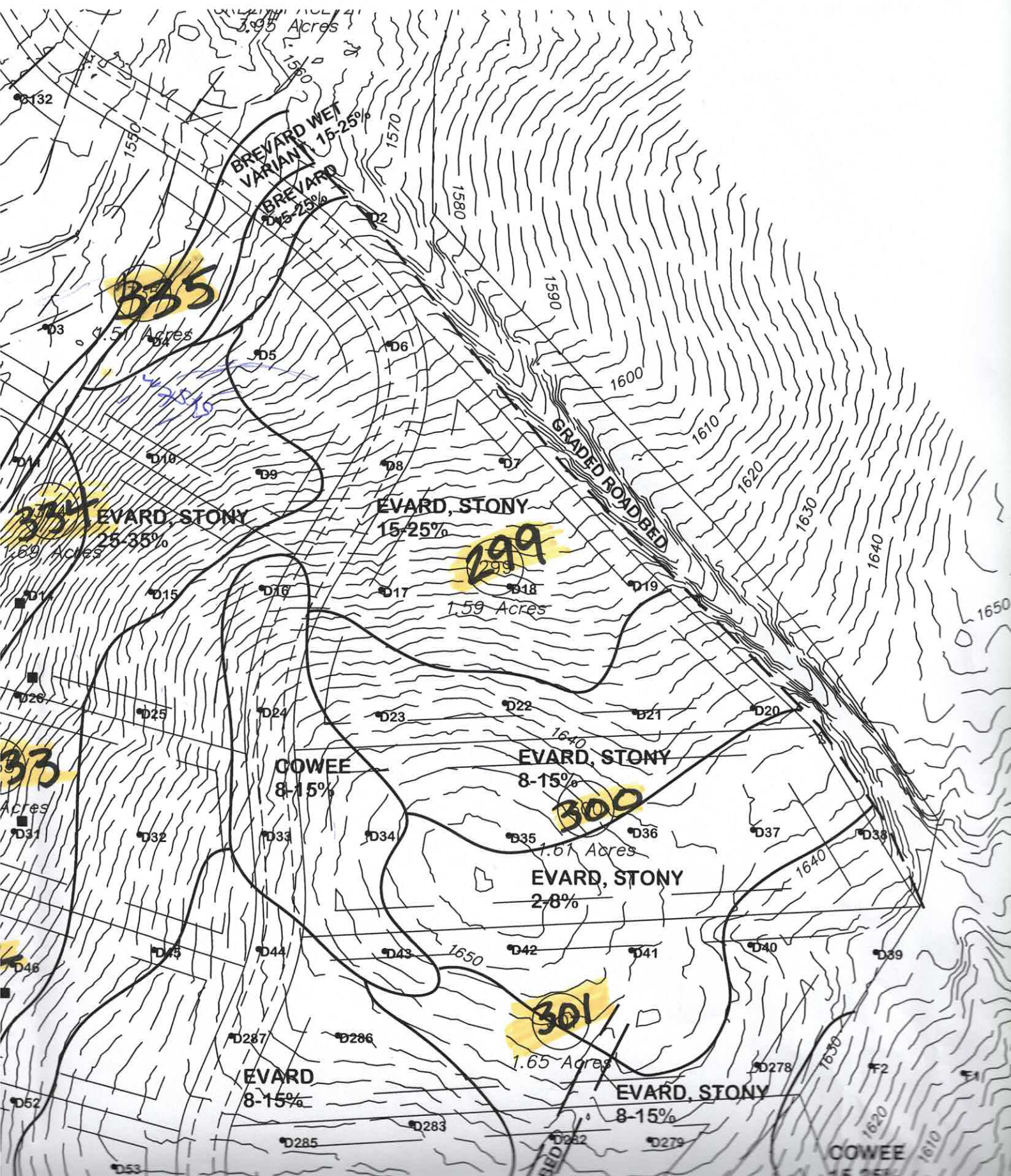




PHASE 7

SOIL UNIT	PRED. SLOPE GRADIENT %	DEPTH TO BEDROCK* (in)	DEPTH TO HIGH WATER TABLE INDICATORS (in)	INSTALLATION ZONE (in)	ESTIMATED PERC RATE (in/in)	SOIL SUITABILITY CODE
Brevard	8-15	>60	>60	18-30	65	A
	15-25	>60	>60	18-30	65	A
	25-35	>60	>60	24-36	65	A
	35-45	>60	>60	24-36	65	A/G
	>45	>60	>60	NR	NR	GI
Brevard Wet V.	2-8	>60	50-60	18-30	65	F
	8-15	>60	50-60	18-30	65	F
	15-25	>60	50-60	18-30	65	F
	25-35	>60	50-60	24-36	65	F
	>45	>60	50-60	NR	NR	F
Chaluge	2-15	>50	15-25	NR	NR	F
Colvard	2-8	>50	40-50	18-24**	65	PI
	8-15	20-40	>40	8-20**	60	H
Cowee	8-15	20-40	>40	8-20**	60	H
	15-25	20-40	>40	NR	NR	HI/G
	25-35	20-40	>40	NR	NR	HI/G
	35-45	20-40	>40	NR	NR	HI/GI
	>45	20-40	>40	NR	NR	GI
Cullum/Evard	8-15	>72	>72	48-60	45	A
	15-25	>72	>72	48-60	45	A
	25-35	>72	>72	48-60	45	A
	35-45	>72	>72	48-60	45	A/G
	>45	>72	>72	NR	NR	GI
Evard	2-8	>72	>72	36-48	45	A
	8-15	>72	>72	36-48	45	A
	15-25	>72	>72	36-48	45	A
	25-35	>72	>72	36-48	45	A
	35-45	>72	>72	36-60	45	A/G
Evard, Stony	>45	>72	>72	NR	NR	GI
	2-8	52->72	>72	28-42	60	R
	8-15	52->72	>72	28-42	60	R
	15-25	52->72	>72	28-42	60	R
	25-35	52->72	>72	28-42	60	R
Fannin	35-45	52->72	>72	30-42	60	R/G
	>45	52->72	>72	NR	NR	GI
	8-15	>72	>72	30-42	60	A
	15-25	>72	>72	30-42	60	A
	>45	>72	>72	40-52	60	A
Hayesville	2-8	>72	>72	40-52	60	A
	8-15	>72	>72	40-52	60	A
	15-25	>72	>72	40-52	60	A
	25-35	>72	>72	40-52	60	A
	>45	>72	>72	40-52	60	A
Hayesville, Stony	2-8	65->72	>72	30-42	65	R
	8-15	65->72	>72	30-42	65	R
	15-25	65->72	>72	30-42	65	R
	25-35	65->72	>72	36-48	65	R
	>45	65->72	>72	NR	NR	F
Willard	2-35	>50	36-50	NR	NR	F
Thurmont	2-35	>50	40-50	NR	NR	F

* = Depth to bedrock as determined by hand auger. Some areas may be stony rather than actual bedrock.

** = Advanced treatment required

NR = Not recommended for septic system installation

NOTES:

- 1) If the area proposed for septic system construction is graded or filled one foot or more, this report and the recommendations herein are void. Soils that have water table indicators or bedrock within six feet of the surface should not be graded. Grading may render such soils as unsuitable for conventional or alternative septic installation.
- 2) Soil borings were located using a Trimble global positioning system. The boundary, topography, and proposed layout was provided by Chastain & Associates. This firm assumes no responsibility for the accuracy of the boundary or topographic information. Refer to the official survey for all applicable notations.
- 3) This investigation was limited to the designated Phase 7 of the Vineyards subdivision. This study was confined to proposed lot area and mostly excluded common/green space areas.
- 4) We advanced 552 borings in a study area of 121 acres.
- 5) We have used the "Stony" designation for some areas of Evard and Hayesville series soils. This indicates areas/mapping units where stones or moderately hard weathered rock was observed at depths slightly less than six feet sporadically throughout the mapped area. There was no consistency or concentration of stones or moderate depths to weathered rock that justified a separate mapping. Most areas are likely stony and have no bedrock limitation within six feet and can accommodate conventional septic installation without concern for rock limitations. However, there may be small, minor areas that may require minor installation adjustments on site. Conversely, areas of Evard, Fannin, and Hayesville without the "Stony" designation are mapping units where stones or weathered rock limitations likely do not exist, but there could be very isolated areas of excessive stones. Such is the nature of high elevation Blue Ridge soils where isolated areas of stones, boulders, or moderately deep soils may be present.
- 6) Upland drains are shown as "Drain". These are narrow upland drainage areas that have little or no deposition of sediments. Rather, these are typically deeply eroded areas of periodic surface drainage. In some areas, we have exaggerated the drain head to encompass areas that may be excessively saturated during rain events and should be avoided for septic installation.
- 7) The springs and creeks were located by others. For the purposes of this soil investigation reporting, we have shown 100-foot spring buffers and 50-foot creek buffers per the GADPH Manual for On-Site Sewage Management systems. There may be additional buffers that apply to State Waters that are not shown here.
- 8) Ensure that any area proposed for septic system installation, including future reserves area, is properly landscaped such that surface water drainage and ponding does not occur. This includes ensuring that runoff from driveway, hardscape and gutters is diverted away from any component of the septic system.

SOIL SUITABILITY CODES:

- A) These soils are considered suitable for installation of a conventional septic system and should function satisfactorily given proper design, installation and maintenance. There could be very small, minor areas of excessive stones or small boulders in isolated areas.
- F) These soils are located in a landscape that susceptible to surface and subsurface drainage as well as prolonged periods of saturation. These soils are not considered suitable for septic system installation. However, with further study, there may be very minor areas outside of the drainage area and with depths to saturation that could be considered for an alternative system.
- G) These soils are located on slopes greater than 35 percent. Such soils should be considered for deeper installation or site modifications such as benching to reduce the risk of effluent seepage from the slope. Consideration of deep installation will likely require backhoe test pits. The recommended installation depth here corresponds to benching type. Note that areas where shallow rock was observed may require test pits to determine actual depth to bedrock and the feasibility of deeper installation or benching. The Gilmer County Environmental Health Department should provide guidance.
- H) These soils are located on slopes greater than 45 percent. While such soils could be considered for deeper installation or site modifications such as benching to reduce the risk of effluent seepage from the slope, consideration should be made to the actual feasibility of such approach given equipment limitations on excessively steep slopes. Note that areas where shallow rock was observed may require test pits to determine actual depth to bedrock and the feasibility of deeper installation or benching. The Gilmer County Environmental Health Department should provide guidance.
- I) These soils were observed to have hard restrictive rock at depths too shallow to accommodate a conventional septic system. These soils can be considered for a shallow installation of a drain field type that can accommodate a very shallow installation depth with advanced treatment. If a drip emitter system is proposed, a loading rate of 0.20 gpd is recommended. Backhoe test pits can be excavated to determine if deeper soils exist to possibly accommodate a conventional septic system installation.
- II) These soils were observed to have hard restrictive rock at depths too shallow to accommodate a septic system. Based upon depth to rock and steepness of slope, these soils cannot accommodate a shallow installation if any type of system. Backhoe test pits can be excavated to determine if deeper soils exist to possibly accommodate some type of septic system installation.
- F) These soils were observed to have seasonal high water table indicators at a depth sufficient to accommodate a conventional septic system installed at a moderately shallow depth. The installation depth range listed must be maintained.
- PI) These soils were observed to have seasonal high water table indicators at a depth sufficient to accommodate a conventional type septic system with advanced treatment. The installation depth range listed must be maintained. If a drip emitter system is proposed, a loading rate of 0.15 gpd/sqft is recommended.
- R) These soils are considered suitable for installation of a conventional septic system and should function satisfactorily given proper design, installation and maintenance. Note these soils are stony or are moderately deep to potentially restrictive bedrock. Stones and small boulders should be expected in minor areas requiring installation adjustments/modifications on site.