

# **#PROJECT NARRATIVE**

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**Village at Broad Rock  
AP 33 Lot 24  
852 Broad Rock Road  
South Kingstown, Rhode Island**

**OWNER:**

**Sheleen M Clarke REV LIV TRUST AGMT  
96 Duck Cove Road  
North Kingstown, RI 02852**

**APPLICANT:**

**New England Properties, LLC  
257 Wickford Ct.  
North Kingstown, RI 02852**

**PREPARED BY:**



**COMMONWEALTH**  
ENGINEERS & CONSULTANTS, INC.

.....  
400 SMITH STREET  
PROVIDENCE, RHODE ISLAND 02908  
401-273-6600

**September 2023** (revised 4/2/24)  
*CE&C Project No. 23011.00*

## **Table of Contents:**

	<b><u>Page</u></b>
<b>Narrative</b>	<b>3</b>
<b>Design Approach</b>	<b>5</b>
<b>Viewshed Analysis</b>	<b>5</b>
<b>Appendix A: Half Mile Vicinity Plan</b>	
<b>Appendix B: Waiver Statement</b>	
<b>Appendix C: Wetland &amp; Soils Report</b>	
<b>Appendix D: FEMA Map</b>	
<b>Appendix E: Letter of Water Availability</b>	
<b>Appendix F: Fiscal Analysis</b>	

**General Description of Project:** The applicant is proposing to develop A.P. 33 Lot 24 into a 19-lot Flexible Design Residential Project (FDRP). Subject property is 16.5± acres in size and is situated in the R-40 zoning district.

The FDRP type development is different from a conventional subdivision in that the FDRP will provide smaller lots with open space land.

**Existing Property:** The property is currently developed with a residential dwelling and is called Sweet Fern Farm.

**Abutting Properties:** The abutting properties to the north and south are residential properties situated in the R-40 zoning district. The properties located across Broad Rock Road to the east are residential and situated in the R-80 zoning district. The Saugatucket River abuts the subject property to the west. Across the river is the transfer station property which is zoned GI.

**Natural Resources in the Area:** The Saugatucket River abuts the subject property to the west and has freshwater wetlands associated with it. Refer to the site plans for the wetland edge delineation performed by Avizinis Environmental Services, Inc. (AESI). A copy of AESI's report is part of this narrative report.

RIDEM identifies the abutting Saugatucket River as being a warm water fishery and having a TMDL for fecal coliform. RIDEM also indicates impairments of 1) iron and 2) benthic macroinvertebrates bioassessment; therefore, is subject to RIDEM review of the stormwater water system to ensure the TMDLs and impairments are properly addressed.

The subject property is not situated in the Town's groundwater protection overlay district as indicated on the Town GIS.

The subject property is not situated in a SK natural heritage area as indicated on the Town GIS, but is situated in a natural heritage area as indicated on RIDEM's GIS.

**Flood Zones:** The subject property is predominately situated in Zone X 'Area of minimal flood hazard' as identified by the Federal Emergency Management Agency Flood Rate Insurance Map, #44009C0201J, effective April 3, 2020. A small, localized area around the Saugatucket River is identified as a special flood hazard area Zone A. Refer to the attached FEMA map and site plans for the location of Zone A. The Saugatucket River is situated in the Town's special flood hazard area overlay district.

**Topography:** The project site has mild slopes (6%) which generally slope in a westerly direction from the high point near Broad Rock Road (elevation 89±) to the low point (elevation 33±) located at the Saugatucket River. Refer to the plan set which shows topography.

**Notable Site Features:** Subject property is partially developed with a residential dwelling, detached garage, and impervious driveway. The majority of subject property west of the residential dwelling is forested, undeveloped land. Refer to aerial photo and existing conditions plan for details. Another notable feature is the Saugatucket River abuts the property to the west.

**Drainage divides:** The RIDEM GIS map web site indicates the project site is situated in the Saugatucket River watershed and is identified as HUC 12 – 010900050401 and HUC 8 - 01090005.

**Soils:** The USDA-NRCS Soil Survey map indicates the soil in the proposed development area is BmA-Bridgehampton with typical characteristics of water tables greater than 6’ deep and bedrock greater than 5’ deep. Soil evaluations were performed by Avizinis Environmental Services, Inc. and witnessed by the RIDEM. Ground water tables were then monitored during the wet season and re-affirmed at deeper depths and verified by the RIDEM under OWTS application #2332-0114. Soil logs, location map, soils map and verified groundwater tables are provided in the Appendix.

**Stormwater Management System:** Stormwater runoff from the proposed development will be designed in accordance with the RIDEM stormwater regulation entitled “Rhode Island Stormwater Design and Installation Standards Manual” and supplemented with the Town’s requirements. A combination of grassed dry swales and an infiltration basin are proposed. These proposed best management practices will be designed in accordance with RIDEM requirements for discharges to TMDL & impaired water bodies.

**Wastewater Disposal System:** The proposed development will be serviced with an onsite wastewater treatment systems (OWTS).

**Potable Water Source:** The proposed development will be serviced with public water from the Veolia Water Rhode Island (VWRI) system.

**Fire Suppression:** A public water is available, and hydrants will be provided at locations determined by the fire marshal.

**Parking:** Two parking spaces are required for each residential lot. The proposed parking spaces will meet this requirement.

**Erosion Control Practices:** A soil erosion and sedimentation control plan will be prepared for the preliminary plan submission. In general, staked silt fence will be proposed along the perimeter of the down gradient disturbed areas to prevent soil erosion. A crushed stone construction entrance will be constructed at all entrances to reduce soil transport from construction vehicles onto local roads. Temporary sediment traps will be provided during construction activities. Notes and details on final plans will describe the procedures for installation of soil erosion control measures and required maintenance during the construction process. The erosion control plan will require a permit from the RIDEM through the RIPDES program.

**Construction Phasing:** No construction phasing is proposed.

**State Permits Required:** The following State permits are anticipated:

1. RIDEM OWTS Subdivision Suitability is required for the proposed septic systems.
2. RIDEM RIPDES Stormwater Discharge Associated with Construction Activity program for the project activities (land disturbance more than one acre).

3. RIDEM Freshwater Wetlands Permit may be required for work near wetland edges.

**Design Approach:**

The proposed subdivision was designed utilizing the guidelines as described in Section IV. A Flexible Design Residential Projects. As described below, the design process was considered in determining the layout of the proposed streets, house lots and open space.

- a. Understanding the Site – The site was surveyed, and an existing conditions plan was prepared identifying the significant site features. In addition, the site was walked and visually inventoried during the design process.
- b. Evaluating Site Context – The site context was evaluated to include the adjacent land uses, the river and adjacent wetland was identified and flagged in the field.
- c. Designating the Open Space – As required, the open space was designated to protect the most sensitive resources including the 200’ River Buffer Zone, the adjacent properties and to provide access to all the homeowners in the development. The required open space is 7.44 acres, the project as designed proposes 7.82 acres of open space.
- d. Location of Development Areas – After the open space was identified the building sites and other built amenities were delineated.

**Viewshed Analysis:**

The views of the existing site are shown/described below:



Photo above showing the view from Broad Rock Road looking into existing driveway.



Photo above showing view from Broad Rock Road into the property near the center of the frontage.



Photo above showing the stone wall and driveway along the southern property line.



Photo above showing the front yard area with Broad Rock Road in the distance.



Photo above showing the driveway intersection at the start of the loop (looking west).



Photo above showing the driveway near the dwelling and garage at the small circle (looking north).

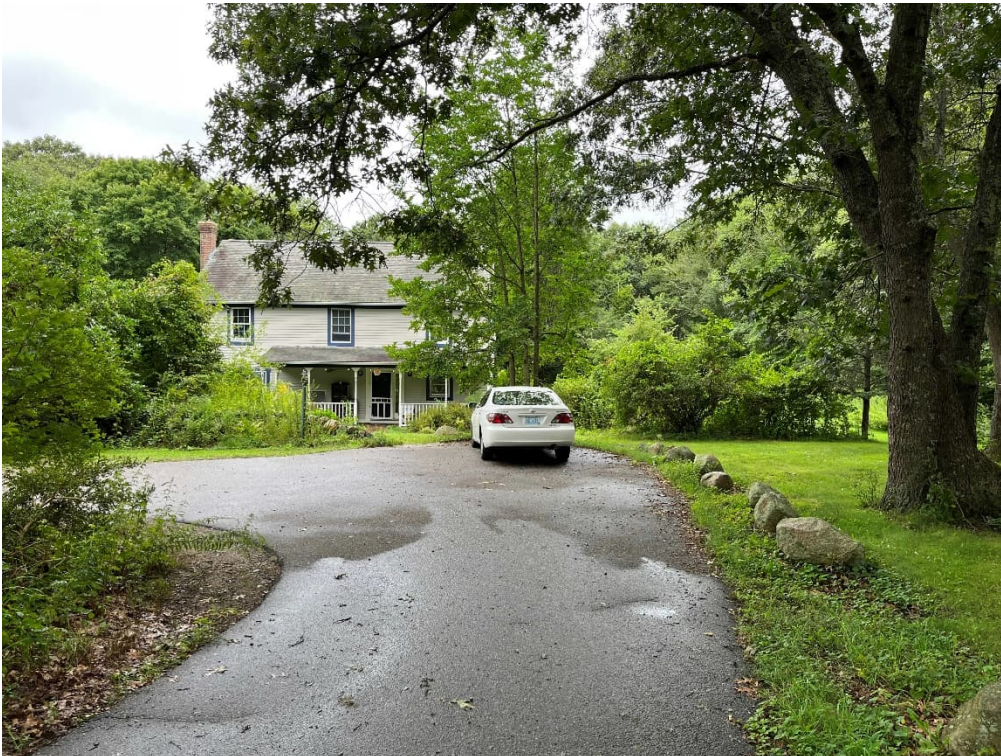
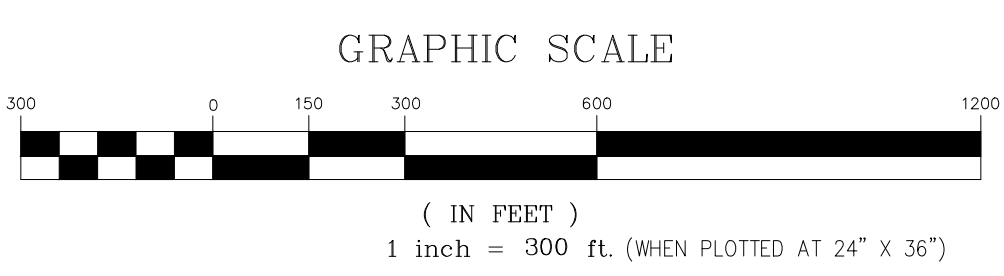
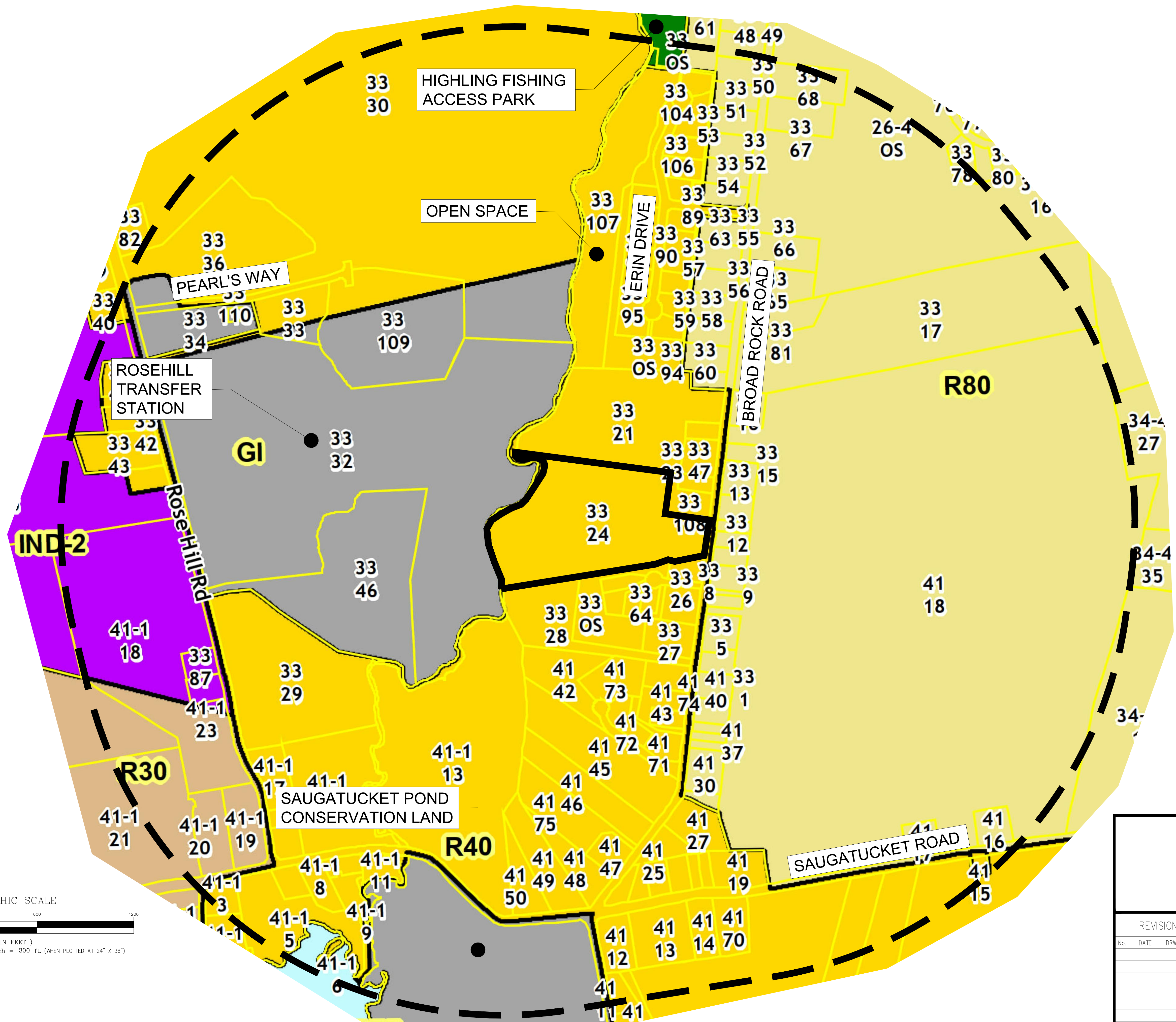
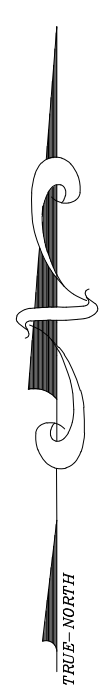


Photo above showing the existing dwelling (looking west).

# Appendix A



OWNER:  
SHELEEN M CLARKE REV LIV  
TRUST AGMT  
96 DUCK COVE ROAD  
NORTH KINGSTOWN, RI 02852

APPLICANT:  
NEW ENGLAND PROPERTIES, LLC  
257 WICKFORD CT  
NORTH KINGSTOWN, RI 02852

**HALF MILE RADIUS PLAN**  
SCALE: 1" = 300'

REVISIONS			
No.	DATE	DRWN	CHKD



VILLAGE AT BROAD ROCK  
for  
PLAT 33, LOT 24  
ZONED R-40  
in  
SOUTH KINGSTOWN, RHODE ISLAND  
HALF MILE VICINITY PLAN

SCALE: AS SHOWN SHEET NO.: 1 of 1  
DRAWN BY: TB DESIGN BY: TB CHECKED BY: TB  
DATE: 09/6/23 PROJECT NO.: 23011.00

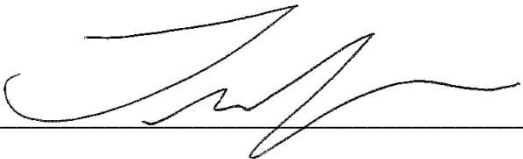
# Appendix B

Statement for Waiver/Modification from the Regulations:

WAIVERS:

THE FOLLOWING WAIVERS PROPOSED:

1. CONCEPTUAL MASTER PLAN CHECKLIST FOR MAJOR SUBDIVISION, SECTION (D) YIELD PLAN, ITEM 6, RIDEM WITNESSED SOIL EVALUATIONS ON EACH PROPOSED LOT. WE HAVE PERFORMED 13 RIDEM SOIL EVALUATIONS SCATTERED THROUGHOUT THE SITE AND REQUEST A WAIVER FOR THE REMAINING SOIL EVALUATIONS UNTIL PRELIMINARY PLAN APPLICATION.

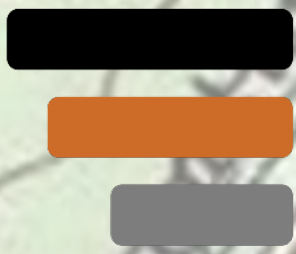


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Timothy Behan, PE

Date: Apr . 2 , 2024

# Appendix C



**AVIZINIS**  
ENVIRONMENTAL  
SERVICES INC

**WETLAND  
REPORT**

**SITE LOCATION:**  
A.P. 33, Lot 24  
852 Broad Rock Road  
South Kingstown, Rhode Island

**PREPARED FOR:**  
Curt Nunes, PLS  
Commonwealth Land Surveyors  
cnunes@commonwealthlandsurveyors.com

**PREPARED (July 15, 2022) BY:**

Edward J. Avizinis, CPSS, PWS | President



## INTRODUCTION

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Avizinis Environmental Services, Inc., (AES), has completed the requested field work at the identified project site at 852 Broad Rock Road in South Kingstown, Rhode Island. AES staff visited the site on July 14, 2022 to delineate the regulated wetlands that occur along the project site.

Wetlands in Rhode Island are regulated by two agencies, the Department of Environmental Management (DEM), or the Coastal Resources Management Council (CRMC). The State of Rhode Island has created predetermined maps that identify which properties are under which regulatory agency. These maps identify that the subject property is within DEM jurisdiction. Therefore, AES has delineated all onsite wetland features on the lot to meet the standards outlined in Appendix 2 of the Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act (250-RICR-150-15-3, effective July 1).

## EXISTING CONDITIONS

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The is located extending west from Broad Rock Road to the banks of the Saugatucket River in a residential section of South Kingstown, Rhode Island. The property consists of a residential structure with an associated yard, driveway, and other ancillary structures. The Saugatucket River is categorized as a warm-water fishery by the DEM and runs along the western edge of the property. The length of the Saugatucket River running through this region has been designated as a wildlife corridor and High Value / High Vulnerability Habitat by the DEM. All limits of wetland impacting the property have been delineated by AES.

A review of historic aerial photographs available from the DEM – Environmental Resource Maps, shows that as of the earliest available photographs taken in 1939, this property and much of the surrounding area were cleared for agricultural use between Broad Rock Road and the Saugatucket River. By the time of the next available imagery from 1951-1952, much of this cleared land had been left to revegetate. The imagery from 1962 reveals that a portion of the eastern portion of this property had been recleared, but as of the next available imagery from 1972 had been left to revegetate once more. The imagery from 1981 shows that the eastern portion of the property had once again been cleared, and the first structure on the lot had been erected towards the center of the property. As of the time of the

1997 imagery, the second structure present on the lot had been constructed. No additional changes can be seen in the remaining successive images.

## WETLAND FEATURES

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AES has established one wetland flag series on the property. Flagging labeled **A1 – A30** delineates the closest limit of a swamp surrounding Saugatucket River along the western edge of the property and extending well off the lot, following the course of the river off to the north and south.

## REGULATORY SETBACKS

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In accordance with wetland regulations (250-RICR-150-15-3), all freshwater wetlands will require a 100-foot Jurisdictional Area, and all rivers, streams, and intermittent streams require a 200-foot jurisdictional area. Any proposed alterations with this zone will require some degree of application and review by the DEM. This jurisdictional area has not been depicted on the attached maps.

Furthermore, a separate buffer zone and construction setback will be required for the wetland. The buffer zone is a naturally vegetated or planted area left to naturalize that is immediately contiguous with the wetland. The setback is a separate zone that limits the placement of structures.

The size of the buffer zone is based on numerous factors including wetland vegetative type, subtype, position within the watershed, and habitat types among other factors. The project area lies within River Protection Region 2. The wetland feature delineated by the A-series is a deciduous-dominated swamp that is greater than 10 acres in size and is not within a drinking water supply watershed. This wetland will therefore receive a 75-foot buffer zone per section 2.23.H.3.e. In accordance with 2.23.H.5., Saugatucket River shall require the application of a 200-foot buffer zone.

In addition, a 20-foot construction setback shall be applied to the landward limit of the farthest-reaching buffer zone. Certain construction activities are limited within the setback related to primary structures. Only a 5-foot construction setback pertains to accessory structures (section 2.71.C.1.). It is unclear in the regulations whether or not stormwater

features are subject to the setback requirements, nor are they listed under the definition for accessory structures.

Flag Series	Classification	Jurisdictional Area (ft)	Buffer Zone (ft)	Setback (ft)
A1 – A30	Swamp	100	75	20
Not flagged	River (Saugatucket River)	200	200	20

## CLOSING

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Thank you for giving AES the opportunity to assist you with this project. Please review the attached wetland delineation map which represents the finding of my field work. I have located the wetland flags and other pertinent site features with a Spectra SP20 submetric GPS/GNSS. Although this is not survey quality it is useful for preliminary planning. This data has also been forwarded to you in conjunction with this report and is in the NAD 1983 RI State Plane format in case this information is useful to you. Please do not hesitate to contact AES should you have any questions on this report.

## **ATTACHMENTS**

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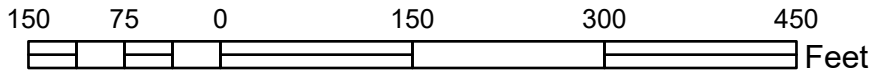
- 1) 2021 AERIAL MAP
- 2) USDA – NRCS SOIL SURVEY MAP
- 3) USGS TOPOGRAPHIC MAP
- 4) WETLAND DELINEATION MAP




2021 AERIAL MAP  
A.P. 33, Lot 24 | 852 Broad Rock Road  
South Kingstown, Rhode Island

LEGEND

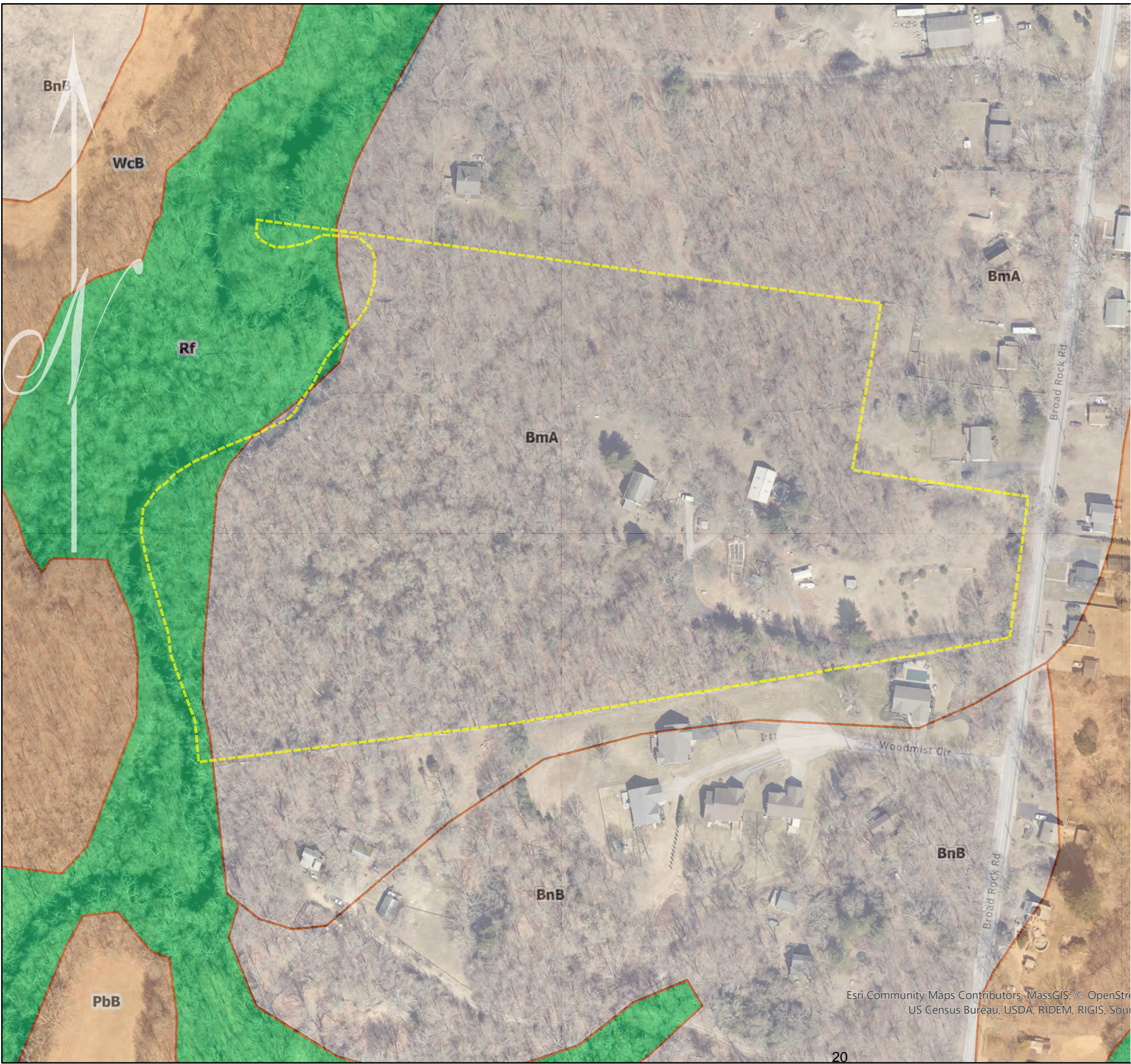
 PROPERTY LINE



- General Notes:
- 1. This map should not be interpreted as a survey quality graphic. It is designed for preliminary planning purposes only. AES recommends consultation with a Professional Land Surveyor for accurate site feature locations.
  - 2. Property lines as depicted on this map have been approximated from plat maps available from the town assessor's online database.
  - 3. Aerial photograph base map and other data layers acquired from the RI DEM and RIGIS database.

Map created by:   
Patrick J. Loveland, GIS Specialist

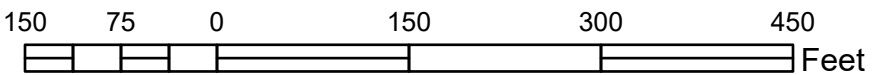
07/07/2022



USDA - NRCS SOIL SURVEY MAP  
 A.P. 33, Lot 24 | 852 Broad Rock Road  
 South Kingstown, Rhode Island

LEGEND

- BmA - Bridgehampton silt loam, till substratum, 0 to 3 percent slopes
- BnB - Bridgehampton-Charlton complex, very stony, 0 to 8 percent slopes
- PbB - Paxton very stony fine sandy loam, 0 to 8 percent slopes
- Rf - Ridgebury, Whitman, and Leicester extremely stony fine sandy loams
- WcB - Wapping very stony silt loam, 0 to 8 percent slopes



- General Notes:
1. This map should not be interpreted as a survey quality graphic. It is designed for preliminary planning purposes only. AES recommends consultation with a Professional Land Surveyor for accurate site feature locations.
  2. Property lines as depicted on this map have been approximated from plat maps available from the town assessor's online database.
  3. Aerial photograph base map and other data layers acquired from the RI DEM and RIGIS database.

Esri Community Maps Contributors, MassGIS, © OpenStreetMap contributors, US Census Bureau, USDA, RIDEM, RIGIS, Source: Esri

Map created by:

*Patrick J. Loveland*  
 Patrick J. Loveland, GIS Specialist

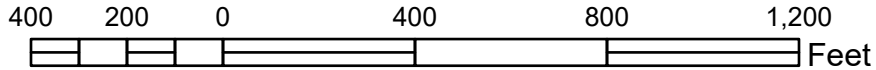
07/07/2022



USGS TOPOGRAPHIC MAP  
 A.P. 33, Lot 24 | 852 Broad Rock Road  
 South Kingstown, Rhode Island

LEGEND

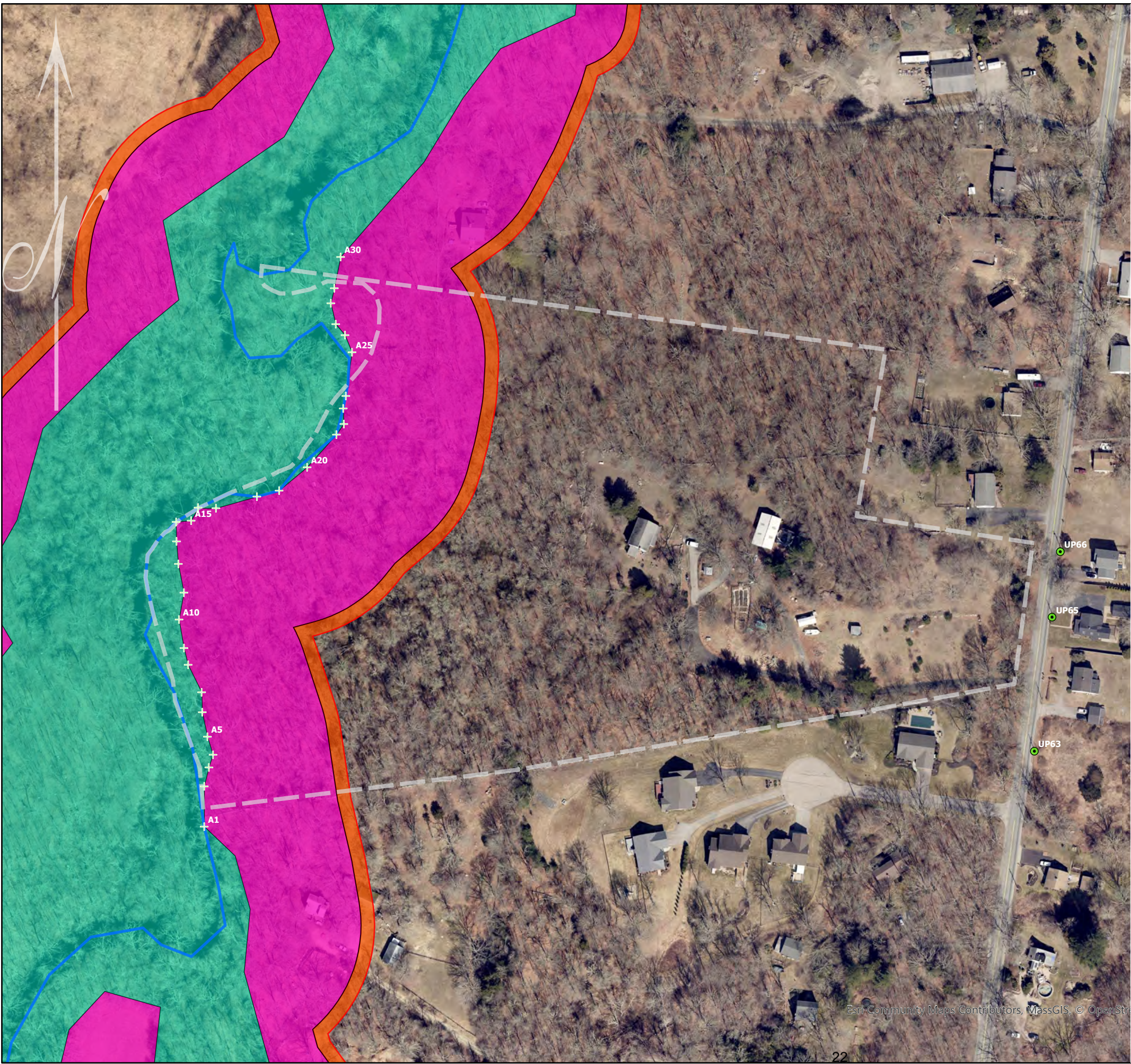
 PROPERTY LINE



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  3. Aerial photograph base map and other data layers acquired from the RI DEM and RIGIS database.

Map created by: Patrick J. Loveland, GIS Specialist

07/07/2022



**2022 WETLAND DELINEATION MAP**  
**A.P. 33, Lot 24 | 852 Broad Rock Road**  
**South Kingstown, Rhode Island**

**LEGEND**

- PROPERTY LINE
- GPS BENCHMARK LOCATION
- AES WETLAND FLAG
- WETLAND FEATURE
- BUFFER ZONE
- CONSTRUCTION SETBACK
- RIVER

150 75 0 150 300  
 Feet

**General Notes:**

1. This map should not be interpreted as a survey quality graphic. It is designed for preliminary planning purposes only. AES recommends consultation with a Professional Land Surveyor for an accurate site plan.
2. Property lines as depicted on this map have been approximated from plat maps available from the town assessor's online database.
3. Aerial photograph base map and other data layers acquired from the RI DEM and RIGIS database.
4. Site features located with a Juniper Geode Submetric GNSS receiver with SWmaps data collection software. Non-delineated wetland edges have not been field verified and are depicted for graphic purposes only.

Delineation performed by:   
 Edward J. Avizinis, CPSS, PWS   07/14/2022

Map created by:   
 Patrick J. Loveland, GIS Specialist 07/15/2022

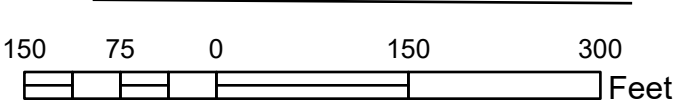


2023 SOIL EVALUATION MAP  
 A.P. 33, Lot 24 | 852 Broad Rock Road  
 South Kingstown, Rhode Island

**LEGEND**

PROPERTY LINE

SOIL LAYER



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 4. Site features located with a Juniper Geode Submetric GNSS receiver with SWmaps data collection software. Non-delineated wetland edges have not been field verified and are depicted for graphic purposes only. The required 20-foot construction setbacks are not shown on this map.

Delineation performed by:   
 Amber K. Hardy, M.S., Soil Evaluator D4098 02/16/2022

Map created by:   
 Patrick J. Loveland, GIS Specialist 02/22/2022



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment Systems Program



Site Evaluation Form
Part A - Soil Profile Description Application Number 2332-0114

Property Owner: Sheleen M. Clarke
Property Location: 852 Broad Rock Rd, South Kingstown, Rhode Island
Date of Test Hole: February 16, 2023
Soil Evaluator: Amber K. Hardy, M.S. License Number: D4098
Weather: Cloudy, 65° Shaded: Yes [ ] No [X] Time: 11:00 am

Table with 11 columns: TH 1 Horizon, Depth, Horizon Boundaries (Dist, Topo), Soil Colors (Matrix, Re-Dox Features), Re-Dox (Ab. S. Contr.), Texture, Structure, Consistence, Soil Category. Rows include horizons Cd, Ap, Bw, and 2Cd.

TH 1 Soil Class G/A Total Depth 96 Impervious/Limiting Layer Depth none (og) GW Seepage Depth none SHWT INC (og)

TH 2 Soil Class G/A Total Depth 108 Impervious/Limiting Layer Depth none (og) GW Seepage Depth none SHWT 30 (og)

Comments: TH1 showed evidence of scalping/cutting

**Part B**





**Site Evaluation** – to be completed by Soil Evaluator or Class II or III Designer

**Please use the area below to locate:**

1. Test holes and bedrock test holes,
2. Approximate direction of due north,
3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.\*

**\*OFFSETS MUST BE SHOWN**

**Key:**

-  Approximate location of test holes
-  Approximate location of bedrock test holes
-  Estimated gradient and direction of slope
-  Approximate direction of due north



Bedrock THs	
TH	Depth

1. Relief and Slope: 3 - 5%
2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. NO  YES
3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. NO  YES
4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. NO  YES
5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. NO  YES
6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 6.42? NO  YES
7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. NO  YES
8. Site's potential for flooding or ponding: NONE  SLIGHT  MODERATE  SEVERE
9. Landscape position: Backslope
10. Vegetation: Apple orchard, non-wetland grasses & shrubs
11. Indicate approximate location of property lines and roadways.
12. Additional comments, site constraints or additional information regarding site: \_\_\_\_\_

**Certification**  
 The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: *[Signature]* License #D4098      Part B prepared by: *[Signature]* License #D4098

**DO NOT WRITE IN THIS SPACE**

**Witnessed Soil Evaluation Decision:**      Concur       Inconclusive       Disclaim

**Unwitnessed Soil Evaluations Decision:**      Accept       Inconclusive       Disclaim

Wet Season Determination required       Additional Field Review Required

Explanation: TH1 INCONCLUSIVE  
TH2 - CONCUR 30" ESBLWT

\_\_\_\_\_  
 Signature Authorized Agent

4/7/23  
 Date



**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**  
 Department of Environmental Management  
 Office of Water Resources  
 Onsite Wastewater Treatment Systems Program



**Site Evaluation Form**  
**Part A – Soil Profile Description**      Application Number 2332-0114

Property Owner: Sheleen M. Clarke  
 Property Location: 852 Broad Rock Rd, South Kingstown, Rhode Island  
 Date of Test Hole: February 16, 2023  
 Soil Evaluator: Amber K. Hardy, M.S.      License Number: D4098  
 Weather: Cloudy, 65°      Shaded: Yes  No       Time: 11:00 am

TH 3 Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox	Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab. S. Contr.				
Ap	0 - 8	A	S	10YR 3/2	-	-	VFSL	1 M GR	VFR	5
Bw1	8 - 24	C	W	7.5YR 4/4	-	-	SIL	1 M SBK	VFR	5
Bw2	24 - 32	A	W	10YR 4/4	7.5YR 6/6 2.5Y 6/2	@30 C, 5, P @33 C, 5, P	SIL	1 M SBK	VFR	5
2Cd	42 - 108+	-	-	2.5Y 3/2	-	-	COBSL	1 TK PL	FI	8M
TH 4 Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox	Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab. S. Contr.				
Ap	0 - 8	A	S	10YR 4/3	-	-	VFSL	1 M GR	VFR	5
Bw	8 - 30	A	W	7.5YR 4/4	-	-	SIL	1 M SBK	VFR	5
2Cd	30 - 102+	-	-	2.5Y 3/2	2.5Y 6/2	@36 F, 3, D	GRSL	1 TK PL	FI	8M

TH\_3      Soil Class G / A      Total Depth 108      Impervious/Limiting Layer Depth none (og)      GW Seepage Depth none      SHWT 30 (og)

TH\_4      Soil Class G / A      Total Depth 102      Impervious/Limiting Layer Depth none (og)      GW Seepage Depth none      SHWT 30 (og)

Comments: Depletions below the indicated depths only in SIL material, not in sandy material. Cd layers had fewer roots than overlying silty material. Cd material close to the boundary between SL and LS with lenses of white sand. Cd platy structure was weak and occurred inconsistently throughout the site.





**Part B**

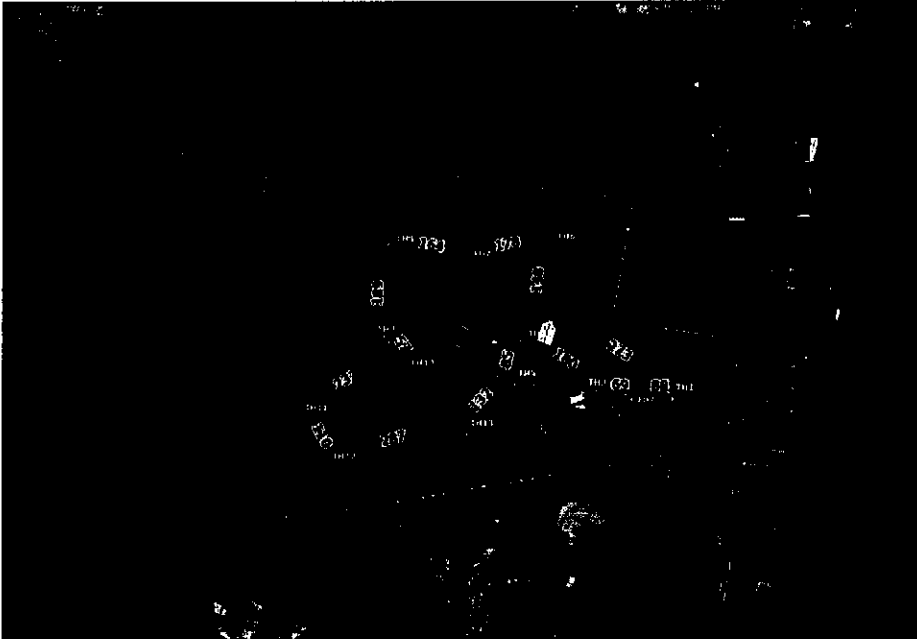
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**\*OFFSETS MUST BE SHOWN**

**Key:**

-  Approximate location of test holes
-  Approximate location of bedrock test holes
-  Estimated gradient and direction of slope
-  Approximate direction of due north



Bedrock THs	
TH	Depth

1. Relief and Slope: 3 – 5%
2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. NO  YES
3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. NO  YES
4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. NO  YES
5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. NO  YES
6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 6.42? NO  YES
7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. NO  YES
8. Site's potential for flooding or ponding: NONE  SLIGHT  MODERATE  SEVERE
9. Landscape position: Backslope
10. Vegetation: Apple orchard, non-wetland grasses & shrubs, mixed deciduous woodland (Quercus alba)
11. Indicate approximate location of property lines and roadways.
12. Additional comments, site constraints or additional information regarding site: \_\_\_\_\_

**Certification**

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: *[Signature]* License #D4098      Part B prepared by: *[Signature]* License # D4098

**DO NOT WRITE IN THIS SPACE**

**Witnessed Soil Evaluation Decision:** Concur  Inconclusive  Disclaim

**Unwitnessed Soil Evaluations Decision:** Accept  Inconclusive  Disclaim

Wet Season Determination required  Additional Field Review Required

Explanation: \_\_\_\_\_

\_\_\_\_\_  
 Signature Authorized Agent      Date 4/7/23



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment Systems Program



Site Evaluation Form
Part A - Soil Profile Description

Application Number 2332-0114

Property Owner: Sheleen M. Clarke

Property Location: 852 Broad Rock Rd, South Kingstown, Rhode Island

Date of Test Hole: February 16, 2023

Soil Evaluator: Amber K. Hardy, M.S.

License Number: D4098

Weather: Cloudy, 65°

Shaded: Yes [ ] No [X] Time: 11:00 am

Table with 11 columns: TH 5/6 Horizon, Depth, Horizon Boundaries (Dist, Topo), Soil Colors (Matrix, Re-Dox Features), Re-Dox (Ab. S. Contr.), Texture, Structure, Consistence, Soil Category. Contains data for TH 5 and TH 6 horizons.

TH 5 Soil Class G/A Total Depth 102 Impervious/Limiting Layer Depth none (og) GW Seepage Depth none SHWT 24 (og)

TH 6 Soil Class G/A Total Depth 102 Impervious/Limiting Layer Depth none (og) GW Seepage Depth none SHWT 30 (og)

Comments: Depletions occurred below the indicated depths only in the SIL material, not in sandy material. Cd layers had fewer roots than overlying silty material. Cd

material was close to the boundary between SL and LS with lenses of white sand. Cd platy structure was weak and occurred inconsistently throughout the site.





**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**  
 Department of Environmental Management  
 Office of Water Resources  
 Onsite Wastewater Treatment Systems Program



**Site Evaluation Form**  
**Part A – Soil Profile Description**      Application Number 2332-0114

Property Owner: Sheleen M. Clarke  
 Property Location: 852 Broad Rock Rd, South Kingstown, Rhode Island  
 Date of Test Hole: February 16, 2023  
 Soil Evaluator: Amber K. Hardy, M.S.      License Number: D4098  
 Weather: Cloudy, 65°      Shaded: Yes  No  Time: 11:00 am

TH 7 Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox	Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab. S. Contr.				
Ap	0 - 7	A	S	10YR 4/3	-	-	VFSL	1 M GR	VFR	5
Bw	7 - 26	C	W	7.5YR 4/4	-	-	SIL	1 M SBK	VFR	5
Bg	22 - 34	A	W	2.5Y 6/2	-	-	SIL	1 M SBK	VFR	5
2Cd	34 - 102+	-	-	2.5Y 5/2	-	-	GRSL	0 MA	FI	8M
TH 8 Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox	Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab. S. Contr.				
Ap	0 - 10	A	S	10YR 3/2	-	-	VFSL	1 M GR	VFR	5
Bw	10 - 40	A	W	10YR 5/4	-	-	SIL	1 M SBK	VFR	5
Bg	40 - 48	A	W	2.5Y 6/2	7.5YR 6/6	C, 4, P	SIL	1 M SBK	VFR	5
2Cd	46 - 102+	-	-	2.5Y 3/2	-	-	GRSL	0 MA	FI	8M

TH 5    Soil Class G / A    Total Depth 102    Impervious/Limiting Layer Depth none (og) GW Seepage Depth none    SHWT 26 (og)

TH 6    Soil Class G / A    Total Depth 102    Impervious/Limiting Layer Depth none (og) GW Seepage Depth none    SHWT 24 (og)

Comments: Depletions occurred below the indicated depths only in the SIL material, not in sandy material. Cd layers had fewer roots than overlying silty material. Cd

material was close to the boundary between SL and LS with lenses of white sand. Cd platy structure was weak and occurred inconsistently throughout the site.

**Part B**





**Site Evaluation – to be completed by Soil Evaluator or Class II or III Designer**

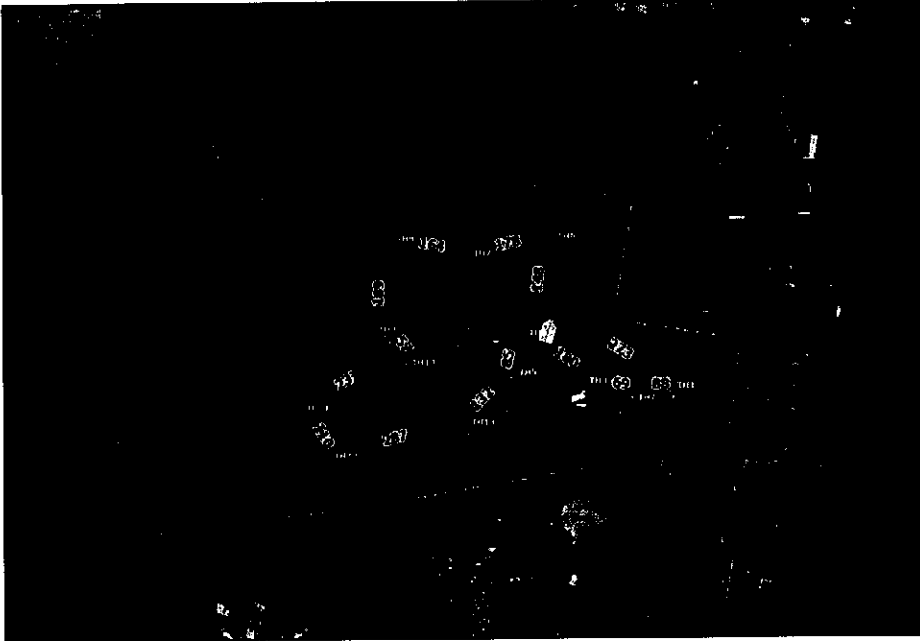
**Please use the area below to locate:**

1. Test holes and bedrock test holes,
2. Approximate direction of due north,
3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.\*

**\*OFFSETS MUST BE SHOWN**

**Key:**

-  Approximate location of test holes
-  Approximate location of bedrock test holes
-  Estimated gradient and direction of slope
-  Approximate direction of due north



Bedrock THs	
TH	Depth

1. Relief and Slope: 3 - 5%
2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. NO  YES
3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. NO  YES
4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. NO  YES
5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. NO  YES
6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 6.42? NO  YES
7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. NO  YES
8. Site's potential for flooding or ponding: NONE  SLIGHT  MODERATE  SEVERE
9. Landscape position: Backslope
10. Vegetation: mixed deciduous woodland (Acer rubrum)
11. Indicate approximate location of property lines and roadways.
12. Additional comments, site constraints or additional information regarding site: \_\_\_\_\_

**Certification**

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: *[Signature]* License # D4098 Part B prepared by: *[Signature]* License # D4098

**DO NOT WRITE IN THIS SPACE**

**Witnessed Soil Evaluation Decision:** Concur  Inconclusive  Disclaim

**Unwitnessed Soil Evaluations Decision:** Accept  Inconclusive  Disclaim

Wet Season Determination required  Additional Field Review Required

Explanation: \_\_\_\_\_

\_\_\_\_\_  
Signature Authorized Agent

4/7/23  
Date



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment Systems Program



Site Evaluation Form
Part A - Soil Profile Description

Application Number 2332-0114

Property Owner: Sheleen M. Clarke

Property Location: 852 Broad Rock Rd, South Kingstown, Rhode Island

Date of Test Hole: February 17, 2023

Soil Evaluator: Amber K. Hardy, M.S. License Number: D4098

Weather: Rain, 55°F Shaded: Yes [ ] No [X] Time: 11:00 am

Table with 11 columns: TH 9 Horizon, Depth, Horizon Boundaries (Dist, Topo), Soil Colors (Matrix, Re-Dox Features), Re-Dox (Ab. S. Contr.), Texture, Structure, Consistence, Soil Category. Rows include Ap, Bw1, Bw2, 2Cd horizons for both TH 9 and TH 10.

TH 9 Soil Class G/A Total Depth 96 Impervious/Limiting Layer Depth none (og) GW Seepage Depth none SHWT 36 (og)

TH 10 Soil Class G/A Total Depth 96 Impervious/Limiting Layer Depth none (og) GW Seepage Depth none SHWT 36 (og)

Comments: Roots decreased or stopped below 36" in these holes. Cd platy structure was weak and occurred inconsistently throughout the site. Cd layers had lenses of white sand that was OSG/Lo in combination with the material that was 0 MA or PL and firm.





**Part B**

**Site Evaluation** – to be completed by Soil Evaluator or Class II or III Designer

**Please use the area below to locate:**

1. Test holes and bedrock test holes,
  2. Approximate direction of due north,
  3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.\*
- \*OFFSETS MUST BE SHOWN**

**Key:**

-  Approximate location of test holes
-  Approximate location of bedrock test holes
-  Estimated gradient and direction of slope
-  Approximate direction of due north



Bedrock THs	
TH	Depth

1. Relief and Slope: 5 - 8%
2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. NO  YES
3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. NO  YES
4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. NO  YES
5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. NO  YES
6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 6.42? NO  YES
7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. NO  YES
8. Site's potential for flooding or ponding: NONE  SLIGHT  MODERATE  SEVERE
9. Landscape position: Backslope
10. Vegetation: mixed deciduous woodland (Acer rubrum)
11. Indicate approximate location of property lines and roadways.
12. Additional comments, site constraints or additional information regarding site: \_\_\_\_\_

**Certification**

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: *Subramanyam* Signature License #D4098 Part B prepared by: *Subramanyam* Signature License # D4098

**DO NOT WRITE IN THIS SPACE**

**Witnessed Soil Evaluation Decision:** Concur  Inconclusive  Disclaim

**Unwitnessed Soil Evaluations Decision:** Accept  Inconclusive  Disclaim

Wet Season Determination required  Additional Field Review Required

Explanation: \_\_\_\_\_

\_\_\_\_\_  
Signature Authorized Agent

4/7/23  
Date



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment Systems Program



Site Evaluation Form
Part A - Soil Profile Description

Application Number 2332-0114

Property Owner: Sheleen M. Clarke

Property Location: 852 Broad Rock Rd, South Kingstown, Rhode Island

Date of Test Hole: February 17, 2023

Soil Evaluator: Amber K. Hardy, M.S.

License Number: D4098

Weather: Rain, 55°F

Shaded: Yes [ ] No [X] Time: 11:00 am

Table with 11 columns: TH Horizon, Depth, Horizon Boundaries (Dist, Topo), Soil Colors (Matrix, Re-Dox Features), Re-Dox (Ab. S. Contr.), Texture, Structure, Consistence, Soil Category. Contains data for TH 11 and TH 12 horizons.

TH 11 Soil Class G/A Total Depth 96 Impervious/Limiting Layer Depth none (og) GW Seepage Depth none SHWT 30 (og)

TH 12 Soil Class G/A Total Depth 96 Impervious/Limiting Layer Depth none (og) GW Seepage Depth none SHWT 24 (og)

Comments: Cd platy structure was weak and occurred inconsistently throughout the site. Cd layers had lenses of white sand that was OSG/Lo in combination with the material that was 0 MA or PL and firm.

**Part B**

Site Evaluation – to be completed by Soil Evaluator or Class II or III Designer

**Please use the area below to locate:**

1. Test holes and bedrock test holes,
2. Approximate direction of due north,
3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.\*

**\*OFFSETS MUST BE SHOWN**

**Key:**

- Approximate location of test holes
- Approximate location of bedrock test holes
- $x\%$  Estimated gradient and direction of slope
- Approximate direction of due north



Bedrock THs	
TH	Depth

1. Relief and Slope: 5 - 8%
2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. NO  YES
3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. NO  YES
4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. NO  YES
5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. NO  YES
6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 6.42? NO  YES
7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. NO  YES
8. Site's potential for flooding or ponding: NONE  SLIGHT  MODERATE  SEVERE
9. Landscape position: Backslope
10. Vegetation: mixed deciduous woodland (Acer rubrum)
11. Indicate approximate location of property lines and roadways.
12. Additional comments, site constraints or additional information regarding site: \_\_\_\_\_

**Certification**  
 The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: [Signature] License #D4098      Part B prepared by: [Signature] License # D4098

**DO NOT WRITE IN THIS SPACE**

**Witnessed Soil Evaluation Decision:**      Concur       Inconclusive       Disclaim

**Unwitnessed Soil Evaluations Decision:**      Accept       Inconclusive       Disclaim

Wet Season Determination required       Additional Field Review Required

Explanation: \_\_\_\_\_

\_\_\_\_\_  
 Signature Authorized Agent

\_\_\_\_\_  
 Date 4/7/23



**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**  
 Department of Environmental Management  
 Office of Water Resources  
 Onsite Wastewater Treatment Systems Program



**Site Evaluation Form**  
**Part A – Soil Profile Description**      Application Number 2332-0114

Property Owner: Sheleen M. Clarke  
 Property Location: 852 Broad Rock Rd, South Kingstown, Rhode Island  
 Date of Test Hole: February 17, 2023  
 Soil Evaluator: Amber K. Hardy, M.S.      License Number: D4098  
 Weather: Rain, 55°F      Shaded: Yes  No  Time: 11:00 am

TH 13 Horizon	Depth	Horizon Boundaries		Soil Colors		Re-Dox	Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab. S. Contr.				
Ap	0 - 6	A	S	10YR 3/2	-	-	VFSL	1 M GR	VFR	5
Bw1	6 - 10	C	W	7.5YR 4/4	-	-	BoSIL	1 M SBK	VFR	5M
Bw2	10 - 34	A	W	10YR 5/4	7.5YR 6/6	@24 C, 3, P	BoSIL	1 M SBK	VFR	5M
Bg	34 - 46	A	W	2.5Y 6/2	7.5YR 6/6	C, 4, P	BoSIL	1 M SBK	VFR	5M
2Cd	46 - 96+	-	-	2.5Y 5/3	-	-	GRLS	0 MA	FI	8M

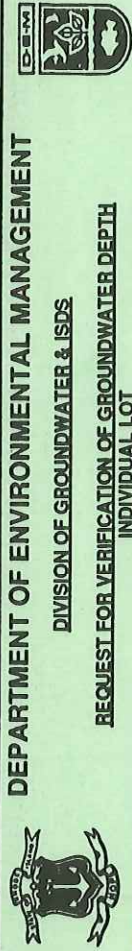
TH 13 Soil Class G / A Total Depth 96 Impervious/Limiting Layer Depth none (og) GW Seepage Depth none SHWT 24 (og)

TH 14 Soil Class \_\_\_\_\_ Total Depth \_\_\_\_\_ Impervious/Limiting Layer Depth \_\_\_\_\_ (og) GW Seepage Depth \_\_\_\_\_ SHWT \_\_\_\_\_ (og)

Comments: Cd platy structure was weak and occurred inconsistently throughout the site. Cd layers had lenses of white sand that was OSG/Lo in combination with the material that was 0 MA or PL and firm.



FOR OFFICE USE ONLY  
 APPLICATION NUMBER 2330.0114 APPLICATION DATE 03/24/23 AMT. 600.00 CK. NO. 2024 CD



**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

DIVISION OF GROUNDWATER & ISDS

**REQUEST FOR VERIFICATION OF GROUNDWATER DEPTH**  
 INDIVIDUAL LOT

TOWN SOUTH KINGSTOWN ADDRESS 852 BEAD ROCK ROAD POLE NO. \_\_\_\_\_  
 PLAT NUMBER 33 ASSESSORS RECORDED  LOT NUMBER 24 LOT SIZE 16.5 ARE THERE WETLANDS ON THIS SITE? YES  NO   
 OWNER'S NAME LAST CLARKE FIRST SHELEEN INIT \_\_\_\_\_  
 MAILING ADDRESS 96 DUCK COVE RD NORTH KINGSTOWN RI 02882 CITY/TOWN \_\_\_\_\_ ZIP CODE \_\_\_\_\_

**SOIL DESCRIPTION BY STRATA - SEE REVERSE SIDE FOR CODES AND INSTRUCTIONS**

DEPTH	0 TO	TO	TO
SOIL TEXTURE	SEE ATTACHED SOIL EVALUATION FORMS		
DENSITY			
DEPTH	TO	TO	DEPTH IMPERVIOUS
SOIL TEXTURE			
DENSITY			
DATE HOLE EXCAVATED			

**SOIL DESCRIPTION BY STRATA - SEE REVERSE SIDE FOR CODES AND INSTRUCTIONS**

DEPTH	0 TO	TO	TO
SOIL TEXTURE	Environmental Management		
DENSITY			
DEPTH	TO	TO	DEPTH IMPERVIOUS
SOIL TEXTURE	MAY 21 2022		
DENSITY			
DATE HOLE EXCAVATED	Water Resources		

**MULTIPLE READINGS**

TEST HOLE NUMBER	DATE:	DATE:	DATE:
SEE ATTACHED FORM			

**DESIGNER'S RECOMMENDED WATER TABLE DESIGN DEPTH**

TEST HOLE SEE ATTACHED FORM FT. FORM IN.  
 TEST HOLE \_\_\_\_\_ FT. \_\_\_\_\_ IN.

**SITE HISTORY**

- TO YOUR KNOWLEDGE, HAVE THERE BEEN PREVIOUS SUBMISSIONS FOR WATER TABLE VERIFICATION AND/OR AN ISDS APPLICATION AT THIS SITE? YES  NO   
 PREVIOUS WATER TABLE NUMBER MM DEPTH \_\_\_\_\_  
 PREVIOUS ISDS APPLICATION NUMBER MM
- HAS FILL BEEN PLACED ON THIS SITE? YES  NO   
 IF YES, DEPTH \_\_\_\_\_
- ARE THERE SUBDRAINS AT THIS SITE? YES  NO   
 IF YES, SHOW EXACT LOCATION AND SUBMIT MULTIPLE READINGS THROUGH ENTIRE WET SEASON.

**CERTIFICATION BY DESIGNER**

I, TIMOTHY BLAHN OF COMMONWEALTH ENGINEERS, TITLE ENGINEER, DO HEREBY CERTIFY THAT THE INFORMATION ABOVE AND ATTACHED HERETO WERE DETERMINED ACCORDING TO THE PROCEDURES PRESCRIBED IN "RULES AND REGULATIONS ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF INDIVIDUAL SEWAGE DISPOSAL SYSTEM", THAT THE FINDINGS ARE TRUE AND ACCURATE AND THAT I HAVE BEEN AUTHORIZED BY THE OWNER(S) TO CONDUCT THESE NECESSARY FIELD INVESTIGATIONS AND SUBMIT THIS REQUEST.  
 DESIGNER'S SIGNATURE \_\_\_\_\_ DATE 3/20/23

**FOR OFFICE USE ONLY**

VERIFIED  ACCEPTED \_\_\_\_\_ DISCLAIMED \_\_\_\_\_  
 WETLANDS DETERMINATION ADVISED PRIOR TO SUBMISSION OF ISDS SYSTEM DESIGN.  
 REMARKS/NECESSARY ACTION TH1=93" TH2=94" TH3=91" TH4=93"  
TH8=79" TH9=85" TH10=83" TH11=67" TH12=67"  
TH13=73" TH45=85" TH6=88" TH7=83"  
 APPROVED WATER TABLE DESIGN DEPTH: TEST HOLE \_\_\_\_\_ FT. \_\_\_\_\_ IN.  
 TEST HOLE \_\_\_\_\_ FT. \_\_\_\_\_ IN.  
 DATE 4/6/23 ISDS STAFF \_\_\_\_\_

**THIS GROUNDWATER TABLE VERIFICATION DOES NOT CONSTITUTE FINAL APPROVAL OR DENIAL OF THE SUITABILITY OF THIS SITE FOR AN ISDS SYSTEM. THIS DECISION DOES NOT AUTHORIZE YOU TO OFFER THE PROPERTY FOR SALE AS A BUILDABLE LOT UNDER RI GL 23-19.5.**

## Additional Wet Season Monitoring Data

OWTS Application No. 2332-0114

Site information

Street name 852 Broad Rock Road, South Kingstown

Plat/Lot AP 33 LOT 24

Owner name Sheleen Clarke

<i>TEST HOLE NO.</i>	<i>DATE</i> <i>3/4/2023</i>	<i>DATE</i> <i>3/14/2023</i>	<i>DATE</i> <i>3/20/2023</i>	<i>DESIGNER'S/SOIL EVALUATOR'S DETERMINATION: SHWT Depth</i>
1	110" dry	110" dry	110" dry	93"
2	111" dry	111" dry	111" dry	94"
3	108" dry	108" dry	108" dry	91"
4	110" dry	110" dry	110" dry	93"
5	102" dry	102" dry	102" dry	85"
6	105" dry	105" dry	105" dry	88"
7	104" dry	97"	100"	83"
8	96" dry	96" dry	96" dry	79"
9	102" dry	102" dry	102" dry	85"
10	100" dry	100" dry	100" dry	83"
11	84" dry	84" dry	84" dry	67"
12	84" dry	84" dry	84" dry	67"
13	90" dry	90" dry	90" dry	73"

Note: RIDEM GWT adjustment factor on 3/20/23 for west bay is 17".

Preparer's Name (print): Timothy Behan

Signature:  Designer License Number D3040

Date: March 21, 2023

**This form must be completed and submitted to the Department along with the 4-part Verification of Groundwater form no later than April 1.**

# Appendix D

# National Flood Hazard Layer FIRMMette



71°29'29"W 41°28'26"N



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>

GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **3/1/2023 at 11:59 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# Appendix E

**Patrick Grant**  
**Superintendent**  
**Veolia Water Rhode**  
Island 10 High St,  
Suite K Wakefield,  
RI 02879 TEL  
401-228-5912

**VEOLIA**

August 24, 2023

Timothy Behan, P.E.  
Commonwealth Engineers & Consultants, Inc.  
400 Smith Street  
Providence, RI 02908

*Re: Water Availability at Broad Rock Road, Plat 33, Lot 24*

Dear Mr. Behan,

This letter is to inform you that water service is available at the above referenced location on **Broad Rock Road Plat 33, Lot 24** from the **Veolia Water Rhode Island (VWRI) system**.

Please contact me at the phone number above if you have any questions.

Respectfully,

**Patrick Grant**

## Information Required for Willingness to Serve

Date: August 24, 2023

Project Name: Broad Rock Road 19 lot subdivision

Project Address (Street Name/Town): Broad Rock Road, S.K.

Brief Project Description: 19 lot residential subdivision

Size and Length of Main: 8" main, 1,300+/- feet

Number of Hydrants: 2 (to be determined by fire marshal)

Number of Domestic Services: 19

Number of Fire Services: 0

Number of Irrigation services: TBD

Commercial (Type and Number Square Feet): N/A

Residential (Number of Units and Number of Bedrooms per Unit): 19 units, 3 bedrooms/unit

Contact Name: Steven Clarke

Contact Address: 257 WICKFORD CT, NORTH KINGSTOWN, RI 02852

Contact Number: 401-529-4690

Contact Email: sclarke4477RI@gmail.com

### Projected Demand Summary (if more than one building, attach a Project Demand Summary Table):

1. Domestic Average Daily Demand (gpd): 3,278 (gpm): 2.28
2. Domestic Maximum Daily Demand (gpd): 6,555 (gpm): 4.55
3. Domestic Peak Hourly Demand (gph): 779 (gpm): 13.0
4. Lawn Irrigation Demand (gpd): TBD (gpm):
5. Required Fire Hydrant Flows (gpm): 1,000 (TBD)
6. Required Fire Sprinkler System Flows (gpm): N/A

Additional Comments: We are at the 'Master Plan' stage so  
all numbers above are subject to change by planning process.

### Additional Requirements:

- Attach a detailed project description including detailed project demand calculations and back-up information supporting all project demand calculations.
- Attach a copy of site plan calling out the block and lots and local vicinity with elevations in NGVD 1929, if elevations are not in NGVD 1929, please provide conversion factor. (elev. are NGVD 88 on plan,
- This form and backup calculations to be signed and sealed by a P.E. El.100 NAVD88 = 100.91 NGVD 29)

Project Description:

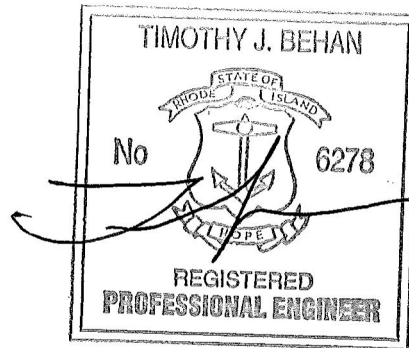
The proposed project is a 19 lot single family residential development which will be served by public water and onsite wastewater treatment systems. The proposed road providing access to the lots will be private and maintained by an HOA.

Water Demand Calculations:

Average Daily Demand =  $MDD / 2 = 3,278 \text{ gal/day}$

Maximum Daily Demand =  $19 \text{ units} \times 3 \text{ beds/unit} \times 115 \text{ gal/bed/day}$   
=  $6,555 \text{ gal/day}$

Peak Hour Demand =  $ADD \times 5.7 / 24 \text{ hours/day} = 779 \text{ gal/hour}$



# Appendix F

a. Village at Broad Rock – Proposed Development

The Village at Broad Rock development proposal includes nineteen single family house lots. This subdivision is designed as a Flexible Design Residential Project, in accordance with Article IV of the Town's Subdivision Rules and Regulations. As proposed the 1242 Ft. roadway, and associated storm drainage and utilities, will be privately maintained by a Home Owners Association.

This proposed subdivision was designed utilizing the guidelines as described in Section IV. A Flexible Design Residential Projects. As described below, the design process was considered in determining the layout of the proposed streets, house lots and open space.

- a. Understanding the Site – The site was surveyed, and an existing conditions plan was prepared identifying the significant site features. In addition, the site was walked and visually inventoried during the design process.
- b. Evaluating Site Context – The site context was evaluated to include the adjacent land uses, the river and adjacent wetland was identified and flagged in the field.
- c. Designating the Open Space – As required, the open space was designated to protect the most sensitive resources including the 200' River Buffer Zone, the adjacent properties and to provide access to all the homeowners in the development. The required open space is 7.44 acres, the project as designed proposes 7.82 acres of open space.
- d. Location of Development Areas – After the open space was identified the building sites and other built amenities were delineated.

b. Anticipated Population

According to the U.S. Census Bureau, the population of South Kingstown in April 2020 was 31,931. There were also 10,790 households. The average household size was 2.45. Therefore, it is anticipated that a population of approximately 47 individuals would reside in the subdivision.

c. Anticipated School-age Population

As of 2021 the South Kingstown School District had a student population of 2736 students servicing 10,790 households. This results in a density of .3 students per average South Kingstown household. Therefore, it is anticipated that approximately 10 school age children would be put into the system.

Given the recent decline in enrollment it is assumed that these students would be accepted into the system with no financial impact.

d. Anticipated Fiscal Impact

It is anticipated that the proposed subdivision will consist of 16 market rate housing, which would be assessed at approximately \$600,000 and three affordable housing units assessed at \$300,000 each.

The total assessment would be approximately \$10,500,000. The present structure and land are assessed at \$ 430,000, which would create a betterment of \$10,070,000. Given the current tax rates(\$11.05/\$1,000 assessed value), it should be anticipated an increase in tax revenue of approximately \$122,000.

The maintenance of the roadway and the drainage system will be the responsibility of the Home Owners Association.

e. Comprehensive Plan - Housing

As the Planning Board is well aware, the Town of South Kingstown and Rhode Island as a whole, suffers from a severe housing shortage that is forcing the “best and the brightest” of future generations to look for housing and jobs outside the state of Rhode Island.

In recent months the lack of housing is constantly in the headlines:

January 20, 2022: The Providence Journal highlights the critical lack of supply of the R.I. housing market.

September 21, 2022, the Rhode Island Association of Realtors published a report entitled *“No relief to inventory shortage in R.I.’s housing market”*. This report highlighted the need for increase in housing at all levels.

September 27, 2022, The Providence Journal published an article *“Where did all the houses go? RI faces a crisis in housing”*.

In January 2023, during the state of the state address Governor Dan McKee outlined the critical need for housing in Rhode Island and directed us to his administration’s report RI2030. This report “Rhode Island 2030, Charting a course for the future of the Ocean State” outlines the need for housing at all levels. This plan states that Rhode Island must “Increase housing production overall”, and specifically outlines the following strategies.

- Establish a statewide plan for increasing housing production and meeting the needs of Rhode Islanders in all 39 cities and towns, drawing upon stakeholder and community input.
- Work with interested cities and towns across the state to create a more favorable planning, zoning, and development environment.

- Invest in infrastructure so that more and denser housing can be built where there is demand while paying particular attention to current and future transit locations and economic development plans.
- Support builders in conducting workforce development and help them find and train the carpenters, plumbers, electricians, and others who will build the housing we need.
- Work with builders and educational institutions to invest in the construction workforce by creating internship opportunities for those interested in going into the trades.

We believe that this proposal will provide critically needed housing opportunities in the Town of South Kingstown. By providing this housing we will be servicing a need and potentially opening up existing housing for families across the town.