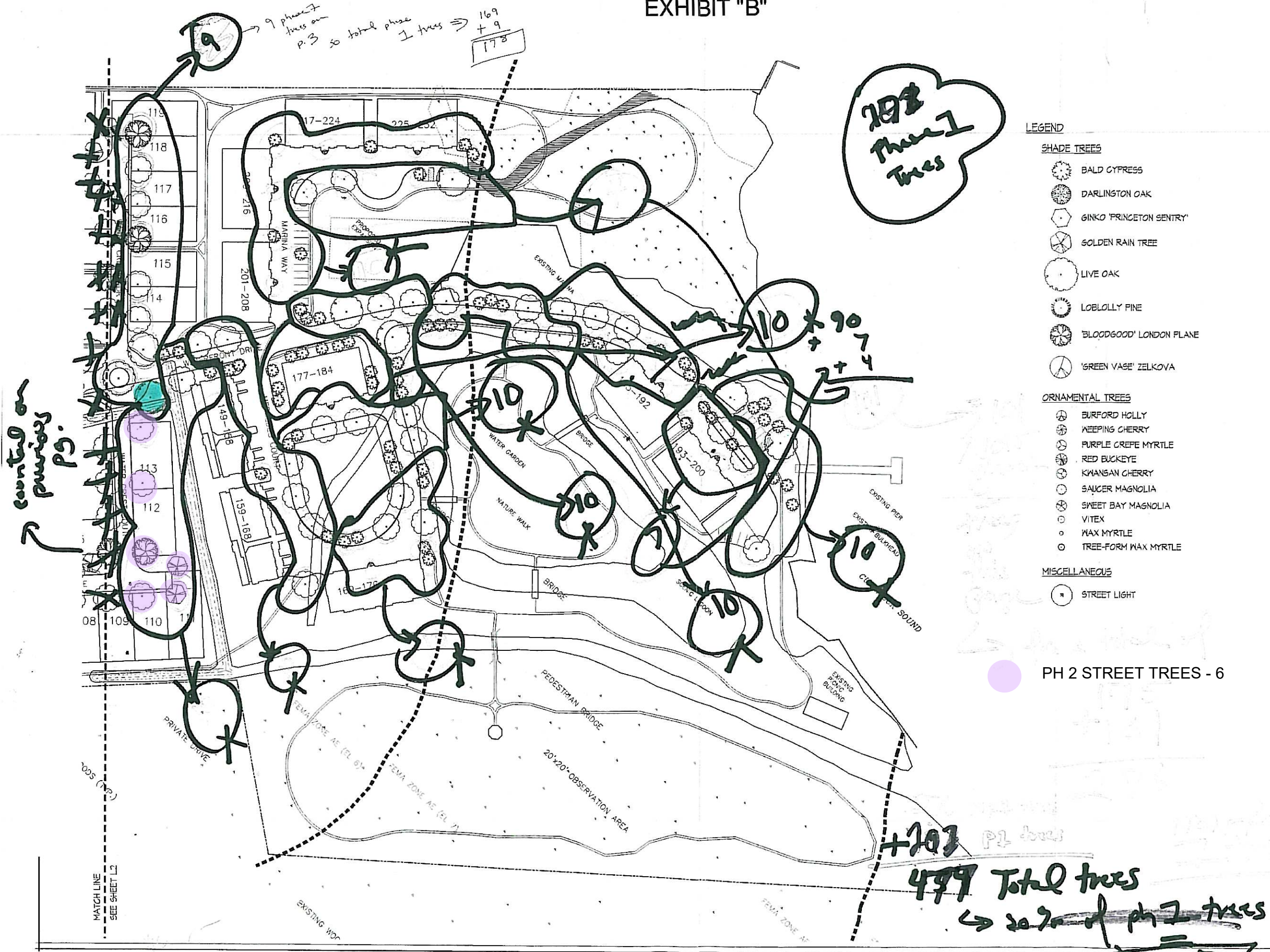
- BALD CYPRESS
- DARLINGTON OAK
- GINKGO 'PRINCETON SENTRY'
- GOLDEN RAIN TREE
- LIVE OAK
- LOBLOLLY PINE
- 'BLOODGOOD' LONDON PLANE
- 'GREEN VASE' ZELKOVA

ORNAMENTAL TREES

- BURFORD HOLLY
- WEEPING CHERRY
- PURPLE CREPE MYRTLE
- RED BUCKEYE
- KWANSAN CHERRY
- SAUCER MAGNOLIA
- SWEET BAY MAGNOLIA
- VITEX
- WAX MYRTLE
- TREE-FORM WAX MYRTLE

MISCELLANEOUS

- STREET LIGHT



PH 2 STREET TREES - 6

+202 P1 trees  
**499 Total trees**  
 ↳ 20% of ph 2 trees

**39.2%**

counted on previous pg.

9 trees on P.3 so total phase 1 trees ⇒ 169 + 9 = 178

202 trees

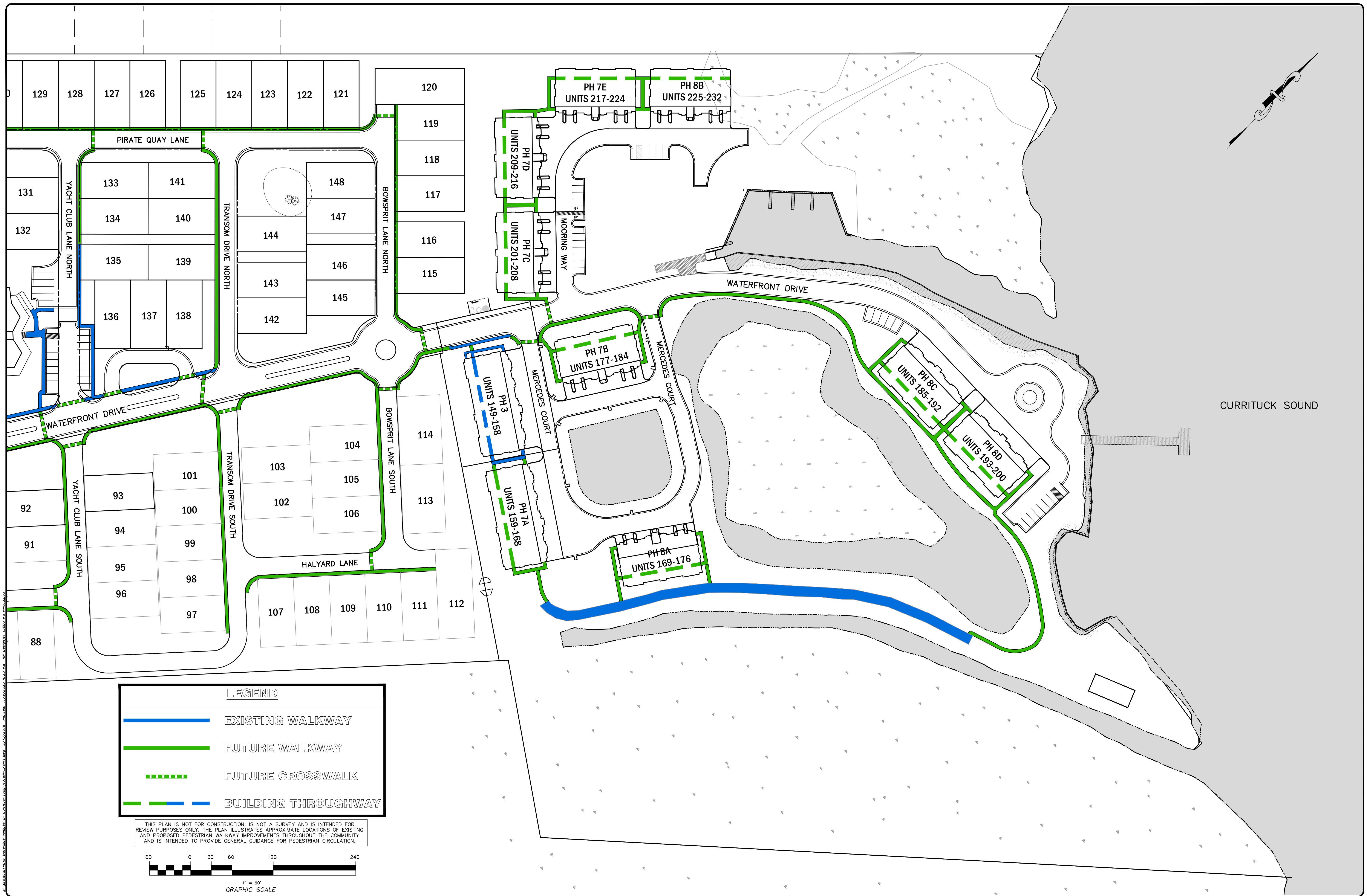
MATCH LINE SEE SHEET L2

EXISTING WDP





20'x20' OBSERVATION AREA

EXISTING WDP

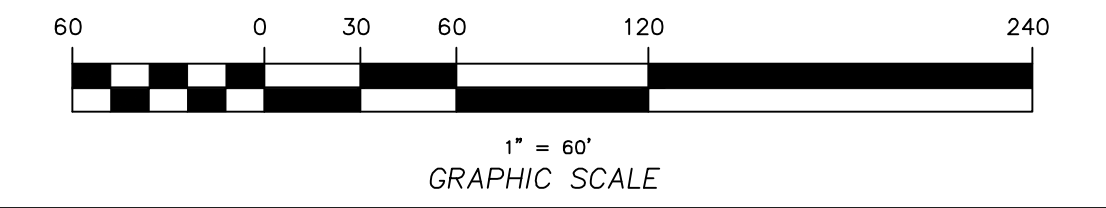




**LEGEND**

-  EXISTING WALKWAY
-  FUTURE WALKWAY
-  FUTURE CROSSWALK
-  BUILDING THROUGHWAY

THIS PLAN IS NOT FOR CONSTRUCTION, IS NOT A SURVEY AND IS INTENDED FOR REVIEW PURPOSES ONLY. THE PLAN ILLUSTRATES APPROXIMATE LOCATIONS OF EXISTING AND PROPOSED PEDESTRIAN WALKWAY IMPROVEMENTS THROUGHOUT THE COMMUNITY AND IS INTENDED TO PROVIDE GENERAL GUIDANCE FOR PEDESTRIAN CIRCULATION.



**BISSELL**  
 PROFESSIONAL GROUP  
 Engineers, Planners, Surveyors  
 and Environmental Specialists

Bissell Professional Group  
 1577 License # C-295  
 1577 License # C-295  
 P.O. Box 1088  
 27909-1088  
 (252) 261-3266  
 (252) 261-3267  
 FAX (252) 261-1760

**DEVELOPMENT OVERVIEW**

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**WATERSIDE VILLAGES**  
 NORTH CAROLINA

POPULAR BRANCH TOWNSHIP  
 CURRITUCK COUNTY

**PEDESTRIAN CIRCULATION SYSTEM MAP**

NO.	DATE	DESCRIPTION	BY
1	11-13-18	WALK TO WEST SIDE TRANSOM DR. N.	DMK

**PRELIMINARY**  
 DO NOT USE FOR  
 CONSTRUCTION

DATE:	2-13-18	SCALE:	1"=60'
DESIGNED:	BPG	CHECKED:	MDB
DRAWN:	DMK	APPROVED:	MSB
SHEET:	2	OF:	2
CAD FILE:	4018WALKWAY		
PROJECT NO.:	4018		

ROY COOPER  
Governor  
MARY PENNY KELLEY  
Secretary  
RICHARD E. ROGERS, JR.  
Director



December 11, 2024

CURRITUCK COUNTY WATER DEPARTMENT  
ATTN: DONALD I. MCREE, COUNTY MANAGER  
153 COURTHOUSE ROAD  
CURRITUCK, NC 27929

Re: **Final Approval**

Final Approval Date: December 11, 2024

WATERSIDE VILLAGES PHASES 2 & 4

Serial No.: 22-00999

Water System Name: CURRITUCK COUNTY WATER  
SYSTEM

Water System No.: NC0427010

Currituck County

Dear Sir/Madam:

The Department received an Engineer's Certification statement and an Applicant's Certification concerning the above referenced project. The Engineer's Certification verifies that the construction of the referenced project has been completed in accordance with the engineering plans and specifications approved under Department Serial Number 22-00999. The Applicant's Certification verifies that an Operation and Maintenance Plan and Emergency Management Plan have been completed and are accessible to the operator at all times and available to the department upon request and that the system will have a certified operator as required by 15A NCAC 18C .1300.

The Department has determined that the requirements specified in 15A NCAC 18C .0303(a) and (c) have been met, and therefore, issues this **Final Approval** in accordance with Rule .0309(a).

Please contact us at (919) 707-9100 if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink that reads "Rebecca Sadosky".

Rebecca Sadosky, Ph.D., Chief  
Public Water Supply Section  
Division of Water Resources, NCDEQ

cc: JAMIE MIDGETTE, P.E., Regional Engineer  
Currituck County Health Department  
BISELL PROFESSIONAL GROUP



North Carolina Department of Environmental Quality | Division of Water Resources  
512 North Salisbury Street | 1634 Mail Service Center | Raleigh, North Carolina 27699-1634  
919.707.9100

MARK S. BISSELL  
BISSELL PROFESSIONAL GROUP  
P.O. BOX 1068  
KITTY HAWK, NC 27949



**ENGINEER'S PARTIAL CERTIFICATION OF  
INSTALLED STORMWATER MANAGEMENT SYSTEM**

I, David M. Klebitz, a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe construction on a periodic basis for the following project:

Waterside Villages of Currituck – Phases 2 & 4

(Project name)

High-Density Stormwater Management Permit No. SW7040511

(Project Description)

Township of Poplar Branch, Currituck County, N.C.

(Project location)

WSV Holdings, LLC

(Project Developer)

Hereby state that, to the best of my knowledge and belief, due care and diligence were used in the observation of the construction of the existing system such that the construction was observed to have been completed by the Contractor in substantial accordance with the intent of the approved plans and specifications. This certification serves as a supplement to a Partial Engineer's Certification previously issued by David M. Ryan, P.E. for Phases 1, 1A, 3, 5, 6 and the Clubhouse, dated 9-23-09. Based on the construction observations documented, the following items were noted in the recently constructed Phases 2 & 4 of the development;

1. Phase 2

- a. Relocation of (1) 5,200 sf residential lot from Phase 1 to Phase 2.
- b. Installation of typical NCDOT frame and grate catch basins in place of slotted drains within the curb & gutter systems of the subdivision roadways.
- c. Installation of additional pipe conveyances and drop inlets to avoid deep swales in areas of limited space. Shallow swales are still utilized above the pipes to convey runoff from lots to drop inlets.
- d. Minor deviations to alignments and grades, as shown on the record drawings.

2. Phase 4

- a. Installation of typical NCDOT frame and grate catch basins in place of slotted drains within the curb & gutter systems of the subdivision roadways.
- b. Installation of additional pipe conveyances and drop inlets to avoid deep swales in areas of limited space. Shallow swales are still utilized above the pipes to convey runoff from lots to drop inlets.
- c. The open space swale installed between Lot 51 and Waterfront Drive was reversed to flow east through a culvert under the entrance to Bridge View Drive South. This was done because a culvert was not installed downstream under Mizzenmast Way during the construction of Phase 5.

- d. The open space swale installed between Lot 56 and Admirals View Drive was reversed to flow east through a culvert under Bridge View Drive South. This was done to minimize swale depths and better work within the local topography.
- e. The open space swale installed behind Lots 57-59 was reversed to flow east through the swale continuing behind Lot 60-65. This was done to minimize swale depths and better work with the local topography.
- f. Minor deviations to alignments and grades, as shown on the record drawings.

3. Drainage Area Modifications

- a. The flow reversals described in Phase 4 above have resulted in a modification to the drainage divide between the project's two drainage areas as designed, Drainage Area #1 and Drainage Area #2.
- b. Drainage Area #1 encompasses the western portion of the development and is managed by existing Ponds 1 & 1A. The overall area of Drainage Area #1 has decreased by around 1 acre, from approximately 23.4 acres to 22.4 acres, or near 4%. Given this reduction in drainage area, and associative built-upon area, the modification to Drainage Area #1 is believed to maintain compliance with the intent of the project's stormwater management permit.
- c. Drainage Area #2 encompasses the eastern portion of the development and is managed by existing Ponds 2 & 2A. The overall area of Drainage Area #2 has increased by around 1 acre, from approximately 51.1 acres to 52.1 acres, or near 2%. A built-upon area analysis was conducted within Phases 2 & 4 and it was determined that, if all lots are built out to the maximum 65% limit, approximately 18,250 sf of additional impervious coverage may occur within the amended drainage area. This equates to a 2.5% increase relative to the 716,126 sf of total built-upon area allocated for Drainage Area #2. In a letter from Bissell Professional Group to NCDEQ, dated July 23, 2009, it was explained that Pond 2 was determined to have an actual surface area of 183,011 sf and an actual storage volume of 357,978 cubic feet. These quantities are 4 and 5 times greater than the 45,559 sf and 63,168 cubic feet required by permit. Given the relatively minor increase in built-upon area and the excess capacities available in the receiving stormwater Pond 2, the modification to Drainage Area #2 is believed to maintain compliance with the intent of the project's stormwater management permit.

Signature \_\_\_\_\_

Registration No. 042639

Date 12/11/24





**ENGINEER'S PARTIAL CERTIFICATION OF  
INSTALLED STORMWATER MANAGEMENT SYSTEM**

I, David M. Ryan, a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe construction on a periodic basis for the following project:

Waterside Villages of Currituck – Phases 1, 1A, 3, 5, 6, & Clubhouse

(Project name)

High-Density Stormwater Management Permit No. SW7040511

(Project Description)

Township of Poplar Branch, Currituck County, N.C.

(Project location)

VOC, LLC

(Project Developer)

Hereby state that, to the best of my knowledge and belief, due care and diligence were used in the observation of the construction of the existing system such that the construction was observed to have been completed by the Contractor in substantial accordance with the intent of the approved plans and specifications. This certification serves as a supplement to the engineer's certifications that were previously issued by Mark S. Bissell, P.E.. Based on the construction observations documented, the following items were noted;

1. Phases 1 & 1A
  - a. Modification of the drawdown device, overflow pipe and swale in pond No. 1 in order to match field conditions.
  - b. Substitution of 18" HDPE pipe for swale along rear of lots 136-138 in order to improve project aesthetics.
  - c. Some lot grades will need to be adjusted at the time of commencement of home construction in order to comply with the minimum pad elevation requirements.
  - d. Minor deviations to alignments and grades, as shown on the record drawings.
2. Phase 3
  - a. Modification of flow direction of vegetated swale behind building 3, which, as modified, achieves the design intent to as great or greater degree than as shown on the approved plans.
  - b. Minor deviations to alignments and grades, as shown on the record drawings.
3. Phases 5 & 6
  - a. Minor deviations to alignments and grades, as shown on the record drawings.
4. Clubhouse
  - a. Addition of 2 drop inlets adjacent to the clubhouse to relieve ponding from a low area discovered during construction.
  - b. Minor deviations to alignments and grades, as shown on the record drawings.

5. Post-Construction Corrective Actions

- a. Following the performance of several post-construction site observations, a corrective action plan was prepared illustrating several maintenance and minor improvement modifications that needed to be performed to bring the system into compliance. (A copy of the Corrective Action Plan dated 7/22/09 is provided herewith.) The corrective actions as illustrated include the following:
  - i. Removal of vegetation and debris identified within drop inlets and primary conveyance measures.
  - ii. Removal of woody vegetation, debris and sediment accumulation identified within the wet-detention ponds.
  - iii. Revegetation of isolated areas of identified escarpments and erosion.
  - iv. Installation of periphery swale around building 7A.
  - v. Installation of rock check dam at rear of Lot 112.
  - vi. Redirecting flow of an existing curb-flume installation from the main pool section to the forebay of Pond 1.
  - vii. Although indicated on the plans, installation of the overflow swale for Pond 2A was excluded from the corrective actions. It has been determined that this improvement may be unnecessary as described in the attached justification letter.
- b. Performance of the corrective actions were reviewed and determined to be implemented in substantial conformation with corrective action plan.

Signature \_\_\_\_\_

Registration No. \_\_\_\_\_

Date \_\_\_\_\_





*The Coastal Experts*

TO: Bill Moore  
NCDENR – Division of Water Quality  
943 Washington Square Mall  
Washington, NC 27889

FROM: David Ryan  
Bissell Professional Group

DATE: July 23, 2009

SUBJECT: Waterside Villages  
Stormwater Permit No. SW7040511

On behalf of our client, Wachovia Bank, we are submitting for your review the justification for a deviation from the approved stormwater management system at Waterside Villages in Currituck County. A high-density stormwater management permit was issued on July 28, 2004, SW7040511, for the development of a residential development. As per item #6 under the Schedule of Compliance, an engineer's certificate of completion shall be provided for your review. During the post-construction inspection of the facilities it was discovered that the requisite emergency overflow swale from pond 2A (lagoon) to the adjacent canal was never constructed. The following is a summary of this investigation;

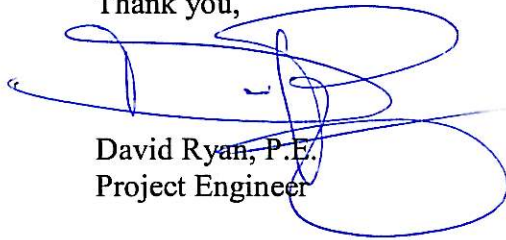
1. The permanent pool elevation observed for pond 2A (lagoon) was observed to be at 0.25' msl, approximately 1.25' below the approximated 1.50' msl permanent pool elevation.
2. The permanent pool elevation observed for pond 2 was observed to be at 0.65' msl, approximately 0.85' below the approximated 1.50' msl permanent pool elevation.
3. A topographic study had not been performed on the upland portion of "high ground" that is located on the interior of pond 2A (lagoon). This upland portion area was excluded from the original design based upon the lack of information available at that time. The minimum exterior ground elevations that exist along the periphery of the lagoon are approximately 3.0' msl, (the limiting factor in the design). Since the permit approval, additional information has been acquired in this area that depicts an average ground elevation of approximately 1.62' msl. If the emergency overflow outlet for the lagoon was to be removed, this area could be accounted in the ultimate storage capacity, minus the upland areas.
4. The soils testing that was referenced within the narrative of the stormwater permit application was taken from on-site testing that was performed by Protocol Sampling Service for design of the wastewater disposal system. The testing that was conducted was primarily located to the west of this location and may not have been wholly indicative of groundwater and/or surface water elevations in this specific location.
5. A groundwater lowering system was installed in conjunction with that of the wastewater treatment and disposal site which is located towards the center of the project. It appears as though the performance of this system has impacted groundwater elevations in and around the development area. This is evidenced by the entrance detention basins which are approximately 3'-3.5' lower than the design permanent pool elevations.

After further investigation it is our belief that the overflow swale is not necessary for this drainage system to function properly. The basis for this conclusion is as follows;

1. The permitted required storage volume for basin 2 is 63,168 c.f. The actual provided storage volume for basin 2 is 357,978 c.f. This is the equivalent of a 5.67 in. rainfall event, or nearly the amount of the 10 year 24 hour rainfall for this area of 6.2 inches.
2. The permitted surface area for basin 2 is 45,559 s.f. The actual provided surface area for basin 2 is 183,011 s.f., approximately four times the required surface area.
3. The proposed rip-rap lined emergency overflow swale that is connected to pond 2A and discharges to the adjoining canal was designed and approved prior to the CAMA permits being issued for this project. This swale discharge may conflict with current CAMA policies. It appears that there may not be any alternative discharge points without creating short circuiting or direct discharges to surface waters.

Please reference the attached Stormwater Management System As-Built drawing and Corrective Action Plan that depicts these conditions. You may contact me directly at (252) 261-3266 x228 if should have any comments or concerns pertaining to this information. We thank you for your time and consideration in this matter.

Thank you,



David Ryan, P.E.  
Project Engineer



Energy, Mineral &  
Land Resources  
ENVIRONMENTAL QUALITY

ROY COOPER  
*Governor*

MICHAEL S. REGAN  
*Secretary*

WILLIAM E. (TOBY) VINSON, JR.  
*Interim Director*

March 9, 2018

WSV Holdings, LLC  
Attention: Prem Gupta, Registered Agent  
P.O. Box 90  
Kill Devil Hills, NC 27948

**Subject: Stormwater Permit No. SW7040511 Renewal/Ownership Change  
Waterside Villages  
High Density Project  
Currituck County**

Dear Prem Gupta:

The Washington Regional Office received a complete Stormwater Renewal and Ownership Change Application for the wet detention pond system serving Waterside Villages located at Grandy NC on January 29, 2018. Staff review of the applications has determined that the permit can be renewed. We are forwarding Permit No. SW7040511 for two wet detention ponds serving this project.

This permit, upon its effective date, will replace all previous State Stormwater permits for this site. This permit shall be effective from March 9, 2018 until July 28, 2026, and shall be subject to the conditions and limitations as specified therein. Please pay special attention to the Operation and Maintenance requirements in this permit. Failure to establish an adequate system for operation and maintenance of the stormwater management system will result in future compliance problems. The issuance of this permit does not resolve any previous violations of the stormwater rules.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

If you have any questions, or need additional information concerning this matter, please contact me at (252) 948-3923.

Sincerely,

Roger K. Thorpe  
Environmental Engineer

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES

**STATE STORMWATER MANAGEMENT PERMIT**

**HIGH DENSITY DEVELOPMENT**

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations

PERMISSION IS HEREBY GRANTED TO

***WSV Holdings, LLC***

***Waterside Villages***

***Currituck County***

FOR THE

construction, operation and maintenance of two stormwater wet detention pond systems in compliance with the provisions of 15A NCAC 2H .1000 (hereafter referred to as the "stormwater rules") and the approved stormwater management plans and specifications and other supporting data as attached and on file with and approved by the Division of Energy, Mineral, and Land Resources and considered a part of this permit.

This permit shall be effective from the March 9, 2018 until July 28, 2026, and shall be subject to the following specified conditions and limitations:

**I. DESIGN STANDARDS**

1. This permit is effective only with respect to the nature and volume of stormwater described in the application and other supporting data.
2. This stormwater system has been approved for the management of stormwater runoff as described in Section I.6 of this permit. The stormwater control has been designed to handle the runoff from a total of 1,070,704 square feet of impervious area.
3. The tract will be limited to the amount of built-upon area indicated in Section I.6 of this permit, and per approved plans.



4. All stormwater collection and treatment systems must be located in either dedicated common areas or recorded easements. The final plats for the project will be recorded showing all such required easements, in accordance with the approved plans.
5. The runoff from all built-upon area within the permitted drainage area of this project must be directed into the permitted stormwater control system.
6. The following design criteria have been provided in the wet pond system and must be maintained at design condition:

	<u>Drainage Area # 1</u>	<u>Drainage Area # 2</u>
a. Drainage Area, ft <sup>2</sup> :	1,027,372	2,266,596
b. Total Impervious Surfaces, ft <sup>2</sup> :	354,578	716,126
c. Design Storm, inches:	1.0	1.0
d. Permanent Pool Elevation, FMSL:	9.50	1.50
e. Permanent Pool Surface Area, ft <sup>2</sup> :	29,938	95,827
f. Permitted Storage Volume, ft <sup>3</sup> :	78,391	147,565
g. Temporary Storage Elev., FMSL:	10.60	2.16
h. Controlling Orifice:	1.0 "Ø pipe	N/A
i. Pond Depth, ft.:	4.0	4.0
j. Receiving Stream:	Currituck Sound	
k. Classification of Water Body:	"SC"	

## II. SCHEDULE OF COMPLIANCE

1. The stormwater management system shall be constructed in its entirety, vegetated and operational for its intended use prior to the construction of any built-upon surface.
2. During construction, erosion shall be kept to a minimum and any eroded areas of the system will be repaired immediately.

3. The permittee shall at all times provide the operation and maintenance necessary to assure the permitted stormwater system functions at optimum efficiency. The approved Operation and Maintenance Plan must be followed in its entirety and maintenance must occur at the scheduled intervals including, but not limited to:
  - a. Semiannual scheduled inspections (every 6 months).
  - b. Sediment removal.
  - c. Mowing and revegetation of slopes and the vegetated filter.
  - d. Immediate repair of eroded areas.
  - e. Maintenance of all slopes in accordance with approved plans and specifications.
  - f. Debris removal and unclogging of outlet structure, orifice device, flow spreader, catch basins and piping.
  - g. Access to the outlet structure must be available at all times.
4. Records of maintenance activities must be kept and made available upon request to authorized personnel of the Division. The records will indicate the date, activity, name of person performing the work and what actions were taken.
5. The facilities shall be constructed as shown on the approved plans. This permit shall become voidable unless the facilities are constructed in accordance with the conditions of this permit, the approved plans and specifications, and other supporting data.
6. If the stormwater system was used as an Erosion Control device, it must be restored to design condition prior to operation as a stormwater treatment device, and prior to occupancy of the facility.
7. Access to the stormwater facilities shall be maintained via appropriate easements at all times.
8. The permittee shall submit to the Director and shall have received approval for revised plans, specifications, and calculations prior to construction, for any modification to the approved plans, including, but not limited to, those listed below:
  - a. Any revision to any item shown on the approved plans, including the stormwater management measures, built-upon area, details, etc.
  - b. Project name change.
  - c. Transfer of ownership.
  - d. Redesign or addition to the approved amount of built-upon area or to the drainage area.
  - e. Further subdivision, acquisition, lease or sale of all or part of the project area. The project area is defined as all property owned by the permittee, for which Sedimentation and Erosion Control Plan approval or a CAMA Major permit was sought.
  - f. Filling in, altering, or piping of any vegetative conveyance shown on the approved plan.

9. A copy of the approved plans and specifications shall be maintained on file by the Permittee at all times.
10. Upon completion of construction, prior to issuance of a Certificate of Occupancy, and prior to operation of this permitted facility, a certification must be received from an appropriate designer for the system installed certifying that the permitted facility has been installed in accordance with this permit, the approved plans and specifications, and other supporting documentation. Any deviations from the approved plans and specifications must be noted on the Certification. A modification may be required for those deviations.
11. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of revised plans and certification in writing to the Director that the changes have been made.

### III. GENERAL CONDITIONS

1. This permit is not transferable except after notice to and approval by the Director. In the event of a change of ownership, or a name change, the permittee must submit a formal permit transfer request to the Division, accompanied by a completed name/ownership change form, documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits and may or may not be approved. The permittee is responsible for compliance with all permit conditions until such time as the Division approves the transfer request.
2. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to enforcement action by the Division, in accordance with North Carolina General Statute 143-215.6A to 143-215.6C.
3. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances, which may be imposed by other government agencies (local, state, and federal) having jurisdiction.
4. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those as may be required by this Division, such as the construction of additional or replacement stormwater management systems.
5. The permittee grants DEQ Staff permission to enter the property during normal business hours for the purpose of inspecting all components of the permitted stormwater management facility.

6. The permit may be modified, revoked and reissued or terminated for cause. The filing of a request for a permit modification, revocation and reissuance or termination does not stay any permit condition.
7. Unless specified elsewhere, permanent seeding requirements for the stormwater control must follow the guidelines established in the North Carolina Erosion and Sediment Control Planning and Design Manual.
8. Approved plans and specifications for this project are incorporated by reference and are enforceable parts of the permit.
9. The permittee shall notify the Division any name, ownership or mailing address changes within 30 days.
10. This permit shall be effective from the March 9, 2018 until July 28, 2026. Application for permit renewal shall be submitted 180 days prior to the expiration date of this permit and must be accompanied by the processing fee.

Permit issued this the 9 th day of March 2018.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



\_\_\_\_\_ for  
William E. (Toby) Vinson, Jr., Interim Director  
Division of Energy, Mineral, and Land Resources  
By Authority of the Environmental Management Commission

Permit No. SW7040511

**SUPPLEMENTAL DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS  
FOR WATERSIDE VILLAGES OF CURRITUCK (LOTS 51-80, PHASE 4)**

THIS SUPPLEMENTAL DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR WATERSIDE VILLAGES OF CURRITUCK (“Supplemental Declaration”) is made this \_\_\_\_\_ day of \_\_\_\_\_, 2024, by WSV HOLDINGS, LLC, a North Carolina limited liability company (the “Declarant”).

RECITALS:

A. Declarant is the Declarant under the Declaration of Covenants, Conditions and Restrictions for Waterside villages of Currituck, which is recorded in Book 908 at Page 872 in the Office of the Register of Deeds of Currituck County, North Carolina, as previously supplemented and amended (the “Declaration”). The capitalized terms and definitions in this Supplemental Declaration shall be the same as set forth in the Declaration unless otherwise defined herein.

B. Declaration is the fee owner of fee simple of the real property described in Exhibit “A” which is attached hereto and incorporated herein by reference (“Lots 51-80, being Phase 4”), said real property being part of the “Contiguous Property.”

C. Pursuant to Section 9.1 of the Declaration, Declarant desires to annex Lots 51-80 into the Project and subject it to the provisions of the Declaration and the jurisdiction of the Association.

NOW, THEREFORE, Declarant, exercising its right to annex Contiguous Property pursuant to Section 9.1 of the Declaration, does hereby declare that all of Lots 51-80 shall be held, sold, used and conveyed subject to the Declaration and all easements, restrictions, covenants, conditions and benefits described therein; and further, the Lots 51-80 are hereby subjected to the jurisdiction of the Association and all Association Documents.

IN WITNESS WHEREOF, Declarant has executed this Supplemental Declaration this \_\_\_\_ day of \_\_\_\_\_, 2024.

**WSV HOLDINGS, LLC**, a North Carolina limited liability company

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

STATE OF NORTH CAROLINA

COUNTY OF \_\_\_\_\_

I certify that the following person(s) personally appeared before me this day, acknowledging to me that he or she voluntarily signed the foregoing document for the purpose stated therein and in the capacity indicated: \_\_\_\_\_.

(Name of Principal(s))

Date: \_\_\_\_\_

\_\_\_\_\_  
Official Signature of Notary Public

\_\_\_\_\_  
Notary Printed or Typed Name

OFFICIAL SEAL

My Commission Expires: \_\_\_\_\_

**EXHIBIT "A"**

Being located in Currituck County, North Carolina, and being more particularly described as follows:

Lot 92 of Waterside Villages of Currituck as shown on Final Plat thereof entitled "Waterside Villages of Currituck – Phase 2 – Lot 92" as recorded in Plat Cabinet \_\_\_\_\_ at Slides \_\_\_\_\_ in the Office of the Register of Deeds of Currituck County, North Carolina.

## WATERSIDE VILLAGES

### OPEN SPACE CALCULATIONS

February 8, 2007  
Updated March 23, 2017 (Lots 92 & 93)  
Updated December 12, 2024 (PH 7A, 2 & 4)

<u>PHASE</u>	<u>TOTAL AREA</u>	<u>OPEN SPACE DEDICATIONS</u>
1	9.18 Ac.	2.40 Ac.
1A	0.90 Ac.	0.09 Ac.
CLUB	2.69 Ac.	2.69 Ac.
5	5.28 Ac.	1.35 Ac.
6	4.86 Ac.	1.12 Ac.
3	0.71 Ac.	0.19 Ac.
Lot 93	0.12 Ac.	0
Lot 92	0.14 Ac.	0
7A	0.79 Ac.	0
2	7.62 Ac.	2.39 Ac.
4	<u>6.06 Ac.</u>	<u>1.66 Ac.</u>
Total	38.35 Ac.	11.89 Ac. (31.00%)