

**COUNTY OF ALBEMARLE
PLANNING STAFF REPORT SUMMARY**

Project Name: ZMA202000007 RST Residences	Staff: Andy Reitelbach, Senior Planner
Planning Commission Public Hearing: March 2, 2021	Board of Supervisors Public Hearing: TBD
Owner: Seminole Trail LLC, c/o RST Development LLC	Applicant: RST Development, LLC
Acreage: 19.51 acres	Rezone from: R-1 Residential to PRD, Planned Residential Development
TMPs: 04600000010800; 04600000010900	Location: 2883 and 2885 Seminole Trail; and 1374 Ridgewood Circle
School Districts: Albemarle High, Sutherland Middle, Hollymead Elementary	By-right use: 19 residential units
Magisterial Districts: Rivanna	Proffers: No
Proposal: Rezone a total of approximately 19.51 acres from the R1 Zoning District, which allows residential uses at densities up to 1 unit/acre, to Planned Residential Development (PRD), which allows residential (maximum of 35 units/acre) with limited commercial uses. An associated request for a Special Exception (SE202000003) to waive the setback requirements for the proposed buildings, under §18-4.19.5.	Requested # of Dwelling Units: A maximum of 370 units is proposed, with 254 multifamily apartments and 108 townhouse units proposed, at a net density of 19.89 units/acre, and a gross density of 18.97 units/acre.
DA (Development Area) – Community of Hollymead in the Places29 Master Plan area	Comp. Plan Designation: Urban Density Residential – residential (6.01 – 34 units/acre); supporting uses such as religious institutions, schools, commercial, office, and service uses; and Privately-Owned Open Space – privately owned recreational amenities and open space; floodplains, steep slopes, wetlands, and other environmental features.
Character of Property: The property consists of two parcels. A motel is located on one of the parcels. The Ridgewood mobile home community is located on the other parcel.	Use of Surrounding Properties: Forest Lakes and Ashland neighborhoods to the east and southeast, with a mix of single-family attached and detached dwellings; Brookhill development to the south across Ashwood Blvd.; forested properties to the west across U.S. Route 29 and to the north.
Affordable Housing: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	AMI (Area Median Income): 80% of AMI as determined by U.S. Dept. of Housing & Urban Development

<p>Factors Favorable:</p> <ol style="list-style-type: none"> 1. The request is consistent with the uses and density recommended by the Places29 Master Plan. 2. The proposal provides at least 50% affordable housing, more than the minimum recommended by the comprehensive plan, which is 15%. 3. The request proposes to provide additional pedestrian connections in the area, including parallel to Ashwood Boulevard, connecting to the existing multi-use path along Route 29. 4. The request at least partially addresses the twelve neighborhood model principles. 	<p>Factors Unfavorable:</p> <ol style="list-style-type: none"> 1. The proposed development would result in additional student enrollment at area schools, including Albemarle High, which is already over-capacity. 2. The proposed height of some of the buildings is inconsistent with the recommendations of the Places29 master plan. 3. Although the minimum amount of open space area has been provided, the PRD recommends an improved level of amenities, which cannot be analyzed at this time with the information available. 4. Most of the neighborhood model principles are only partially met and could be strengthened.
<p>RECOMMENDATION: At this time, staff is unable to recommend approval of ZMA202000007 RST Residences.</p> <p>In addition, at this time, staff is unable to recommend approval of the one (1) special exception request SE202000003 (Sec. 18-4.19.5) for the requirement of a setback of at least 15 feet for each story that exceeds 40 feet, or three stories, whichever is less, as identified in the Special Exception staff report, Attachment 7.</p>	

STAFF PERSON:
PLANNING COMMISSION:
BOARD OF SUPERVISORS:

Andy Reitelbach
March 2, 2021
TBD

ZMA 202000007 RST Residences

PETITION

PROJECT: ZMA202000007 RST Residences

MAGISTERIAL DISTRICT: Rivanna

TAX MAP/PARCEL(S): 04600000010800; 04600000010900

LOCATION: 2883 and 2885 Seminole Trail; and 1374 Ridgewood Circle

PROPOSAL: Rezone two parcels to allow a maximum of 370 residential units.

PETITION: Request to rezone a total of approximately 19.51 acres from the R1 Zoning District, which allows residential uses at densities up to 1 unit/acre, to Planned Residential Development (PRD), which allows residential (maximum of 35 units/acre) with limited commercial uses. A maximum of 370 units is proposed, with 254 multifamily apartments and 108 townhouse units proposed, at a net density of 19.89 units/acre, and a gross density of 18.97 units/acre. An associated request for a Special Exception (SE202000003) to waive the stepback requirements for the proposed buildings, under §18-4.19.5.

ZONING: R-1 Residential – 1 unit/acre

OVERLAY DISTRICT(S): AIA – Airport Impact Area, EC – Entrance Corridor, Steep Slopes – Managed, and Steep Slopes – Preserved

PROFFERS: No

COMPREHENSIVE PLAN: Urban Density Residential – residential (6.01 – 34 units/acre); supporting uses such as religious institutions, schools, commercial, office, and service uses; and Privately-Owned Open Space – privately owned recreational amenities and open space; floodplains, steep slopes, wetlands, and other environmental features; in the Community of Hollymead in the Places29 Master Plan area.

CHARACTER OF THE AREA

The subject property includes two parcels of land near the northeast corner of the intersection of U.S. Route 29 and Ashwood Boulevard and totals approximately 19.51 acres (see Attachment 1 – Location Map). There is a motel currently located on one parcel, visible along Route 29. The Ridgewood mobile home community is on the second parcel, situated behind the motel parcel. There is also a cemetery located on the property, close to Route 29. Both parcels are currently zoned R-1 Residential, which permits one dwelling unit per acre (see Attachment 2 – Zoning Map). The property is located on an Entrance Corridor (Route 29) and within the Airport Impact Area overlay district. There are also areas of both managed and preserved steep slopes on the property.

The neighboring area is largely residential, along with several forested areas. To the east and southeast is the Ashland Townhomes community and larger Forest Lakes neighborhood. This area consists of a mix of single-family attached and detached houses and is zoned PUD, Planned Unit Development. To the north of the subject property are several forested parcels zoned R-1 Residential. Across Route 29 to the west are additional forested parcels. These properties are zoned RA, Rural Areas.

Directly to the south of the subject property is a parcel zoned PUD that is owned by the Commonwealth of Virginia. This parcel was acquired by the Commonwealth as part of the Route 29 improvement project. It consists of a small rectangular area directly adjacent to the intersection of Ashwood Blvd. and Route 29, as well as a small sliver of land that extends along Ashwood Blvd. from Route 29 to the Ashland Townhomes open space parcel. This sliver of land owned by the

Commonwealth prevents the subject property from having any actual frontage along the County-owned right-of-way of Ashwood Blvd.

Across Ashwood Blvd. to the south is the Brookhill mixed-use development, which is currently under construction. Brookhill is zoned NMD, Neighborhood Model District. There is also a vacant parcel on the southeast corner of Ashwood Blvd. and Route 29, zoned PUD, that is owned by Albemarle County. This parcel is currently vacant; however, Archer Avenue, a north-south road proposed with the Brookhill development, will eventually be constructed on a portion of this property to provide Brookhill with access to Ashwood Blvd.

SPECIFICS OF THE PROPOSAL

The applicant is proposing to rezone two parcels of land totaling approximately 19.51 acres from R-1 Residential to PRD, Planned Residential Development, which allows residential uses up to a maximum density of 35 units per acre, along with limited commercial uses. The applicant requests this rezoning to allow for a maximum of 370 dwelling units on the property, for a gross density of approximately 18.97 units per acre and a net density of approximately 19.89 units per acre. (See Attachment 3 – Project Narrative.) As shown on the application plan submitted for this project, which is a requirement of the PRD, the applicant is proposing 254 multi-family units located in five buildings. There are also 108 townhouse-style units proposed by the applicant as “two-over-two” units in a total of eight structures. These are four-story structures with a two-story townhouse situated on top of another two-story townhouse. (See Attachment 4 – Application Plan.) The applicant has indicated that these units will be sold as condominiums, while the multi-family apartments will be rental units.

Without the rezoning, the applicant could develop approximately 19 dwelling units, at a density of approximately one unit per acre. Additional residential units could potentially be constructed if the property owner were to choose to pursue the various bonus factors that the Zoning Ordinance permits. Using a combination of bonus factors, the maximum number of additional units that could potentially be approved by-right is 50% of the base zoning. This calculation could result in approximately 29 units total that could be constructed. However, it is important to note that bonus factors have different requirements, including some discretionary approvals, so it may not be possible for the property to utilize all potential bonus factors.

The five multi-family apartment buildings are proposed for the west and middle portions of the property, with the central two buildings – which are more like two wings of a single building connected by a plaza and breezeway – depicted as five stories on the application plan. The other three apartment buildings are depicted as three stories. The eight two-over-two townhouse structures are situated in the east of the parcel, near the existing adjacent dwellings in the Ashland Townhomes community and greater Forest Lakes neighborhood. These structures would be four stories. The applicant has also submitted a Special Exception application to waive the requirement for buildings of four stories or more to have a 15-ft. setback. This special exception request and the staff analysis of it are discussed in more detail in the attached documents (see Attachments 6 and 7).

The applicant proposes a minimum of 25% of open space and recreational amenities, as required by the ordinance. This open space includes a 100-ft. buffer along Route 29 and a 20-ft. buffer along the perimeter of the other sides of the property. Other areas for recreation and open space are scattered around the property, with sites considered for tot lots, a dog park along the eastern property line, and a pool and recreation building in the center of the site. The applicant has indicated that a substitution request for recreational amenities will likely be pursued at the site planning stage once the final amenity choices are determined. Such a substitution request is permitted at the site planning stage and would be reviewed by staff, with approval allowed to be granted administratively by the Planning

Director if staff determines that the proposed recreational amenities are of equal or better quality than what is required by the ordinance.

The application plan provides more information on proposed circulation routes in and around the property, conceptual grading and stormwater management, and conceptual layout of green and amenity space. The plan also includes proposed street sections, aerial renderings of the site, and other site views.

As a proposed multi-family apartment and townhouse-condo community, the internal access to the dwelling units is largely proposed to be travel-ways, with no dedicated right-of-way but with public access easements. However, the applicant is proposing an internal road (identified as Road C on the application plan) as a private street, with a public access easement. This street would connect from Ashwood Boulevard, directly across from the proposed Archer Avenue in Brookhill, and continue north to the subject property's northern property line. A public access easement is also proposed to be granted at the northern end of this private road to allow for further extension of the street if the parcels to the north were to develop in the future.

This private road C is proposed to cross a small sliver of land currently owned by the Commonwealth of Virginia that is situated between the applicant's property and the Ashwood Boulevard public right-of-way. The entrance onto Ashwood from private road C would be located on this property. VDOT has provided a letter (see Attachment 8) explaining the history of this parcel and that department's process for converting it to right-of-way.

As stated on the cover sheet of the application plan, the applicant is proposing to designate 50% of the total residential dwelling units constructed as affordable housing, at 80% of area median income (AMI) as determined by the U.S. Department of Housing and Urban Development.

APPLICANT'S JUSTIFICATION FOR THE REQUEST

The applicant has provided a narrative with justification for the request (see Attachment 3), as well as a justification narrative for the special exception request (see Attachment 6).

COMMUNITY MEETING and COMMUNITY MEMBER INPUT

A virtual community meeting was held for this proposal on Monday, July 20, 2020, at a regularly scheduled meeting of the Places29-North Community Advisory Committee (CAC). This meeting was conducted using Zoom and PublicInput.com. At the virtual meeting, questions were asked by community and CAC members both by phone and by submitting questions through the chat function of the meeting program. Staff has also received numerous emails and phone calls from community members in the months since the community meeting. (See Attachment 10 for a compilation of written comments provided by community members or other interested parties.)

There have been many concerns raised by community members, either at the July meeting or in subsequent correspondence, about this project, which are summarized below.

Traffic Impacts:

1. Impact that this project would have on the traffic along Ashwood Boulevard, one of the major entrances into the Forest Lakes neighborhood, including the intersection of Ashwood and Route 29.
2. Additional impact that this project would have on the traffic along Route 29, especially commuter traffic to and from Charlottesville and the University of Virginia.
3. Concern about the distribution of traffic in the area since the development is proposing travel-ways and private roads.

4. This development, along with other nearby developments recently constructed or approved, could create greater congestion along this corridor. Concern was expressed that the nearby roads already cannot handle the existing traffic.

Schools:

1. Concern has been expressed over the number of students generated by the proposed housing development and how those additional students would have an impact on the area schools and potential overcrowding in the schools.

Design of the Development/Site/Buildings:

1. Concerns about the heights of the proposed buildings, especially the four-story “two-over-two” townhouse structures situated along the eastern property line adjacent to the two-story Ashland Townhomes community.
2. The visibility of the development from the Route 29 corridor, as it would be situated on a small hill.

Housing:

1. Concern about displacement of the residents of the existing mobile home community.
2. The proposed density of the development is too great for the area.

PLANNING AND ZONING HISTORY

There have been no previous actions taken for the property that composes the proposed RST Residences project.

COMPREHENSIVE PLAN

The subject property is located within the Hollymead Community of the Places29 Master Plan. This Master Plan calls for the parcels that compose the RST Residences property to be developed in accordance with the Urban Density Residential and Privately-Owned Open Space land use classifications (see map inset on the following page; two subject properties highlighted):



Urban Density Residential (orange): This designation calls for primary uses of multi-family and single family residential, including two or more housing types. Secondary uses include retail, office, and commercial uses that support the neighborhood and are encouraged to be located within centers. The density range recommended for Urban Density Residential is 6.01-34 dwelling units per acre. The maximum building height proposed for this designation is four stories, or 45 feet.

This land use designation encompasses most of the subject property, except for a small strip of land along Route 29. The project proposes a maximum of 370 dwelling units on the property, which would produce a gross density of 18.97 units/acre and net density, once the areas of preserved steep slopes are subtracted, of 19.89 units/acre. This proposed density falls approximately in the middle of the recommended density range for Urban Density Residential of 6.01-34 units/acre. The entire project is proposed for residential, with accompanying open space and recreational amenities, which is consistent with the master plan's recommendation for a primary use of residential in this area. The project also proposes two different housing types, including multi-family rental apartments and "two-over-two" townhouse-style units to be sold as condominiums. This proposal meets the recommendation for there to be at least two housing types within a development.

Most of the buildings proposed for this development meet the master plan's recommendation for a height of four stories. The two-over-two structures would be four stories. Three of the apartment buildings are depicted in renderings in the application plan as three stories. However, the central multi-family structure, consisting of two buildings (or two wings of one building connected by a breezeway and plaza) situated in an "L-shape," does not meet the recommendation of the master plan. This building, as depicted on sheet 7 of the application plan, is proposed to be five stories. This height exceeds the recommendation of the master plan for residential buildings in the Urban Density Residential land use designation, which is a maximum height of four stories.

Privately-Owned Open Space / Environmental Features (green): This designation is for open space areas that are owned and managed by private or semi-private entities, such as homeowners' associations. These areas include passive and active recreational amenities and environmental features that should be preserved, such as floodplains, stream buffers, and steep slopes.

The portion of the subject property that is designated for this use is a strip of land along Route 29, where a vegetative buffer is recommended to screen the property from the Entrance Corridor and to provide a transition with the property to the west across Route 29, which is zoned RA, Rural Areas. The master plan recommends a mix of forested buffer and landscaped development frontage. However, at the recommendation of ARB staff, the applicant has proposed a 100-ft. forested buffer along the entire length of the Route 29 frontage to provide screening and to maintain consistency, as one travels along Route 29, with the forested buffer adjacent to the Brookhill development, which lies to the south of this proposed development.

The Neighborhood Model: Staff has reviewed the proposal against the Neighborhood Model Principles. The comprehensive analysis of the Neighborhood Model Principles can be found in Attachment 5.

Affordable Housing: The County's 2015 Comprehensive Plan has a chapter on housing (Chapter 9), which provides strategies to achieve its goal of "housing [that] will be safe, decent, and sanitary; available to all income and age levels; located primarily in the Development Areas; and available equally to all current and future County residents." Objective 6 is for the provision of affordable housing options for low-to-moderate income residents of Albemarle County and persons who work within the County who wish to reside there. The Comprehensive Plan includes several strategies to achieve this objective. Strategy 6b is to "continue to ensure that at a minimum, 15% of all units developed under rezoning and special use permits are affordable, as defined by the County's Office of Housing, or a comparable contribution is made to achieve the affordable housing goals of the County."

This rezoning proposal includes a maximum of 370 dwelling units. On the cover sheet of the application plan, the applicant has included a note about affordable housing that states "at least 50% of the total number of dwelling units shall be affordable housing units which may be for-sale units or rental units, or a combination thereof, in the owner's discretion..." If the full number of 370 dwelling units were constructed, then at least 185 of those units would be designated as affordable. The applicant has also included on the application plan the parameters regarding the designation of affordable dwelling units in this project. The County's Principal Planner for Housing has reviewed this section of the plan on affordable housing and has expressed no objections to the proposal or the language used.

ZONING ORDINANCE REQUIREMENTS

Relationship between the application and the intent and purposes of the requested zoning district:

The purpose and intent of the Planned Residential Development (PRD) zoning district is to:

- Encourage sensitivity toward the natural characteristics of the site and toward impact on the surrounding area in land development.
- Promote economical and efficient land use, an improved level of amenities, appropriate and harmonious physical development, and creative design consistent with the best interest of the county and the area in which it is located.

The PRD is intended to be a flexible zoning district to allow a variety of development for residential purposes and uses ancillary thereto, with open space serving varied uses such as recreation,

protection of areas sensitive to development, buffering between dissimilar uses, and preservation of agricultural activity.

The Places29 Master Plan calls for the parcels included in this rezoning to be developed as Urban Density Residential. The proposal will provide the residential uses recommended by the master plan. With the PRD zoning district, the project can achieve the higher density recommended by the master plan, of between 6.01 and 34 units/acre. The project proposes a net density of 19.89 units/acre. The PRD district is recommended for developments over 15 units per acre to allow for greater flexibility and consideration in design. This density level is consistent with the master plan recommendations, whereas the current zoning of R-1 Residential, at one unit per acre, is much lower than what is recommended.

In encouraging sensitivity toward the natural characteristics of the site, the applicant has proposed including all areas of preserved steep slopes within the designated open space areas, ensuring those areas are protected from development. The applicant is also proposing a 100-ft. buffer along Route 29, acting as a transition with the RA zoned properties to the west across the highway. 20-ft. buffers are proposed around the rest of the perimeter of the site, providing some buffering and transition with the other surrounding uses, which are either residential or forested parcels.

However, as mentioned previously, some of the buildings that are proposed are higher than the four stories recommended by the master plan. This height in excess of what is recommended by the master plan may overshadow the adjacent existing residential uses, which are mostly two-story single-family attached dwelling units. The recommended height for residential buildings is four stories, or 45 feet. The requested zoning district, however, permits heights up to 65 feet. The applicant has not specified a specific proposed height for the buildings on the application plan; however, the two central buildings are depicted as being five stories, which would be permitted by the requested zoning district but is taller than the recommendation of the master plan.

A substitution request has not been submitted at this time for recreational amenities, so staff cannot comment on the final proposed level and design of amenities in the development. However, on the application plan, in addition to several areas designated for tot lots, the applicant has also depicted a pool area in the center of the development and a dog park on the outer edge of the development, adjacent to the existing Ashland townhouse community. The central recreational amenity area, where the pool is proposed, is somewhat enclosed, encircled by the proposed five-story central buildings on two sides, and a retaining wall on the third side, along private road C. This design does not promote an easily accessible central amenity for the development.

Other areas of open space and recreational amenities are largely scattered on the outskirts of the development, including the dog park located behind the proposed two-over-two units, beside the Ashland Townhome community. There are several areas of asphalt and tot lot recreation areas around the site to accommodate tot lots, basketball courts, or other amenities. The largest of these, at over 10,000 square feet total, is at the south end of the property, near the Ashwood Blvd. entrance. It is separated from the majority of the residential buildings by a large parking lot; however, the applicant is proposing sidewalks along the private road and the travelways to provide pedestrian access around the site for residents.

Anticipated impact on public facilities and services:

Streets:

The proposed development is located at the intersection of Route 29 and Ashwood Boulevard, which is one of the main entrances into the Forest Lakes neighborhood. Route 29 is also the main north-

south route for traveling in and through Albemarle County. Over the last several years, VDOT has completed a major project widening Route 29 to three lanes in each direction.

The applicant provided a Traffic Impact Analysis, or TIA (see Attachment 9), which was reviewed by the County's Transportation Planner and VDOT. VDOT and County Transportation Planning both expressed no objections to the proposed development based on its expected impacts on the transportation system in the surrounding area. A right-in/right-out only entrance is proposed for Route 29 to prevent a wide range of turning movements. A turn lane will be also constructed for this entrance. On Route 29 southbound, the TIA recommended lengthening the left-turn lane onto Ashwood Boulevard to accommodate the increased traffic. The applicant is proposing to install this expanded turn lane, as depicted on the application plan.

The main entrance into the site is proposed for Ashwood Boulevard, which will be opposite the eventual Archer Avenue entrance into Brookhill. This Ashwood entrance will allow for the full range of movements. A left turn lane on Ashwood eastbound is also proposed to be constructed for traffic turning into the RST development.

The internal roads will largely be designated as travel-ways, which are privately owned and maintained, through the apartment community. There is one private street proposed, Private Road C, which will extend from the Ashwood entrance, opposite the future Archer Avenue, to the northern property line. The applicant proposes to place a public access easement over all these travel-ways and streets to allow for the public to use them as an alternative way out of Forest Lakes. A 50-ft. access easement is also proposed to be granted at the north end of the property, allowing for future inter-parcel connection between Road C and the parcels to the north. This easement would promote conformance with the master plan's transportation map, which recommends a connection of some sort – either bike, pedestrian, or vehicular – extending from the subject property to the north.

Public streets are preferred in the development areas; however, private streets are permitted for developments that consist of all multi-family or attached units, as is proposed with this project.

The applicant is proposing internal sidewalks, along with a sidewalk or multi-use path parallel to Ashwood Boulevard. No transit stop is provided, as transit service does not currently exist in this area. However, the Thomas Jefferson Planning District Commission is in the early stages of studying potential expansion of CAT bus service farther north up Route 29 to the Hollymead area.

Concern has been expressed about the parcel of land owned by the Commonwealth of Virginia that lies between the subject property and Ashwood Blvd., and over which a small segment of the project's entrance and Road C would cross. VDOT has provided a letter to the County (see Attachment 8) that explains the history of this parcel and how the Commonwealth treats this parcel.

Because this parcel is neither owned by the applicant nor designated as part of the Ashwood right-of-way at this time, the applicant will need to work with VDOT, as indicated in the attached letter, to ensure that access across that property is permitted for this proposed development, as an access point onto Ashwood Boulevard has not been assured at this time. The access must be assured in the form of a legal instrument, such as a plat, deed, or dedication of right-of-way, where the Commonwealth grants the developer legal access across the property, conveys ownership of the property, or dedicates it for inclusion as right-of-way according to their processes. An entrance permit granted at the site planning stage by VDOT will not be sufficient for approval of an entrance to this site.

This situation must be addressed prior to final approval to ensure that the applicant has adequate access off of Ashwood Blvd. as proposed on the application plan.

Schools:

Students living in this area would attend Hollymead Elementary School, Sutherland Middle School, and Albemarle High School. The school division is cognizant that the Hollymead/29-North area continues to be a growing area, with several new developments under construction and others recently approved, such as North Pointe and Brookhill. Albemarle County Public Schools has provided its standard student generation calculator that estimates how many students will be generated at each school level by housing type. The table below specifies the yield of students generated at each school level should the subject parcels be built out as proposed in the application plan. It is important to note that the yield rates are a county-wide average and do not take into account age of building, number of bedrooms, or value of the property.

The proposed maximum of 370 dwelling units is a significant number of units that could produce many additional students for Albemarle County Public Schools. Albemarle High is currently over-capacity, and this proposed development will add more students to that school. In addition, with the expected 47 elementary-age students to be generated by this development, the capacity level for Hollymead Elementary will nearly be reached, with a remaining capacity of approximately 10 students, based on the school system's estimated enrollment for the 2020-2021 school year. It is expected that Sutherland would still remain under capacity for at least the next several years.

Official Calculator

Dwelling Type	Elementary	Middle	High	Total
Townhomes (108 units)	0.15 (16.2)	0.06 (6.48)	0.08 (8.64)	0.29 (31.32)
Multifamily (254 units)	0.12 (30.48)	0.03 (7.62)	0.05 (12.7)	0.21 (53.34)
Total at Each Level	46.68	14.10	21.34	84.66

Source of Calculator: Albemarle County Public Schools

The numbers in parentheses are the number of students expected to be generated by each dwelling type at each school level, with the number of dwelling units of each type proposed. These numbers are based on the applicant's proposed amount of 362 dwelling units to be constructed. If the maximum of 370 units was built instead, the number of students generated would be slightly more.

It is also important to note that these totals include student numbers generated from any dwelling units that could be developed by-right or dwelling units that already exist on the property. They are not an increase over the student numbers that would be generated with any by-right development that could occur.

The school system has provided annual estimates of student enrollment at all three schools over the next ten academic years. Although both Hollymead and Sutherland currently have existing capacity for additional students, based on the school system's project enrollments over the next ten years (through the 2029-2030 school year), both of these schools would be over-capacity at the end of this period with the addition of the units from this development. (Sutherland, however, would reach a small capacity deficit by 2030 even without the units proposed from this development.) It is important to note that these capacity calculations apply only to the dwelling units proposed with this development and do not take into account the potential combined impact of other developments in these school districts and the surrounding areas.

Fire & Rescue:

ACFR has reviewed this rezoning application and has no objections at this time. Code requirements for items such as street and travel-way width, turning radius, and the necessity of secondary emergency fire access routes will be addressed at the site planning or subdivision stage, as well as other items such as adequate access and water availability. These elements will have to meet Fire-

Rescue requirements before those plans can be approved by the County. Based on the number of dwelling units proposed in the application plan, two points of access will be required. A determination that there are two available access points will occur at the site plan or subdivision stage and must be to the satisfaction of ACFR before those plans can be approved by the County.

Utilities:

This project is in the Albemarle County Service Authority (ACSA) water and sewer service jurisdictional area. ACSA and RWSA have no objections to this project at this time. A utilities construction plan will be required, subject to ACSA approval, prior to the approval of subdivision plats and/or site plans by the County at the development stage of these properties.

Anticipated impact on environmental, cultural and historic resources:

There is a known cemetery located on this property, near its frontage on Route 29 in the southwest corner. The applicant is not proposing to disturb the cemetery itself with the development of this property. The applicant plans to install a fence around the perimeter of the cemetery, as well as construct a small pedestrian path from the proposed parking lot to the cemetery for any family members or other individuals who wish to visit the site. In addition, the applicant is proposing to construct retaining walls along the north side of the cemetery. Any site development plan would be reviewed by the ARB and historic preservation planning staff to ensure the cemetery is not negatively affected by construction on the site.

There are also both managed and preserved steep slopes on the property. The applicant is not proposing to disturb the preserved slopes and has included those areas within designated open space on the site. Any disturbance of the managed slopes will be reviewed by County Engineering staff during the development phase of the project to ensure their disturbance is in compliance with the requirements of the ordinance.

In addition, there are no flood plains or water protection ordinance (WPO) buffers on these parcels. Any increase in stormwater runoff above what is currently allowed on the property will be reviewed by County Engineering staff during the development phase of the project as well. Any stormwater facilities will be designed in accordance with the Virginia Stormwater Management Program (VSMP) regulations administered by the Virginia Department of Environmental Quality (DEQ).

Anticipated impact on nearby and surrounding properties:

At the community meeting for this project and in subsequent correspondence, members of the community have expressed concerns about potential traffic issues, the impacts on schools, the height of buildings, and visibility of the development. These issues are summarized below, with staff comments in italics.

- Traffic generated by this development will cause congestion along the Route 29 corridor and problems at the intersection of Route 29 and Ashwood Boulevard and create additional delays at that intersection.

VDOT and the County's Transportation Planner have reviewed this application, along with a traffic impact analysis (TIA) that was provided. The development would increase trips and through traffic in the area, including left turns from Ashwood onto Route 29. However, the increase in traffic was not large enough to merit major improvements to the nearby road network, and neither VDOT nor the County's Transportation Planner had objections to the proposal.

- Impacts on schools.

The proposed residential units will add additional students to the area schools, including Albemarle High, which is currently over capacity. Nothing is being proposed by the applicant to mitigate the expected impacts from these additional students.

- Height of some buildings proposed for the development is not harmonious with the adjacent neighborhoods, including the four-story townhouse structures along the eastern property line, adjacent to the Ashland Townhome community, and the two central buildings, which are proposed to be five stories and situated on a hill.

The two central buildings exceed the maximum height for residential buildings as recommended in the Places29 master plan.

- Visibility of the development from the Route 29 corridor.

The applicant is proposing a 100-ft. forested buffer along Route 29 to screen the development from the highway. In addition, this site lies within the Entrance Corridor Overlay District and is subject to review by the Architectural Review Board at the site planning stage.

Public need and justification for the change:

The County's growth management policy says that new residential development should occur in the designated Development Areas, where infrastructure and services are provided, rather than in the Rural Areas. This development is within the Places29 – Community of Hollymead development area. This proposal will provide a greater density of residential development in the designated development areas, at a density that is consistent with the recommendations of the master plan. It will also help to increase the walkability along Ashwood Boulevard by providing a sidewalk or multi-use path parallel to Ashwood from the eastern end of the property to the existing multi-use path along Route 29.

SUMMARY

Staff has identified the following factors which are favorable to this request:

1. The request is consistent with the uses and density recommended by the Places29 Master Plan.
2. The proposal provides at least 50% affordable housing, more than the minimum recommended by the comprehensive plan, which is 15%.
3. The request proposes to provide additional pedestrian connections in the area, including parallel to Ashwood Boulevard, connecting to the existing multi-use path along Route 29.
4. The request at least partially addresses the twelve neighborhood model principles.

Staff has identified the following factors which are unfavorable to this request:

1. The proposed development would result in additional student enrollment at area schools, including Albemarle High, which is already over-capacity.
2. The proposed height of some of the buildings is inconsistent with the recommendations of the Places29 master plan.
3. Although the minimum amount of open space area has been provided, the PRD recommends an improved level of amenities, which cannot be analyzed at this time with the information available.
4. Most of the neighborhood model principles are only partially met and could be strengthened.

RECOMMENDATION

At this time, staff is unable to recommend approval of ZMA202000007 RST Residences.

In addition, at this time, staff is unable to recommend approval of the one (1) special exception request SE202000003 (Sec. 18-4.19.5) for the requirement of a setback of at least 15 feet for each story that exceeds 40 feet, or three stories, whichever is less, as identified in the Special Exception staff report, Attachment 7.

ATTACHMENTS

- 1 – Location Map
- 2 – Zoning Map
- 3 – Project Narrative, dated May 18, 2020; last revised October 5, 2020.
- 4 – Application Plan, dated May 18, 2020; last revised January 15, 2021.
- 5 – Staff Analysis of Application's Consistency with Neighborhood Model Principles
- 6 – Special Exception Request and Narrative, dated May 18, 2020; last revised October 5, 2020.
- 7 – Staff Report and Analysis for Special Exception Request SE202000003
- 8 – Letter from VDOT concerning Ashwood Blvd. Entrance
- 9 – Traffic Impact Analysis
- 10 – Correspondence from Community Members

Attachment 1 - ZMA2020-00007 RST Residences Location Map

Legend
(Note: Some items on map may not appear in legend)

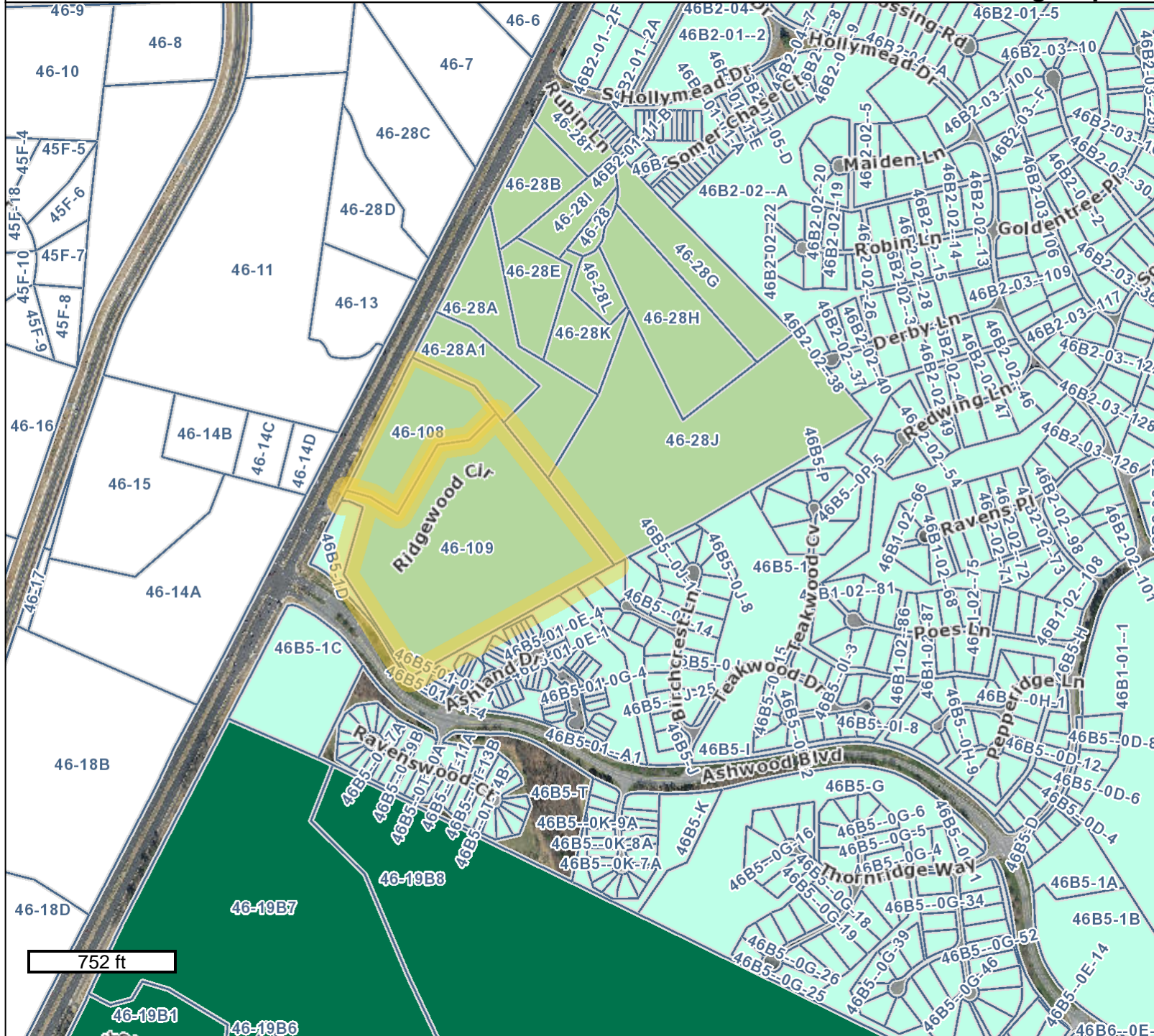
Parcel Info
□ Parcels

752 ft

GIS-Web
Geographic Data Services
www.albemarle.org/gis
(434) 296-5832

February 17, 2021

Attachment 2 - ZMA2020-00007 RST Residences Zoning Map



Legend

(Note: Some items on map may not appear in legend)

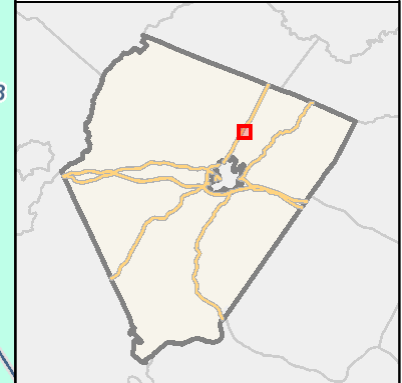
Parcel Info

Parcels

Zoning Info

Zoning Classifications

- Rural Areas
- Village Residential
- R1 Residential
- R2 Residential
- R4 Residential
- R6 Residential
- R10 Residential
- R15 Residential
- Planned Unit Development
- Planned Residential Development
- Neighborhood Model District
- Monticello Historic District
- C1 Commercial
- Commercial Office
- Highway Commercial
- Planned Development Shopping Ctr.
- Planned Development Mixed Comm.
- Downtown Crozet District
- Light Industry
- Heavy Industry
- Planned Development Industrial Par
- Town of Scottsville



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(434) 296-5832

RST Residences

Zoning Map Amendment Application Narrative

ZMA 2020-00007

Description of Proposed Project

The proposed zoning map amendment would rezone tax map parcels 04600-00-00-10800 and 04600-00-00-10900 (the “Property”), located in the Places29 Development Area, from R-1 Residential to Planned Residential Development (“PRD”), to allow for the development of a multi-family townhouse and apartment community known as RST Residences (the “Project”). The Project is proposed by Seminole Trail, LLC (the “Owner”) and RST Development, LLC (the “Developer”, and collectively, the “Applicant”). RST Residences will provide updated housing and amenities for residents of Albemarle County (the “County”).

The Project proposes a maximum of 370 residential units comprised of apartments and townhouses. The Concept Plan shown on Sheet 4 of the application package shows a total of 362 units, comprised of 254 apartments and 108 townhouse units. The Project also proposes amenities for residents, which may include a dog park and an outdoor recreation area. An application plan for the Project is enclosed showing these features.

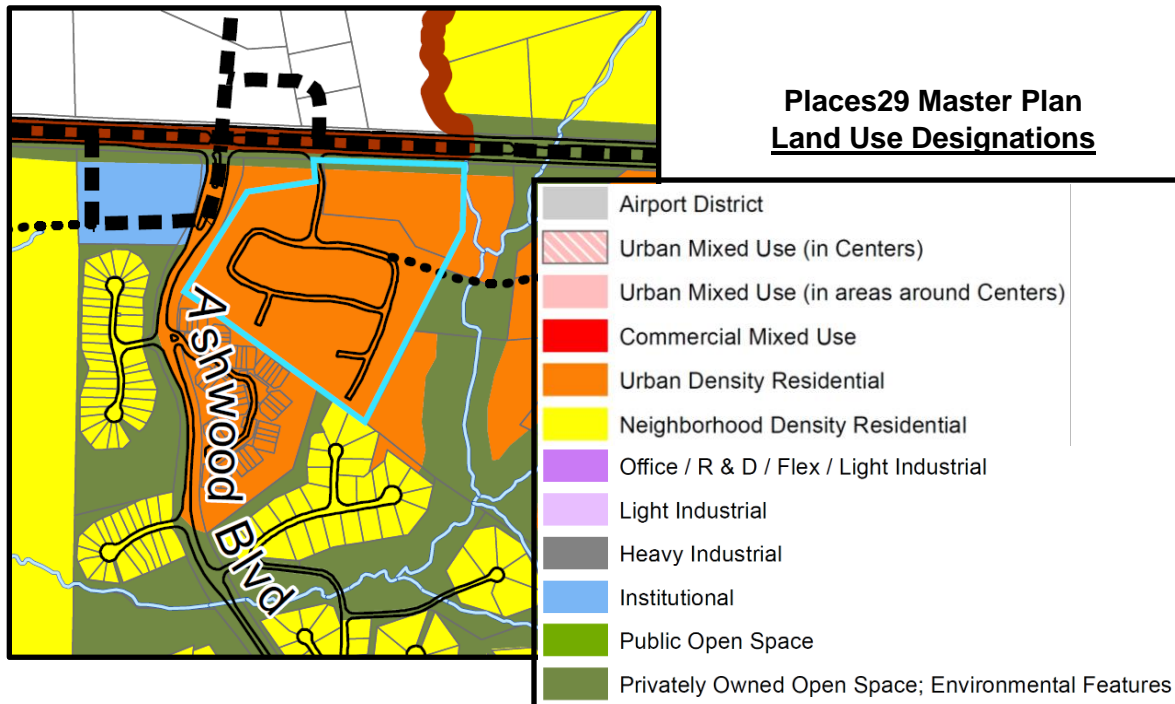
The apartments are proposed to be located in 5 buildings arranged at the Project’s center. The townhouses are proposed to be located behind the apartment buildings and are proposed as a “2-over-2” design. The 2-over-2 stacks one two-story townhouse on top of another, with a front door entrance to each unit accessed from a shared stoop on the first level of the building. The design also contains a garage and driveway for each unit that will accommodate one parking space each (providing 2 dedicated parking spots per unit).

The remaining 2-over-2 floor layout is as follows. The first level contains the living room, kitchen, and powder room for the lower unit in the stack. The second level contains the bedrooms for the lower unit. The layout for the bedrooms in the lower units varies; most lower units have a 3-bedroom layout, while some have a 2-bedroom with a home office layout. The third level contains the living room, dining room, and kitchen for the upper unit. The fourth level contains the 3 bedrooms for each upper unit. Some upper units will have access to a dedicated roof terrace (not a common area). The 2-over-2 units are offered for sale as condominiums, with owners purchasing everything from the drywall in. The rest of the building and outdoor space is common area (or limited common area such as windows, doors, or decks).

Consistency with the Comprehensive Plan

The Places29 Master Plan (the “Master Plan”) designates the Property for Urban Density Residential uses. The primary uses within the Urban Density Residential designation are “multifamily and single-family residential, including two or more housing types.” The Project meets this description.

The Urban Density Residential designation “is used in areas around Centers where multifamily housing with a gross density range between 6.01 and 34 units per acre is desired.” Places29 Master Plan, page 4-5. The Hollymead Town Center area is in the immediate vicinity of the Property, and the Project would contribute to its ongoing development. The Property is outlined on the excerpt of the Master Plan’s land use designation map shown below.



This map shows that the predominant character of the area near the Property is medium- to high-density residential uses. As shown above, most of the nearby parcels are designated for Urban Density Residential, Neighborhood Density Residential, or for Privately Owned Open Space. The sole parcel designated for Institutional uses is owned by the County. The Urban Density Residential parcel that abuts the property to the south (TMP 46B5-1D) is owned by VDOT was used in connection with the major road improvements to U.S. Route 29, which have been completed in this area. As a result, the Applicant understands that VDOT is currently evaluating whether this parcel may be offered for sale. The Applicant is in communication with VDOT regarding potentially buying the parcel, should it become available. If able to acquire the land, the Applicant would consider incorporating the parcel into the Project.

The Master Plan’s gross density range allows the Property’s 19.51 acres to be developed with at least 117 and up to 663 residential units. The existing zoning, R-1 Residential, is inconsistent with the Comprehensive Plan because it permits a gross density range between 0.97 and 1.45 dwelling units per acre, well below the desired density for this location. See Zoning Ordinance § 13.3. The Project proposes a density that would achieve the County’s desired density in this location. As noted on the cover sheet to the revised plans, the Project proposes a gross density of approximately 19 dwelling units per acre, and a net density of approximately 20 dwelling units per acre.

The Project's density also supports Objective 4 of Chapter 8 (Development Areas) of the Comprehensive Plan, recommending the "[u]se [of] Development Areas land efficiently to prevent premature expansion of the Development Areas." The Project clusters units together on the site, and includes one-, two-, and three-bedroom apartments, and attached townhouses. The Project's residential layout thus makes efficient use of Development Areas land.

Chapter 8 of the Comprehensive Plan states that housing in the Development Areas should be provided at a variety of price points, including affordable housing. In addition, Objective 4 of Chapter 9 (Housing) of the Comprehensive Plan is to "[p]rovide for a variety of housing types for all income levels and help provide for increased density in the Development Areas." The Project includes affordable housing, which will likely include both for-sale and for-rent units. At least 15 percent of all units in the Project will be affordable housing units, meeting the recommendation in the Comprehensive Plan (Strategy 6b, Chapter 9).

Places 29 Design Guidelines

The Property is located on the U.S. Route 29 Entrance Corridor. The Applicant has submitted supplemental materials to the Architectural Review Board for evaluation of the Project's potential impacts on the Entrance Corridor and conformity with the Places29 Master Plan Entrance Corridor Design Guidelines.

Places 29 Frontage Condition

Most of the Property is designated on the Places29 Master Plan Recommended Entrance Corridor Frontage Conditions Map for "Landscaped Development," which recommends a 10- to 20-foot landscaped buffer between the Project and the existing multi-use path that runs along U.S. Route 29. Relatively new tree plantings already exist on the Property in the recommended landscaped buffer area. The Applicant anticipates additional plantings in this area will be installed.

A small portion of the Property is designated for "Forested Buffer," which recommends preserving "relatively dense stands of trees" as a 30-foot buffer to screen multi-family residential uses. The Recommended Entrance Corridor Frontage Conditions Map shows the boundary between the "Landscaped Development" and "Forested Buffer" areas on the Property at roughly the same location where steep slopes adjacent to U.S. Route 29 begin. The Application Plan shows buffers around these areas, indicating that the steep slopes will not be disturbed. By not disturbing these areas, the Project satisfies the applicable "Forested Buffer" frontage condition.

To clarify the project narrative and concept plans initially submitted on May 18, 2020, and in response to comments from Architectural Review Board staff, please note that the revised plans provide for a 100-foot forested buffer along the Entrance Corridor.

Consistency with the Neighborhood Model Principles

The proposed project is consistent with the applicable Neighborhood Model Principles as follows:

Pedestrian Orientation. A multi-use path already exists along the entire frontage of the Property adjacent to the Entrance Corridor. The existing multi-use path along the frontage of the

Property provides a pedestrian connection to the existing pedestrian network surrounding the Property. Sidewalks on both sides of the entrance to the project from Route 29 will connect to the existing multi-use path. In addition, the Project proposes a separate multi-use path along Ashwood Boulevard to provide a pedestrian connection to the existing pedestrian network that currently terminates at the Forest Lake South Townhomes. Connecting to this pedestrian network will provide residents with pedestrian access to the schools and amenities at the Hollymead Town Center, approximately one mile from the Project. Sidewalk connections between buildings and amenities within the Project would also support a pedestrian orientation. It is expected that pedestrian activity will be encouraged by the location of many common amenities located in or adjacent to Building 1, and by the thoughtfully designed streetscapes throughout RST Residences.

Mixture of Uses. The Project does not introduce a mixture of uses in that the Property will be used entirely for residential uses, but the Property is in close proximity to other mixed-use properties such as the Brookhill community directly to the South, as well as the Forest Lakes Shopping Center and the Hollymead Town Center. As shown by the future land use map in the Places29 Master Plan, the Property is designated for urban density residential use to support an overall mixture of uses in and around the Hollymead Town Center. When considered in light of the Project's proximity to Hollymead Town Center, and especially its close proximity to Brookhill Town Center, we contend this principle is met.

Neighborhood Center. While the Project is not required to function as a free-standing Neighborhood Center under these guidelines, the Project includes many on-site amenities and the Property is in close, walkable distance to the Brookhill Town Center and Hollymead Town Center. Residents would be afforded many benefits by this proximity. In particular, the educational, recreational, dining, and shopping amenities that will be located within Brookhill will be a short walk (approximately ½ mile) from the Project. Besides those nearby amenities, the Project would include an outdoor amenity area with a swimming pool with a grill area for social events, in addition to other outdoor amenities such as a dog park and tot lots. All amenities would be accessible through pedestrian walkways throughout the Project, with the central amenity area to be accessible from the plaza area adjacent to Building 1 and from an additional pedestrian walkway at the intersection of "Private Road A" and "Private Road C." In light of the variety of on-site and nearby amenities at existing Neighborhood Centers, this principle is fully satisfied.

Mixture of Housing Types and Affordability. The Property has been used as a mobile home park for many years. Therefore, the Project introduces a mixture of housing types (townhomes and apartments) where such variety does not exist today. In addition, the Project contains an affordable housing component, as discussed elsewhere in this narrative. When considered in the context for the large number of single family residences nearby in Forest Lakes, Brookhill, and other nearby neighborhoods, we contend that this principle is met.

Interconnected Streets and Transportation Networks. The project proposes private streets in the areas shown on the Application Plan, which will support a system of interconnected streets and "non-street connections" to allow vehicles to access nearby locations without having to access Route 29, as expressly recommended in the Comprehensive Plan. The Project as proposed would increase the existing interconnected street network and system of non-street connections. The updated plans also show an area for a future connection on the north side of

the Property. RST Development would record an access easement to allow the public to use the private streets within the Project. This access would promote interconnected streets and would improve the existing transportation network. The Project also proposed to lengthen the southbound left turn lane from Route 29 to Ashwood Boulevard, further contributing to the improvement of the existing transportation network.

Multi-Model Transportation Opportunities. The application continues existing multi-model transportation opportunities in that residents can continue to access the Property by vehicle, on foot, or by bicycle. While the Property is not yet accessible via public transit, the #12 CAT bus provides service to the Walmart Supercenter on Hilton Heights Road, which is just over a mile and a half away, and which is connected to the Property by the existing multi-use path along U.S. Route 29. The extension of the multi-use path along the project's frontage on Ashwood Boulevard will also enhance multi-model transportation opportunities and connections to Brookhill, including the educational and recreational facilities that are proposed for that project. The Project includes extensive sidewalks that connect to the multi-use path to encourage pedestrian activity and bicycle transportation.

Parks, Recreational Amenities and Open Space. The Project proposes common recreational areas and other amenities for residents, including a dog park, an outdoor swimming pool, a fitness center, and possibly other amenities. In addition, by adding landscaping and other plantings the Project would enhance the appearance of the Property when compared to existing conditions, and expand the Open Space areas. The Project is proposed to be surrounded by buffers on all sides, and proposes additional areas to be reserved for open space.

Buildings and Spaces of Human Scale. The Project proposes buildings with articulated designs meant to break up "massing" and support the principle of buildings of human scale. Each structure on the concept plan except "Building 1" and the 2-over-2 townhouse structures are proposed to be no more than three stories, further supporting this principle. The Applicant has separately requested a special exception from the setback requirement that applies to the front of Building 1 and to the townhouses. Given that U.S. Route 29 is located 449 feet from the front of Building 1, and that no other structures are proposed between Building 1 and the public road, the requested special exception is consistent with the principle of buildings and spaces of human scale. Please refer to the updated special exception application for more information on this issue.

Relegated Parking. The Project proposes only minimal parking areas that front public roads, including the U.S. Route 29 Entrance Corridor. While some parking in these areas is proposed, the vast majority of the parking proposed is relegated behind or to the side of buildings, buffers, or recreational areas. Parking areas are expected to have limited visibility from the Entrance Corridor, especially given the distance involved, and the 100-foot forested buffer.

Redevelopment. This application involves a redevelopment of the Property of a type that is expressly recommended by the Places29 Master Plan.

Respecting Terrain and Careful Grading and Re-grading. Some grading will need to occur on the Property during construction. The Application Plan accounts for managed or preserved slopes on the Property. The Applicant will obtain all required permits and approvals that may be needed to conduct grading on the Property. The Application Plan shows that the preserved slopes

located within the Project will not be disturbed during construction, and that improvements have been carefully sited to preserve those areas.

Clear Boundaries with the Rural Area. Not applicable. The Property is not adjacent to the Rural Area.

Impacts on Public Facilities & Public Infrastructure

The Project has no negative impact on public facilities and public infrastructure. The Project would improve the public road network, in the form of a new vehicular connection to Ashwood Boulevard that aligns with proposed Archer Avenue in Brookhill. This proposed connection to Ashwood and extension to Archer would help divert congestion on Route 29 and give residents additional alternatives to reaching nearby destinations without needing to travel on Route 29. Additionally, a proposed driveway from Ashwood would help direct traffic entering or leaving the Property through the signalized intersection of Ashwood and U.S. Route 29. The Project also provides for a potential road connection to the parcel north of the Property, should it be redeveloped. While the Project proposes private roads, RST Development will grant an access easement for the public to use the private roads. Since they will be accessible to the public, the proposed private roads will improve the County's road network over existing conditions on the Property, which is currently only served by access to Route 29, and by creating and extending alternatives to travel on U.S. Route 29.

The Project also proposes a new right turn lane to access the Property from U.S. Route 29. This improvement will provide much safer access to the Property and traffic flow on U.S. Route 29 than provided by the two driveways that exist on the Property today. The proposed turn lane will be placed at a sufficient distance from the other access points to U.S. Route 29, as required by VDOT standards. In addition, the Project would extend the length of the southbound left turn lane from Route 29 to Ashwood Boulevard. In response to comments received from VDOT, the Project proposes 350 feet of storage in this turn lane, which is shown on the plans as revised October 5, 2020. This amount has been increased from the previously proposed length of 250 feet, and is greater than the existing length of 200 feet.

With regard to traffic impacts, as explained in more detail in the enclosed traffic study, the number of projected trips associated with the Project will increase over present conditions, but the effect of the increase will be lessened by the proposed access points and turn lane. Although the Project will create more trips to and from the Property, this result is consistent with the higher density residential use prescribed for the Property by the Comprehensive Plan. Also, when compared to the levels of service and wait time that are projected for the area without any development of the RST property, the level of service and wait times are nearly identical with the proposed development and implementation of the recommended improvements. As such, there are no material impacts on traffic or on the surrounding road network.

Impacts on Environmental Features

The proposed Project has no negative impacts on environmental features. Residential use of the Property would continue. Unlike the existing residential use on the Property, which is served by a private water system and septic fields, the Project will be served by the public water and sewer system, which provides much more protection of the environment. No portion of the Property

contains protected stream buffers, and the Project is carefully designed to avoid encroachment or other impacts to the preserved slopes on the Property and nearby. The Project includes extensive buffer areas that will provide space for additional vegetation.

Impacts of the Proposed Development

Parks: The Project contains a variety of recreational and other amenities for the use and benefit of the residents of the Project, several of which are shown on the Concept Plan. While the specific details of the amenities have not yet been decided, the Concept Plan shows that RST Residences will include an outdoor swimming pool, a dog park, two tot lots, and a dedicated outdoor recreational area. In addition, a grill area near the swimming pool and an indoor fitness center are envisioned. Residents will also have easy access to other nearby parks and recreational areas, and to walking trails existing and proposed nearby.

Fire & Rescue: The Project layout has been carefully designed to meet the standards for emergency vehicle access, and other fire and rescue standards.

Schools: Students living in RST Residences would be within the current school districts for Hollymead Elementary School, Sutherland Middle School, and Albemarle High School. Based on the most recent (November 11, 2019) Albemarle County Schools Capacity vs. Enrollment Projections¹, both Hollymead and Sutherland are under capacity, while Albemarle High School is over capacity. The total impact of the Project on the school system will be mitigated by the fact that approximately two thirds (254) of the units will be one- and two-bedroom multi-family (apartment) units, while 108 units are planned as two- and three-bedroom townhome units. Smaller units tend to generate fewer school children.

The County Schools provided the following matrix for estimating student counts:

OFFICIAL CALCULATOR²

Type of Dwelling Unit	Elementary	Middle	High	Total
Townhome (108)	0.15 (16)	0.06 (6)	0.08 (9)	0.29 (31)
Multi-Family (254)	0.12 (30)	0.03 (8)	0.05 (13)	0.21 (53)
	=46	=14	=22	84 total

Based on the Capacity vs. Enrollment Projections for the next ten (10) years, Hollymead and Sutherland are projected to remain under capacity, while AHS will remain over capacity. In the 2019-20 school year, Hollymead was under capacity by 52 students and Sutherland by 60 students. Further projections are as follows:

¹ Albemarle County Public Schools K-12 Enrollment Projections FY 2020/21 to FY 2029/30, dated November 2019; Capacity vs. Enrollment Projections, dated November 19, 2019.

² Provided by Rosalyn Schmitt, Chief Operating Officer, Albemarle County Public Schools, on September 25, 2018.

School	K - 1 2 Capacity	2020 -21	2021 -22	2022 -23	2023 -24	2024 -25	2025 -26	2026 -27	2027 -28	2028 -29	2029 -30
Hollymead	418	412	415	418	425	426	430	431	426	426	427
Sutherland	653	606	599	597	594	618	636	633	652	657	658
Albemarle	1,775	1928	1943	1972	2097	2116	2122	2169	2134	2164	2168

Currently, there are sixty-seven (67) trailers on the property, and only three school-aged children – one elementary, two middle school, and no high school students. Prior to acquisition by the Applicant, the Property was home to six or seven school-aged children.

While the Project would have some impact on school capacity, County Staff has noted in a recent Staff Report for another development that the “dedication of land for two new elementary schools are proffered commitments of other large developments in the Places29 Development Area. This includes a 7-acre site within Brookhill and a 12.85-acre site within North Pointe. The Brookhill development also has a proffer requiring dedication of an approximately 60-acre site along Berkmar Drive that could be used for a comprehensive public high school.” Staff Report for ZMA 2018-00018 and SP 2018-0023, Rivers Edge, Planning Commission Hearing (March 10, 2020).

The Albemarle County Public Schools *Long Range Planning Advisory Committee Recommendations*, July 11, 2019 (the “Report”) states that the new elementary school proffered as part of the Brookhill rezoning at the intersection of 29N and Polo Grounds Road is at an optimal location for growth along the 29 corridor. The Report states that this “growth will be monitored, and if capacity becomes an issue at Hollymead or other schools in the area this project should be evaluated in more detail.”

The Report states that the middle schools have combined adequate capacity and that the school division “has embarked upon a ‘center’ based strategy to address capacity issues at its three comprehensive high schools, in particular Albemarle High School.”

Affordable Housing: Affordable housing is a central feature of RST Residences. The Application Plan contains a note providing that 15% of the total dwelling units within the Project will be affordable units and the Applicant intends to offer affordable units for rent and for sale. The Applicant is working on proposals to provide a significantly higher percentage of affordable units in the Project than 15%. Both for-sale and for-rent affordable units are envisioned. The for-sale affordable units will be townhomes and the for-rent affordable units will be apartments.

Anti-Displacement Policy: The Applicant is aware that the County Housing Director and the Board of Supervisors are developing an Anti-Displacement policy for the County. The Applicant now owns the Property and has allowed the residents to continue living at the Property for a minimum of one year, so they all have as much time as possible to arrange for new housing. The Applicant and its management team are committed to working with the remaining residents, non-profit housing assistance organizations, and the County Housing Department in the coming months to assist the residence. In response to Housing Division staff comments, the Applicant will provide a written plan for relocation assistance for current residents.

Open Space: At least 25% of the Project site shall be Open Space, as noted on the Application Plan. This includes a combination of buffer areas, amenities, and the proposed dog park.

Historic Resources: The Property is adjacent to a cemetery of unknown ownership. The Project will not encroach upon the cemetery and will erect a fence around the cemetery and ensure access to the cemetery. Although staff has expressed an interest in the Applicant managing the cemetery, because it lacks the legal right to do so, that is not possible. But it will ensure that the Project does not encroach upon it, and that it respects the rights of the descendants and other family members to access the cemetery.

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LOCATION OF SITE
SEMINOLE TRAIL AND ASHWOOD BOULEVARD
ALBEMARLE COUNTY, VIRGINIA

SEMINOLE TRAIL AND ASHWOOD BOULEVARD

ALBEMARLE COUNTY, VIRGINIA



OWNER/DEVELOPER
RST DEVELOPMENT, LLC
10 EXECUTIVE BOULEVARD, SUITE
ROCKVILLE, MARYLAND 20852
CONTACT: SCOTT COPELAND
PHONE: (301) 816-4243

BOHLER //

VA@BohlerEng.com

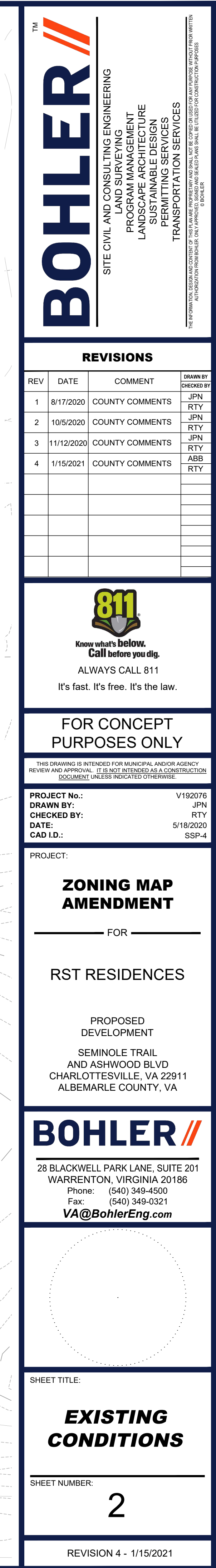
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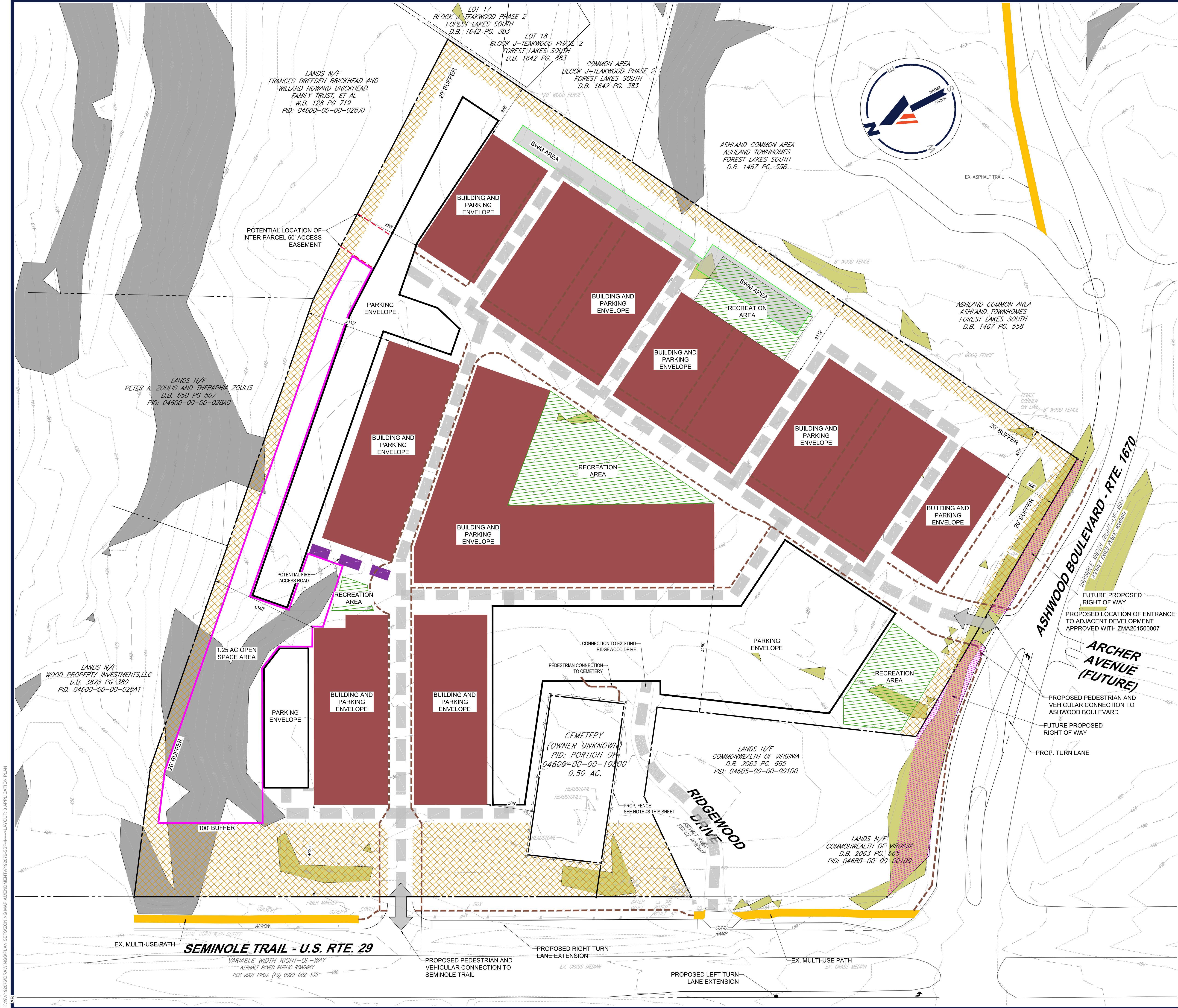
TRAFFIC IMPACT STATEMENT:

A TRAFFIC IMPACT ANALYSIS WAS COMPLETED IN DECEMBER OF 2019 BY RAMEY KEMP & ASSOCIATES. AS SHOWN IN THE MODEL, THE PROPOSED RESIDENTIAL UNITS ASSOCIATED WITH THIS APPLICATION ARE NOT ANTICIPATED TO GENERATE ADVERSE IMPACTS TO EXISTING TRAFFIC PATTERNS. ALSO, TRAFFIC CALMING MEASURES HAVE BEEN PROPOSED WITH THIS APPLICATION ON BOTH ROUTE 29 AND ASHWOOD BOULEVARD TO ADDITIONALLY MITIGATE EXISTING TRAFFIC PATTERNS.

SHEET NUMBER:

REVISION 4 - 1/15/2021



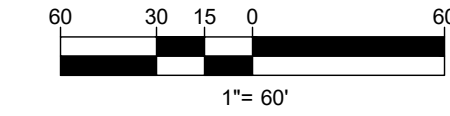


LEGEND

- OPEN SPACE AREA
- BUILDING ENVELOPE
- PARKING ENVELOPE
- MANAGED SLOPES
- PRESERVED SLOPES
- PROPOSED SWM AREA
- PROPOSED AMENITY AREA
- VEGETATIVE BUFFER
- FUTURE PROPOSED RIGHT OF WAY
- PEDESTRIAN CONNECTION PATH
- EXISTING ACCESS TRAIL
- ROADWAY / TRAVELWAY
- POTENTIAL FIRE ACCESS ROAD

NOTES:

- EXACT LOCATION OF ROADWAYS, PEDESTRIAN PATHS, AND TRAVELWAYS SHALL BE DETERMINED WITH THE SITE PLAN PROCESS. OWNER WILL CONVEY A PUBLIC ACCESS EASEMENT FOR THE ASHWOOD BOULEVARD SIDEWALK.
- THE PROPERTY SHALL BE DEVELOPED IN GENERAL CONFORMANCE WITH THE FEATURES OF THIS APPLICATION PLAN. MINOR VARIATIONS FROM THIS PLAN SHALL BE PERMITTED, IN ACCORDANCE WITH ALBEMARLE COUNTY ZONING REQUIREMENTS AND REGULATIONS.
- PROPOSED UTILITIES NECESSARY TO SERVE THE DEVELOPMENT SHALL BE INSTALLED WITHIN THE BUFFER AREAS ON THE PROPERTY. IF FOUND TO BE NEEDED, UTILITIES MAY BE INSTALLED WITHIN THE PRESERVED SLOPES, IN ACCORDANCE WITH ALBEMARLE COUNTY ZONING ORDINANCE AND REGULATIONS.
- ALL ROADWAY AND TRAVELWAY FRONTAGE IMPROVEMENTS ALONG SEMINOLE TRAIL AND ASHWOOD BOULEVARD SHALL BE SUBJECT TO ALBEMARLE COUNTY AND VDOT REVIEW AND APPROVAL. MODIFICATIONS AND CHANGES TO THE ROAD FRONTAGE IMPROVEMENTS SHOWN ON THE APPLICATION PLAN MAY BE IMPLEMENTED AS REQUESTED BY THE COUNTY AND VDOT DURING THE REVIEW AND APPROVAL PROCESS.
- FOR THE PURPOSE OF STORMWATER MANAGEMENT, A MINIMUM OF 75% OF THE REQUIRED PHOSPHORUS NUTRIENT REDUCTIONS SHALL BE ACHIEVED ONSITE. EXACT TYPE AND LOCATIONS OF PROPOSED SWM FACILITIES TO BE DETERMINED AT TIME OF FINAL ENGINEERING WITH SITE PLAN SUBMITTAL.
- IF PROPOSED, GARAGE UNITS MAY BE INSTALLED WITHIN THE PARKING AREAS OF THIS APPLICATION PLAN, SUBJECT TO REVIEW AND APPROVAL OF THE ARCHITECTURAL REVIEW BOARD AT TIME OF PROCESSING THE SITE PLAN.
- PARKING TO BE ALLOWED ALONG ACCESS DRIVES.
- FENCE TO BE PROVIDED AROUND THE CEMETERY WITH DESIGN SUBJECT TO ARB REVIEW. THE CEMETERY SHALL BE DELINEATED AND THE BOUNDARIES MARKED AND PROTECTED BEFORE CONSTRUCTION OR GRADING COMMENCES. PROPOSED TRASH COMPACTORS IN THE PARKING ENVELOPE ADJACENT TO THE CEMETERY SHALL BE APPROPRIATELY SCREENED.
- AT THE SITE PLAN STAGE, VDOT WILL REVIEW THE PROPOSED CONNECTION TO ASHWOOD BOULEVARD AND THE PROPOSED CURB, GUTTER, AND SIDEWALK IMPROVEMENTS ALONG ASHWOOD BOULEVARD. THE AREA LABELED "FUTURE PROPOSED RIGHT OF WAY" WILL BE RECLASSIFIED AS RIGHT OF WAY LAND AND ADDED TO VDOT'S RIGHT OF WAY INVENTORY UPON VDOT'S REVIEW AND APPROVAL OF THE SITE PLAN.
- THE OWNER'S OBLIGATION TO CONSTRUCT THE PROPOSED SIDEWALK THROUGH PARCEL 4685-1D IS SUBJECT TO ISSUANCE OF ALL NECESSARY PERMITS FROM VDOT, AND THE PRECISE LOCATION IS CONCEPTUAL. THE FINAL LOCATION WILL BE DETERMINED AT THE SITE PLAN STAGE UPON CONSULTATION WITH VDOT AND THE OWNER'S DISCRETION. IF ALL NECESSARY PERMITS TO BUILD THE SIDEWALK THROUGH PARCEL 4685-1D ARE NOT GRANTED PRIOR TO APPROVAL OF THE FIRST FINAL SITE PLAN FOR THE PROJECT, THE OWNER SHALL THEN HAVE THE OPTION AT ITS DISCRETION TO INSTEAD BUILD AN ON-SITE TRAIL (OR A SIDEWALK, IN THE OWNER'S DISCRETION) AS FOLLOWS: BEGINNING AT THE POINT WHERE THE SIDEWALK ADJACENT TO ASHWOOD BOULEVARD ABUTS THE EASTERN BOUNDARY OF PARCEL 4685-1D, THE TRAIL OR SIDEWALK SHALL EXTEND ALONG THE EASTERN AND NORTHERN BOUNDARIES OF PARCEL 4685-1D, TO THE EXISTING MULTI-USE PATH ON ROUTE 29.



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SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS				
REV	DATE	COMMENT	DRAWN BY	
1	8/17/2020	COUNTY COMMENTS	JPN	RTY
2	10/5/2020	COUNTY COMMENTS	JPN	RTY
3	11/12/2020	COUNTY COMMENTS	JPN	RTY
4	1/15/2021	COUNTY COMMENTS	ABB	RTY

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FOR CONCEPT PURPOSES ONLY

PROJECT No.:	V192076
DRAWN BY:	JPN
CHECKED BY:	RTY
DATE:	5/16/2020
CAD ID:	SSP-4

ZONING MAP AMENDMENT

FOR

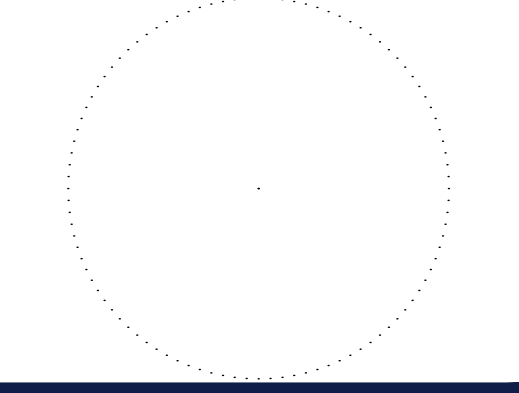
RST RESIDENCES

PROPOSED DEVELOPMENT

SEMINOLE TRAIL
AND ASHWOOD BLVD
CHARLOTTESVILLE, VA 22911
ALBEMARLE COUNTY, VA

BOHLER

28 BLACKWELL PARK LANE, SUITE 201
WARRENTON, VIRGINIA 20186
Phone: (540) 349-4500
Fax: (540) 349-0321
VA@BohlerEng.com



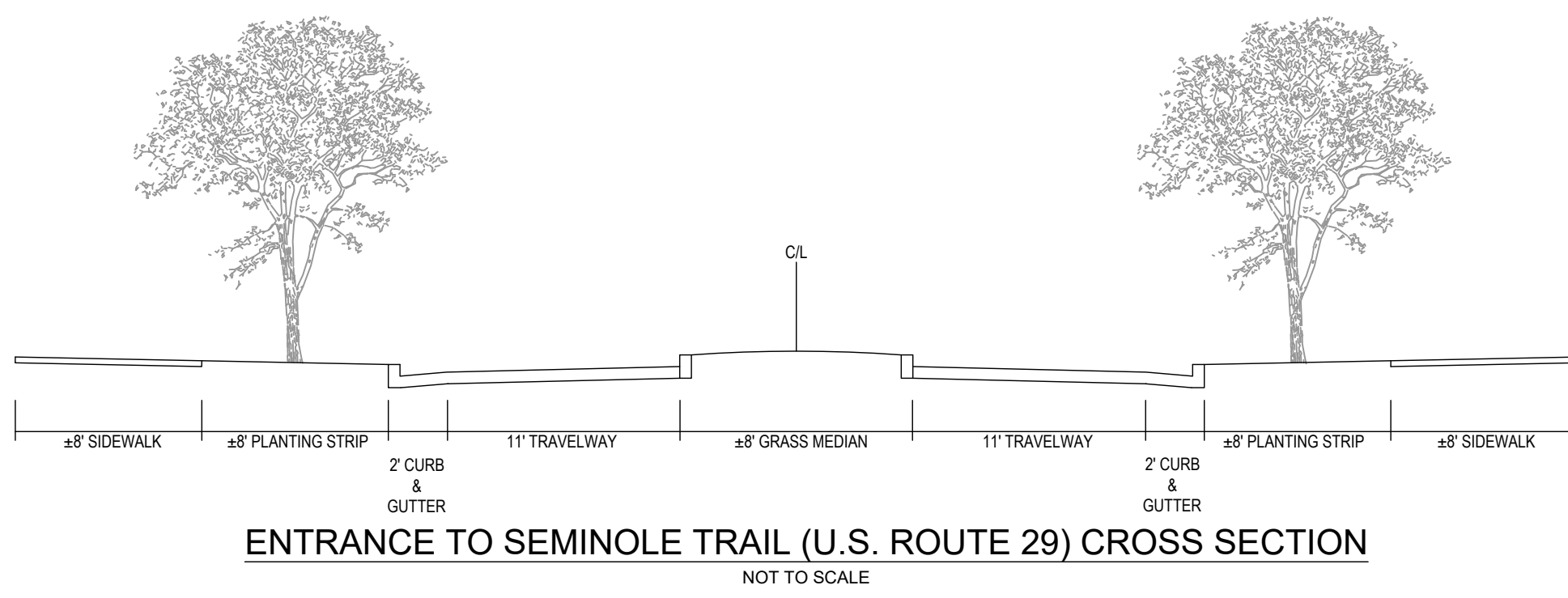
APPLICATION PLAN

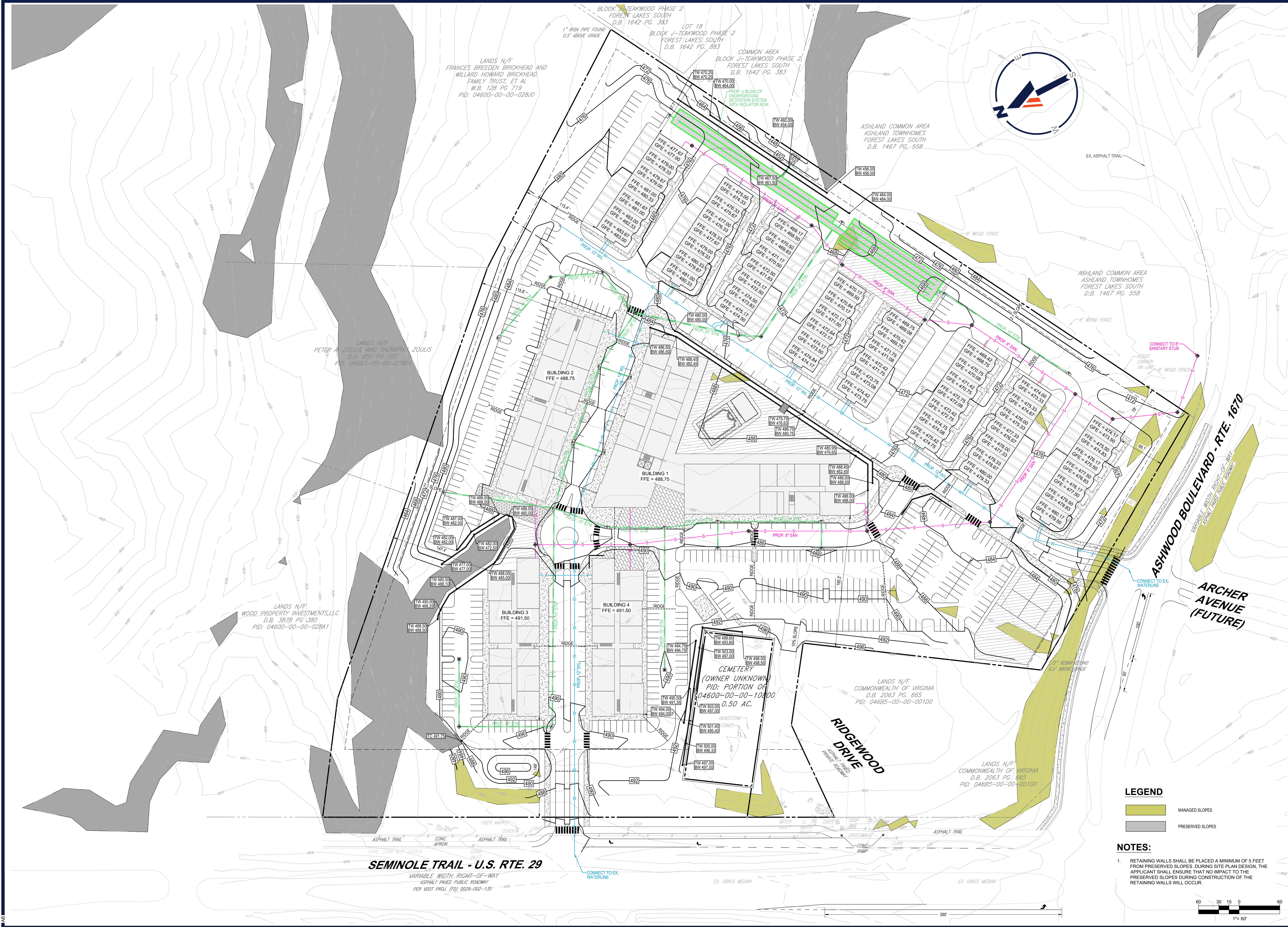
SHEET TITLE:

SHEET NUMBER:

3

REVISION 4 - 1/15/2021





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SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS				
REV	DATE	COMMENT	DESIGNED BY	CHECKED BY
1	8/17/2020	COUNTY COMMENTS	JPN	RTY
2	10/5/2020	COUNTY COMMENTS	JPN	RTY
3	11/12/2020	COUNTY COMMENTS	JPN	RTY
4	1/15/2021	COUNTY COMMENTS	ABB	RTY

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DATE: 5/16/2020
CAD ID: CGU-4

ZONING MAP AMENDMENT

FOR

RST RESIDENCES

PROPOSED DEVELOPMENT
SEMINOLE TRAIL AND ASHWOOD BLVD
CHARLOTTESVILLE, VA 22911
ALBEMARLE COUNTY, VA

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VA@BohlerEng.com

CONCEPTUAL GRADING & UTILITY PLAN

SHEET NUMBER: 6

REVISION 4 - 1/15/2021



ROUNABOUT VIEW 1



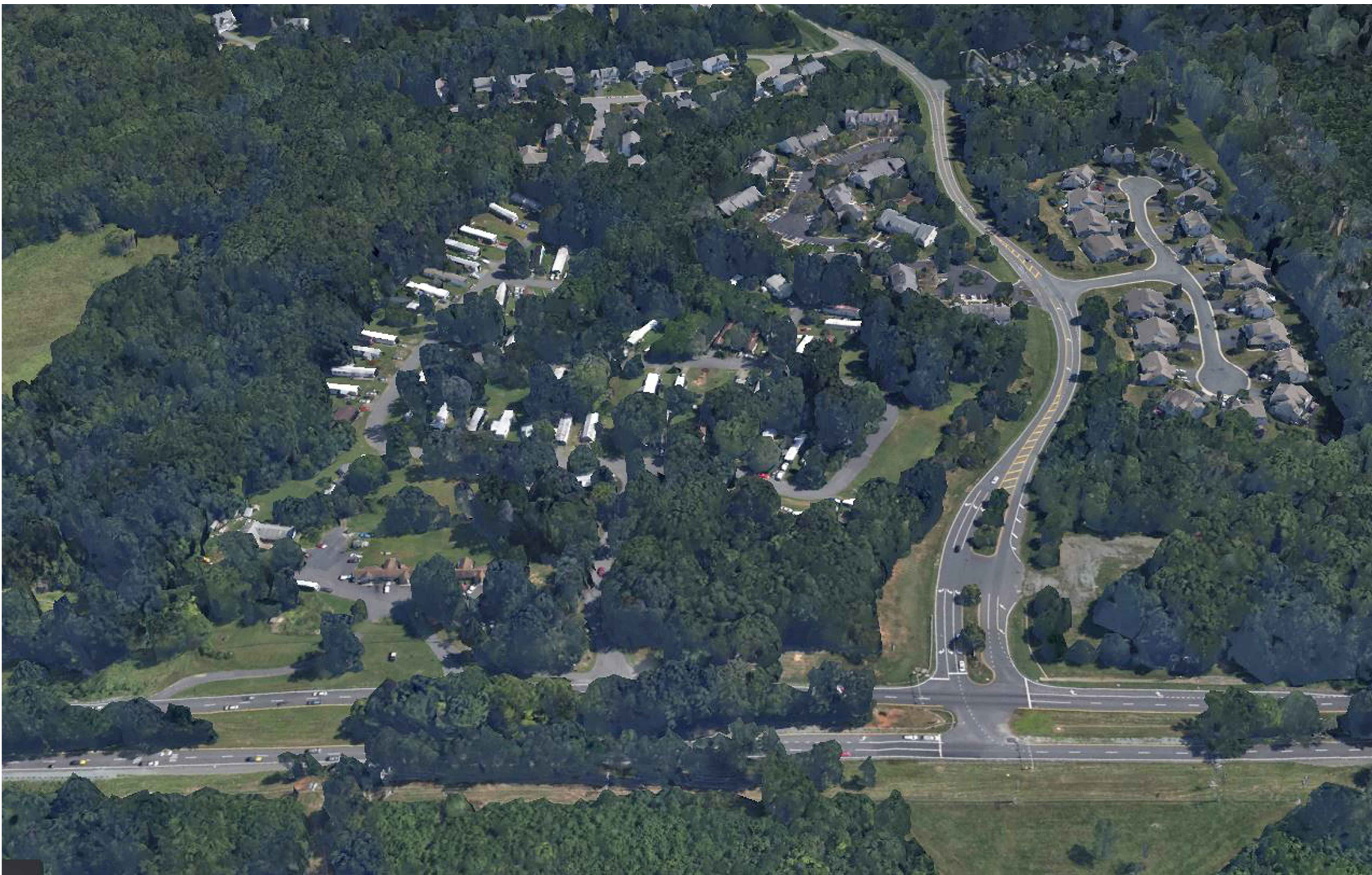
ROUNABOUT VIEW 2



PROPOSED AERIAL CLOSE-UP



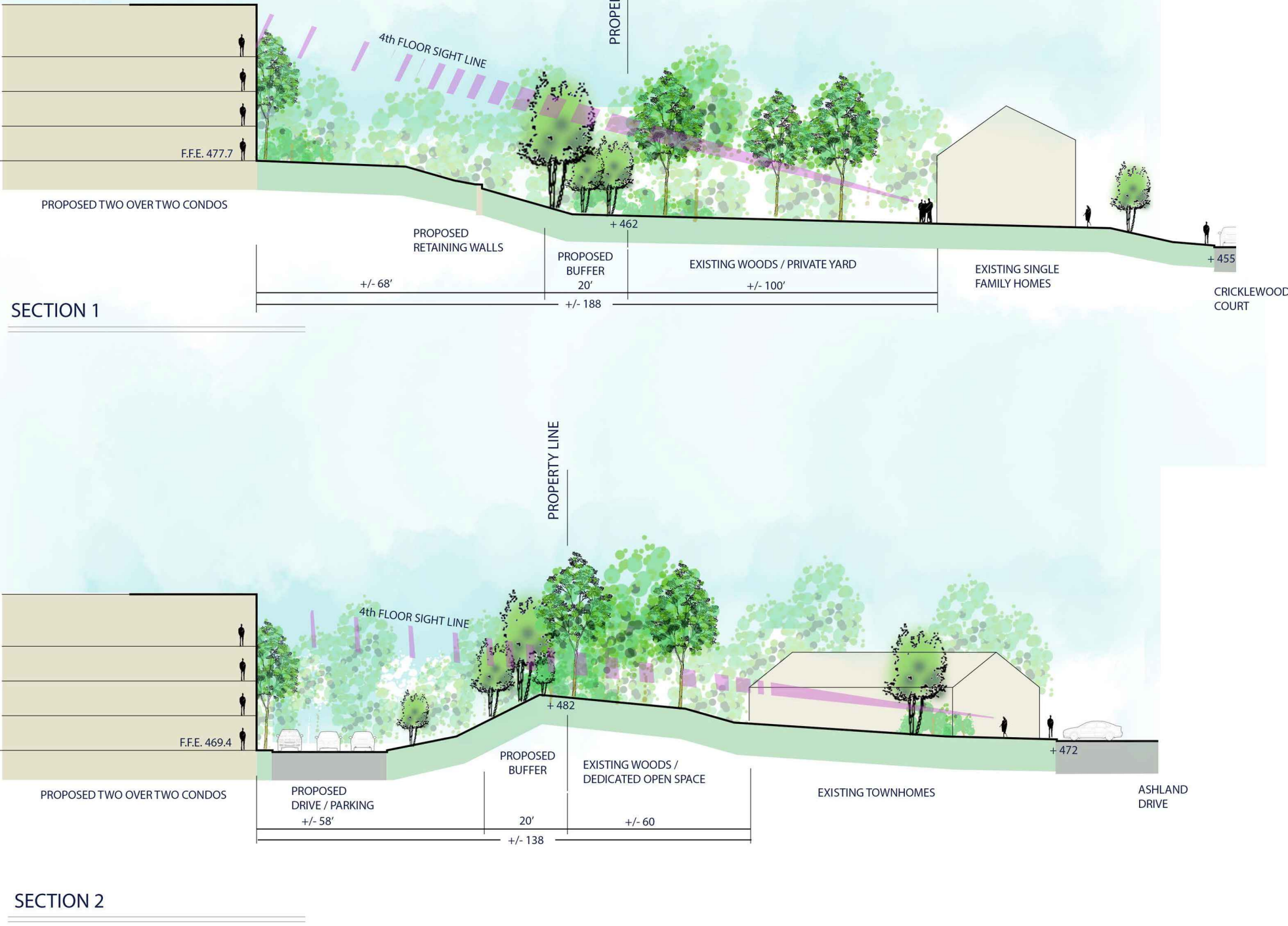
MAIN APPROACH 1
(SEMINOLE TRAIL ENTRANCE)



EXISTING SITE AERIAL



PROPOSED SITE AERIAL



ADJACENT PROPERTY SITE SECTIONS
NOT TO SCALE
08.11.2020

REVISIONS				
REV	DATE	COMMENT	DRAWN BY	
1	8/17/2020	COUNTY COMMENTS	JPN	RTY
2	10/5/2020	COUNTY COMMENTS	JPN	RTY
3	11/12/2020	COUNTY COMMENTS	JPN	RTY
4	1/15/2021	COUNTY COMMENTS	ABB	RTY

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PROJECT No.: V192076
DRAWN BY: JPN
CHECKED BY: RTY
DATE: 5/16/2020
CAD ID: EXA-4

**ZONING MAP
AMENDMENT**

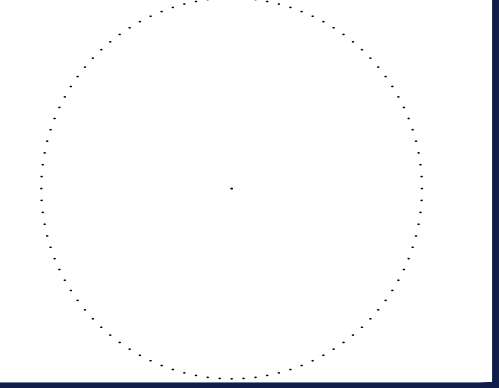
FOR

RST RESIDENCES

PROPOSED
DEVELOPMENT
SEMINOLE TRAIL
AND ASHWOOD BLVD
CHARLOTTESVILLE, VA 22911
ALBEMARLE COUNTY, VA

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WARRENTON, VIRGINIA 20186
Phone: (540) 349-4500
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SHEET TITLE:
**SITE VIEW
EXHIBIT**

SHEET NUMBER:
7

REVISION 4 - 1/15/2021

Attachment 5 – ZMA202000007 RST Residences

Staff Analysis of Application's Consistency with Neighborhood Model Principles

Pedestrian Orientation	<p>Pedestrian facilities are provided throughout the site, along most of the internal streets and travel-ways, as well as in between the facing pairs of “two-over-two” style townhouse units. A pedestrian connection is also proposed parallel to Ashwood Boulevard, on the property currently owned by the Commonwealth of Virginia, if permitted by VDOT.</p> <p>There are a couple areas where the pedestrian experience may be compromised because of retaining walls adjacent to proposed sidewalks, such as by the “pool amenity area” and by the large parking area at the intersection of Travelway B and Private Road C. The impact would depend on the final height of the retaining walls constructed at these sites. The applicant is proposing a stairwell from the sidewalk up to the pool amenity area; however, no ramp for people with physical disabilities is depicted, with the retaining walls potentially restricting ease of access to this amenity from the Road C sidewalk. Near the stairwell, the two terraced retaining walls appear to extend for a total height of approximately ten feet based on the conceptual grading plan.</p> <p><u>This principle has been partially addressed and could be strengthened.</u></p>
Mixture of Uses	<p>The Places29 Master Plan designates most of this property as Urban Density Residential, which recommends a primary use of residential, with multiple dwelling types, and commercial or institutional uses as secondary. A small portion of this property is designated for privately-owned open space.</p> <p>The applicant is proposing residential for this project, including two housing types – rental multi-family apartments and for-sale “two-over-two” style townhouse units anticipated to be sold as condominiums. There is also the minimum required 25% open space provided, which is proposed to be privately owned. No commercial, institutional, or other uses are proposed with this project.</p> <p><u>This principle has been met.</u></p>
Neighborhood Centers	<p>Strategy 2f in Chapter 8 of the Comprehensive Plan identifies neighborhood centers as having four components: 1) a centralized park or outdoor amenity which is surrounded by 2) a ring of commercial or mixed uses with 3) surrounded by medium to high density residential uses and a final 4) outer ring of low density residential.</p> <p>This project provides a centralized triangular amenity area with a pool; however, this area is not strongly visually defined and appears to be difficult to access for many residents of the proposed development because it is surrounded by the two central apartment buildings on two sides and terraced</p>

	<p>retaining walls (approximately ten feet tall total) along its road frontage with Private Road C.</p> <p>In addition, the tallest residential structures, which are the two central apartment buildings, depicted on the application plan as five stories, are proposed for the center of the site, adjacent to the pool amenity area. The other residential structures, which, at three stories (the other apartment buildings) or four stories (the two-over-two townhouses), are shorter than the two central buildings and are located on the outskirts of the site.</p> <p><u>This principle has been partially addressed and could be strengthened.</u></p>
Mixture of Housing Types and Affordability	<p>The Application Plan proposes two different housing types – rental multi-family apartment buildings, at 254 units, and anticipated for-sale “two-over-two” townhouse condo units, at 108 units.</p> <p>The applicant is also proposing that at least 50% of the total number of units will be designated as affordable housing at 80% of AMI as determined by the U.S. Dept. of Housing and Urban Development.</p> <p><u>This principle has been met.</u></p>
Interconnected Streets and Transportation Networks	<p>The internal roadway network of this proposed development is largely interconnected. However, there are no direct interconnections proposed to be constructed with adjacent properties. A public access easement that is 50-ft. wide has been provided in the northeast corner of the development that would allow for a future connection of some type to the currently undeveloped properties to the north. The master plan shows a connection for either bike, pedestrian, or vehicular modes in approximately this location. In addition, the proposed entrance into the development from Ashwood Blvd. is aligned opposite the future Archer Avenue intersection, which will be constructed as Brookhill is built out. However, as the Commonwealth of Virginia owns property between Ashwood Blvd. and the subject parcels, access to the site via Ashwood is not assured at this time and is subject to VDOT’s processes (see Attachment 8 for more information).</p> <p>The development is proposed to be served by all private roadways. The road designated as “Private Road C,” which runs from the proposed Ashwood entrance north to the easement mentioned above for a future interconnection, will be a private street, built to private street standards. All other roadways in the development will be designated as internal travelways serving the residents of the development. The applicant, however, is proposing to place public access easements across Travelways A and B and Private Road C to allow the public to use these roadways as well.</p> <p>This development does not promote an interconnected network of public streets with the surrounding area, as recommended in the development areas. However, as a proposed apartment and condo community, all amenities and</p>

	<p>features would be under common ownership, and the public access easements would allow public travel on the roadways.</p> <p>The application plan also depicts a proposed new pedestrian path parallel to Ashwood Blvd., promoting better connections from Route 29 east into the Forest Lakes neighborhood, as well as pedestrian ways internally throughout the development.</p> <p><u>This principle has been partially addressed and could be strengthened.</u></p>
Multi-modal Transportation Opportunities	<p>This development as proposed is largely automobile-centric, including one large expanse of parking proposed for the southwest area of the property between Travelway B and the cemetery.</p> <p>There are, however, pedestrian facilities provided throughout the site, alongside most of the internal roadways, as well as a pedestrian pathway parallel to Ashwood Blvd.</p> <p>No bike lanes are provided throughout the site.</p> <p>No transit accommodations are provided on the site.</p> <p><u>This principle is largely not addressed and could be strengthened.</u></p>
Parks, Recreational Amenities, and Open Space	<p>The proposal provides the minimum 25% that is required for open space in the PRD, including vegetative buffers, recreational amenity areas, and other open space areas. If this rezoning is approved, at the site planning stage, the applicant will be required to meet the recreational requirements of 18-4.16 of the Zoning Ordinance or must submit a substitution request for review by staff with different recreational amenities that are of a similar or greater level than what the ordinance requires. The applicant has not submitted a substitution request at this time, so staff cannot comment on potential amenities. However, the application plan does show a pool area and a dog park. In addition, the applicant has provided the minimum square footage of open space required if the tot lots and basketball courts required by the ordinance are installed instead of submitting a substitution request at the site planning stage.</p> <p>There is a 100-ft. forested buffer proposed to screen the site from Route 29. The applicant is also proposing a 20-ft. buffer around the rest of the perimeter of the site. In addition, the preserved slope areas are within open space and not proposed to be disturbed.</p> <p>Most of the recreational amenities are located on the outskirts of the site, with only the pool recreation area situated as a central feature of the development. However, as mentioned previously, this area appears to be enclosed by the two central apartment buildings on two sides, and a retaining wall, with a stairwell for access, along Private Road C on the third side. The proposed dog park is located on the eastern edge of the property, behind the proposed townhouse units, adjacent to the Ashland Townhomes community. The asphalt</p>

	<p>recreational area and one tot lot spot are situated at the southern edge of the property, near the entrance from Ashwood Blvd., and across the large parking lot from the central apartment buildings. A second tot lot area is situated near the central roundabout of the development, between the two northern apartment buildings. Sidewalks are provided for pedestrian access to all of these recreational areas.</p> <p><u>This principle has been partially addressed and could be strengthened.</u></p>
Buildings and Space of Human Scale	<p>The maximum recommended height for residential buildings in the Urban Density Residential land use designation in the Places29 Master Plan is four stories or 45 feet. The two central buildings of this proposed development, adjacent to the pool recreation area, do not appear to conform with this recommendation. The application plan depicts them as being five stories tall, which exceeds the recommendations of the master plan.</p> <p>The other proposed buildings in the development are all four stories or less. The townhouse structures on the eastern side of the property, near the existing two-story Ashland Townhomes structures, are proposed to be four stories – a two-story unit on top of a two-story unit. The other rental multi-family apartment buildings in the development are depicted as being three stories tall.</p> <p>The apartment buildings are all proposed to front on either Travelway A or Travelway B, with most parking relegated. There is one large expanse of parking, however, between Travelway B and the cemetery, which separates one of the recreational areas from the residential buildings. The two-over-two structures have their sides facing Private Road C, with pairs of the structures facing each other over a small plaza area with grass and sidewalks. The rears of the structures face travelways, acting like alleys with access to garages serving the units.</p> <p>In addition, there appear to be several retaining walls around the site that are alongside sidewalks, including a terraced wall, of approximately ten feet total, that is adjacent to the central amenity area, appearing to block easy access from other areas of the site and the adjacent street. There is also one at the intersection of Travelway B and Road C. Depending on their final height and design, they could produce segments of blank walls along sidewalks that are used to reach the development's recreational amenities.</p> <p>The final architectural design of these buildings has not been completed at this time. This property is located within the Entrance Corridor Overlay District and will be reviewed by the Architectural Review Board at the site planning stage if this rezoning is approved.</p> <p><u>This principle has been partially addressed and could be strengthened.</u></p>
Relegated Parking	<p>The parking as shown on the application plan is largely either on-street parking or has been relegated behind the buildings from the internal travel-ways and</p>

	roads. The one exception is the large expanse of parking lot located in the southwest corner of the property, between the cemetery and Travelway B. <u>This principle has been partially addressed and could be strengthened.</u>
Redevelopment	The two parcels that make up this project include an existing motel and an existing mobile home community. It is proposed that these existing structures will be removed and the site redeveloped with other dwelling unit types, including multi-family apartments and “two-over-two” style townhouse units. <u>This principle has been met.</u>
Respecting Terrain and Careful Grading and Re-grading of Terrain	There are areas of both managed and preserved steep slopes on this property. The applicant is not proposing to disturb any of the preserved slopes and has included all of those slopes within proposed open space areas. Any grading or disturbance of the managed slopes on the property will be reviewed by the County Engineer at the site planning/subdivision stage for compliance with state and County code requirements. <u>This principle has been met.</u>
Clear Boundaries with the Rural Area	This property lies within the Community of Hollymead Development Area, although designated Rural Areas are located to the west of the subject property, across U.S. Route 29. However, Route 29 acts as an existing barrier delineating a clear boundary between this proposed project and the Rural Areas. In addition, the applicant is proposing a 100-ft. forested buffer along the subject property’s Route 29 frontage, providing significant natural screening to help act as a transition between the Rural Areas and this project. <u>This principle has been met.</u>

RST Residences

Special Exception Application Narrative

On behalf of Seminole Trail, LLC (the “Owner”) and RST Development, LLC (the “Developer”, and collectively, the “Applicant”), this Application for a Special Exception respectfully requests an exception from the setback requirements of Section 4.19 of the Albemarle County Zoning Ordinance that would otherwise apply to the eight townhouse structures and the apartment structure labeled “Building 1” on Sheet 6 of the conceptual plans submitted with this resubmittal of this Application on August 17, 2020.

This Application is submitted in connection with a zoning map amendment application that proposes to rezone tax map parcels 04600-00-00-10800 and 04600-00-00-10900 (the “Property”), from R-1 Residential to Planned Residential Development (“PRD”), to allow for the development of a multi-family townhouse and apartment community known as RST Residences (the “Project”). The Project proposes a maximum of 370 residential units comprised of apartments and townhouses. The Concept Plan shown on Sheet 4 of the application package shows a total of 362 units, comprised of 254 apartments and 108 townhouse units. The townhomes are proposed to be stacked and attached in a total of eight buildings (the “Townhome Buildings”). The apartments are proposed in a total of four additional buildings. Figure 1 below shows the arrangement of the buildings in the Project.

Building 1 and the eight townhome structures are proposed to exceed three stories. Accordingly, each of these structures is subject to the County’s front setback requirement, which provides that for each story beginning above 40 feet in height, or for each story above the third story, whichever is less, the minimum setback shall be 15 feet unless reduced by special exception. Zoning Ordinance § 4.19.5. There is no minimum setback for the side and rear of structures under this rule.

Building 1 is designed with two rectangular wings (the “North Wing” and the “South Wing”), which are joined together by common plaza and several pedestrian connections (a walkway and several skyways). The South Wing façade faces U.S. Route 29, while the façade of the North Wing faces the internal vehicle travelway between the North Wing and Building 2. Therefore, the Applicant understands that the front setback requirement applies to the side of the South Wing that faces U.S. Route 29, and to the side of the North Wing that faces Building 2.

The front façade of each Townhome Building is the side containing the front door to the townhouse units. The rear of each Townhome Building is the side containing the garages. For each Townhome Building, one side faces Private Road C, and one side faces the property line with the adjacent parcels to the southeast of the Property. Therefore, the Applicant understands that the front setback requirement applies to the side of each Townhome Building containing the front door to the townhouse units.

The requested special exemptions for both the North Wing and the South Wing, and for the Townhome Buildings, should be granted because waiving the front setback requirement would not frustrate the purposes of Section 4.19, the Places29 Design Guidelines, or the Neighborhood Model Principles.

The South Wing

The front of the South Wing will be located 449 feet from the U.S. Route 29 right-of-way. Given the distance between Building 1 and the public road, the requested special exception will not result in the undesired “canyon” effect along public roads that Section 4.19 is designed to prevent.¹ Moreover, Building 1 is the centerpiece of the Project. All residents will be served by common amenities in and around Building 1, including a mail kiosk and recreation areas. In addition, when prospective residents visit to tour available townhomes and apartments, they will be received at the property management office in Building 1. Waiving the front setback requirement would increase Building 1’s visual prominence, which would promote the Project’s sense of place by focusing attention toward the anchor building of this residential community.

The North Wing

For the same reasons, the front setback requirement should be waived for the front of the North Wing. Waiving the setback rules for the front of the North Wing will not lead to a “canyon” effect, as the surrounding buildings are all proposed to be shorter than Building 1. Given the shorter height of the adjacent Buildings 2-4, the North Wing will be provided with sufficient space and light to achieve the results that Section 4.19 seeks to achieve.

Taken as a whole, the Project’s design implements the Neighborhood Model Principle that recommends Buildings and Spaces of Human Scale. Figures 2 and 3 below provide a representation of the pedestrian-oriented, tree-lined streetscape and the relation between the proposed buildings. The proposed street trees are used, as mentioned in the Neighborhood Model Principles, to enclose the street and sidewalks in a way that achieves a “comfortable human scale.” The proposed design is also meant to foster a walkable and interactive residential environment to support a strong sense of community among residents.

The Townhome Buildings

The front setback requirement should be waived for the Townhome Buildings because their location and design also avoids the “canyon” effect. There are very few places along “Private Road C” as shown in the resubmitted plans where the Townhome Buildings are opposite other buildings. In large part, the Townhome Buildings are situated opposite the central amenity area, which allows for appropriate light to reach the roadway and avoids the appearance of a canyon. With regard to the roads between each Townhome Building, the setback requirement should be waived because the proposed design of the facades will incorporate different materials, textures, and features to prevent massing. These design features will help mitigate any potential canyon effect. Figure 4 shows an illustrative example of the general character of the proposed design. Please note this example is not particular to the Project, and therefore some of the building measurements may not be reflected in the Project.

¹ The purpose of the setback rules was discussed during the public hearing at which the Board of Supervisors added Section 4.19 to the Zoning Ordinance. County Staff noted that Section 4.19 “avoids a ‘canyon’ effect.” Statement of Ron Higgins, Deputy Zoning Administrator, Minutes of the Board of Supervisors Hearing, June 3, 2015, at page 99.

The setback requirement should also be waived to preserve living space in the Townhome Buildings. The modest size of the townhome units as proposed allow them to be affordable for Albemarle County residents without the need for a housing subsidy. This is a strength of the project that furthers the County's affordable housing goals. However, the setback requirement would leave no option but to shrink the living space of the upper townhouse units in a way that would reduce their appeal or utility to many prospective buyers. Especially since the proposed green space, sidewalks, and amenity areas already help avoid any "canyon" effect of the Townhome Buildings, the ability to deliver affordable housing in furtherance of the County's goals justifies waiving the setback requirement for this Project. Given the Project's focus of providing affordable housing to Albemarle County citizens, waiving the setback requirement would help balance the County's design requirement with important housing priorities.

The Proposed Special Exceptions Supports the Goals of the Comprehensive Plan

Waiving the front setback requirement is consistent with the recommended future land use of the Property under the Comprehensive Plan. The Project is located in the Development Area and is designated for Urban Density Residential uses, with up to 34 dwelling units per acre. The Applicant estimates that strict application of a 15-foot setback to Building 1 would result in the loss of ten residential units. As a reduction in the number of residential units is contrary to the Comprehensive Plan's recommendation for the Property, a special exception from the setback is warranted. A reduction in the number of units also impacts the Project's ability to provide affordable housing. With fewer units, the Project will be less effective in meeting the County's affordable housing goals. Likewise, the Townhome Buildings are important to the Project's overall success and they help to advance the Project's affordable housing goals. Waiving the setback requirement for the Townhome Buildings would allow the Project to more effectively realize the County's affordable housing goals set out in the Comprehensive Plan.

As noted above, Section 4.19 does not apply setback requirements to the sides or rear of any structures in a residential zoning district. Therefore, the remaining sides of Building 1 and the Townhome Buildings are not subject to the setback rules.

For these reasons, the Applicant requests a special exception from Section 4.19 as applied to the fronts of the North Wing and the South Wing of Building 1, and to the fronts of the Townhome Buildings. Granting the requested special exceptions will further the goals of the Comprehensive Plan without creating significant detriments to County residents.

Thank you for your consideration of this request.

RST Residences: Building 1



Figure 1. View of the Project, including Building 1 at center (the South Wing is at right).



Figure 2. View of the North Wing (at right), opposite Building 2, and separated from Building 2 by a shaded, pedestrian-friendly vehicular travelway.

RST Residences: Building 1



Figure 3. Additional view of the North Wing, showing its front side facing Building 2.

RST Residences: Townhome Buildings (Illustrative Example)



Figure 4. Additional view of the North Wing, showing its front side facing Building 2.

**STAFF PERSON:
PLANNING COMMISSION:
BOARD OF SUPERVISORS:**

**Andy Reitelbach
March 2, 2021
TBD**

Staff Report for Special Exception SE202000003 to waive the requirement for a minimum setback of 15 feet for each story that begins above 40 feet in height or for each story above the third story, whichever is less, in the Planned Residential Development zoning district, in association with ZMA202000007, RST Residences. (§ 18-4.19.5)

WAIVERS AND MODIFICATIONS FOR PLANNED DEVELOPMENTS

The applicant is requesting to waive the requirement for a minimum setback of 15 feet for each story that begins above 40 feet in height or for each story above the third story, whichever is less, in a PRD, Planned Residential Development. According to County Code § 18-4.19.5, the Zoning Ordinance, all buildings on the property must meet the requirement that each story that begins above 40 feet in height or for each story above the third story, whichever is less, the minimum setback shall be 15 feet. County Code § 18-8.2(b) permits any planned district regulation to be modified or waived by the Board of Supervisors as a Special Exception under County Code § 18-33.43 through §18-33.51. In addition, § 18-4.19.5 specifically allows the Board of Supervisors to waive the requirement for a minimum setback of 15 feet. The applicant has provided a request and justification for this special exception, which can be found in Attachment 6. Staff analysis for County Code § 18-8.2(b)(3) and § 18-4.19.5 is provided below:

3. Findings. In addition to making the findings required for the granting of a waiver or modification in sections 4, 5, 21, 26, or 32, a waiver or modification may be granted only if it is also found:

(No modifications or waivers are requested under sections 5, 21, 26, or 32. There are no specific findings required for the granting of a waiver or modification as listed in § 18-4.19.5.)

- i. to be consistent with the intent and purposes of the planned development district under the particular circumstances, and satisfies all other applicable requirements of section 8;**

Staff has reviewed the intent and purposes of the Planned Districts generally, and the Planned Residential Development district in particular, and found that the proposal would allow design flexibility that does not contribute to implementing the goals and objectives of the comprehensive plan, including the Places29 Master Plan. The master plan recommends that residential buildings in the Urban Density Residential land use designation be a maximum of four stories. The applicant has depicted two of the proposed buildings on this property (the two central multi-family apartment buildings) as being five stories, exceeding the recommended maximum. The application plan for ZMA202000007 also does not specify a proposed maximum height of the buildings, only identifying the height permitted in the PRD, which is 65 feet, twenty feet greater than recommended in Urban Density Residential areas.

At five stories, the two central buildings of the development already are proposed to exceed the maximum recommended height for the land use designation in the master plan. Waiving the requirement for a setback would further reduce the ability to create

buildings and spaces of human scale, as recommended in the Neighborhood Model Principles of the comprehensive plan.

ii. to be consistent with planned development design principles;

The application has been reviewed under the Neighborhood Model Principles and has been found to partially meet those principles, especially Principle #8, Buildings and Space of Human Scale, which is the most applicable to this special exception request. (See Attachment 5 for a more detailed analysis of this project's consistency with the Neighborhood Model Principles.)

iii. that the waiver or modification would not adversely affect the public health, safety or general welfare;

Staff has found that the public health, safety, and general welfare generally will not be adversely affected by the waiver of the requirement for a setback of at least 15 feet for buildings that exceed three stories, or 40 feet, whichever is less. However, such a waiver does not contribute to creating buildings and spaces of human scale in the public realm of the development.

iv. in the case of a requested modification, that the public purposes of the original regulation would be satisfied to at least an equivalent degree by the modification.

A purpose of the regulation is to create buildings and spaces of human scale that prevent structures from overwhelming people who are nearby and to contribute to the comfort of pedestrians, as reflected in the Neighborhood Model Principles, especially #8, outlined in the comprehensive plan. Waiving this requirement would not satisfy the purpose of this regulation to an equivalent degree, especially since the height of some of the proposed buildings already exceeds the maximum recommended by the Places29 Master Plan.

At this time, staff is unable to recommend approval of Special Exception request SE202000003.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219-2000

Stephen C. Brich, P.E.
COMMISSIONER

February 17, 2021

Andrew Reitelbach
Senior Planner
Albemarle County Community Development Department
401 McIntire Road
Charlottesville, Virginia 22902

RIGHT OF WAY - VDOT Lands Acquired From Forest Lakes Associates
RST Residences Zoning Application (ZMA 2020-00007)

Dear Mr. Reitelbach:

The Virginia Department of Transportation ("VDOT") has been requested to provide Albemarle County ("County") information regarding VDOT's right of way and Tax Map Parcel 46B5-1D, as it relates to the proposed project known as "RST Residences" ("RST") and a proposed connection to Ashwood Boulevard. The County has requested clarification regarding RST's right and ability to construct an access to Ashwood Boulevard, as shown on the application plan, across those lands owned by VDOT.


VDOT acquired Parcel 46B5-1D in 2001 from Forest Lakes Associates for the purpose of constructing a Route 29 Western Bypass. The Bypass project was subsequently rescinded by the Commonwealth Transportation Board by resolution dated July 16, 2014. As a part of the initiative to return those lands acquired for the Bypass project, back to private ownership, VDOT reviewed Tax Parcel 46B5-1D to determine its need for current or future highway purposes. During the review it was noted the County comprehensive plan showed an extension of Ashwood Boulevard to Berkmar Drive. As a result, VDOT determined that a portion of the property, fronting Route 29, containing approximately 1.44 acres (marked in RED – Attachment 1) could be released for sale, and the remainder, located along Ashwood Blvd (marked in BLUE – Attachment 1), should be reserved for right of way purposes, allowing for future modifications and improvements within those limits.

The process to adjust right of way limits, on lands already owned by VDOT, is an internal administrative process (see attachment 2). As a result, VDOT has requested RST to depict the proposed right of way limits for Ashwood Boulevard on their site plan, showing that portion of Parcel 46B5-1D being retained by VDOT as "Proposed Right of Way" and VDOT will formally acknowledge this designation as a part of the RST site plan review process. This will also be supported by VDOT's request to the County Assessor to revise the boundaries and acreage of Parcel 46B5-1D to depict the proposed right of way limits, and reflecting only that 1.44 acre portion of the parcel which will be offered to the public.

The acknowledgement and designation of this area as right of way provides for RST to construct the proposed connection and any improvements (i.e. sidewalk, curb and gutter, etc) that may be required by the County or VDOT as a part of the site plan review process, along Ashwood Boulevard and clarify any questions as to the legal rights of access across those lands owned by VDOT. After this area is designated as right of way, RST's property would then abut the Ashwood Boulevard right of way. As such, the proposed connection would not cross a separate County tax map parcel to reach the Ashwood Boulevard right of way, allowing the proposed connection to be constructed within the right of way limits pursuant under VDOT's access permitting procedures. No portion of the proposed connection would be built on a tax map parcel, owned by VDOT. All improvements and any proposed connection will still require review and approval by the County and VDOT to ensure they meet all zoning, land use, and highway standards and requirements.

If you have any further questions regarding this matter, please do not hesitate to contact me.

Sincerely yours,



Kimberly M. Leckner
Assistant Program Manager
Right of Way and Utilities Division

cc: Adam J. Moore, P.E., Area Land Use Engineer, Charlottesville Residency

Attachments 2 (1 – Acquisition Project Plans, 2 – Real Estate Certification)

Rev. Prop. R/W lines are depicted as the Prop. Right of Way lines shown on the plans for Project 0029-002-135, R-201

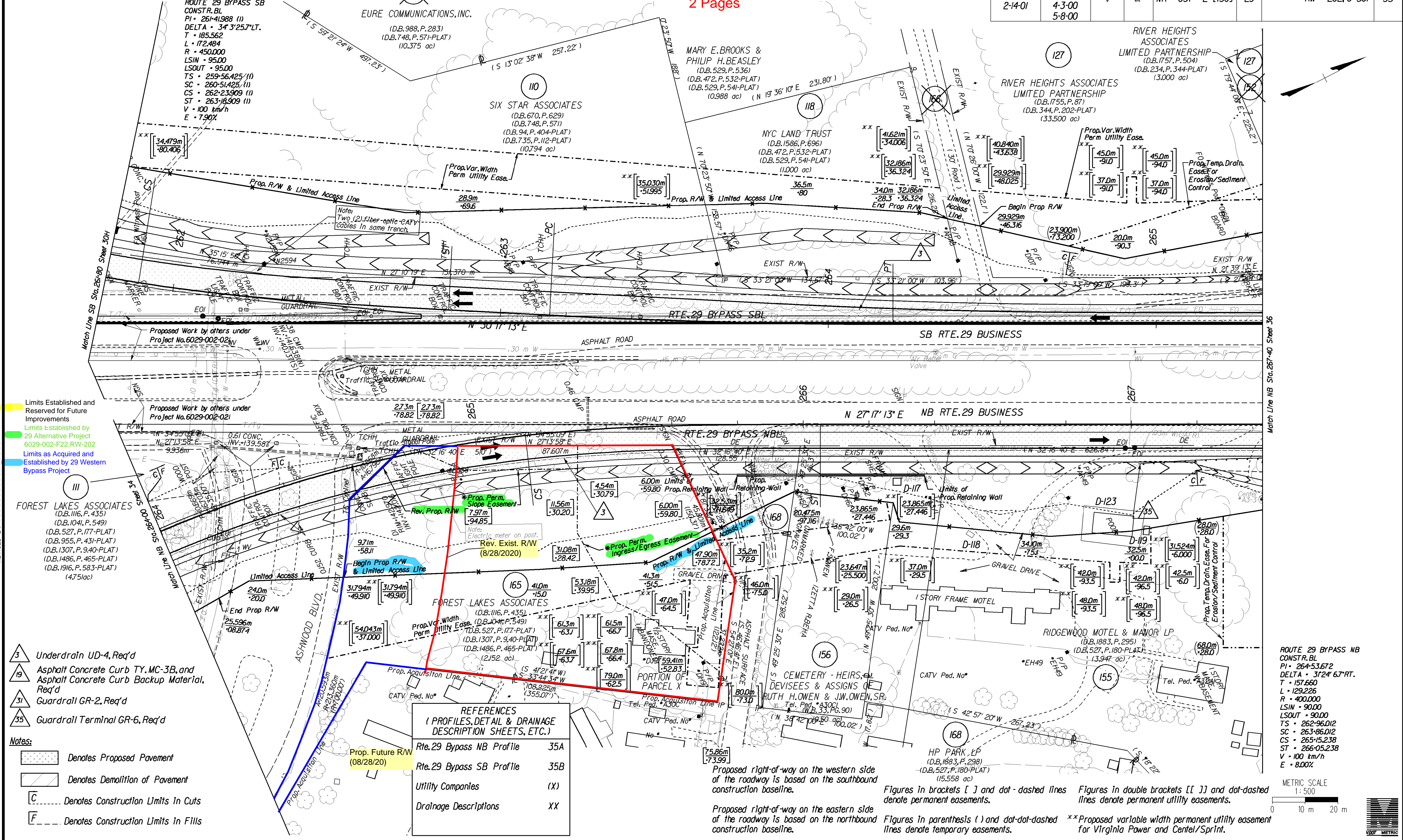
*Prop. Perm. Slope Easement lines are depicted as shown on the plans for Project 0029-002-135, R-201

*Prop. Perm. Ingress/Egress Easement lines are depicted as shown on the plans for Project 0029-002-135, R-201

Attachment # 1
2 Pages

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	REVISED	FHWA REGION	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
5-16-00 9-6-00 9-26-00 2-14-01	9-30-99 11-8-99 3-22-00 4-3-00 5-8-00	3	VA	NH - 037 - 2 [130]	29	6029 - 002 - F22 RW 202, C 501	35



- Limits Established and Reserved for Future Improvements
- Limits Established by 29 Alternative Project 6029-002-F22, RW-202
- Limits as Acquired and Established by 29 Western Bypass Project

- 3 Underdrain UD-4, Req'd
- 19 Asphalt Concrete Curb TY, MC-3B, and Asphalt Concrete Curb Backup Material, Req'd
- 31 Guardrail GR-2, Req'd
- 35 Guardrail Terminal GR-6, Req'd

- Notes:
- Denotes Proposed Pavement
 - Denotes Demolition of Pavement
 - Denotes Construction Limits in Cuts
 - Denotes Construction Limits in Fills

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)	
Rte. 29 Bypass NB Profile	35A
Rte. 29 Bypass SB Profile	35B
Utility Companies	(X)
Drainage Descriptions	XX

Proposed right-of-way on the western side of the roadway is based on the southbound construction baseline.

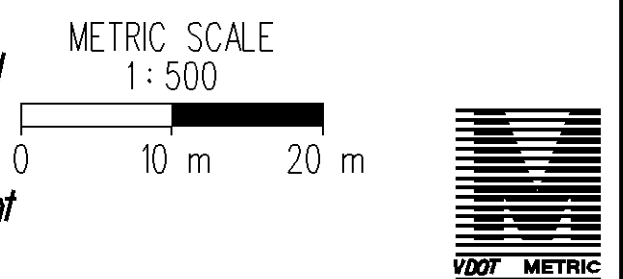
Proposed right-of-way on the eastern side of the roadway is based on the northbound construction baseline.

Figures in brackets [] and dot-dashed lines denote permanent easements.

Figures in parentheses () and dot-dot-dashed lines denote temporary easements.

Figures in double brackets [[]] and dot-dashed lines denote permanent utility easements.

**Proposed variable width permanent utility easement for Virginia Power and Centel/Sprint.



SURVEYED BY - ROUSE-SIRINE ASSOCIATES, LTD.
SUPERVISED BY - PATSY MAPLER (604) 786-2566
DESIGNED BY - PARSONS BRINCKERHOFF, OMAHA & DOUGLAS
CADD OPERATOR - ROUSE-SIRINE ASSOCIATES, LTD.
REVISED BY -

10/21/2005 10:41:09

A	PLAN NO.	PROJECT	FILE NO.	SHEET NO.
		6029 - 002 - F22		34

Real Estate Certification

The following land and/or property interest that was formerly a portion of road right of way is no longer deemed necessary for uses of the State Highway System or Secondary Highway System.

<u>Location of Property or Property Interest</u> PMI 6638	
Route : 29	County : Albemarle
Acquired for Project	6029-002-F22, RW-202
Acquired from	Forest Lakes Associates
Location	Shown on Sheet 9, 10 and 10E of the plans for Route 29, State Highway Project 0029-002-135,RW201, lying northeast of the intersection of Ashwood Boulevard and Route 29, north of and adjacent to north existing and proposed right of way line of Ashwood Boulevard and east of and adjacent to the east existing right of way line of Route 29; from a point 176.03 feet opposite Station 102+77.56 (Ashwood Boulevard Construction Baseline to a point 90.98 feet opposite Station 2657+32.02 (Route 29 Mainline Construction Baseline).
Size (area)	1.4473 acre

<u>Reason for Change</u>

	Roadway abandoned
	Roadway changes resulting from a new project
X	Reduction of right of way width, for area no longer needed (no further need was reviewed and concurred in by Planning, Operation, and Maintenance.
	Easement no longer needed (no further need was reviewed and concurred in by Planning, Operation, and Maintenance.
X	The plans have been revised at the request of the County and District to accommodate a future project to widen and extend Ashwood Blvd.. If approved for sale, the limited access rights as shown on the plans will be released.

I certify that the above described real property or property interest is no longer needed for uses of the State Highway System or Secondary Highway System and authorize the disposal in accordance with State statutes.

Richard

Walton Jr.
Richard Walton Jr.
Chief of Policy

Digitally signed by
Richard Walton Jr

Date: 2020.08.28

08:46:47 -04'00'

Date _____

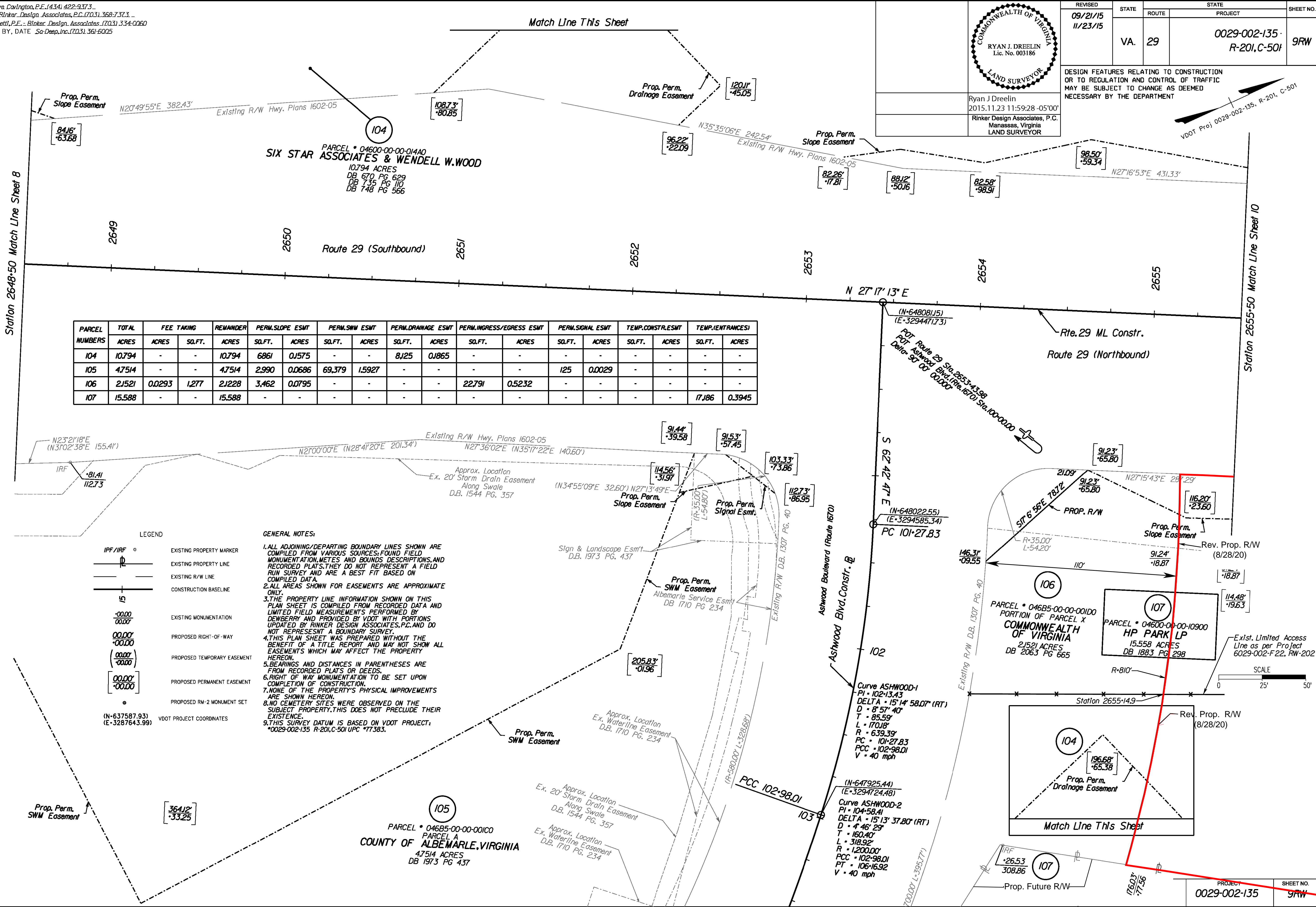
Office Locations
Rinker Design Associates, P.C.
10000 Old Dominion Blvd., Suite 200
Manassas, VA 20108
Phone: (703) 761-6005
Fax: (703) 761-6006
Email: info@rinkerdesign.com
www.rinkerdesign.com

Design Associates, P.C.
Civil Engineering - Land Planning
Surveying - Boundary - Environmental
Transportation - Right of Way - Utilities



CULPEPER DISTRICT

PROJECT MANAGER: Dave Cavington, P.E. (434) 422-9373
SURVEYED BY, DATE: Rinker Design Associates, P.C. (703) 368-7373
DESIGN BY: John A. Glanville, P.E. - Rinker Design Associates, P.C. (703) 334-0060
SUBSURFACE UTILITY BY, DATE: So-Deep, Inc. (703) 361-6005



Office Locations
Rinker Design Associates, P.C.
Civil Engineering - Surveying - Land Planning
Environmental Engineering - Transportation
Virginia Professional Seal
Professional Engineer
Professional Surveyor
Professional Planner
Professional Designer
Professional Architect
Professional Engineer
Professional Surveyor
Professional Planner
Professional Designer
Professional Architect

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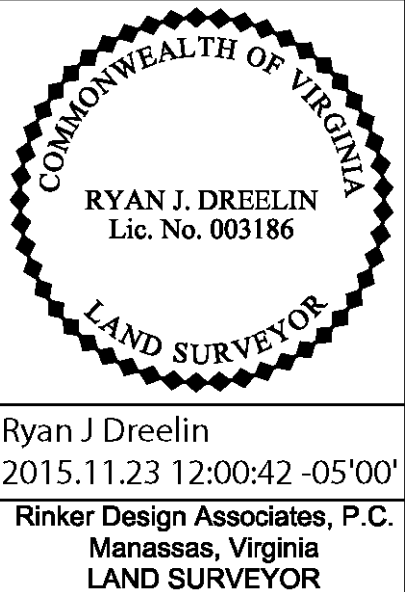
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DESIGN BY: John A. Glanville, P.E. - Rinker Design Associates (703) 334-0060
SUBSURFACE UTILITY BY, DATE: So-Deep, Inc. (703) 361-6005

- LEGEND
- IPF / IRF
 - EXISTING PROPERTY MARKER
 - EXISTING PROPERTY LINE
 - EXISTING R/W LINE
 - CONSTRUCTION BASELINE
 - EXISTING MONUMENTATION
 - PROPOSED RIGHT-OF-WAY
 - PROPOSED TEMPORARY EASEMENT
 - PROPOSED PERMANENT EASEMENT
 - PROPOSED RM-2 MONUMENT SET
 - VDOT PROJECT COORDINATES

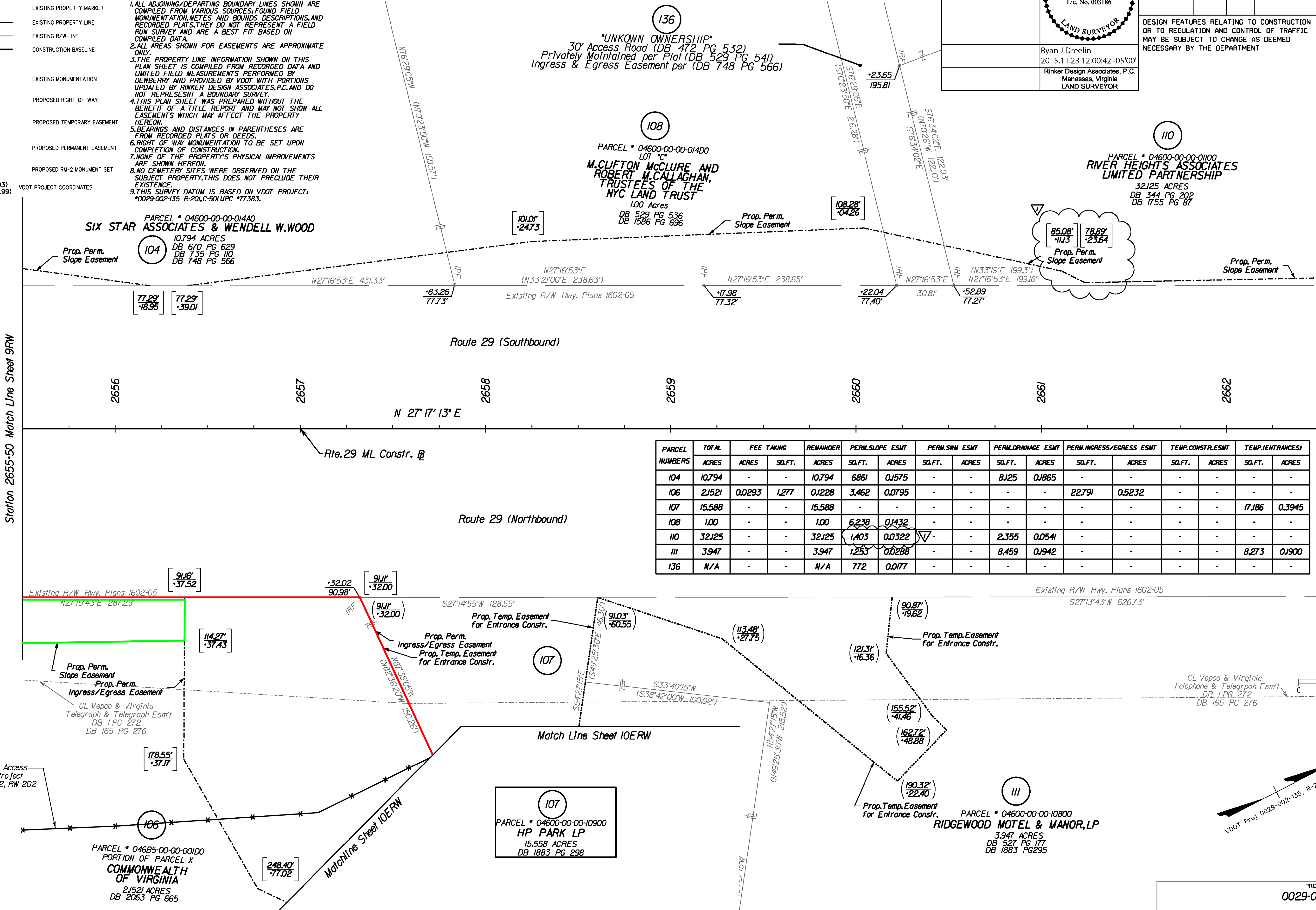
GENERAL NOTES:

1. ALL ADJOINING/DEPARTING BOUNDARY LINES SHOWN ARE COMPILED FROM VARIOUS SOURCES: FOUND FIELD MONUMENTATION, METES AND BOUNDS DESCRIPTIONS, AND RECORDED PLATS. THEY DO NOT REPRESENT A FIELD RUN SURVEY AND ARE A BEST FIT BASED ON COMPILED DATA.
2. ALL AREAS SHOWN FOR EASEMENTS ARE APPROXIMATE ONLY.
3. THE PROPERTY LINE INFORMATION SHOWN ON THIS PLAN SHEET IS COMPILED FROM RECORDED DATA AND LIMITED FIELD MEASUREMENTS PERFORMED BY DEWBERRY AND PROVIDED BY VDOT WITH PORTIONS UPDATED BY RINKER DESIGN ASSOCIATES, P.C. AND DO NOT REPRESENT A BOUNDARY SURVEY.
4. THIS PLAN SHEET WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND MAY NOT SHOW ALL EASEMENTS WHICH MAY AFFECT THE PROPERTY HEREON.
5. BEARINGS AND DISTANCES IN PARENTHESES ARE FROM RECORDED PLATS OR DEEDS.
6. RIGHT OF WAY MONUMENTATION TO BE SET UPON COMPLETION OF CONSTRUCTION.
7. NONE OF THE PROPERTY'S PHYSICAL IMPROVEMENTS ARE SHOWN HEREON.
8. NO CEMETERY SITES WERE OBSERVED ON THE SUBJECT PROPERTY. THIS DOES NOT PRECLUDE THEIR EXISTENCE.
9. THIS SURVEY DATUM IS BASED ON VDOT PROJECT: *0029-002-135 R-201, C-501 UPC *77383.



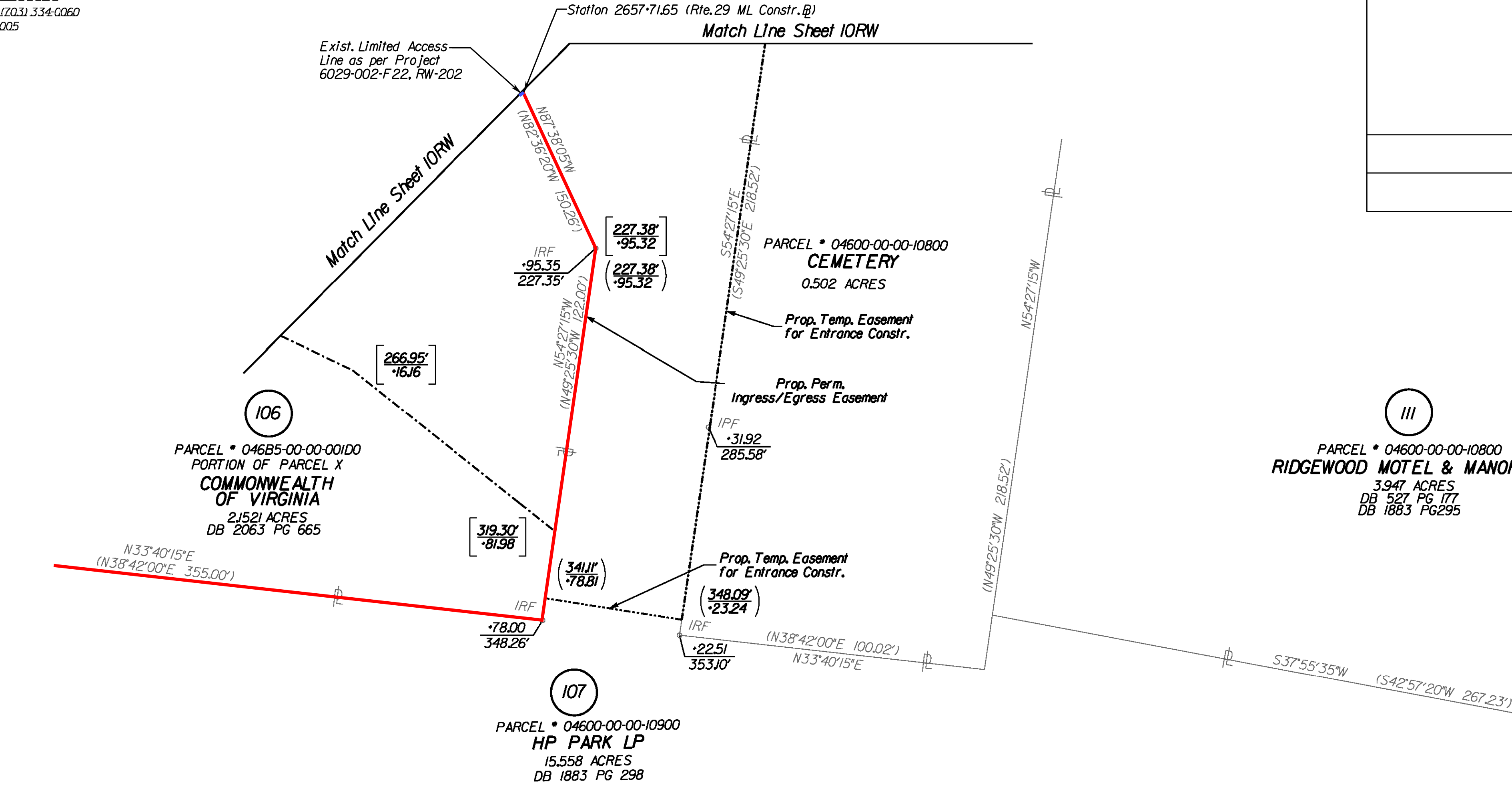
REVISED	STATE	ROUTE	PROJECT	SHEET NO.
09/02/15 09/21/15 10/26/15 11/23/15	VA.	29	0029-002-135 R-201, C-501	10RW

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



R.W. PLANS

PROJECT MANAGER Dava Covington, P.E. (434) 422-9373
SURVEYED BY, DATE Rinker Design Associates, P.C. (703) 368-7373
DESIGN BY John A. Glanville, P.E. - Rinker Design Associates (703) 334-0060
SUBSURFACE UTILITY BY, DATE So-Deep, Inc. (703) 361-6005



PARCEL NUMBERS	TOTAL ACRES	FEE TAKING ACRES	REMAINDER SQ.FT.	ACRES	PERM.SLOPE ESMT SQ.FT.	ACRES	PERM.SHW ESMT SQ.FT.	ACRES	PERM.DRAINAGE ESMT SQ.FT.	ACRES	PERM.INGRESS/EGRESS ESMT SQ.FT.	ACRES	TEMP.CONSTR.ESMT SQ.FT.	ACRES	TEMP.(ENTRANCES) SQ.FT.	ACRES
106	21521	0.0293	1277	21228	3,462	0.0795	-	-	-	-	22,791	0.5232	-	-	-	-
107	15.558	-	-	15.558	-	-	-	-	-	-	-	-	-	-	17,186	0.3945
III	3.947	-	-	3,947	1,253	0.0288	-	-	6,132	0.1408	-	-	-	-	8,273	0.1900

LEGEND

IPF / IRF ° EXISTING PROPERTY MARKER

EXISTING PROPERTY LINE

EXISTING R/W LINE

CONSTRUCTION BASELINE

EXISTING MONUMENTATION

PROPOSED RIGHT-OF-WAY

PROPOSED TEMPORARY EASEMENT

PROPOSED PERMANENT EASEMENT

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VDOT PROJECT COORDINATES

GENERAL NOTES:

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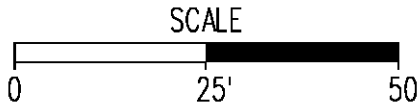
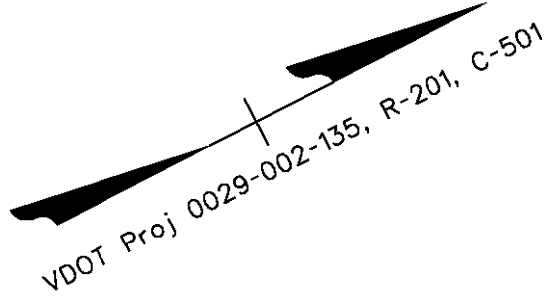
9. THIS SURVEY DATUM IS BASED ON VDOT PROJECT: *0029-002-135 R-201, C-501 UPC *77383.

COMMONWEALTH OF VIRGINIA
RYAN J. DREELIN
Lic. No. 003186
LAND SURVEYOR

Ryan J Dreelin
2015.11.23 12:00:07 -05'00'
Rinker Design Associates, P.C.
Manassas, Virginia
LAND SURVEYOR

REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
09/02/15 11/23/15	VA.	29		0029-002-135 R-201, C-501	10ERW

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



PROJECT	SHEET NO.
0029-002-135	10ERW

October 6, 2020

Mr. Kevin McDermott, AICP
Albemarle County
401 McIntire Road
Charlottesville, Virginia 22902
Phone: (434) 296-5832

Reference: **Ashwood Boulevard Residential** – Revised Traffic Impact Analysis (TIA)

Dear Mr. McDermott,

Ramey Kemp & Associates, Inc. (RKA) prepared the Traffic Impact Analysis (TIA) for this proposed neighborhood on December 27, 2019. VDOT reviewed the TIA and provided comments in a letter dated July 22, 2020, which are detailed below and following is a brief response to each.

VDOT Traffic Engineering

1) Page 1: The counts and collection dates do not match and will be corrected.

- The traffic count date has been corrected in the revised TIA

2) Page 6: TE recommends 100-ft storage and 100-ft taper for Ashwood @ Archer Ave. The construction of the left turn lane may lead to the closure of the existing median break. TE recommends 200-ft taper to comply with the VDOT access management for turning lane length of taper and storage for US 29 @ RIRO Driveway.

- RKA agrees with these recommendations, which were included in the original TIA

Synchro Files

3) AM and PM existing models do not have the correct existing total split timing, yellow timings, all red timings. Considering this intersection is coordinated with other intersection along US 29, the existing timings need to be used throughout all scenarios. If signal-timing modification is deemed necessary to accommodate the development, the modified signal timings should be added to the recommendation section for review. Furthermore, any signal timing modification to this intersection may require updating the entire coordination system along US 29. Obtain the correct existing timings from VDOT / TOC and update synchro accordingly.

- The existing VDOT signal timings have been included in this revised analysis for the existing conditions and maintained for the no-build and build conditions.

- 4) Lost time adjustment is coded incorrectly throughout all scenarios (Existing, No-Build and Build). Use the default value of “0”. Side note: VDOT / TE commented in this practice from RKA several times at different occasions. Refer to Synchro guide for information in regards to the lost time adjustment.
 - Lost time has two components – start-up lost time (perception / reaction time when the light turns green, which is 2.0 seconds), and the clearance lost time (the amount of clearance time that is not used by drivers – typically assumed to be 2.0 seconds). This results in a total lost time of 4.0 seconds per phase. Synchro calculates lost time as the clearance time (yellow plus all-red), which is incorrect. The U.S. 29 at Ashwood Boulevard intersection has clearance times of 5.9 to 8.5 seconds per phase. Start-up lost time is fixed at 2.0 seconds, so this means that drivers are not using the last 3.9 to 6.5 seconds of clearance time, which is overly conservative. In Table 2, the LOS results are reported with and without the lost time adjustment.
- 5) The existing condition has a pedestrian phase, which was not coded into Synchro. Add the pedestrian phase for all scenarios.
 - The pedestrian phase for the crosswalk across the east leg of the intersection has been included in all scenarios. This crosswalk runs with northbound U.S. 29, so it receives plenty of walk time with every cycle, so has no impact to the Synchro analysis.
- 6) Level of Service Summary tables uses Synchro output values, however, per TOSAM “HCM 2010 should be used for reporting Synchro analyses. If HCM 2010 reports are not generated because of the operation of the intersection, HCM 2000 should be used”. Revise all the summary tables to include the HCM values and all attached reports are to be HCM 2010 / HCM 2000 reports.
 - The HCM 2010 reports have been utilized for all unsignalized intersections in the revised TIA. HCM 2000 reports were utilized to report LOS and delay for the signalized intersection because HCM 2010 is unable to analyze U-turns, and the Synchro intersection reports have been included for lane queues.
- 7) Southbound left-turn lane is coded incorrectly throughout all scenarios (Existing, No-Build, and Build). SBL is coded as a protected permissive; however, SBL is in a protected only mode. Revise Synchro models to match the existing condition of the SBL operation. VDOT TE performed internal analysis for the PM Build model using existing timing. The Synchro queue length is #313-ft. As a result, TE recommends that the SBL storage needs to be extended an additional 150-ft to accommodate the long queue during the PM peak.
 - The southbound left-turn movement has been corrected to protected-only operation, and the applicant has agreed to extend the storage in the southbound left-turn lane from 200 feet to 350 feet.
- 8) Note that the final plan must show conformance with the VDOT Road Design Manual Appendices B(1) and F, as well as any other applicable standards, regulations or other requirements.
 - Understood

Ramey Kemp & Associates, Inc. (RKA) has performed a Traffic Impact Analysis (TIA) for the proposed neighborhood in the northeast quadrant of the U.S. 29 at Ashwood Boulevard intersection. The development plan includes up to 250 apartments and 108 two-over-two (2+2) townhome units with one full-movement driveway on Ashwood Boulevard and one right-in / right-out driveway on U.S. 29. If approved, the neighborhood is expected to be built-out in 2023. Figure 1 shows the site location and study intersections, and Figure 2 shows the preliminary site plan.

Based on our TIA scoping meeting with you and VDOT on December 6, the purpose of this letter report is to provide the following:

- Trip generation calculations
- Evaluation of turn lane warrants for the proposed site driveways
- Capacity and queueing analysis of the study intersections

Existing Roadway Conditions

U.S. 29 (Seminole Trail) is a six-lane Principal Arterial with a current average daily traffic (ADT) volume of approximately 45,000 vehicles per day (vpd), and a posted speed limit of 45 miles per hour (mph) in the vicinity of the site.

Ashwood Boulevard is a two-lane collector with a current ADT volume of approximately 5,100 vpd, and a posted speed limit of 35 mph.

The existing roadway configuration is shown in Figure 3.

Existing Traffic Volumes

The AM peak hour (7:00 to 9:00 AM) and PM peak hour (4:00 to 6:00 PM) turning movement counts were conducted by Peggy Malone & Associates, Inc. at the intersection of U.S. 29 at Ashwood Boulevard on December 12, which was during University of Virginia (UVA) exam week, and months before the Covid-19 pandemic. Based on discussion with you at the time, we agreed that traffic counts during UVA exam week were acceptable. In fact, the traffic volumes on U.S. 29 were likely elevated due to holiday shopping at the retail centers on the U.S. 29 corridor. The traffic count data are enclosed, and the existing 2019 volumes are shown in Figure 4.

Approved Development

Based on discussion with the County and VDOT, one approved development is included in this TIA. Brookhill is a mixed-use development in the southeast quadrant of the U.S. 29 at Ashwood Boulevard intersection. The approved development trips were based on Figure 12 from the RKA TIA dated February 2016. The trips for the Brookhill neighborhood are shown in Figure 5.

Background Traffic Growth

The 2019 peak hour traffic volumes were grown by an annual rate of 1.15% for four years to estimate the 2023 peak hour traffic volumes. The grown volumes were combined with the approved development trips to estimate the no-build 2023 volumes, which are shown in Figure 6.

Trip Generation

The trip generation potential of the proposed neighborhood during a typical weekday, AM peak hour, and PM peak hour was estimated using the methodologies published by the *ITE Trip Generation Manual – 10th Edition*. Table 1 summarizes the trip generation calculations.

Table 1
ITE Trip Generation – Weekday – 10th Edition

Land Use (ITE Land Use Code)	Size	Weekday Daily Traffic (vpd)		AM Peak Hour (vph)		PM Peak Hour (vph)	
		Enter	Exit	Enter	Exit	Enter	Exit
Multifamily Housing – Mid-Rise (221)	375 units	1,021	1,021	35	100	101	64

The development plan includes 358 units, but the analysis is based on the trip potential of 375 units to be conservative.

Site Traffic Distribution

The following site traffic distribution was applied based on a review of the existing traffic volumes, the adjacent roadway network, and engineering judgement:

- 67% to / from the south on U.S. 29
- 15% to / from the south on Archer Avenue
- 13% to / from the north on U.S. 29
- 5% to / from the east on Ashwood Boulevard

Figure 7 shows the site trip distribution, Figure 8 shows the site trip assignment, and Figure 9 shows the projected 2023 build-out peak hour traffic volumes.

VDOT Turn Lane Warrant Analysis

The projected build-out AM and PM peak hour traffic volumes at the proposed site driveways were compared to the turn lane warrants in the Virginia Department of Transportation (VDOT) *Access Management Design Standards for Entrances and Intersections*.

U.S. 29 at Right-in / Right-out Driveway:

- A northbound right-turn taper on U.S. 29 is barely warranted in the PM peak hour only

Ashwood Boulevard at Archer Avenue / Site Driveway:

- A westbound right-turn lane on Ashwood Boulevard is not warranted
- An eastbound left-turn lane on Ashwood Boulevard is nearly warranted in the PM peak hour only

Figure 10 shows the recommended roadway laneage at the proposed driveways.

Intersection Spacing Standards

VDOT requires at least 305 feet of separation between partial access driveways on Principal Arterial roadways posted 45 mph. The proposed right-in / right-out driveway on U.S. 29 is approximately 500 feet north of the U.S. 29 at Ashwood Boulevard intersection which exceeds the VDOT minimum spacing standards.

Traffic Capacity Analysis

Traffic capacity analysis for the study intersections was performed using Synchro 10, which is a comprehensive software package that allows the user to model signalized and unsignalized intersections to determine levels-of-service based on the thresholds specified in the Highway Capacity Manual (HCM) – 6th Edition.

Table 2 summarizes the capacity analysis results for the signalized intersection of U.S. 29 at Ashwood Boulevard, and the Synchro outputs are enclosed for reference. HCM 2010 is unable to analyze U-turn movements, so HCM 2000 methodology was utilized for LOS and delay. Synchro intersection reports are included in the analysis to provide queue lengths, which are not provided with HCM 2000 signalized reports.

Table 2
Level-of-Service Summary for U.S. 29 at Ashwood Boulevard

CONDITION	LANE GROUP	AM PEAK HOUR				PM PEAK HOUR			
		Lane LOS	Lane Delay (sec)	Queue (ft)	Overall LOS (Delay)	Lane LOS	Lane Delay (sec)	Queue (ft)	Overall LOS (Delay)
Existing (2019) Traffic Conditions	WBL	D	50.1	188	B (17.7 sec)	E	59.1	88	B (12.1 sec)
	WBR	D	40.7	36		E	55.6	35	
	NBU	E	57.6	6		E	65.5	7	
	NBT	B	11.9	274		B	11.9	449	
	NBR	A	8.6	23		A	7.3	30	
	SBL	E	58.3	30		E	62.9	91	
	SBT	B	15.1	549		A	7.2	286	
No-Build (2023) Traffic Conditions	WBL	D	50.7	221	C (25.4 sec)	E	62.4	117	C (20.3 sec)
	WBR	D	39.4	45		D	55.0	47	
	NBU	E	58.2	97		E	63.6	97	
	NBT	B	16.1	314		B	16.7	511	
	NBR	B	11.2	24		A	9.5	30	
	SBL	E	72.2	125		F	115.2	302	
	SBT	C	23.9	658		B	11.4	368	
Build (2023) Traffic Conditions	WBL	D	53.2	257	C (27.3 sec)	E	69.2	154	C (22.7 sec)
	WBR	D	38.3	46		D	54.5	48	
	NBU	E	58.2	97		E	63.6	97	
	NBT	B	17.8	317		B	16.9	522	
	NBR	B	12.4	26		A	9.8	32	
	SBL	E	64.6	136		F	152.9	332	
	SBT	C	25.6	658		B	11.6	368	
Build (2023) Traffic Conditions <i>With Lost Time Adjustment</i>	WBL	D	43.0	243	C (23.8 sec)	E	55.4	138	B (18.2 sec)
	WBR	C	34.8	43		D	50.6	46	
	NBU	D	50.2	93		E	57.1	94	
	NBT	B	15.6	305		B	15.5	497	
	NBR	B	10.9	25		A	9.0	31	
	SBL	D	53.0	113		E	79.7	289	
	SBT	C	23.2	630		B	10.5	349	

Capacity analysis indicates that the intersection currently operates at LOS B during the AM and PM peak hours. Under no-build conditions, the intersection is expected to operate at LOS C during the AM and PM peak hours.

Under build conditions, the intersection is expected to continue to operate at LOS C during the AM and PM peak hours.

Lost time has two components – start-up lost time (perception / reaction time when the light turns green, which is 2.0 seconds), and the clearance lost time (the amount of clearance time that is not used by drivers – typically assumed to be 2.0 seconds). This gives us a total lost time of 4.0 seconds.

With the appropriate lost time adjustment factored into the analysis for build conditions, the intersection is expected to operate at LOS C during the AM peak hour and LOS B during the PM peak hour.

The following improvement is recommended to accommodate the site trips:

- Extend the storage in the southbound left-turn lane on U.S. 29 from 200 feet to 350 feet

Table 3 summarizes the capacity analysis results for the intersection of Ashwood Boulevard at Archer Avenue / Site Driveway, and the Synchro outputs are enclosed for reference. HCM 2010 methodology was utilized for this analysis.

Table 3
Level-of-Service Summary for Ashwood Boulevard at Archer Avenue / Site Driveway

CONDITION	LANE GROUP	AM PEAK HOUR				PM PEAK HOUR			
		Lane LOS	Lane Delay (sec)	Queue (ft)	Overall LOS (Delay)	Lane LOS	Lane Delay (sec)	Queue (ft)	Overall LOS (Delay)
No-Build (2023) Traffic Conditions	EBT	-	-	-	N/A ³	-	-	-	N/A ³
	EBR	-	-	-		-	-	-	
	WBL ²	A	7.6	3		A	8.4	3	
	WBT	-	-	-		-	-	-	
	NBL ¹	C	15.4	18		B	14.9	15	
	NBR ¹	A	9.0	3		B	10.4	5	
Build (2023) Traffic Conditions	EBL ²	A	8.4	3	N/A ³	A	7.7	3	N/A ³
	EBT	-	-	-		-	-	-	
	EBR	-	-	-		-	-	-	
	WBL ²	A	7.6	3		A	8.4	3	
	WBT/R	-	-	-		-	-	-	
	NBL ¹	C	24.0	30		C	22.3	25	
	NBT/R ¹	A	9.9	5		B	12.7	8	
	SBL/T ¹	C	17.1	5		C	18.8	5	
	SBR ¹	B	12.2	13		A	9.4	5	

1. Level of service for minor approach

2. Level of service for major street left-turn movement

3. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

Under no-build conditions, capacity analysis indicates that the minor street left-turn movement is expected to operate with short delays (less than 25 seconds) during the AM and PM peak hours with queue lengths less than one vehicle.

Under build conditions, capacity analysis indicates that the minor street left-turn movement is expected to continue to operate with short delays (less than 25 seconds) during the AM and PM peak hour with queue lengths of one vehicle or less.

Table 4 summarizes the capacity analysis results for the intersection of U.S. 29 at Right-in / Right-out Driveway, and the Synchro outputs are enclosed for reference. HCM 2010 methodology was utilized for this analysis.

Table 4
Level-of-Service Summary for U.S. 29 at Right-in / Right-out Driveway

CONDITION	LANE GROUP	AM PEAK HOUR				PM PEAK HOUR			
		Lane LOS	Lane Delay (sec)	Queue (ft)	Overall LOS (Delay)	Lane LOS	Lane Delay (sec)	Queue (ft)	Overall LOS (Delay)
Build (2023) Traffic Conditions	WBR ¹	C	19.1	5	N/A ²	D	32.0	5	N/A ²
	NBT	-	-	-		-	-	-	
	NBR	-	-	-		-	-	-	
	SBT	-	-	-		-	-	-	

1. Level of service for minor approach

2. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

Under build conditions, capacity analysis indicates that the minor street right-turn movement is expected to operate with short delays (less than 25 seconds) during the AM peak hour and with moderate delays (between 25 and 50 seconds) during the PM peak hour, with queue lengths of less than one vehicle.

Recommendations

Based on the trip generation potential of the proposed neighborhood, the following improvements are recommended:

U.S. 29 at Ashwood Boulevard:

- Extend the storage in the southbound left-turn lane on U.S. 29 from 200 feet to 350 feet

Ashwood Boulevard at Archer Avenue / Site Driveway:

- Construct site driveway with one ingress lane and two egress lanes
- Construct one eastbound left-turn lane on Ashwood Boulevard with 100 feet of storage

U.S. 29 at Right-in / Right-out Driveway:

- Construct site driveway with one ingress lane and one egress lane
- Construct one northbound right-turn lane on U.S. 29 with 200 feet of storage

We appreciate your attention to this matter. Please contact me at (804) 217-8560 if you have any questions about this report.

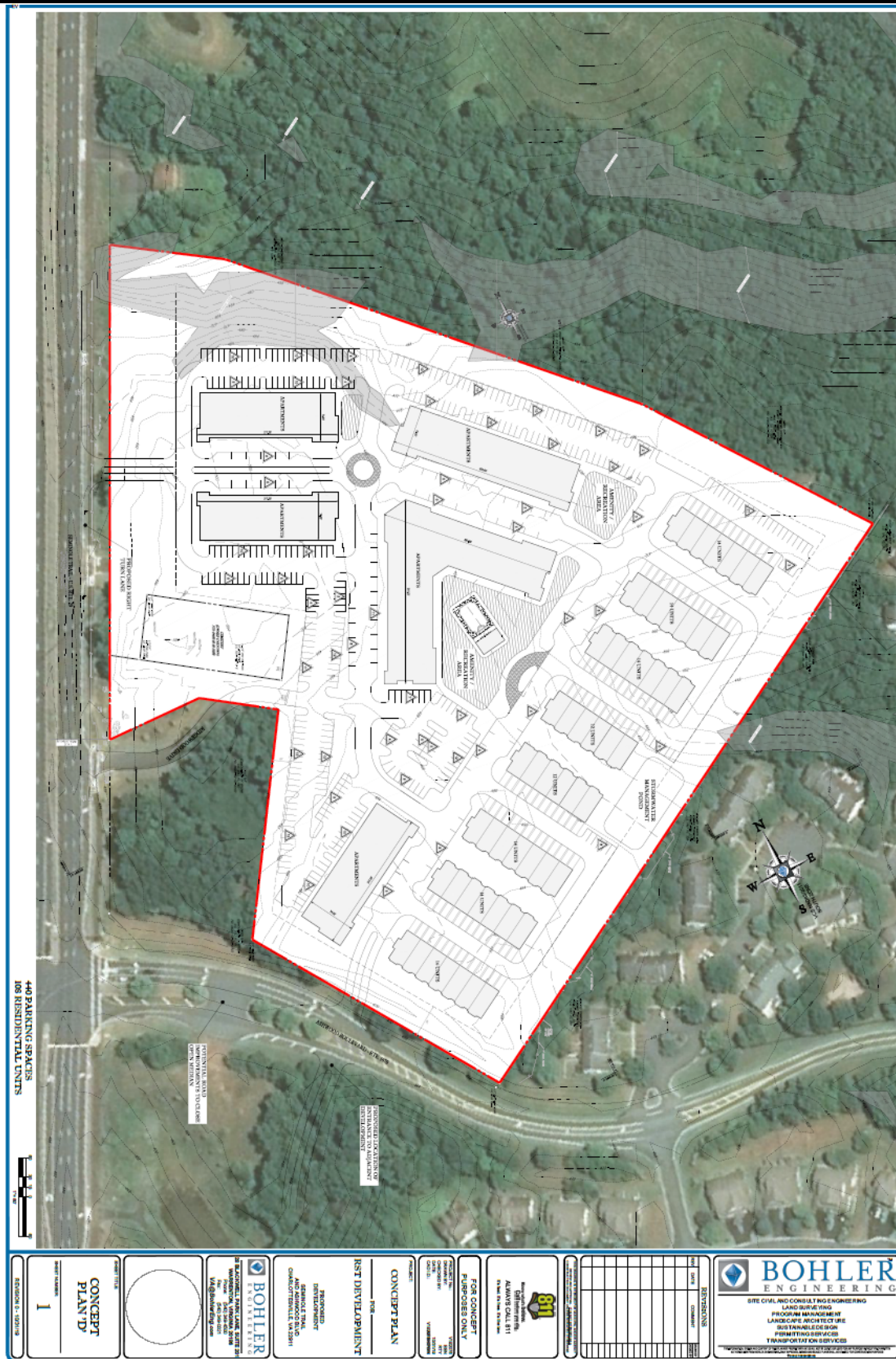
Sincerely yours,
Ramey Kemp & Associates, Inc.



Carl Hultgren, P.E., PTOE
State Traffic Engineering Lead

Enclosures: Figures, Traffic count data, Synchro output, VDOT turn lane warrant diagrams

Copy to: Mr. Adam Moore, P.E., VDOT
Mr. Scott Copeland, RST Development, LLC
Mr. Alex Mays, RST Development, LLC
Ms. Valerie Long, Williams Mullen
Mr. Charles Alvis, Williams Mullen
Mr. Ryan Yauger, P.E., Bohler Engineering



Moving forward.

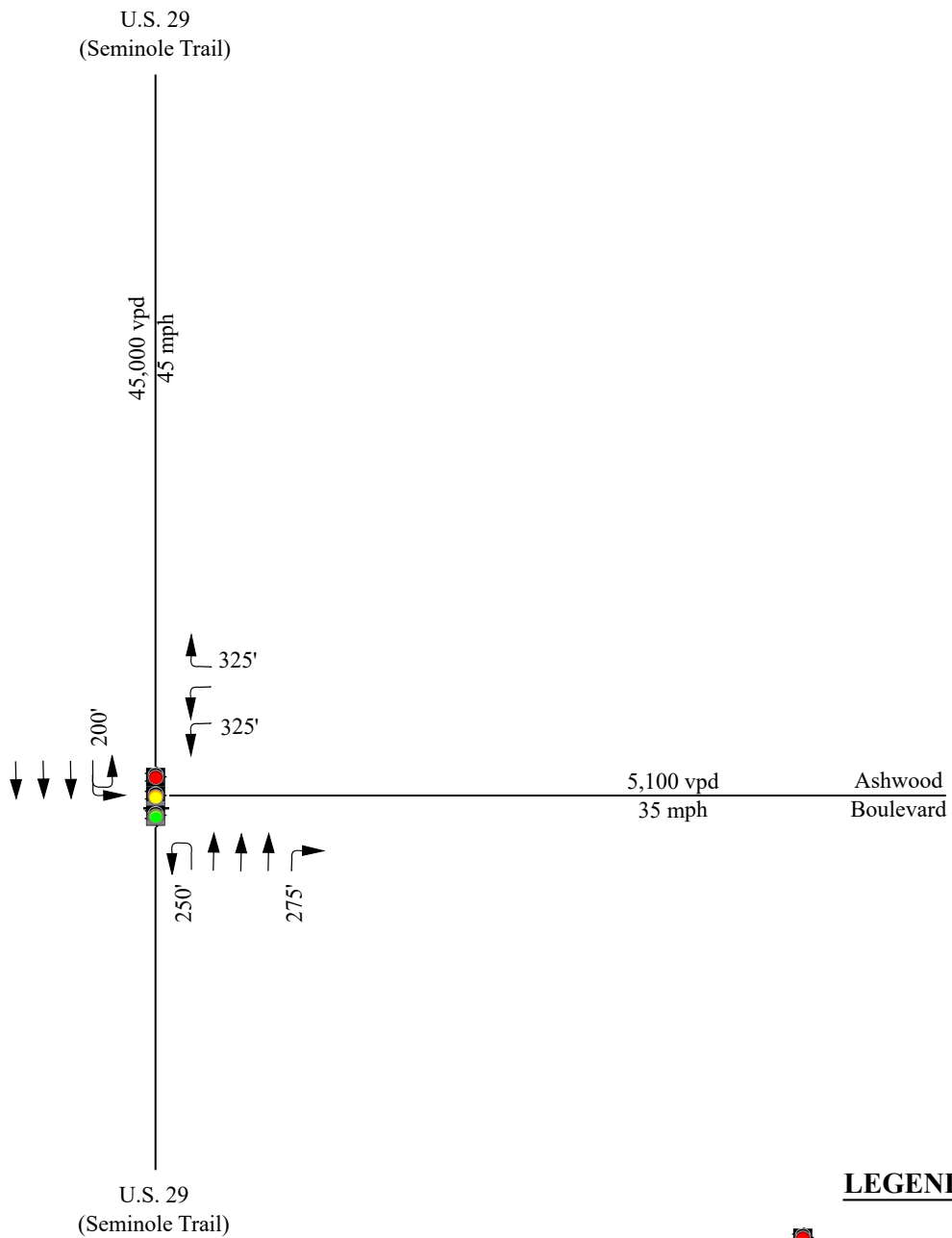


Ashwood Boulevard Residential Albemarle County, Virginia



Preliminary Site Plan

Scale: Not to Scale

Figure 2

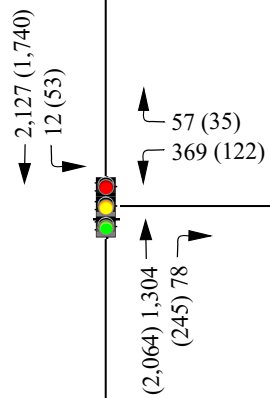


LEGEND

-  Existing Traffic Signal
-  Existing Lane
- X' Storage (In Feet)



U.S. 29
(Seminole Trail)



U.S. 29
(Seminole Trail)

Ashwood
Boulevard

LEGEND

X (Y) AM (PM) Peak Hour



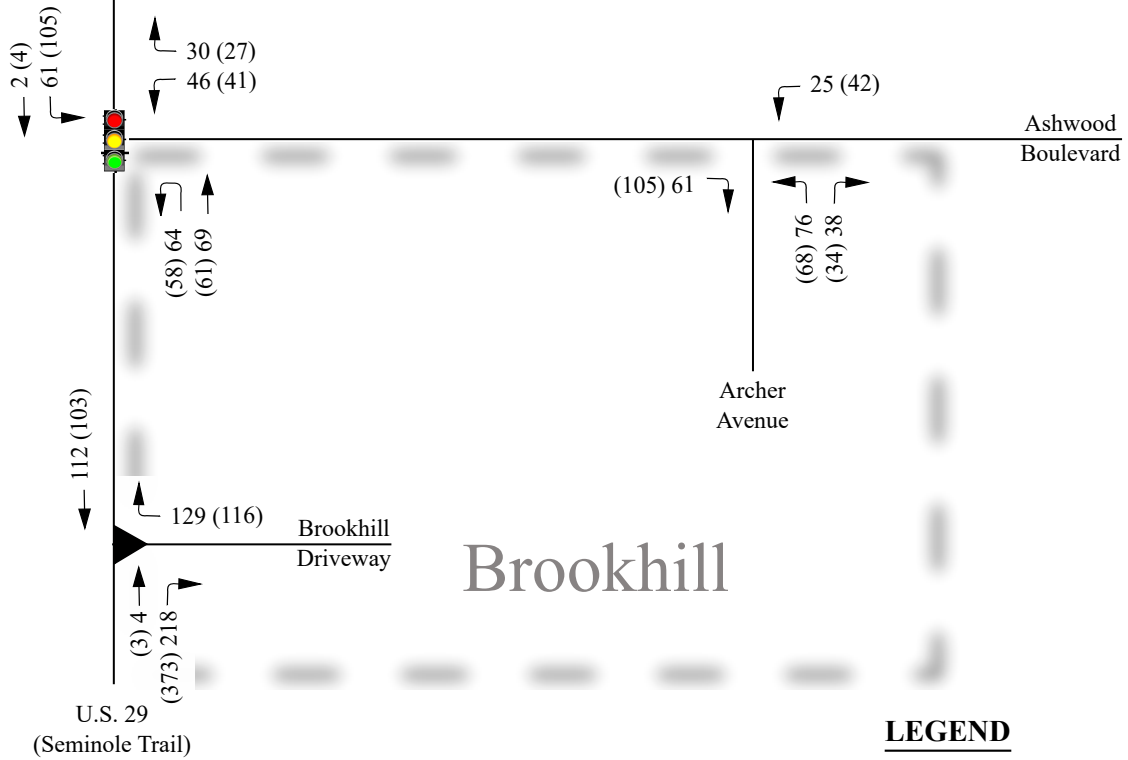
Ashwood Boulevard
Residential
Albemarle County, Virginia

Existing (2019) Peak Hour
Traffic Volumes

Scale: Not to Scale

Figure 4

U.S. 29
(Seminole Trail)



LEGEND

- X (Y) AM (PM) Peak Hour
- ▼ Right-in / Right-out Driveway



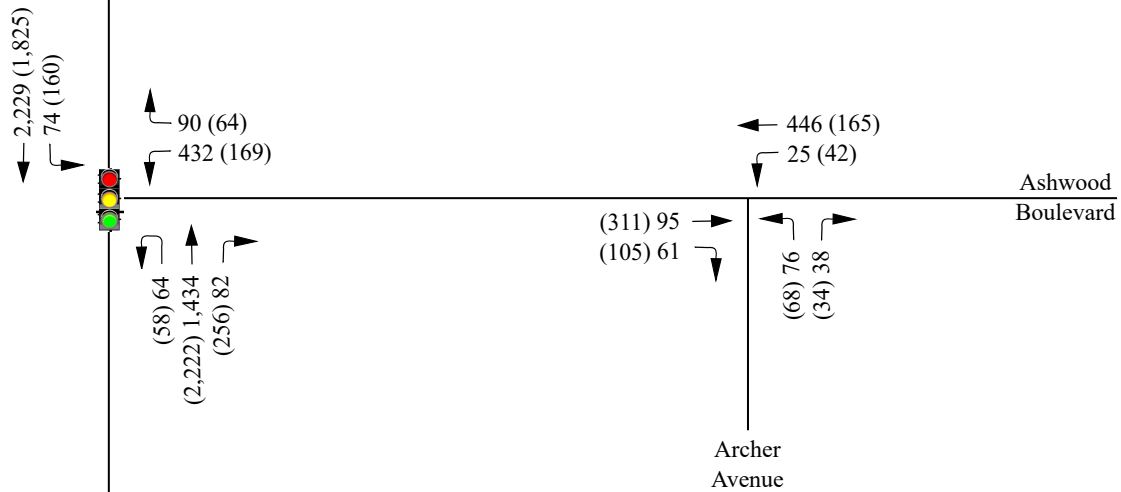
Ashwood Boulevard
Residential
Albemarle County, Virginia

Approved Development Trips

Scale: Not to Scale

Figure 5

U.S. 29
(Seminole Trail)



LEGEND

X (Y) AM (PM) Peak Hour



Ashwood Boulevard
Residential
Albemarle County, Virginia

No-Build (2023) Peak Hour
Traffic Volumes

Scale: Not to Scale

Figure 6

U.S. 29
(Seminole Trail)

13%

13%

(10%)

Proposed
RIRO

(3%)
30%

(3%)
(67%)

8%
5%

25%
42%

Site

Proposed
Driveway

(70%)
(15%)
(5%)

5%

Ashwood
Boulevard

5%

50%

15%

Archer
Avenue

15%

U.S. 29
(Seminole Trail)

67%

LEGEND

X% (Y%) Entering (Exiting) Trip Distribution

XX% Regional Trip Distribution

Moving forward.



RAMEY KEMP ASSOCIATES

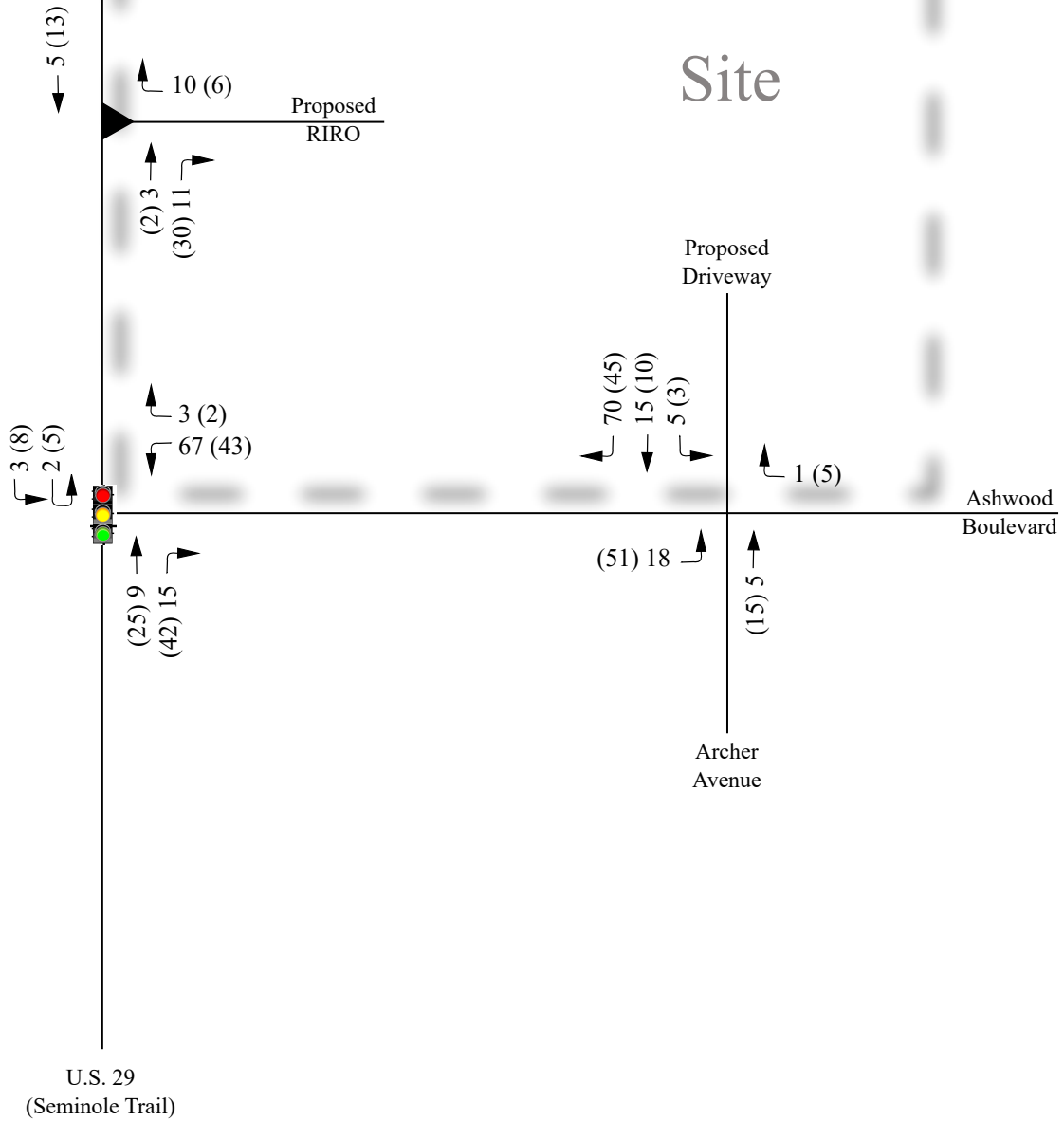
Ashwood Boulevard
Residential
Albemarle County, Virginia

Site Trip
Distribution

Scale: Not to Scale

Figure 7

U.S. 29
(Seminole Trail)



LEGEND

X (Y) AM (PM) Peak Hour



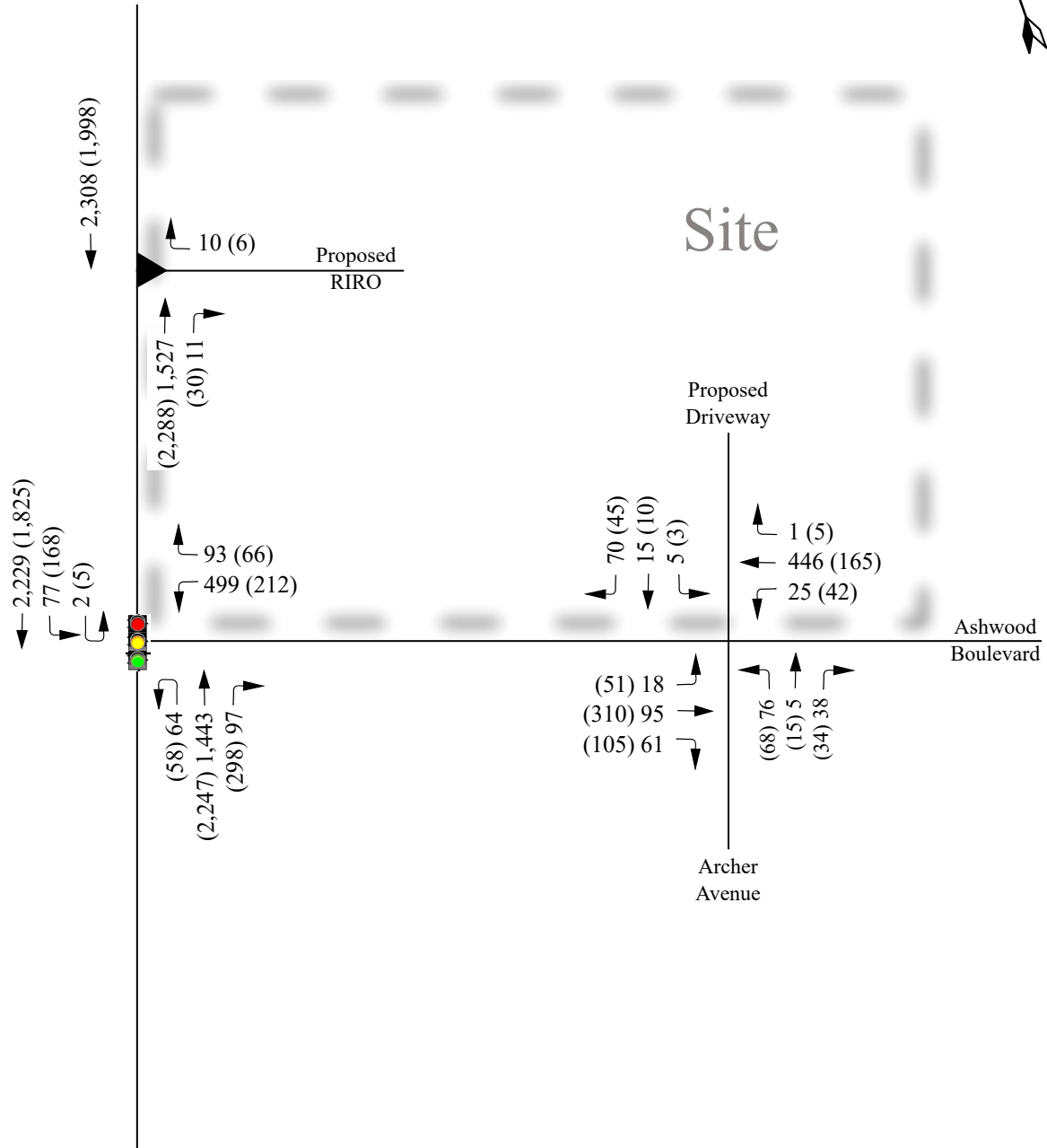
Ashwood Boulevard
Residential
Albemarle County, Virginia

Site Trip
Assignment

Scale: Not to Scale

Figure 8

U.S. 29
(Seminole Trail)



LEGEND

X (Y) AM (PM) Peak Hour Traffic



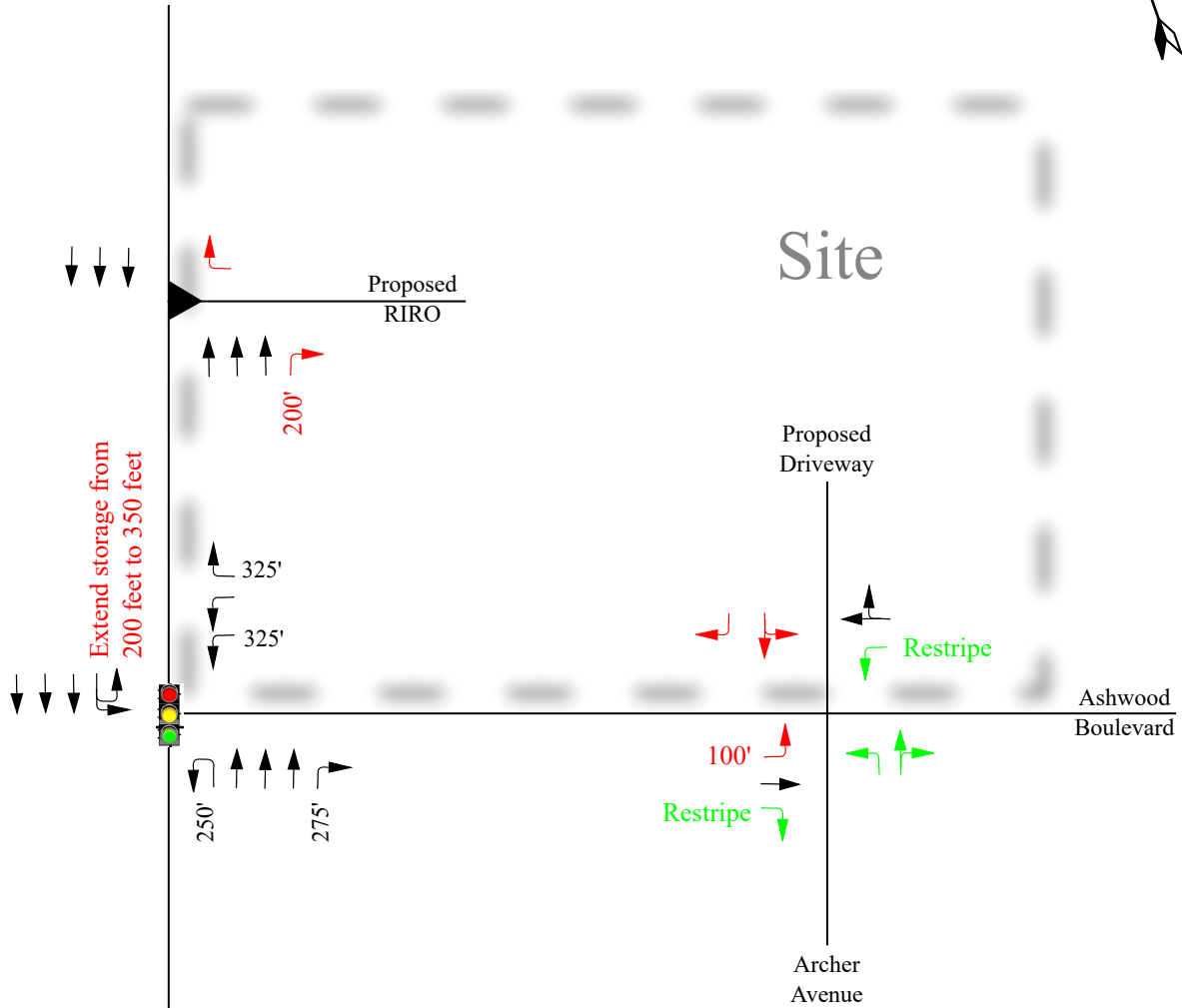
Ashwood Boulevard
Residential
Albemarle County, Virginia

Build (2023) Peak Hour
Traffic Volumes

Scale: Not to Scale

Figure 9

U.S. 29
(Seminole Trail)



LEGEND



Existing Traffic Signal

X'

Storage (In Feet)



Existing Lane



Recommended Lane



Lane to be constructed by Brookhill development

Moving forward.



RAMEY KEMP ASSOCIATES

Ashwood Boulevard
Residential
Albemarle County, Virginia

Recommended Lane
Configuration

Scale: Not to Scale

Figure 10

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : US 29 and Ashwood Blvd. AM
Site Code :
Start Date : 12/12/2019
Page No : 1

Groups Printed- Combined

	US 29 Southbound				Ashwood Blvd Westbound				US 29 Northbound					
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	381	1	0	382	8	30	0	38	10	255	0	0	265	685
07:15 AM	514	7	0	521	17	44	0	61	16	296	0	0	312	894
07:30 AM	562	3	0	565	15	70	0	85	21	314	0	0	335	985
07:45 AM	570	4	0	574	16	97	0	113	24	352	0	0	376	1063
Total	2027	15	0	2042	56	241	0	297	71	1217	0	0	1288	3627
08:00 AM	519	3	0	522	18	93	0	111	18	308	0	0	326	959
08:15 AM	476	2	0	478	8	109	0	117	15	330	0	0	345	940
08:30 AM	403	4	0	407	16	99	0	115	24	301	1	0	326	848
08:45 AM	454	4	0	458	15	64	0	79	32	297	0	0	329	866
Total	1852	13	0	1865	57	365	0	422	89	1236	1	0	1326	3613
Grand Total	3879	28	0	3907	113	606	0	719	160	2453	1	0	2614	7240
Apprch %	99.3	0.7	0		15.7	84.3	0		6.1	93.8	0	0		
Total %	53.6	0.4	0	54	1.6	8.4	0	9.9	2.2	33.9	0	0	36.1	

	US 29 Southbound			Ashwood Blvd Westbound			US 29 Northbound				
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	562	3	565	15	70	85	21	314	0	335	985
07:45 AM	570	4	574	16	97	113	24	352	0	376	1063
08:00 AM	519	3	522	18	93	111	18	308	0	326	959
08:15 AM	476	2	478	8	109	117	15	330	0	345	940
Total Volume	2127	12	2139	57	369	426	78	1304	0	1382	3947
% App. Total	99.4	0.6		13.4	86.6		5.6	94.4	0		
PHF	.933	.750	.932	.792	.846	.910	.813	.926	.000	.919	.928


























Peggy Malone & Associates, Inc.
(888) 247-8602




















File Name : US 29 and Ashwood Blvd. PM
Site Code :
Start Date : 12/12/2019
Page No : 1

Groups Printed- Combined

	US 29 Southbound				Ashwood Blvd Westbound				US 29 Northbound					
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	393	8	0	401	3	37	0	40	43	503	0	0	546	987
04:15 PM	405	9	0	414	15	57	0	72	55	558	1	0	614	1100
04:30 PM	437	13	0	450	14	30	0	44	52	476	0	0	528	1022
04:45 PM	419	8	0	427	9	33	0	42	67	470	0	0	537	1006
Total	1654	38	0	1692	41	157	0	198	217	2007	1	0	2225	4115
05:00 PM	474	15	0	489	9	24	0	33	53	538	0	0	591	1113
05:15 PM	433	19	0	452	7	31	0	38	64	523	0	0	587	1077
05:30 PM	414	11	0	425	10	34	0	44	61	533	0	0	594	1063
05:45 PM	401	12	0	413	7	27	0	34	74	485	0	0	559	1006
Total	1722	57	0	1779	33	116	0	149	252	2079	0	0	2331	4259
Grand Total	3376	95	0	3471	74	273	0	347	469	4086	1	0	4556	8374
Apprch %	97.3	2.7	0		21.3	78.7	0		10.3	89.7	0	0		
Total %	40.3	1.1	0	41.4	0.9	3.3	0	4.1	5.6	48.8	0	0	54.4	

	US 29 Southbound			Ashwood Blvd Westbound			US 29 Northbound				
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	419	8	427	9	33	42	67	470	0	537	1006
05:00 PM	474	15	489	9	24	33	53	538	0	591	1113
05:15 PM	433	19	452	7	31	38	64	523	0	587	1077
05:30 PM	414	11	425	10	34	44	61	533	0	594	1063
Total Volume	1740	53	1793	35	122	157	245	2064	0	2309	4259
% App. Total	97	3		22.3	77.7		10.6	89.4	0		
PHF	.918	.697	.917	.875	.897	.892	.914	.959	.000	.972	.957

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	 	 	 	   	 	 	   
Traffic Volume (vph)	369	57	1	1304	78	12	2127
Future Volume (vph)	369	57	1	1304	78	12	2127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	5085	1583	1770	5085
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	1770	5085	1583	1770	5085
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	397	61	1	1402	84	13	2287
RTOR Reduction (vph)	0	51	0	0	32	0	0
Lane Group Flow (vph)	397	10	1	1402	52	13	2287
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4		5	2		1	6
Permitted Phases		4			2		
Actuated Green, G (s)	18.6	18.6	1.2	71.4	71.4	3.0	73.2
Effective Green, g (s)	18.6	18.6	1.2	71.4	71.4	3.0	73.2
Actuated g/C Ratio	0.16	0.16	0.01	0.62	0.62	0.03	0.64
Clearance Time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	555	256	18	3157	982	46	3236
v/s Ratio Prot	c0.12		0.00	0.28		c0.01	c0.45
v/s Ratio Perm		0.01			0.03		
v/c Ratio	0.72	0.04	0.06	0.44	0.05	0.28	0.71
Uniform Delay, d1	45.7	40.7	56.3	11.4	8.5	54.9	13.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.4	0.1	1.3	0.5	0.1	3.4	1.3
Delay (s)	50.1	40.7	57.6	11.9	8.6	58.3	15.1
Level of Service	D	D	E	B	A	E	B
Approach Delay (s)	48.8			11.7			15.4
Approach LOS	D			B			B
Intersection Summary							
HCM 2000 Control Delay			17.7		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio			0.71				
Actuated Cycle Length (s)			115.0		Sum of lost time (s)	22.0	
Intersection Capacity Utilization			63.8%		ICU Level of Service		B
Analysis Period (min)			15				
c Critical Lane Group							

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	 			  			  
Traffic Volume (vph)	369	57	1	1304	78	12	2127
Future Volume (vph)	369	57	1	1304	78	12	2127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250		275	200	
Storage Lanes	2	1	1		1	1	
Taper Length (ft)	100		100			100	
Satd. Flow (prot)	3433	1583	1770	5085	1583	1770	5085
Flt Permitted	0.950		0.950			0.950	
Satd. Flow (perm)	3433	1583	1770	5085	1583	1770	5085
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		61			84		
Link Speed (mph)	35			45			45
Link Distance (ft)	454			863			808
Travel Time (s)	8.8			13.1			12.2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)							
Lane Group Flow (vph)	397	61	1	1402	84	13	2287
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4		5	2		1	6
Permitted Phases		4			2		
Detector Phase	4	4	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	5.0	20.0
Minimum Split (s)	16.0	16.0	14.4	49.9	49.9	13.0	28.5
Total Split (s)	32.0	32.0	18.0	67.0	67.0	16.0	65.0
Total Split (%)	27.8%	27.8%	15.7%	58.3%	58.3%	13.9%	56.5%
Yellow Time (s)	3.1	3.1	4.0	4.9	4.9	4.1	5.1
All-Red Time (s)	5.4	5.4	3.4	1.0	1.0	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effect Green (s)	18.6	18.6	5.6	76.0	76.0	6.5	79.2
Actuated g/C Ratio	0.16	0.16	0.05	0.66	0.66	0.06	0.69
v/c Ratio	0.72	0.20	0.01	0.42	0.08	0.13	0.65
Control Delay	53.1	11.4	52.0	11.1	2.9	54.0	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	11.4	52.0	11.1	2.9	54.0	12.7
LOS	D	B	D	B	A	D	B
Approach Delay	47.5			10.7			12.9
Approach LOS	D			B			B
Queue Length 50th (ft)	145	0	1	132	0	9	287
Queue Length 95th (ft)	188	36	6	274	23	30	549
Internal Link Dist (ft)	374			783			728
Turn Bay Length (ft)			250		275	200	
Base Capacity (vph)	701	372	163	3361	1074	129	3500
Starvation Cap Reductn	0	0	0	0	0	0	0

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.16	0.01	0.42	0.08	0.10	0.65

Intersection Summary

Area Type: Other

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 47 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 15.9

Intersection LOS: B























Intersection Capacity Utilization 63.8%




















ICU Level of Service B








Analysis Period (min) 15

Splits and Phases: 1: U.S. 29 & Ashwood Boulevard



							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	 	 		  	 	 	  
Traffic Volume (vph)	122	35	1	2064	245	53	1740
Future Volume (vph)	122	35	1	2064	245	53	1740
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	5085	1583	1770	5085
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	1770	5085	1583	1770	5085
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	131	38	1	2219	263	57	1871
RTOR Reduction (vph)	0	35	0	0	81	0	0
Lane Group Flow (vph)	131	3	1	2219	182	57	1871
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4		5	2		1	6
Permitted Phases		4			2		
Actuated Green, G (s)	10.0	10.0	1.2	89.8	89.8	8.2	96.8
Effective Green, g (s)	10.0	10.0	1.2	89.8	89.8	8.2	96.8
Actuated g/C Ratio	0.08	0.08	0.01	0.69	0.69	0.06	0.74
Clearance Time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	264	121	16	3512	1093	111	3786
v/s Ratio Prot	c0.04		0.00	c0.44		c0.03	c0.37
v/s Ratio Perm		0.00			0.11		
v/c Ratio	0.50	0.02	0.06	0.63	0.17	0.51	0.49
Uniform Delay, d1	57.6	55.5	63.8	11.0	7.0	59.0	6.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	0.1	1.6	0.9	0.3	4.0	0.5
Delay (s)	59.1	55.6	65.5	11.9	7.3	62.9	7.2
Level of Service	E	E	E	B	A	E	A
Approach Delay (s)	58.3			11.4			8.8
Approach LOS	E			B			A
Intersection Summary							
HCM 2000 Control Delay			12.1		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio			0.62				
Actuated Cycle Length (s)			130.0		Sum of lost time (s)		22.0
Intersection Capacity Utilization			60.4%		ICU Level of Service		B
Analysis Period (min)			15				
c Critical Lane Group							

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	 			  			  
Traffic Volume (vph)	122	35	1	2064	245	53	1740
Future Volume (vph)	122	35	1	2064	245	53	1740
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250		275	200	
Storage Lanes	2	1	1		1	1	
Taper Length (ft)	100		100			100	
Satd. Flow (prot)	3433	1583	1770	5085	1583	1770	5085
Flt Permitted	0.950		0.950			0.950	
Satd. Flow (perm)	3433	1583	1770	5085	1583	1770	5085
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		38			263		
Link Speed (mph)	35			45			45
Link Distance (ft)	454			863			808
Travel Time (s)	8.8			13.1			12.2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)							
Lane Group Flow (vph)	131	38	1	2219	263	57	1871
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4		5	2		1	6
Permitted Phases		4			2		
Detector Phase	4	4	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	5.0	20.0
Minimum Split (s)	16.0	16.0	13.0	49.9	49.9	13.0	27.1
Total Split (s)	20.0	20.0	20.0	90.0	90.0	20.0	90.0
Total Split (%)	15.4%	15.4%	15.4%	69.2%	69.2%	15.4%	69.2%
Yellow Time (s)	3.1	3.1	4.0	4.9	4.9	4.1	5.1
All-Red Time (s)	5.4	5.4	3.4	1.0	1.0	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effect Green (s)	10.0	10.0	5.6	91.4	91.4	9.4	102.8
Actuated g/C Ratio	0.08	0.08	0.04	0.70	0.70	0.07	0.79
v/c Ratio	0.50	0.24	0.01	0.62	0.22	0.45	0.47
Control Delay	64.0	20.5	60.0	12.3	1.4	68.2	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.0	20.5	60.0	12.3	1.4	68.2	5.5
LOS	E	C	E	B	A	E	A
Approach Delay	54.2			11.2			7.4
Approach LOS	D			B			A
Queue Length 50th (ft)	55	0	1	358	0	47	142
Queue Length 95th (ft)	88	35	7	449	30	91	286
Internal Link Dist (ft)	374			783			728
Turn Bay Length (ft)			250		275	200	
Base Capacity (vph)	303	174	171	3573	1190	168	4019
Starvation Cap Reductn	0	0	0	0	0	0	0

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.22	0.01	0.62	0.22	0.34	0.47

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 79 (61%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 11.2

Intersection LOS: B















Intersection Capacity Utilization 60.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: U.S. 29 & Ashwood Boulevard

 Ø1	 Ø2 (R)	 Ø4
20 s	90 s	20 s
 Ø5	 Ø6 (R)	
20 s	90 s	




















							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	432	90	64	1434	82	74	2229
Future Volume (vph)	432	90	64	1434	82	74	2229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	5085	1583	1770	5085
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	1770	5085	1583	1770	5085
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	465	97	69	1542	88	80	2397
RTOR Reduction (vph)	0	80	0	0	38	0	0
Lane Group Flow (vph)	465	17	69	1542	50	80	2397
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4		5	2		1	6
Permitted Phases		4			2		
Actuated Green, G (s)	20.4	20.4	7.9	65.3	65.3	7.3	64.7
Effective Green, g (s)	20.4	20.4	7.9	65.3	65.3	7.3	64.7
Actuated g/C Ratio	0.18	0.18	0.07	0.57	0.57	0.06	0.56
Clearance Time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	608	280	121	2887	898	112	2860
v/s Ratio Prot	c0.14		0.04	0.30		c0.05	c0.47
v/s Ratio Perm		0.01			0.03		
v/c Ratio	0.76	0.06	0.57	0.53	0.06	0.71	0.84
Uniform Delay, d1	45.0	39.3	51.9	15.4	11.1	52.8	20.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.7	0.1	6.3	0.7	0.1	19.3	3.1
Delay (s)	50.7	39.4	58.2	16.1	11.2	72.2	23.9
Level of Service	D	D	E	B	B	E	C
Approach Delay (s)	48.8			17.6			25.5
Approach LOS	D			B			C
Intersection Summary							
HCM 2000 Control Delay			25.4		HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio			0.81				
Actuated Cycle Length (s)			115.0		Sum of lost time (s)		22.0
Intersection Capacity Utilization			77.9%		ICU Level of Service		D
Analysis Period (min)			15				
c Critical Lane Group							





Ashwood Boulevard Residential - Albemarle, VA

1: U.S. 29 & Ashwood Boulevard

No-Build (2023) Conditions

Timing Plan: AM Peak Hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	 			  			  
Traffic Volume (vph)	432	90	64	1434	82	74	2229
Future Volume (vph)	432	90	64	1434	82	74	2229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250		275	200	
Storage Lanes	2	1	1		1	1	
Taper Length (ft)	100		100			100	
Satd. Flow (prot)	3433	1583	1770	5085	1583	1770	5085
Flt Permitted	0.950		0.950			0.950	
Satd. Flow (perm)	3433	1583	1770	5085	1583	1770	5085
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		97			88		
Link Speed (mph)	35			45			45
Link Distance (ft)	454			863			808
Travel Time (s)	8.8			13.1			12.2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)							
Lane Group Flow (vph)	465	97	69	1542	88	80	2397
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4		5	2		1	6
Permitted Phases		4			2		
Detector Phase	4	4	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	5.0	20.0
Minimum Split (s)	16.0	16.0	13.0	49.9	49.9	13.0	27.1
Total Split (s)	32.0	32.0	18.0	67.0	67.0	16.0	65.0
Total Split (%)	27.8%	27.8%	15.7%	58.3%	58.3%	13.9%	56.5%
Yellow Time (s)	3.1	3.1	4.0	4.9	4.9	4.1	5.1
All-Red Time (s)	5.4	5.4	3.4	1.0	1.0	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effect Green (s)	20.4	20.4	9.1	66.8	66.8	8.7	66.2
Actuated g/C Ratio	0.18	0.18	0.08	0.58	0.58	0.08	0.58
v/c Ratio	0.76	0.27	0.50	0.52	0.09	0.60	0.82
Control Delay	53.6	9.6	62.7	16.5	3.0	70.4	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	9.6	62.7	16.5	3.0	70.4	24.5
LOS	D	A	E	B	A	E	C
Approach Delay	46.0			17.7			26.0
Approach LOS	D			B			C
Queue Length 50th (ft)	170	0	49	267	0	57	536
Queue Length 95th (ft)	221	45	97	314	24	#125	658
Internal Link Dist (ft)	374			783			728
Turn Bay Length (ft)			250		275	200	
Base Capacity (vph)	701	400	163	2952	956	139	2928
Starvation Cap Reductn	0	0	0	0	0	0	0

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.24	0.42	0.52	0.09	0.58	0.82

Intersection Summary

Area Type: Other

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 47 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 25.4

Intersection LOS: C

Intersection Capacity Utilization 77.9%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: U.S. 29 & Ashwood Boulevard



Ashwood Boulevard Residential - Albemarle, VA
2: Archer Avenue & Ashwood Boulevard

No-Build (2023) Conditions
Timing Plan: AM Peak Hour

Intersection




















Int Delay, s/veh 2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	95	61	25	446	76	38
Future Vol, veh/h	95	61	25	446	76	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	200	200	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	66	27	485	83	41

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	169
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1409
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1409
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	430	952	-	-	1409	-
HCM Lane V/C Ratio	0.192	0.043	-	-	0.019	-
HCM Control Delay (s)	15.4	9	-	-	7.6	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0.1	-




















							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	 			  			  
Traffic Volume (vph)	169	64	58	2222	256	160	1825
Future Volume (vph)	169	64	58	2222	256	160	1825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	1770	5085	1583	1770	5085
Flt Permitted	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	1770	5085	1583	1770	5085
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	182	69	62	2389	275	172	1962
RTOR Reduction (vph)	0	63	0	0	97	0	0
Lane Group Flow (vph)	182	6	62	2389	178	172	1962
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4		5	2		1	6
Permitted Phases		4			2		
Actuated Green, G (s)	10.8	10.8	8.5	84.1	84.1	13.1	88.7
Effective Green, g (s)	10.8	10.8	8.5	84.1	84.1	13.1	88.7
Actuated g/C Ratio	0.08	0.08	0.07	0.65	0.65	0.10	0.68
Clearance Time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	285	131	115	3289	1024	178	3469
v/s Ratio Prot	c0.05		0.04	c0.47		c0.10	c0.39
v/s Ratio Perm		0.00			0.11		
v/c Ratio	0.64	0.04	0.54	0.73	0.17	0.97	0.57
Uniform Delay, d1	57.7	54.8	58.9	15.3	9.1	58.2	10.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.6	0.1	4.8	1.4	0.4	57.0	0.7
Delay (s)	62.4	55.0	63.6	16.7	9.5	115.2	11.4
Level of Service	E	D	E	B	A	F	B
Approach Delay (s)	60.3			17.1			19.7
Approach LOS	E			B			B
Intersection Summary							
HCM 2000 Control Delay			20.3		HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio			0.76				
Actuated Cycle Length (s)			130.0		Sum of lost time (s)		22.0
Intersection Capacity Utilization			75.0%		ICU Level of Service		D
Analysis Period (min)			15				
c Critical Lane Group							

Ashwood Boulevard Residential - Albemarle, VA

No-Build (2023) Conditions

1: U.S. 29 & Ashwood Boulevard

Timing Plan: PM Peak Hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	 			  			  
Traffic Volume (vph)	169	64	58	2222	256	160	1825
Future Volume (vph)	169	64	58	2222	256	160	1825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250		275	200	
Storage Lanes	2	1	1		1	1	
Taper Length (ft)	100		100			100	
Satd. Flow (prot)	3433	1583	1770	5085	1583	1770	5085
Flt Permitted	0.950		0.950			0.950	
Satd. Flow (perm)	3433	1583	1770	5085	1583	1770	5085
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		69			275		
Link Speed (mph)	35			45			45
Link Distance (ft)	454			863			808
Travel Time (s)	8.8			13.1			12.2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)							
Lane Group Flow (vph)	182	69	62	2389	275	172	1962
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4		5	2		1	6
Permitted Phases		4			2		
Detector Phase	4	4	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	5.0	20.0
Minimum Split (s)	16.0	16.0	13.0	49.9	49.9	13.0	27.1
Total Split (s)	20.0	20.0	20.0	90.0	90.0	20.0	90.0
Total Split (%)	15.4%	15.4%	15.4%	69.2%	69.2%	15.4%	69.2%
Yellow Time (s)	3.1	3.1	4.0	4.9	4.9	4.1	5.1
All-Red Time (s)	5.4	5.4	3.4	1.0	1.0	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.5	8.5	7.4	5.9	5.9	7.6	6.1
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effect Green (s)	10.8	10.8	9.7	84.1	84.1	13.1	90.2
Actuated g/C Ratio	0.08	0.08	0.07	0.65	0.65	0.10	0.69
v/c Ratio	0.64	0.36	0.47	0.73	0.25	0.97	0.56
Control Delay	68.2	17.8	68.8	16.9	1.5	118.2	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.2	17.8	68.8	16.9	1.5	118.2	11.6
LOS	E	B	E	B	A	F	B
Approach Delay	54.4			16.6			20.2
Approach LOS	D			B			C
Queue Length 50th (ft)	77	0	51	457	0	~153	304
Queue Length 95th (ft)	117	47	97	511	30	#302	368
Internal Link Dist (ft)	374			783			728
Turn Bay Length (ft)			250		275	200	
Base Capacity (vph)	303	202	171	3289	1121	177	3528
Starvation Cap Reductn	0	0	0	0	0	0	0

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.34	0.36	0.73	0.25	0.97	0.56

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 79 (61%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 19.9

Intersection LOS: B

Intersection Capacity Utilization 75.0%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: U.S. 29 & Ashwood Boulevard



Ashwood Boulevard Residential - Albemarle, VA
2: Archer Avenue & Ashwood Boulevard

No-Build (2023) Conditions
Timing Plan: PM Peak Hour

Intersection

Int Delay, s/veh 2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	311	105	42	165	68	34
Future Vol, veh/h	311	105	42	165	68	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	200	200	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	338	114	46	179	74	37

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	452
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1109
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1109
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	13.4
HCM LOS			B
















Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	439	704	-	-	1109	-
HCM Lane V/C Ratio	0.168	0.052	-	-	0.041	-
HCM Control Delay (s)	14.9	10.4	-	-	8.4	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	0.2	-	-	0.1	-

Ashwood Boulevard Residential - Albemarle, VA

1: U.S. 29 & Ashwood Boulevard

Build (2023) Conditions

Timing Plan: AM Peak Hour
















								
Movement	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	499	93	64	1443	97	2	77	2229
Future Volume (vph)	499	93	64	1443	97	2	77	2229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.5	8.5	7.4	5.9	5.9		7.6	6.1
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00		1.00	0.91
Frt	1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3433	1583	1770	5085	1583		1770	5085
Flt Permitted	0.95	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3433	1583	1770	5085	1583		1770	5085
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.92	0.93	0.93
Adj. Flow (vph)	537	100	69	1552	104	2	83	2397
RTOR Reduction (vph)	0	81	0	0	47	0	0	0
Lane Group Flow (vph)	537	19	69	1552	57	0	85	2397
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	4		5	2		1	1	6
Permitted Phases		4			2			
Actuated Green, G (s)	21.8	21.8	7.9	62.9	62.9		8.3	63.3
Effective Green, g (s)	21.8	21.8	7.9	62.9	62.9		8.3	63.3
Actuated g/C Ratio	0.19	0.19	0.07	0.55	0.55		0.07	0.55
Clearance Time (s)	8.5	8.5	7.4	5.9	5.9		7.6	6.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	650	300	121	2781	865		127	2798
v/s Ratio Prot	c0.16		0.04	0.31			c0.05	c0.47
v/s Ratio Perm		0.01			0.04			
v/c Ratio	0.83	0.06	0.57	0.56	0.07		0.67	0.86
Uniform Delay, d1	44.8	38.2	51.9	17.0	12.2		52.0	22.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.5	0.1	6.3	0.8	0.1		12.6	3.6
Delay (s)	53.2	38.3	58.2	17.8	12.4		64.6	25.6
Level of Service	D	D	E	B	B		E	C
Approach Delay (s)	50.9			19.1				27.0
Approach LOS	D			B				C
Intersection Summary								
HCM 2000 Control Delay			27.3			HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio			0.84					
Actuated Cycle Length (s)			115.0			Sum of lost time (s)		22.0
Intersection Capacity Utilization			79.8%			ICU Level of Service		D
Analysis Period (min)			15					
c Critical Lane Group								


Ashwood Boulevard Residential - Albemarle, VA

1: U.S. 29 & Ashwood Boulevard

Build (2023) Conditions

Timing Plan: AM Peak Hour

								
Lane Group	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	499	93	64	1443	97	2	77	2229
Future Volume (vph)	499	93	64	1443	97	2	77	2229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250		275		350	
Storage Lanes	2	1	1		1		1	
Taper Length (ft)	100		100				100	
Satd. Flow (prot)	3433	1583	1770	5085	1583	0	1770	5085
Flt Permitted	0.950		0.950				0.950	
Satd. Flow (perm)	3433	1583	1770	5085	1583	0	1770	5085
Right Turn on Red		Yes			Yes			
Satd. Flow (RTOR)		100			104			
Link Speed (mph)	35			45				45
Link Distance (ft)	454			863				808
Travel Time (s)	8.8			13.1				12.2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.92	0.93	0.93
Shared Lane Traffic (%)								
Lane Group Flow (vph)	537	100	69	1552	104	0	85	2397
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	4		5	2		1	1	6
Permitted Phases		4			2			
Detector Phase	4	4	5	2	2	1	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	5.0	5.0	20.0
Minimum Split (s)	16.0	16.0	13.0	49.9	49.9	13.0	13.0	27.1
Total Split (s)	32.0	32.0	18.0	67.0	67.0	16.0	16.0	65.0
Total Split (%)	27.8%	27.8%	15.7%	58.3%	58.3%	13.9%	13.9%	56.5%
Yellow Time (s)	3.1	3.1	4.0	4.9	4.9	4.1	4.1	5.1
All-Red Time (s)	5.4	5.4	3.4	1.0	1.0	3.5	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	8.5	8.5	7.4	5.9	5.9		7.6	6.1
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effect Green (s)	21.8	21.8	9.1	62.9	62.9		8.3	64.8
Actuated g/C Ratio	0.19	0.19	0.08	0.55	0.55		0.07	0.56
v/c Ratio	0.83	0.26	0.50	0.56	0.11		0.66	0.84
Control Delay	56.2	9.3	62.7	18.3	2.9		76.6	25.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	56.2	9.3	62.7	18.3	2.9		76.6	25.8
LOS	E	A	E	B	A		E	C
Approach Delay	48.8			19.1				27.6
Approach LOS	D			B				C
Queue Length 50th (ft)	194	0	49	272	0		62	569
Queue Length 95th (ft)	257	46	97	317	26		#136	658
Internal Link Dist (ft)	374			783				728
Turn Bay Length (ft)			250		275		350	
Base Capacity (vph)	701	403	163	2779	912		132	2866
Starvation Cap Reductn	0	0	0	0	0		0	0

								
Lane Group	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Spillback Cap Reductn	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0
Reduced v/c Ratio	0.77	0.25	0.42	0.56	0.11		0.64	0.84

Intersection Summary

Area Type: Other

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 47 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 27.4

Intersection LOS: C

Intersection Capacity Utilization 79.8%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: U.S. 29 & Ashwood Boulevard












Ashwood Boulevard Residential - Albemarle, VA
2: Archer Avenue/Proposed Driveway & Ashwood Boulevard

Build (2023) Conditions

Timing Plan: AM Peak Hour

Intersection

Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	95	61	25	446	1	76	5	38	5	15	70
Future Vol, veh/h	18	95	61	25	446	1	76	5	38	5	15	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	15	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	200	200	-	-	0	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	103	66	27	485	1	83	5	41	5	16	76

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	486	0	0	169	0	0	734	683	118	754	749	491
Stage 1	-	-	-	-	-	-	143	143	-	540	540	-
Stage 2	-	-	-	-	-	-	591	540	-	214	209	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1077	-	-	1409	-	-	336	372	934	326	341	578
Stage 1	-	-	-	-	-	-	860	779	-	526	521	-
Stage 2	-	-	-	-	-	-	493	521	-	788	729	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1077	-	-	1409	-	-	271	358	921	295	328	575
Mov Cap-2 Maneuver	-	-	-	-	-	-	271	358	-	295	328	-
Stage 1	-	-	-	-	-	-	844	764	-	516	511	-
Stage 2	-	-	-	-	-	-	404	511	-	723	715	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			0.4			18.9			13.3		
HCM LOS							C			B		





Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	271	779	1077	-	-	1409	-	-	319	575
HCM Lane V/C Ratio	0.305	0.06	0.018	-	-	0.019	-	-	0.068	0.132
HCM Control Delay (s)	24	9.9	8.4	-	-	7.6	-	-	17.1	12.2
HCM Lane LOS	C	A	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	1.2	0.2	0.1	-	-	0.1	-	-	0.2	0.5

Ashwood Boulevard Residential - Albemarle, VA
3: U.S. 29 & Proposed RIRO

Build (2023) Conditions
Timing Plan: AM Peak Hour

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	1527	11	0	2308
Future Vol, veh/h	0	13	1527	11	0	2308
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	1660	12	0	2509

Major/Minor	Minor1	Major1	Major2
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







Conflicting Flow All	-	830	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	269	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	269	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
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HCM Control Delay, s	19.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
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Capacity (veh/h)	-	-	269	-
HCM Lane V/C Ratio	-	-	0.053	-
HCM Control Delay (s)	-	-	19.1	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.2	-






















								
Movement	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	212	66	58	2247	298	5	168	1825
Future Volume (vph)	212	66	58	2247	298	5	168	1825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.5	8.5	7.4	5.9	5.9		7.6	6.1
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00		1.00	0.91
Frt	1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3433	1583	1770	5085	1583		1770	5085
Flt Permitted	0.95	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3433	1583	1770	5085	1583		1770	5085
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.92	0.93	0.93
Adj. Flow (vph)	228	71	62	2416	320	5	181	1962
RTOR Reduction (vph)	0	65	0	0	113	0	0	0
Lane Group Flow (vph)	228	6	62	2416	207	0	186	1962
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	4		5	2		1	1	6
Permitted Phases		4			2			
Actuated Green, G (s)	11.3	11.3	8.5	84.1	84.1		12.6	88.2
Effective Green, g (s)	11.3	11.3	8.5	84.1	84.1		12.6	88.2
Actuated g/C Ratio	0.09	0.09	0.07	0.65	0.65		0.10	0.68
Clearance Time (s)	8.5	8.5	7.4	5.9	5.9		7.6	6.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	298	137	115	3289	1024		171	3449
v/s Ratio Prot	c0.07		0.04	c0.48			c0.11	c0.39
v/s Ratio Perm		0.00			0.13			
v/c Ratio	0.77	0.05	0.54	0.73	0.20		1.09	0.57
Uniform Delay, d1	58.1	54.4	58.9	15.4	9.3		58.7	10.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	11.1	0.1	4.8	1.5	0.4		94.2	0.7
Delay (s)	69.2	54.5	63.6	16.9	9.8		152.9	11.6
Level of Service	E	D	E	B	A		F	B
Approach Delay (s)	65.7			17.2				23.9
Approach LOS	E			B				C
Intersection Summary								
HCM 2000 Control Delay			22.7		HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio			0.79					
Actuated Cycle Length (s)			130.0		Sum of lost time (s)		22.0	
Intersection Capacity Utilization			77.4%		ICU Level of Service		D	
Analysis Period (min)			15					
c Critical Lane Group								




Ashwood Boulevard Residential - Albemarle, VA

1: U.S. 29 & Ashwood Boulevard

Build (2023) Conditions

Timing Plan: PM Peak Hour

								
Lane Group	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations	 			  			 	  
Traffic Volume (vph)	212	66	58	2247	298	5	168	1825
Future Volume (vph)	212	66	58	2247	298	5	168	1825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250		275		350	
Storage Lanes	2	1	1		1		1	
Taper Length (ft)	100		100				100	
Satd. Flow (prot)	3433	1583	1770	5085	1583	0	1770	5085
Flt Permitted	0.950		0.950				0.950	
Satd. Flow (perm)	3433	1583	1770	5085	1583	0	1770	5085
Right Turn on Red		Yes			Yes			
Satd. Flow (RTOR)		71			320			
Link Speed (mph)	35			45				45
Link Distance (ft)	454			863				808
Travel Time (s)	8.8			13.1				12.2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.92	0.93	0.93
Shared Lane Traffic (%)								
Lane Group Flow (vph)	228	71	62	2416	320	0	186	1962
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	4		5	2		1	1	6
Permitted Phases		4			2			
Detector Phase	4	4	5	2	2	1	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	5.0	5.0	20.0
Minimum Split (s)	16.0	16.0	13.0	49.9	49.9	13.0	13.0	27.1
Total Split (s)	20.0	20.0	20.0	90.0	90.0	20.0	20.0	90.0
Total Split (%)	15.4%	15.4%	15.4%	69.2%	69.2%	15.4%	15.4%	69.2%
Yellow Time (s)	3.1	3.1	4.0	4.9	4.9	4.1	4.1	5.1
All-Red Time (s)	5.4	5.4	3.4	1.0	1.0	3.5	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	8.5	8.5	7.4	5.9	5.9		7.6	6.1
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effect Green (s)	11.3	11.3	9.7	84.1	84.1		12.6	89.7
Actuated g/C Ratio	0.09	0.09	0.07	0.65	0.65		0.10	0.69
v/c Ratio	0.77	0.35	0.47	0.73	0.28		1.09	0.56
Control Delay	75.4	17.3	68.8	17.2	1.6		148.0	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	75.4	17.3	68.8	17.2	1.6		148.0	11.8
LOS	E	B	E	B	A		F	B
Approach Delay	61.6			16.5				23.6
Approach LOS	E			B				C
Queue Length 50th (ft)	98	0	51	468	0		~178	304
Queue Length 95th (ft)	#154	48	97	522	32		#332	368
Internal Link Dist (ft)	374			783				728
Turn Bay Length (ft)			250		275		350	
Base Capacity (vph)	303	204	171	3289	1137		171	3510
Starvation Cap Reductn	0	0	0	0	0		0	0

								
Lane Group	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Spillback Cap Reductn	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0
Reduced v/c Ratio	0.75	0.35	0.36	0.73	0.28		1.09	0.56

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 79 (61%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 22.0

Intersection LOS: C

Intersection Capacity Utilization 77.4%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: U.S. 29 & Ashwood Boulevard

 Ø1	 Ø2 (R)	 Ø4
20 s	90 s	20 s
 Ø5	 Ø6 (R)	
20 s	90 s	










Ashwood Boulevard Residential - Albemarle, VA
2: Archer Avenue/Proposed Driveway & Ashwood Boulevard

Build (2023) Conditions

Timing Plan: PM Peak Hour

Intersection

Int Delay, s/veh 4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	310	105	42	165	5	68	15	34	3	10	45
Future Vol, veh/h	51	310	105	42	165	5	68	15	34	3	10	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	200	200	-	-	0	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	337	114	46	179	5	74	16	37	3	11	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	184	0	0	451	0	0	751	723	337	805	835	182
Stage 1	-	-	-	-	-	-	447	447	-	274	274	-
Stage 2	-	-	-	-	-	-	304	276	-	531	561	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1391	-	-	1109	-	-	327	352	705	301	304	861
Stage 1	-	-	-	-	-	-	591	573	-	732	683	-
Stage 2	-	-	-	-	-	-	705	682	-	532	510	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1391	-	-	1109	-	-	281	324	705	258	280	861
Mov Cap-2 Maneuver	-	-	-	-	-	-	281	324	-	258	280	-
Stage 1	-	-	-	-	-	-	567	550	-	703	655	-
Stage 2	-	-	-	-	-	-	627	654	-	470	490	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	1.7	18.3	11.5
HCM LOS			C	B





Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	281	518	1391	-	-	1109	-	-	275	861
HCM Lane V/C Ratio	0.263	0.103	0.04	-	-	0.041	-	-	0.051	0.057
HCM Control Delay (s)	22.3	12.7	7.7	-	-	8.4	-	-	18.8	9.4
HCM Lane LOS	C	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	1	0.3	0.1	-	-	0.1	-	-	0.2	0.2

Ashwood Boulevard Residential - Albemarle, VA
3: U.S. 29 & Proposed RIRO

Build (2023) Conditions
Timing Plan: PM Peak Hour

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	8	2288	30	0	1998
Future Vol, veh/h	0	8	2288	30	0	1998
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	2487	33	0	2172

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	- 1244	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	- 7.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	- 3.92	-	-
Pot Cap-1 Maneuver	0 142	-	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	- 142	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-
















Approach	WB	NB	SB
HCM Control Delay, s	32	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 142	-
HCM Lane V/C Ratio	-	- 0.061	-
HCM Control Delay (s)	-	- 32	-
HCM Lane LOS	-	- D	-
HCM 95th %tile Q(veh)	-	- 0.2	-

Ashwood Boulevard Residential - Albemarle, VA Build (2023) Conditions - Adjusted Lost Time

1: U.S. 29 & Ashwood Boulevard






















Timing Plan: AM Peak Hour

								
Movement	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	499	93	64	1443	97	2	77	2229
Future Volume (vph)	499	93	64	1443	97	2	77	2229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00		1.00	0.91
Frt	1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3433	1583	1770	5085	1583		1770	5085
Flt Permitted	0.95	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3433	1583	1770	5085	1583		1770	5085
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.92	0.93	0.93
Adj. Flow (vph)	537	100	69	1552	104	2	83	2397
RTOR Reduction (vph)	0	77	0	0	44	0	0	0
Lane Group Flow (vph)	537	23	69	1552	60	0	85	2397
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	4		5	2		1	1	6
Permitted Phases		4			2			
Actuated Green, G (s)	21.8	21.8	7.9	64.3	64.3		6.9	63.3
Effective Green, g (s)	26.3	26.3	11.3	66.2	66.2		10.5	65.4
Actuated g/C Ratio	0.23	0.23	0.10	0.58	0.58		0.09	0.57
Clearance Time (s)	8.5	8.5	7.4	5.9	5.9		7.6	6.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	785	362	173	2927	911		161	2891
v/s Ratio Prot	c0.16		0.04	0.31			c0.05	c0.47
v/s Ratio Perm		0.01			0.04			
v/c Ratio	0.68	0.06	0.40	0.53	0.07		0.53	0.83
Uniform Delay, d1	40.6	34.7	48.7	14.9	10.8		49.9	20.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.5	0.1	1.5	0.7	0.1		3.1	2.9
Delay (s)	43.0	34.8	50.2	15.6	10.9		53.0	23.2
Level of Service	D	C	D	B	B		D	C
Approach Delay (s)	41.7			16.7				24.2
Approach LOS	D			B				C
Intersection Summary								
HCM 2000 Control Delay			23.8			HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio			0.78					
Actuated Cycle Length (s)			115.0			Sum of lost time (s)		15.6
Intersection Capacity Utilization			71.5%			ICU Level of Service		C
Analysis Period (min)			15					
c Critical Lane Group								

Ashwood Boulevard Residential - Albemarle, VA Build (2023) Conditions - Adjusted Lost Time

1: U.S. 29 & Ashwood Boulevard






Timing Plan: AM Peak Hour

								
Lane Group	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations	 			  			 	  
Traffic Volume (vph)	499	93	64	1443	97	2	77	2229
Future Volume (vph)	499	93	64	1443	97	2	77	2229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250		275		350	
Storage Lanes	2	1	1		1		1	
Taper Length (ft)	100		100				100	
Satd. Flow (prot)	3433	1583	1770	5085	1583	0	1770	5085
Flt Permitted	0.950		0.950				0.950	
Satd. Flow (perm)	3433	1583	1770	5085	1583	0	1770	5085
Right Turn on Red		Yes			Yes			
Satd. Flow (RTOR)		100			104			
Link Speed (mph)	35			45				45
Link Distance (ft)	454			863				808
Travel Time (s)	8.8			13.1				12.2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.92	0.93	0.93
Shared Lane Traffic (%)								
Lane Group Flow (vph)	537	100	69	1552	104	0	85	2397
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	4		5	2		1	1	6
Permitted Phases		4			2			
Detector Phase	4	4	5	2	2	1	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	5.0	5.0	20.0
Minimum Split (s)	16.0	16.0	13.0	49.9	49.9	13.0	13.0	27.1
Total Split (s)	32.0	32.0	18.0	67.0	67.0	16.0	16.0	65.0
Total Split (%)	27.8%	27.8%	15.7%	58.3%	58.3%	13.9%	13.9%	56.5%
Yellow Time (s)	3.1	3.1	4.0	4.9	4.9	4.1	4.1	5.1
All-Red Time (s)	5.4	5.4	3.4	1.0	1.0	3.5	3.5	1.0
Lost Time Adjust (s)	-4.5	-4.5	-3.4	-1.9	-1.9		-3.6	-2.1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effect Green (s)	26.3	26.3	12.5	67.8	67.8		11.8	66.9
Actuated g/C Ratio	0.23	0.23	0.11	0.59	0.59		0.10	0.58
v/c Ratio	0.68	0.23	0.36	0.52	0.11		0.47	0.81
Control Delay	45.3	8.1	52.5	15.8	2.6		57.6	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	45.3	8.1	52.5	15.8	2.6		57.6	23.5
LOS	D	A	D	B	A		E	C
Approach Delay	39.5			16.5				24.7
Approach LOS	D			B				C
Queue Length 50th (ft)	184	0	48	261	0		60	544
Queue Length 95th (ft)	243	43	93	305	25		113	630
Internal Link Dist (ft)	374			783				728
Turn Bay Length (ft)			250		275		350	
Base Capacity (vph)	835	461	215	2996	975		186	2959
Starvation Cap Reductn	0	0	0	0	0		0	0

Ashwood Boulevard Residential - Albemarle, VA Build (2023) Conditions - Adjusted Lost Time

1: U.S. 29 & Ashwood Boulevard

Timing Plan: AM Peak Hour

								
Lane Group	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Spillback Cap Reductn	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0
Reduced v/c Ratio	0.64	0.22	0.32	0.52	0.11		0.46	0.81

Intersection Summary

Area Type: Other

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 47 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 23.7






Intersection LOS: C

Intersection Capacity Utilization 71.5%

ICU Level of Service C

Analysis Period (min) 15
















Splits and Phases: 1: U.S. 29 & Ashwood Boulevard

 Ø1	 Ø2 (R)	 Ø4
16 s	67 s	32 s
 Ø5	 Ø6 (R)	
18 s	65 s	

Ashwood Boulevard Residential - Albemarle, VA Build (2023) Conditions - Adjusted Lost Time

1: U.S. 29 & Ashwood Boulevard






















Timing Plan: PM Peak Hour

								
Movement	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	212	66	58	2247	298	5	168	1825
Future Volume (vph)	212	66	58	2247	298	5	168	1825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.91	1.00		1.00	0.91
Frt	1.00	0.85	1.00	1.00	0.85		1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3433	1583	1770	5085	1583		1770	5085
Flt Permitted	0.95	1.00	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3433	1583	1770	5085	1583		1770	5085
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.92	0.93	0.93
Adj. Flow (vph)	228	71	62	2416	320	5	181	1962
RTOR Reduction (vph)	0	62	0	0	108	0	0	0
Lane Group Flow (vph)	228	9	62	2416	212	0	186	1962
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	4		5	2		1	1	6
Permitted Phases		4			2			
Actuated Green, G (s)	11.2	11.2	8.5	84.1	84.1		12.7	88.3
Effective Green, g (s)	15.7	15.7	11.9	86.0	86.0		16.3	90.4
Actuated g/C Ratio	0.12	0.12	0.09	0.66	0.66		0.13	0.70
Clearance Time (s)	8.5	8.5	7.4	5.9	5.9		7.6	6.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	414	191	162	3363	1047		221	3536
v/s Ratio Prot	c0.07		0.04	c0.48			c0.11	0.39
v/s Ratio Perm		0.01			0.13			
v/c Ratio	0.55	0.04	0.38	0.72	0.20		0.84	0.55
Uniform Delay, d1	53.8	50.5	55.6	14.2	8.6		55.6	9.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.6	0.1	1.5	1.4	0.4		24.1	0.6
Delay (s)	55.4	50.6	57.1	15.5	9.0		79.7	10.5
Level of Service	E	D	E	B	A		E	B
Approach Delay (s)	54.3			15.7				16.4
Approach LOS	D			B				B
Intersection Summary								
HCM 2000 Control Delay			18.2		HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio			0.73					
Actuated Cycle Length (s)			130.0		Sum of lost time (s)		15.6	
Intersection Capacity Utilization			69.0%		ICU Level of Service		C	
Analysis Period (min)			15					
c Critical Lane Group								

Ashwood Boulevard Residential - Albemarle, VA Build (2023) Conditions - Adjusted Lost Time

1: U.S. 29 & Ashwood Boulevard



Timing Plan: PM Peak Hour

								
Lane Group	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations	 			  			 	  
Traffic Volume (vph)	212	66	58	2247	298	5	168	1825
Future Volume (vph)	212	66	58	2247	298	5	168	1825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	250		275		350	
Storage Lanes	2	1	1		1		1	
Taper Length (ft)	100		100				100	
Satd. Flow (prot)	3433	1583	1770	5085	1583	0	1770	5085
Flt Permitted	0.950		0.950				0.950	
Satd. Flow (perm)	3433	1583	1770	5085	1583	0	1770	5085
Right Turn on Red		Yes			Yes			
Satd. Flow (RTOR)		71			320			
Link Speed (mph)	35			45				45
Link Distance (ft)	454			863				808
Travel Time (s)	8.8			13.1				12.2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.92	0.93	0.93
Shared Lane Traffic (%)								
Lane Group Flow (vph)	228	71	62	2416	320	0	186	1962
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	Prot	NA
Protected Phases	4		5	2		1	1	6
Permitted Phases		4			2			
Detector Phase	4	4	5	2	2	1	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	20.0	20.0	5.0	5.0	20.0
Minimum Split (s)	16.0	16.0	13.0	49.9	49.9	13.0	13.0	27.1
Total Split (s)	20.0	20.0	20.0	90.0	90.0	20.0	20.0	90.0
Total Split (%)	15.4%	15.4%	15.4%	69.2%	69.2%	15.4%	15.4%	69.2%
Yellow Time (s)	3.1	3.1	4.0	4.9	4.9	4.1	4.1	5.1
All-Red Time (s)	5.4	5.4	3.4	1.0	1.0	3.5	3.5	1.0
Lost Time Adjust (s)	-4.5	-4.5	-3.4	-1.9	-1.9		-3.6	-2.1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Min	C-Min	None	None	C-Min
Act Effect Green (s)	15.7	15.7	13.1	86.0	86.0		16.3	91.9
Actuated g/C Ratio	0.12	0.12	0.10	0.66	0.66		0.13	0.71
v/c Ratio	0.55	0.28	0.35	0.72	0.28		0.84	0.55
Control Delay	59.2	14.4	59.2	15.7	1.5		86.5	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	59.2	14.4	59.2	15.7	1.5		86.5	10.6
LOS	E	B	E	B	A		F	B
Approach Delay	48.6			15.1				17.2
Approach LOS	D			B				B
Queue Length 50th (ft)	94	0	49	445	0		156	287
Queue Length 95th (ft)	138	46	94	497	31		#289	349
Internal Link Dist (ft)	374			783				728
Turn Bay Length (ft)			250		275		350	
Base Capacity (vph)	422	257	217	3363	1155		221	3594
Starvation Cap Reductn	0	0	0	0	0		0	0

Ashwood Boulevard Residential - Albemarle, VA Build (2023) Conditions - Adjusted Lost Time

1: U.S. 29 & Ashwood Boulevard

Timing Plan: PM Peak Hour

								
Lane Group	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Spillback Cap Reductn	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0		0	0
Reduced v/c Ratio	0.54	0.28	0.29	0.72	0.28		0.84	0.55

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 79 (61%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 17.9

Intersection LOS: B

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: U.S. 29 & Ashwood Boulevard

 Ø1	 Ø2 (R)	 Ø4
20 s	90 s	20 s
 Ø5	 Ø6 (R)	
20 s	90 s	

WARRANT FOR LEFT-TURN STORAGE LANES ON TWO-LANE HIGHWAY

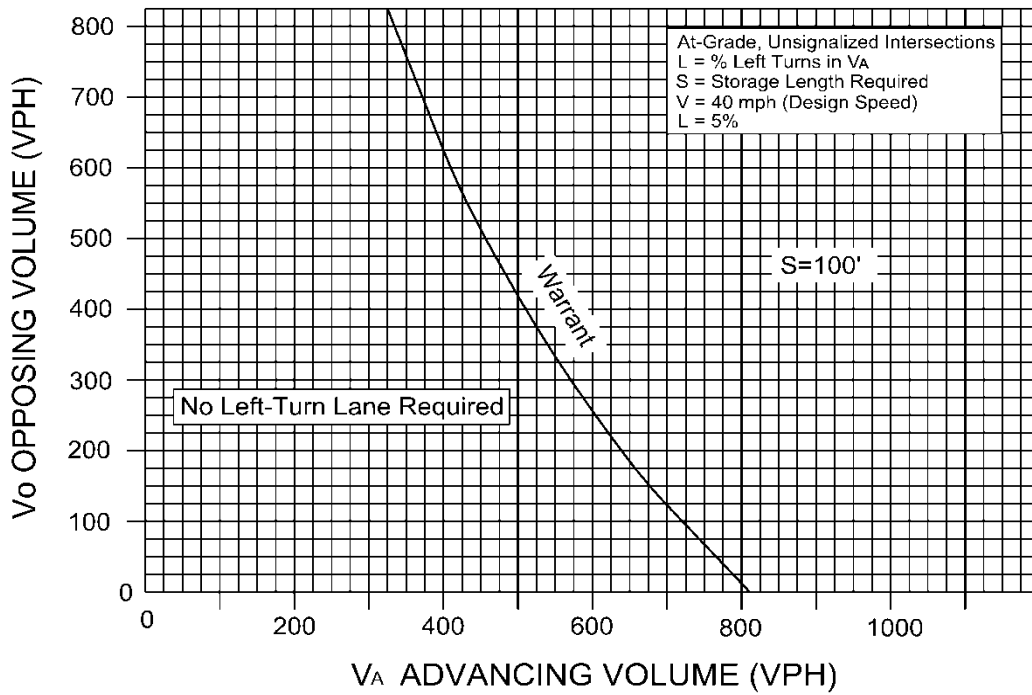


FIGURE 3-5

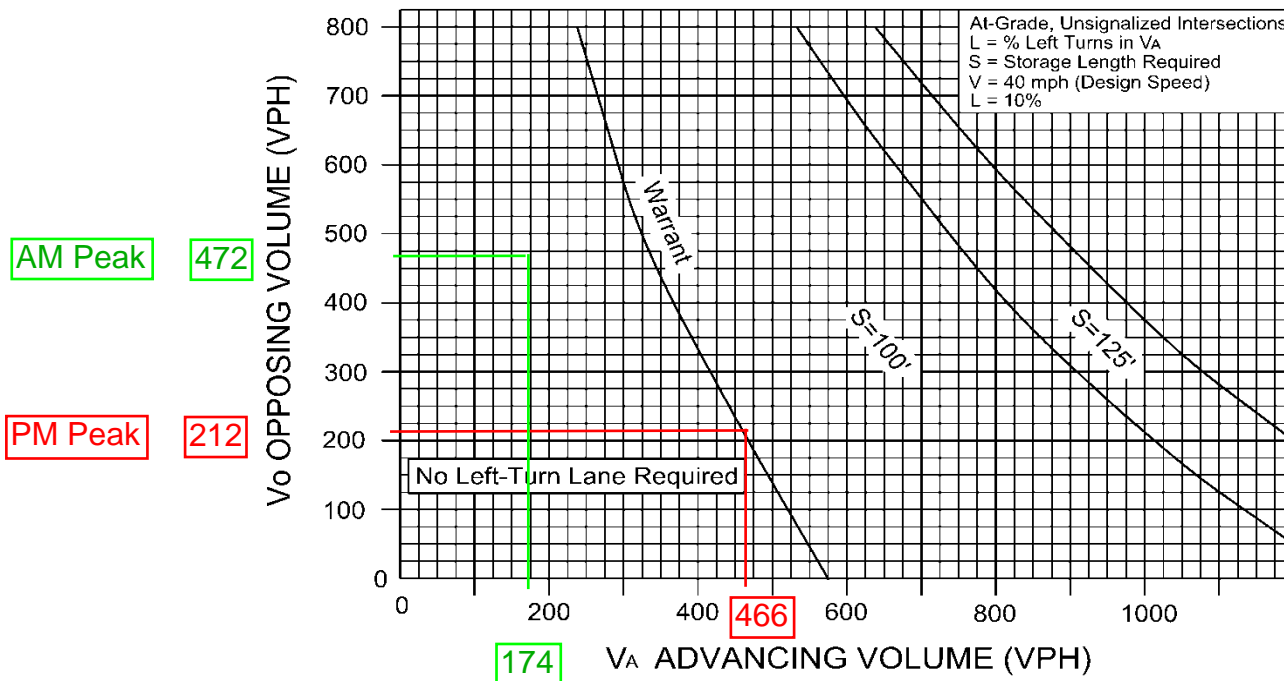
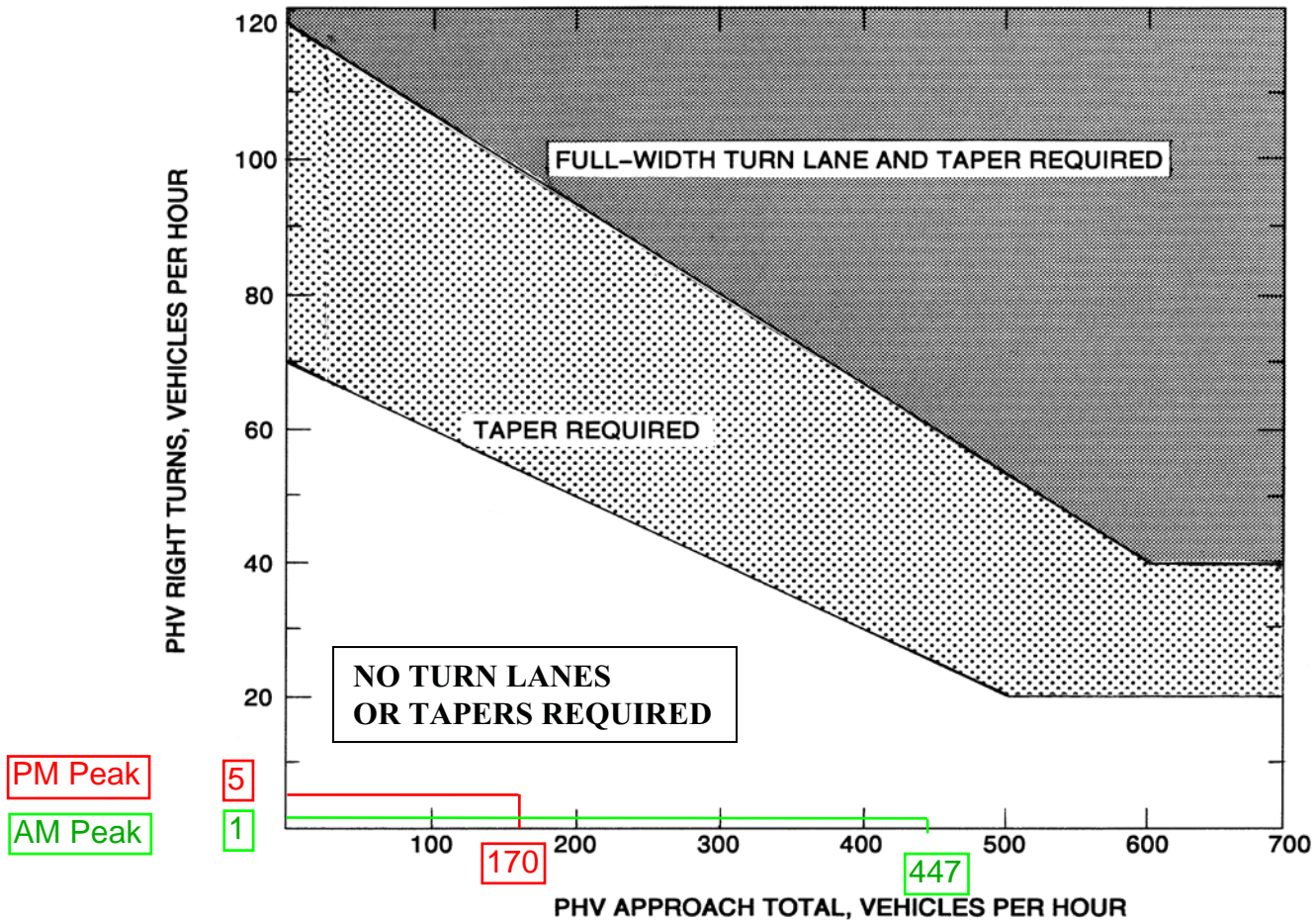


FIGURE 3-6



Appropriate Radius required at all Intersections and Entrances (Commercial or Private).

LEGEND

PHV - Peak Hour Volume (also Design Hourly Volume equivalent)

Adjustment for Right Turns

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.

Adjusted right turns = PHV Right Turns - 20

If PHV is not known use formula: $PHV = ADT \times K \times D$

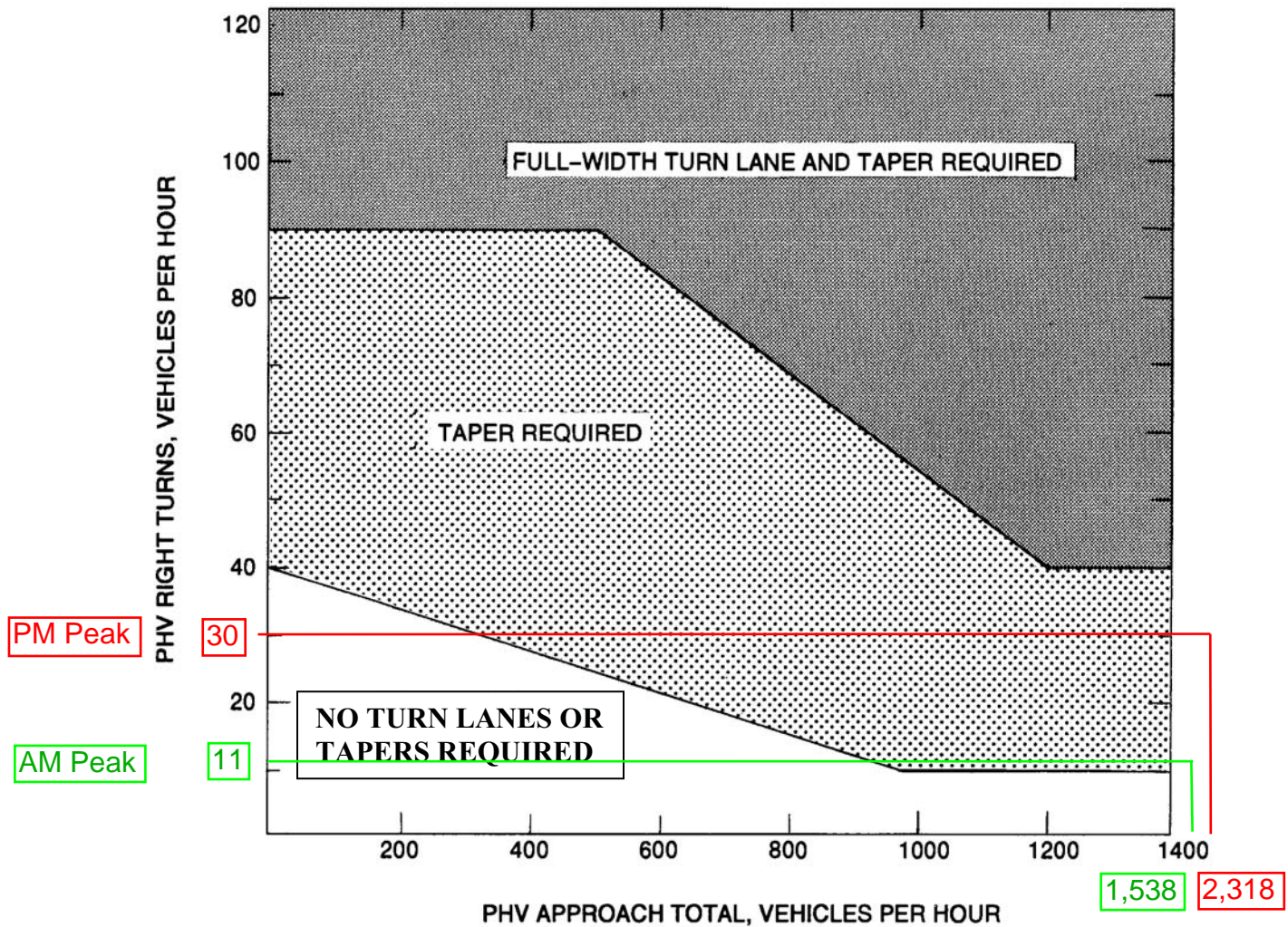
K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.

When right turn facilities are warranted, see Figure 3-1 for design criteria.*

FIGURE 3-26 WARRANTS FOR RIGHT TURN TREATMENT (2-LANE HIGHWAY)



Appropriate Radius required at all Intersections and Entrances (Commercial or Private).

LEGEND

PHV- - Peak Hour Volume (also Design Hourly Volume equivalent)

Adjustment for Right Turns

If PHV is not known use formula: $PHV = ADT \times K \times D$

K = the percent of AADT occurring in the peak hour

D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.

When right turn facilities are warranted, see Figure 3-1 for design criteria.*

FIGURE 3-27 WARRANTS FOR RIGHT TURN TREATMENT (4-LANE HIGHWAY)

* Rev. 1/15

Andy Reitelbach

From: Vivian Groeschel
Sent: Monday, February 15, 2021 9:16 AM
To: Andy Reitelbach
Cc: Vivian Groeschel
Subject: FW: RST Development Concerns

FYI.....

Vivian Groeschel

Vivian Groeschel
Community Development Assistant-Planning
County of Albemarle
Department of Community Development
Email: vgroeschel@albemarle.org
Phone: 434 296 5832 ext 3259
Fax: 434 972 4126
www.albemarle.org

From: Catherine Smith <catherine51@hotmail.com>
Sent: Saturday, February 13, 2021 9:23 AM
To: Planning Commission <PlanningCommission@albemarle.org>
Subject: RST Development Concerns

CAUTION: This message originated outside the County of Albemarle email system. DO NOT CLICK on links or open attachments unless you are sure the content is safe.

As a Forest Lakes resident, I have spoken with Valerie Long, with Williams Mullen, and with Forest Lakes community members, who were all generous with their time as they each presented their point of view.

Valerie kindly offered the areas in which they feel they are successfully meeting county standards, such as including low-income housing, and staying within the units-per-acre standards as set forth by the Places 29 Master plan. However, there wasn't an allowance for much flexibility or accommodation in a number of problematic areas.

1. The scale of these units remains a concern. The proposal to leave a 20 foot "natural buffer" is inadequate; the deciduous trees in that area are sparse at best. Although it is not an issue with the current, low-rise buildings, it will offer a meager and ineffective shield from the larger structures proposed. Without a more proactive effort to blend the planned development into the already existing community, it will not align with the physical character of the area. A more suitable design element must be established to better bridge the transect zone from urban to suburban.
 - a. Possible solution: A large stand of quick-growing and tall evergreen trees could be planted to obscure the scale and size of the proposed buildings.

- b. Possible solution: Decrease the height of the proposed structures, eliminate the proposed roof top decks, create step-backs on the rear side of the buildings to allow for an outdoor space for the development residents, and to reduce the span of wall that would back up against the two-story homes of Forest Lakes.
- 2. The influx of new residents in the proposed development will bring our schools to a higher capacity, and further burden the already overcrowded Albemarle High School, and tax the capacity of Hollymead Elementary. A number of schools in the county are already dealing with this issue. Many of the residents in Forest Lakes and its surrounding communities have moved here specifically for the favorable school ratings of the local schools, which will likely suffer as they are pushed to their limits, and in some cases beyond.
 - a. Possible solution: Without an assurance of a new school being built, it would be better to reduce the size of this development to minimize the impact on our school system. Without a plan to address this potential problem, there is a risk that residents will move from the area to seek out better educational options. With the hazard of falling school ratings, it is likely one will see a devaluation of homes in the area.

It was pointed out that the Places 29 Master plan, limits not only the height of the buildings in the area in terms of feet, but also in a maximum number of stories. Four is the total number of floors allowed under the Places 29 plan. Any residential building seen in Albemarle, from the area around 5th Street Station, to the new Brookhill Development on Rt. 29. follow these codes. To allow for such an exception would create a precedent that would greatly change the community aesthetic. Permitting a building that exceeds 4 stories could wreak havoc on the architectural landscape of the area, opening the neighborhood up to taller and taller buildings. I believe that the scale proposed by RST is heavy-handed and goes outside of the Master plan.

Lastly, the expressed desire of the new development to have private streets, with no northern exit, is in my opinion unfavorable. Under their proposal, residents of the new development would be allowed to access our public roads onto Rt. 29. But the lack of public roads and a northern exit via the development neighborhood would disadvantage surrounding community residents from also having alternative routes of travel.

As a former urban dweller, I fully understand and value the benefit of sensible development. However, this approach does not fall into that category. I am strongly against this development as it is being proposed and recommend that the county reject this proposal.

Sincerely,
Catherine Smith
703-554-2428

Andy Reitelbach

From: Carolyn Shaffer
Sent: Thursday, February 11, 2021 9:20 AM
To: Andy Reitelbach
Subject: FW: ZMA2020-00007 RST Residences

See Below

Thank you,

Carolyn Shaffer
Clerk, Planning Commission and Boards
[Albemarle County](#)

cshaffer2@albemarle.org
Phone: (434) 296-5832 ext 3437
401 McIntire Road, , Charlottesville, VA 22902

From: Janet Adams <jana2c@gmail.com>
Sent: Sunday, February 7, 2021 10:23 PM
To: Planning Commission <PlanningCommission@albemarle.org>
Subject: ZMA2020-00007 RST Residences

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Hi. I live at Forest Lakes South just off of Rt 29 and Ashwood Blvd. I am very sad to see the proposed development northeast of Ashwood Blvd. If passed this development will appear to have many negative effects on our neighborhood and community by destroying landscape, changing the appearance of the Forest Lakes South border and entrance, greatly increased traffic around and through the Forest Lakes neighborhood and Rt 29 area, overcrowding of schools, etc. It does not appear to be something that will make our community better but rather deteriorate/change our current standard of living, particularly in the sections of Forest Lake near Rt. 29. Several of our neighbors have already sold and moved and I suspect others will follow if possible. Because the trees are being destroyed in the Brookhill development in process, there is already increased wildlife daily in our yards just feet away from our homes eating our plants and invading our space. One day there was a deer less than a foot away from my bedroom window. I have as many as 8-10 deer in my yard daily and this evening I think I saw a fox run through the yard. I am seeing increased dust/pollution settling on cars and windows and much increased traffic noise heard from Rt 29 road already.

I ask that you take these things into consideration before approval in order to preserve the beauty and quality of life within our neighborhood.

Thank you.
Janet Adams
2368 Ravenswood Ct

Andy Reitelbach

From: Christopher Hawk <chawk@pecva.org>
Sent: Wednesday, February 10, 2021 2:03 PM
To: Andy Reitelbach
Subject: Re: Updates Regarding ZMA2020-00007 RST Residences

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Andy,

Thanks again for this update. In hopes to better understand the project prior to the public hearing, could you help provide a bit more information about the following?

- How does the county view the 10 variance requests for the 15-ft stepback requirement?
- Bike/pedestrian connectivity is vague, and it appears that sidewalks and greenspace concerns still exist. Has the county been given a final update on recreation area/open space and sidewalks?
- Has the applicant decided upon a final traffic plan? Are roads still going to be private?
- The Places 29 master plan calls for a future bus stop in this area, is the applicant willing to provide them?

Thanks in advance,
Chris

On Wed, Jan 27, 2021 at 6:27 PM Andy Reitelbach <mreitelbach@albemarle.org> wrote:

Good afternoon everyone,

As you have previously expressed interest in the above-referenced project, proposed for property at the northeast corner of the intersection of Route 29 and Ashwood Boulevard, I wanted to provide you with several updates regarding its current status.

This rezoning application has recently been scheduled for a public hearing with the Albemarle County Planning Commission for Tuesday, March 2, 2021, at 6:00pm. This meeting will be held virtually via Zoom. Once we get closer to the meeting date, the link to the Zoom webinar will be found on the County calendar, which can be accessed here: <https://www.albemarle.org/community/county-calendar>. The meeting agenda and staff report for this project will be available on the County website approximately one week prior to the public hearing. During the public hearing, there will be a portion of the meeting dedicated to allowing members of the public to speak about this project. Each speaker is limited to three (3) minutes. You are also welcome to email comments, visuals, reports, etc., to the Planning Commission in advance of the meeting. The email address for the Planning Commission is PlanningCommission@albemarle.org. Emails sent to this address will go to all seven Planning Commissioners.

In addition, the applicant has provided a revised application plan for the project, which includes several changes to the proposed plan. A PDF of this revised plan is attached for your reference. This revised plan is still under review by

County staff; however, changes to the plan identified by staff so far include the following: 1) an increase in the amount of proposed affordable dwelling units to include 50% of the total number of dwelling units, an increase from 15%; 2) additional language was added to the notes about site access and buffers on the cover sheet of the plan; 3) additional language has been added for notes 9 and 10 on sheet 3 of the plan, regarding the property's access; and 4) Road C through the property is labelled as a private road, and the other roads in the interior of the property are labelled as travelways.

If you have any questions, please let me know.

Best regards,

Andy

Andrew Reitelbach

Senior Planner

[Albemarle County](#)

--

areitelbach@albemarle.org

434.296.5832 x3261

401 McIntire Road

Charlottesville, VA 22902

--



Christopher M. Hawk
Field Representative - Albemarle & Orange
804.337.6716

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Andy Reitelbach

From: Judy Schlussel <jschlussel@earthlink.net>
Sent: Thursday, January 28, 2021 10:10 AM
To: Andy Reitelbach
Subject: Question.....Re: Updates Regarding ZMA2020-00007 RST Residences

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Hi Andy~

Appreciate the updates and being kept in the loop regarding RST Residences. I have a few questions:

=was it ever established what distance "walkable" is in terms of the amenities (grocery store, shopping, bus connection, etc.)? Also, are they calculating "walkable" from the entrance or from the inner most units of the subdivision?

=since the developer has increased the number of affordable units to now be 50% of the total number of dwelling units, will they offer the residents from the former mobile home site who were displaced an opportunity to be able to rent? purchase?

Hope all is well.

Thanks
Regards
Judy

-----Original Message-----

From: Andy Reitelbach
Sent: Jan 27, 2021 6:26 PM
To: Andy Reitelbach
Subject: Updates Regarding ZMA2020-00007 RST Residences

Good afternoon everyone,

As you have previously expressed interest in the above-referenced project, proposed for property at the northeast corner of the intersection of Route 29 and Ashwood Boulevard, I wanted to provide you with several updates regarding its current status.

This rezoning application has recently been scheduled for a public hearing with the Albemarle County Planning Commission for Tuesday, March 2, 2021, at 6:00pm. This meeting will be held virtually via Zoom. Once we get closer to the meeting date, the link to the Zoom webinar will be found on the County calendar, which can be accessed here: <https://www.albemarle.org/community/county-calendar>. The meeting agenda and staff report for this project will be available on the County website approximately one week prior to the public hearing. During the public hearing, there will be a portion of the meeting dedicated to allowing members of the public to speak about this project. Each speaker is limited to three (3) minutes. You are also welcome to email comments, visuals, reports, etc., to the Planning Commission in advance of the meeting. The email address for the Planning

Commission is PlanningCommission@albemarle.org. Emails sent to this address will go to all seven Planning Commissioners.

In addition, the applicant has provided a revised application plan for the project, which includes several changes to the proposed plan. A PDF of this revised plan is attached for your reference. This revised plan is still under review by County staff; however, changes to the plan identified by staff so far include the following: 1) an increase in the amount of proposed affordable dwelling units to include 50% of the total number of dwelling units, an increase from 15%; 2) additional language was added to the notes about site access and buffers on the cover sheet of the plan; 3) additional language has been added for notes 9 and 10 on sheet 3 of the plan, regarding the property's access; and 4) Road C through the property is labelled as a private road, and the other roads in the interior of the property are labelled as travelways.

If you have any questions, please let me know.

Best regards,
Andy

Andrew Reitelbach

Senior Planner

[Albemarle County](#)

--

areitelbach@albemarle.org

434.296.5832 x3261

401 McIntire Road

Charlottesville, VA 22902

Andy Reitelbach

From: Tina Dever <devertina@gmail.com>
Sent: Thursday, December 10, 2020 4:19 PM
To: Andy Reitelbach
Subject: proposed RST development

CAUTION: This message originated outside the County of Albemarle email system. DO NOT CLICK on links or open attachments unless you are sure the content is safe.

Hello Mr. Reitelbach,

I am a 22 year resident of Forest Lakes. Both my children have graduated from the Albemarle County school system, and we have sincerely loved our time in this community.

I want to express my concerns regarding the redevelopment of the Ridgewood Mobile Home Park. My three biggest concerns are the impact it will have on overcrowding in the northern feeder pattern schools, the increased traffic on Ashood Blvd, and how the new development will blend in with the surrounding communities.

Given that Brookhill and North Pointe developments have already started construction, and with the additional population increases the new RST development would cause, I am most concerned with the impact on school enrollment. As a parent volunteer in the schools and also as a teacher, I have witnessed firsthand how school overcrowding impacts the quality of education, and given our current experience with COVID, the health of our students, staff, and community. If the children in our region cannot receive the excellent education people have come to expect, we could also see a decrease in home values and tax revenue for the county.

Secondly, I am concerned with the proposed use of Ashwood Blvd. as a way for people in the RST development to access Rt. 29. In recent memory, we have lived through the expense and disruption caused by the widening and flattening of that section of Rt. 29, and I am concerned that any improvements VDOT has made in safety and efficiency will be wiped away by the addition of hundreds of extra cars travelling on a small section of road.

Lastly, I am concerned about the requests the developer has made to waive certain zoning rules. The developer appears to be trying to fit the maximum number of units into the space but cutting corners, such as making the roads private so they can be narrower than VDOT requires, seeking a waiver from setback and height requirements, not providing open space and natural areas as stipulated in the Places29 Plan, and with its four story buildings backing up to two story single family homes and townhomes, the development as proposed does not follow the Places29 document, which states that "the community of the Northern Development Areas values creative, effective design, which respects the scale and character of existing development and adjacent planned open space."

I ask you to consider the impact this development as proposed will have on our community.

Thank you for your time,
Christina Dever

Andy Reitelbach

From: Rob Propes <propesrob@gmail.com>
Sent: Tuesday, December 8, 2020 11:42 AM
To: Andy Reitelbach
Subject: Mobile Home Park Redevelopment

CAUTION: This message originated outside the County of Albemarle email system. DO NOT CLICK on links or open attachments unless you are sure the content is safe.

Mr. Reitlbach,

I understand you are the point person for the Planning Department on the proposal by RST Development to redevelop the existing mobile home park adjacent to Ashwood Blvd. and Rt. 29.

As a resident of Forest Lakes, I would like to express my opposition to the current redevelopment plan. The plan is simply too large and out of scale for an area that adjoins single family homes. I am very concerned this proposal will have on air quality with the additional emissions from vehicles, the impact on the traffic at this end of the county where there are already large neighborhoods that have been permitted and are actively under construction; and the impact on the schools, where we have elementary schools at capacity, and a highschool that is over capacity.

The current proposal will further erode the quality of life for the existing residents in the area, and the reason so many folks enjoy living in this part of Albemarle County. With unchecked development, the area will quickly become congested with vehicles that overwhelm the existing infrastructure, and schools that are even more overburdened.

I would ask you to look carefully at the development plan that has been put forth, and find a solution to approve a project that is appropriate in scale and architectural style to the community it would border. The County does not need to accept what is put forth by a developer. The County and its existing residents need to be in the drivers seat, working together to create a livable, sustainable community that people enjoy living in.

Thank you,

Rob Propes
350 Pleasant Place
Charlottesville, VA
443-642-1280

Andy Reitelbach

From: Patricia Jones Turner <pjonesey19@icloud.com>
Sent: Thursday, July 9, 2020 10:58 PM
To: Andy Reitelbach
Subject: Questions I'd Like Addressed at the July 20th Meeting Pertaining to ZMA-2020-00007-RST Residences Community Meeting

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These are my questions and concerns:

1. Where will the families go who will be displaced by this new development?
2. Will the road with in this development connect with an alternative route other than Route 29?
3. Will the development be considered affordable housing?
4. Have the owners of this property considered other locations?

Thanks for your time and consideration.

Rev. Patricia Jones Turner
804-356-8565

Andy Reitelbach

From: Elena DeLiso <delisoe@gmail.com>
Sent: Thursday, July 16, 2020 7:25 PM
To: Andy Reitelbach
Subject: ZMA-2020-00007-RST Residences Community

CAUTION: This message originated outside the County of Albemarle email system. DO NOT CLICK on links or open attachments unless you are sure the content is safe.

Hello Mr. Reitelbach

I recently received a letter about a proposed development near my townhome in the Ashland community in Forest Lakes.

These questions may be answered at the community Zoom meeting but I thought I'd go ahead and send.

Thank you in advance.

Stay well.

-Lena DeLiso

Here are the questions:

1. What is the scheduled start date of the construction?
2. Will consideration about capacity related to cell phones, electricity / power?
3. It appears that there will be an entrance onto Ashwood Boulevard between 29 and Ashland Drive. Will there be a light there? Stop sign? Planned review / reevaluation of the traffic onto Ashwood Blvd?
4. With the planned / possible increase in population in the area, how will that impact fire/rescue?
5. What are the mitigation plans for water run off / storm water management?
6. We have wildlife (deer and bears) that visit the Ashland development. As the proposed development might impact wildlife, how will the displacement of wildlife be handled (for the safety of people and the wildlife)?
7. What kind of lights will be used in common areas? Will the cover around fixtures be applied so that the light is directed downward and reduce glare?
8. What kind of landscaping will be part of the proposed development?

Andy Reitelbach

From: Janet Adams <jana2c@gmail.com>
Sent: Friday, July 17, 2020 2:07 PM
To: Andy Reitelbach
Subject: Comments - RST Residences Community Meeting

CAUTION: This message originated outside the County of Albemarle email system. DO NOT CLICK on links or open attachments unless you are sure the content is safe.

RE: ZMA-2020-00007 - RST Residences Community Meeting

Dear Mr. Reitelbach,

I am writing in response to a Williams Mullen July 6 letter regarding the above referenced subject.

I would be opposed to any change in zoning which would allow for development in a manner outlined in the letter.

Having lived at my current residence at Forest Lakes South-Ravenswood for nearly 16 years, it is becoming increasing concerning to think about all the changes in recent years. I have listed some of my concerns below:

- 1.) the current major development of land just south of Ashwood Blvd which I understand will have school, retail, apartments, single family home lots, etc. . . . all bringing in many people and increasing traffic in the Rt 29 area significantly.
- 2.) destruction/decrease of natural land in our community surrounding the existing homes, decreasing value and enjoyment by all.
- 3.) increased noise and safety concerns from great increase in traffic in the Rt. 29 area
- 4.) de-value of existing properties with negative impact of adding more retail and traffic issues in an already congested area. Not only bringing in more homeowners, renters, but traffic of visitors to retail locations.
- 5.) there are already existing empty commercial properties in area . . . don't see need for more.
- 6.) concern for existing mobile home residents who will be displaced and probably see financial hardship as a result if they are required to re-locate.

Your consideration appreciated.

Best Regards,
Janet Adams

Andy Reitelbach

From: HAROLD GEBHARDT <mabr12@comcast.net>
Sent: Monday, July 20, 2020 11:47 AM
To: George & Maggie Pearsall; Andy Reitelbach
Cc: Kim Beckwith; Suzanne Kitelinger; Pat and Drew Haines; Dorothy Chappell; BJ. Barbara Jean Robinson; Sharon Hood
Subject: Re: Re-Zoning for RST Residences

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George,

Thank you for your in depth presentation. Not only did you cover the main points of concern of our board, but you did so in such an informed and researched manner, that it becomes difficult to dispute.

On 07/17/2020 1:16 PM George & Maggie Pearsall <gp2mp4@comcast.net> wrote:

Mr. Andy Reitelbach
Senior Planner
Albemarle County, VA,

The Board of Directors for the Ashland Townhomes subdivision met to discuss the rezoning request for tax parcels 04600-00-00-10800 and 04600-00-00-10900.

The board has asked me to submit our concerns to you regarding the development and the impact it will have on surrounding properties.

Density:

The developers proposal for 370 residential units on 19.5 acres we believe to be excessive and raises concerns of our property owners. We are not opposed to development however, this part of the county is rapidly losing its open space and character. You have to look no further than the Brookhill Development on Rt 29 at Polo Grounds Rd to realize what developers are capable of building. Additionally, the developer contends that without this high density they would not be able to include affordable housing in the project.

Traffic:

The traffic study submitted by Ramey Kemp & Associates was conducted on a single day December 11, 2019. They estimate the development would add only 100 vehicles onto Ashwood Blvd. during AM and PM peak hours. Since the planned development is for 370 residences we believe the estimate is very low and expect congestion to become a major issue for all residents of Forest Lakes .

Storm Water Runoff:

The property in the application has significant natural area and a build of this magnitude will generate a great deal of runoff that could adversely affect properties in

the Ashland Townhomes area as well as properties on Cricklewood Ct and Birchcrest Ln in Forest Lakes South.

Schools:

There is no mention of the impact this development will have on the area schools. Since the area is served by the Hollymead Elementary and the Sutherland Middle School the addition of 370 residences will certainly generate an increase in enrolment of both schools and impact their operating expenses and bussing requirements.

Light Pollution:

A development with 370 apartments and townhomes will require lighting for the safety of the residents. We have concerns of how much lighting in such a compact area will affect the quality of life for surrounding residences not to mention the impact such a high density would have on existing wildlife.

The Ashland Townhomes Board of Directors request that this rezoning request and development, as submitted, be rejected and the property be developed at a much lower density.

Sincerely,

George Pearsall
(for Ashland Townhomes, Board of Directors)
1486 Ashland Dr
Charlottesville, VA 22911

Andy Reitelbach

From: Elena DeLiso <delisoe@gmail.com>
Sent: Tuesday, July 21, 2020 7:01 PM
To: Andy Reitelbach
Subject: Follow up to Monday 7/20 Zoom call ZMA 2020 00007 RST Residences Community Meeting

CAUTION: This message originated outside the County of Albemarle email system. DO NOT CLICK on links or open attachments unless you are sure the content is safe.

Good evening Mr. Reitelbach,
I appreciate having the opportunity to view the presentation.
Could you please add me to the distribution list for updates on the planned development?
My email address is delisoe@gmail.com
My name is Lena DeLiso and I live in the Forest Lakes Ashland development.

The Zoom call seemed to indicate that the process was still in a concept phase, but I did have a few questions for the future:

- a. Recycling seemed to be an afterthought in my community, we have to drive our recycling to the Forest Lakes South community facility because there is no area large enough in the common area for a dumpster and vehicle for picking up the dumpster. How will recycling be addressed?
 - b. It was hard to tell from the drawings, but will there be enough areas for putting snow as part of snow removal. In my neighborhood, when we have a snow event that is more than a dusting, there's limited area to put the snow. It's been piled up in the middle of the parking lot where it melts, refreezes and then creates a black ice situation, a safety issue for drivers. Also having limited areas for putting the snow creates barriers for rescue vehicles if someone has a medical emergency.
 - c. Will there be consideration for the potential need for increased capacity related to cell phones, the internet, electricity, power? I'm not sure what "5G" is but wanted to hear more about network capacity etc. Will the network needs of individuals working remotely be robust? While a shift to working remotely could mitigate traffic issues, will the infrastructure support the load?
 - d. Forest Lakes is very pet friendly, with green spaces for dog walking, bags for picking up after pets and trash cans to dispose of those bags. Will the planned development be pet friendly? Are there adequate common areas / green spaces for that?
 - e. The school questions did not seem to be fully answered. Those questions might be more appropriately addressed by the county / city for us to understand the plans for population growth and how an increase in children attending k-12 will be handled. Could the Fashion Square Mall (as there are vacant spaces) be converted for other community needs?
- Thank you.

Andy Reitelbach

From: Andy Reitelbach
Sent: Friday, August 14, 2020 5:06 PM
To: Long, Valerie
Cc: Alvis, Charles
Subject: RE: ZMA 2020-00007 RST Residences

Hi Valerie,

Those comments were received by email. However, thank you for reminding me, as there was one additional comment that had been received by the online comment system via PublicInput.com. That comment is below:

"Make sure to keep a high fence and dense trees. I don't like the idea of making our small community into an urban area. I live in Ashland and i know no one here will be happy about this. Especially people who have their back yards facing these ugly population dense buildings... and the noise of construction gosh... this is a can of worms."

Have a good weekend,
Andy

Andrew Reitelbach

Senior Planner
Albemarle County
Community Development Department
401 McIntire Road
Charlottesville, VA 22902

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areitelbach@albemarle.org
434.296.5832 x3261

From: Long, Valerie <vlong@williamsmullen.com>
Sent: Thursday, August 13, 2020 9:23 PM
To: Andy Reitelbach <mreitelbach@albemarle.org>
Cc: Alvis, Charles <calvis@williamsmullen.com>
Subject: RE: ZMA 2020-00007 RST Residences

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Thank you, Andy. Were these received via the online comment system, or by email?

Valerie Long

Williams Mullen
434-951-5709

From: Andy Reitelbach <mreitelbach@albemarle.org>
Sent: Thursday, August 13, 2020 6:02 PM
To: Long, Valerie <vlong@williamsmullen.com>

Cc: Alvis, Charles <calvis@williamsmullen.com>

Subject: RE: ZMA 2020-00007 RST Residences

Hi Valerie,

Please see below for additional questions/comments that have been received by staff since the community meeting.

-
- a. Recycling seemed to be an afterthought in my community, we have to drive our recycling to the Forest Lakes South community facility because there is no area large enough in the common area for a dumpster and vehicle for picking up the dumpster. How will recycling be addressed?
 - b. It was hard to tell from the drawings, but will there be enough areas for putting snow as part of snow removal. In my neighborhood, when we have a snow event that is more than a dusting, there's limited area to put the snow. It's been piled up in the middle of the parking lot where it melts, refreezes and then creates a black ice situation, a safety issue for drivers. Also having limited areas for putting the snow creates barriers for rescue vehicles if someone has a medical emergency.
 - c. Will there be consideration for the potential need for increased capacity related to cell phones, the internet, electricity, power? I'm not sure what "5G" is but wanted to hear more about network capacity etc. Will the network needs of individuals working remotely be robust? While a shift to working remotely could mitigate traffic issues, will the infrastructure support the load?
 - d. Forest Lakes is very pet friendly, with green spaces for dog walking, bags for picking up after pets and trash cans to dispose of those bags. Will the planned development be pet friendly? Are there adequate common areas / green spaces for that?
 - e. The school questions did not seem to be fully answered. Those questions might be more appropriately addressed by the county / city for us to understand the plans for population growth and how an increase in children attending k-12 will be handled. Could the Fashion Square Mall (as there are vacant spaces) be converted for other community needs?

A. How many parking spaces per individual unit are planned? How many visitor parking spaces are planned? Parking can become a source of conflict.

B. Our HOA discussed speed bumps at great length (temporary speed bumps to be removed before winter due to the snow plow issues versus permanent, 4 or 2, where to place them). There was lots of back and forth. Two permanent speed bumps were added. Both go all the way to the curb on one side, with no gap between the bump and the curb. Water backs up behind when it rains, silt accumulates. We'll see what happens when it rains. I didn't have a strong opinion about speed bumps and was surprised by the strong views.

The Board of Directors for the Ashland Townhomes subdivision met to discuss the rezoning request for tax parcels 04600-00-00-10800 and 04600-00-00-10900.

The board has asked me to submit our concerns to you regarding the development and the impact it will have on surrounding properties.

Density:

The developers proposal for 370 residential units on 19.5 acres we believe to be excessive and raises concerns of our property owners. We are not opposed to development however, this part of the county is rapidly losing its open space and character. You have to look no further than the Brookhill Development on Rt 29 at Polo Grounds Rd to realize what developers are capable of building. Additionally, the developer contends that without this high density they would not be able to include affordable housing in the project.

Traffic:

The traffic study submitted by Ramey Kemp & Associates was conducted on a single day December 11, 2019. They estimate the development would add only 100 vehicles onto Ashwood Blvd. during AM

and PM peak hours. Since the planned development is for 370 residences we believe the estimate is very low and expect congestion to become a major issue for all residents of Forest Lakes .

Storm Water Runoff:

The property in the application has significant natural area and a build of this magnitude will generate a great deal of runoff that could adversely affect properties in the Ashland Townhomes area as well as properties on Cricklewood Ct and Birchcrest Ln in Forest Lakes South.

Schools:

There is no mention of the impact this development will have on the area schools. Since the area is served by the Hollymead Elementary and the Sutherland Middle School the addition of 370 residences will certainly generate an increase in enrolment of both schools and impact their operating expenses and bussing requirements.

Light Pollution:

A development with 370 apartments and townhomes will require lighting for the safety of the residents. We have concerns of how much lighting in such a compact area will affect the quality of life for surrounding residences not to mention the impact such a high density would have on existing wildlife.

The Ashland Townhomes Board of Directors request that this rezoning request and development, as submitted, be rejected and the property be developed at a much lower density.

Best,
Andy

Andrew Reitelbach

Senior Planner
Albemarle County
Community Development Department
401 McIntire Road
Charlottesville, VA 22902

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areitelbach@albemarle.org

434.296.5832 x3261

From: Long, Valerie <vlong@williamsmullen.com>

Sent: Friday, August 7, 2020 10:55 AM

To: Andy Reitelbach <mreitelbach@albemarle.org>

Cc: Alvis, Charles <calvis@williamsmullen.com>

Subject: ZMA 2020-00007 RST Residences

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Andy:

Have you received any public comments or other feedback on the RST Residences application in connection with the community meeting we held on July 20th? If so, would you please forward them to us so we are aware of them? And as you receive them going forward, we would appreciate it if you would forward them to us upon receipt.

Thank you,

Valerie

Valerie Wagner Long | Attorney | Williams Mullen

321 East Main St. Suite 400 | Charlottesville, VA 22902-3200

T 434.951.5709 | C 434.242.6792 | F 434.817.0977 | vlong@williamsmullen.com | www.williamsmullen.com

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Andy Reitelbach

From: Judy Schlussel <jschlussel@earthlink.net>
Sent: Monday, September 21, 2020 5:14 PM
To: Andy Reitelbach
Subject: Re: Resubmittal of ZMA2020-00007 RST Residences

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Hi Andy,

Appreciate you sending this email to keep me in the loop about the RST Residences. This is the first chance I have had to look at the attachments and my question is pertaining to the section Neighborhood Center, page 4.....**which indicates that the Property is in close, walkable distance to the Brookhill Town Center and Hollymead Town Center. It also states that the various amenities located within Brookhill will be a short walk from the project.**

My question is: **what is a distance that is is considered a SHORT WALK?** Have you or staff actually "**walked**" this area?

My husband I drove through the Southwood Trailer area where the long time residents are being displaced. It actually is quite a distance from the back part of the property to Rt 29 and then if someone was to go either Rt 29 N or S for the amenities the area referenced that is quite a distance to walk.

Also on pg 4 **Mixture of Housing Types and Affordability:** Although this states a variety of townhomes and apartments don't exit what about Belvedere....The Reserve are apartments and there also are townhouses within Belvedere and across from Fairview Swim Club. Another area that has townhouses and apartments within the same complex is Hollymead. And still another complex that has townhouses is Hollymead Town Center. Therefore, I do believe this statement is not 100% accurate.

Is RST Residences proposed to be apartments to rent, condo to rent or own, townhouses to rent or townhouses to own?

Will this revision be presented to the Rio 29 North CAC or will it go before the Planning Commission (if so, when?)

Thanks for any insight you can provide.

Hope all is going well.
Regards,
Judy Schlussel
Rio 29 CAC

-----Original Message-----

From: Andy Reitelbach
Sent: Aug 27, 2020 10:10 PM
To: Andy Reitelbach
Subject: Resubmittal of ZMA2020-00007 RST Residences

Hello everyone,

As you had requested to be notified of updates regarding the rezoning project application ZMA2020-00007, RST Residences (which is the proposed residential development near the intersection of Route 29 and Ashwood Boulevard, at the site of the existing Ridgewood mobile home community), I wanted to let you know that the

application has been resubmitted to the County for further review by County and partner agency (ACSA, VDOT) staff, with revised plans and other project materials. These revised documents are attached.

These documents will be reviewed by County staff over the coming weeks, and after staff have reviewed these resubmitted documents, staff will provide the applicant a letter identifying any remaining or additional comments, concerns, and questions regarding the project's compliance with the County's Comprehensive Plan and Zoning Ordinance. If you have any further questions or concerns after reviewing the attached documents, please let me know, and I would be happy to pass them on to the project applicant as well.

If you'd like to contact the applicant directly, the representatives for this project are Valerie Long (vlong@williamsmullen.com) and Charlie Alvis (calvis@williamsmullen.com) of the law firm WilliamsMullen.

As mentioned at the virtual community meeting several weeks ago, staff review of this rezoning proposal is only the first step in the process, and this application will still require two public hearings (which are open to all members of the public for comment) – one of which is before the County's Planning Commission (who will make a recommendation about the project to the Board of Supervisors) and the other of which is before the Board of Supervisors (who will make the final decision as to whether to approve this application or not). Neither of these public hearings has been scheduled at this time, but I am happy to let you know when they are.

If you have any questions, please do not hesitate to contact me.

Best regards,
Andy

Andrew Reitelbach

Senior Planner
Albemarle County
Community Development Department
401 McIntire Road
Charlottesville, VA 22902

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areitelbach@albemarle.org

434.296.5832 x3261

Andy Reitelbach

From: Megan Nedostup
Sent: Friday, October 23, 2020 8:21 AM
To: Betsy Gohdes-Baten; Dennis Odinov
Cc: Andy Reitelbach
Subject: RE: Controversial development near Forrest Lakes

Good Morning,
That application is ZMA2020-007 RST Residences. Below is a link to their materials. Andy Reitelbach, copied here, is the lead reviewer for that application. Please contact him with any questions related to that ZMA.

<https://lfweb.albemarle.org/weblink/search.aspx?dbid=3&searchcommand=%7b%5bCDD-Planning%5d:%5bApplicationNumber%5d=%22ZMA202000007%22%7d>

Thank you,

Megan Nedostup, AICP
(pronounced nuh-DAHST-up)
Principal Planner
She, her, hers
[Albemarle County](#)

mnedostup@albemarle.org
434-296-5832 x3004
401 McIntire Road, Charlottesville, VA 22902

From: Betsy Baten <betsygbaten@earthlink.net>
Sent: Thursday, October 22, 2020 11:14 PM
To: Dennis Odinov <dennis2037@comcast.net>
Cc: Megan Nedostup <mnedostup@albemarle.org>
Subject: Re: Controversial development near Forrest Lakes

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Hi Dennis,

I don't have the ZMA on this one. Perhaps Megan would know more details. I'll cc her this and ask for her reply if she does.

betsy

On Oct 22, 2020, at 5:04 PM, DENNIS ODINOV <dennis2037@comcast.net> wrote:

Thank you, Betsy. Do you have the ZMA number, or is not considered a ZMA?
Dennis

On 10/21/2020 5:14 PM Betsy Baten <betsygbaten@earthlink.net> wrote:

A proposed new development could bring 370 apartments and townhomes to U.S. 29 near Forest Lakes.

More than 25 people attended a virtual community meeting on Monday where RST Development explained the proposal and answered questions.

The developer is requesting a rezoning of the 19.51 acre property at the intersection of U.S. 29 and Ashwood Boulevard from R-1 residential to Planned Residential Development and wants to build 254 apartments and 108 town houses.

The property, which is currently home to Ridgewood Mobile Home Park, was purchased by Virginia Beach-based RST Development last year for \$6 million.

In Albemarle's Places29 Master Plan, which is part of the county's Comprehensive Plan, most of the property is shown on the future land use map as urban density residential, which recommends density of between six and 34 units per acre. A portion of the property along U.S. 29 is designated as open space.

The proposal is to build approximately 19.7 units per acre, according to county staff.

The Comprehensive Plan is the county's guiding document for its long-term vision for land use and resource protection, and includes master plans for the designated development areas of the county. County staff and the Board of Supervisors look to the Comprehensive Plan as part of the rezoning process.

The apartments are being proposed to be in five buildings closer to the front of the development, while the townhouses are proposed to be two-over-two units, with one two-story townhouse on top of another, in eight buildings in the back of the property.

During the meeting, community members asked about the look of the development, school capacity, displacement of mobile home park residents, buffers and traffic, among other questions.

Valerie Long, an attorney with Williams-Mullen who is representing RST Development, said the application will have an advisory review by the county's Architectural Review Board, as it's along U.S. 29, which is an entrance corridor. Then, if it is ultimately approved by the Board of Supervisors, the portions of the development viewable from U.S. 29 would be reviewed by the ARB.

The school division has not yet provided comments about existing school capacity and how many students the proposed development could generate

Brookhill, a development currently under construction to the south of the site, is giving the county land that could be used for a future elementary school and about 60 acres on the other side of U.S. 29 for a future high school or other county uses.

Long said a portion of the townhouses would be sold at affordable prices for people making 80% of area median income or lower. Current area median income for this area for a family is \$93,900, according to the U.S. Department of Housing and Urban Development.

Public hearings for the proposal before the Planning Commission and Board of Supervisors have not yet been scheduled.

After the purchase of Ridgewood Mobile Home Park, RST Development gave current residents a deadline of November 30 to move.

Ahead of the meeting, Scott Copeland with RST Development said that the company is working internally to propose a plan to extend the period further, as it would not break ground on the project by that time, and it wants to provide as much time as possible.

“We are still working out the details, but most likely we would extend the period for an additional 90 days, and continue to reassess the timing as the project review process continues,” Copeland said. “We certainly want to continue working with the remaining residents to make the relocation process less onerous.”

In 2019, the Board of Supervisors passed an anti-displacement and tenant relocation assistance policy, and county staff are working to create a more detailed policy as part of Albemarle’s housing policy update.

Long said the developer is working to put together a relocation plan.

One resident was concerned about four-story townhouses being built behind his single family home.

“For this neighborhood that I’m in, which is a single family home neighborhood, to look out through a 20-foot buffer into four-story buildings, doesn’t seem very appealing to me,” Jeff Smith said. “We’re going to have serious light

pollution and all kinds of congestion, just feet away from our single family home.

Long said the current conceptual plan has a 20-foot buffer along the back side of the property, and that there would be additional land between the building and the property line for stormwater management facilities totaling 87 feet.

“We didn’t want to put the buildings right up against the property line, we wanted to keep them back an appropriate distance, so that they wouldn’t be right on top of each other,” Long said. “It’s fairly consistent with the distances involved from the Forest Lakes Townhomes.”

Andy Reitelbach

From: scott@ducardvineyards.com
Sent: Monday, January 25, 2021 9:01 AM
To: Andy Reitelbach
Subject: RE: ZMA2020-00007 - RST Residences

CAUTION: This message originated outside the County of Albemarle email system. DO NOT CLICK on links or open attachments unless you are sure the content is safe.

Hi - have appreciated all this info and perhaps you know that Forest Lakes is getting geared up for our involvement in this. Strong view that this should be denied – or a wide range of grounds, with a lot of supporting analyses. We'll be prepared when Planning Commission gets scheduled (my understanding is that you'll let us know, thanks.)

You might want to view the video we've created for interested parties in our community – www.forestlakes.net click on Announcements. It includes some stunning visuals about the RST plan and its impacts.

There are other issues not mentioned in the video – environmental, non-compliance with Comp Plan and with Places 29 Plan and undesirable use of waivers – and bad precedent that would create, plus other policy related issues. Andy, your materials to date don't really bump this development up against the P29 plan ... it's not at all consistent with what's included there.

You mentioned you might want to include community comments in your report, and that would be great. If you like, I can write one or two sentences for different sections – let me know.

You might also use the overall wording in the petition (just went live a few days ago) that is also listed on the Forest Lakes site – it captures the essence of our opposition in one paragraph.

Thanks, Scott

Cell 434-409-4378

From: Andy Reitelbach <mreitelbach@albemarle.org>
Sent: Thursday, December 31, 2020 5:09 PM
To: Scott Elliff <scott@ducardvineyards.com>
Subject: FW: ZMA2020-00007 - RST Residences

Good afternoon Scott,

Please see below for an email from Charlie Alvis at WilliamsMullen, a representative of the applicant for ZMA2020-00007 RST Residences. This email is what I had mentioned during our phone call the other day, in which additional information and responses to County comments were provided by the applicant, in regard to outstanding issues with the application that had been identified by County staff or partner agency reviewers. In addition, for your reference, I've also attached a copy of the most recent version of the proposed application plan for this project, which is the same version as the one I sent to you several weeks ago.

Here is contact information for some of the other staff reviewers or partner agency contacts if you have questions specific for them:

-Adam Moore at VDOT, adam.moore@vdot.virginia.gov
-Stacy Pethia, the County's Principal Planner for Housing, spethia@albemarle.org
-Francis MacCall, a Principal Planner for Zoning, fmaccall@albemarle.org
-Frank Pohl, County Engineer, fpohl@albemarle.org
-Maya Kumazawa, a contact at Albemarle County Public Schools, mkumazawa@albemarle.org

If you have any additional questions, or if I forgot to include something that I'd said I would during our phone call the other day, please let me know.

Best regards, and have a happy new year,
Andy

Andrew Reitelbach

Senior Planner

[Albemarle County](mailto:areitelbach@albemarle.org)

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areitelbach@albemarle.org

434.296.5832 x3261

401 McIntire Road

Charlottesville, VA 22902

From: Alvis, Charles <calvis@williamsmullen.com>

Sent: Monday, November 16, 2020 5:29 PM

To: Andy Reitelbach <mreitelbach@albemarle.org>

Cc: Valerie Long <vlong@williamsmullen.com>

Subject: ZMA 2020-00007 - RST Residences - Follow up to Staff Comment Letter of 11.4.2020 [IWOV-IWOVRIC.FID2066722]

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Dear Andy,

Please find below a summary of the items we discussed by phone on Friday, Nov. 6, along with a few pieces of additional information that you requested. I am attaching my correspondence with VDOT and County reviewers on some of your comments. Also attached are final revised plans to clarify the items we discussed by phone.

Planning – General ZMA Comment #1

- **Ashwood Blvd. Entrance - VDOT access permit.** Since we spoke, I confirmed with Adam Moore at VDOT that a private road can cross VDOT's property at the location of the proposed access to Ashwood Boulevard. Please see the attached email from Adam Moore at VDOT. Adam advised that the VDOT access permit would not be granted until site plan approval is obtained. Therefore, we are unable to provide legal documentation of the access permit at this time.
- **Ashwood Blvd. Entrance – Maintenance.** RST Residences is committed to maintaining the private roads and the access area. As such, the property owner will record a maintenance agreement requiring the current property owner, or any future property owner of the Property, to maintain the private roads and access areas.
- **60' access easement labels on plans.** As we discussed, an access easement would be recorded to grant the public access over all the private roads in the Project (Private Roads A, B, and C). The labels on the plans show

where access is proposed to the adjoining parcels. The public would have rights to access the entire private road network in the Project.

Planning – General ZMA Comment #4

- Please see the Cover Sheet of the attached revised plans for a more detailed breakout of how the Project satisfies (and exceeds) the minimum open space and amenity area requirements under Sections 4.16 and 19.6 of the Zoning Ordinance.
- The minimum amenity area for the Project, based on the formula in Section 4.16.1, is 0.98 acres (or 42,560 square feet). To reach this minimum, the Project proposes the following: (i) two tot lots representing a total of 8,270 sq. ft.; (ii) a 3,600 sq. ft. asphalt recreation area; (iii) an 18,400 sq. ft. pool amenity area; (iv) a 10,540 sq. ft. dog park area; and (v) a 1,750 sq. ft. general amenity area. These proposed amenities total 42,560 square feet, or 0.98 acres, as required by Section 4.16.1.
- Section 4.16.2 requires certain amenities be provided unless a substitution request is approved. Specifically, based on the number of residential units proposed (370 units), Section 4.16.2 requires eight (8) 2,000 square foot tot lots and four (4) 30'x30' half-basketball courts. At the site plan stage, RST Residences plans to submit a substitution request to offer the alternative amenities identified above in lieu of the required half-basketball courts and some of the required tot lots. However, in the event that such a substitution request is not submitted or approved, the revised plans clearly show that the Project can accommodate the amenity requirements in Section 4.16.2. The eight required 2,000 sq. ft. tot lots represent a total area of 16,000 square feet. The Project proposes a total tot lot area of 8,270 sq. ft. Therefore, an additional area of 7,730 square feet would be needed for tot lots in the event that a substitution request is not submitted or approved. Because the 10,540 sq. ft. proposed dog park is larger than 7,730 sq. ft., the proposed dog park area could satisfy the tot lot requirement under Section 4.16.2.1 if a substitution request is not submitted or approved. Likewise, the four required 30'x30' half-basketball courts represent a total area of 3,600 square feet. The Project proposes a 3,600 square foot asphalt recreation area in lieu of the required half-basketball courts. In the event a substitution request is not submitted or approved, the area proposed for use as an asphalt recreation area could satisfy the half-basketball court requirement of Section 4.16.2.2.
- Section 19.6 separately requires that not less than 25% of the area devoted to residential use in a Planned Residential Development district be used for common open space. Based on the size of the subject parcels, the open space minimum for this Project is 4.88 acres. To reach this minimum, the Project proposes the following: (i) 0.98 acres of amenity areas (described above); (ii) 2.64 acres of buffer areas; and (iii) a 1.26-acre general open space area (please note that the Application Plan has been revised to show this general open space area, outlined in fuchsia). These proposed open space areas total 4.88 acres, as required by Section 19.6.
- Landscaping strips and parking lot islands are not counted as amenity areas or open space.
- As we discussed, retaining walls can be counted toward open space.
- As we discussed, a stormwater management facility may not be counted as an amenity, but the grass covering an underground stormwater facility may be counted as an amenity area.

Planning – General ZMA Comment #11

- As we discussed, the Project proposes three private roads (shown on the plans as Private Roads A, B, and C). Each private road will be accessible to the public pursuant to a recorded access easement. In addition, the property owner will be responsible for maintaining the private roads in perpetuity pursuant to a recorded maintenance agreement.

Planning – General ZMA Comment #12

- As we discussed, the proposed sidewalk along Ashwood Boulevard would be accessible to the public pursuant to a recorded access easement.

Planning – General ZMA Comment #21

- As we discussed, all private roads in the Project (not just Private Road C) are proposed to be accessible to the public pursuant to a recorded access easement.

Planning Division – Transportation Comment

- Dan Butch and I spoke on Thursday, Nov. 12 regarding this comment. Because the land in question is not owned by the Applicant, no action is required. Please see the attached email.

Housing Division Comment

- Stacy Pethia and I spoke on Friday, Nov. 13 regarding the proposed change to the For-Sale Affordable Housing description on the cover sheet of the plans. Stacy agreed that the best solution would be to strike final sentence after the semicolon in the text quoted in the comment letter. This change is shown below and in the attached email to Stacy confirming our conversation:

THE NINETY (90) DAY PERIOD SHALL COMMENCE UPON WRITTEN NOTICE FROM THE APPLICANT OR ITS SUCCESSOR THAT THE UNIT(S) WILL BE AVAILABLE FOR SALE. THIS NOTICE SHALL NOT BE GIVEN MORE THAN SIXTY (60) DAYS PRIOR TO RECEIPT OF THE CERTIFICATE OF OCCUPANCY FOR THE APPLICABLE FOR-SALE AFFORDABLE DWELLING UNIT; ~~THE COUNTY OR ITS DESIGNEE MAY THEN HAVE THIRTY (30) DAYS WITHIN WHICH TO PROVIDE A QUALIFIED PURCHASER FOR SUCH FOR-SALE AFFORDABLE DWELLING UNIT.~~

One final item that I would like to call to your attention is a correction we made to one of the adjacent property site sections on Sheet 7 of the plans (Site View Exhibit). The +/- 100' portion of Section 1 has been relabeled "Existing Woods/Private Yard." On the prior version of the plans, this portion was labeled "Existing Woods/Dedicated Open Space." As you'll see from the property lines shown in the "Section Locations" inset map, the Section 1 sight line crosses a private residential lot only. The reference to dedicated open space was an error.

Thank you again for your attention to this application. We will look forward to receiving your staff report. Please confirm the Planning Commission date for this project as soon as it is known.

Thank you,
Charlie

Charles B. Alvis | Attorney | Williams Mullen

321 East Main St. Suite 400 | Charlottesville, VA 22902-3200

T 434.951.5725 | C 662.322.3813 | F 434.817.0977 | calvis@williamsmullen.com | www.williamsmullen.com

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February 24, 2021

Albemarle County Planning Commission
% Charles Rapp, Planning Director
410 McIntire Road, North Wing
Charlottesville, VA 22902
(Transmitted via email)

Re: ZMA202000007 RST Residences

Dear Members of the Planning Commission:

The Piedmont Environmental Council (PEC) submits these comments, regarding the RST Residences rezoning ([ZMA202000007](#)). The rezoning request does not conform to the recommendations contained in the Albemarle County Comprehensive Plan nor the Places 29 Master Plan.

The RST Residences rezoning (R-1 Residential to Planned Residential Development) proposes 370 units on 19.51 acres along Route 29 in the Places 29 North growth area. **PEC recommends the rezoning be denied in its current form**, as it does not: (1) effectively build upon the current growth area; (2) create affordable housing units that are sustainable for generational use; (3) conform to stepback requirements; (4) provide bike/pedestrian connectivity to nearby public transit nor essential services/stores required to create and sustain a livable community; (5) create beneficial public road infrastructure; (6) provide adequate proffers related to public schools; and (7) protect nor create beneficial tree canopies.

The Piedmont Environmental Council supports smart growth policies and specific projects that promote inclusive, walkable, public transit-oriented communities. Albemarle's approach to housing should meet anticipated future demand while providing sufficient affordable housing inventory. In order to be truly affordable, that housing should provide generational housing, be located in growth areas, and be within walking/biking distance to public transit, job centers, schools, and other essential services; otherwise, the total costs of living there will prove to be anything but affordable.

PEC raises the following concerns, in order to address our concerns with the proposed rezoning: (1) Comprehensive Planning, (2) Affordable Housing, (3) Special Exceptions, (4) Connectivity, (5) Private Roads, (6) Public Schools, and (7) Tree Canopy.

Comprehensive Planning

The Places 29 Master Plan defines the future land uses, including approximately 50 parcels planned for Urban Density within the Places 29 North growth area.¹ Based on the recommended Urban Density (6.01 to 34 housing units per acre), these additional parcels could provide between approximately 2,500 and 14,500 housing units.

The Draft Albemarle County Housing Policy states, "...the county must support the development of an additional 3,616 units to fully accommodate projected household growth through 2040..."² Since calculated in March 2020:

- Albemarle's population increased from 108,639 to an estimated 110,545, resulting in a population difference of 27,940 between 2020 and 2040;³
- Based on an estimated 2.54 persons per dwelling, approximately 11,000 residential units would be needed to accommodate this growth;⁴
- An additional 897 residential units have been approved by the county, resulting in a total of 9,031 residential units not yet built within the approved housing pipeline;⁵ and
- Therefore, the targeted housing inventory has been reduced from 3,616 to 1,969.

There is a huge difference between (A) what is available for potential free enterprise development via future development called for in the comprehensive plan (between approximately 2,500 and 14,500 units); and (B) what is targeted within the county's housing policy (3,616 units reduced to 1,969 units). This proposed rezoning would consume over 18% of the county's projected housing needs without appropriately connecting to core development areas. The county has the ability to be selective when approving the targeted housing units.

During the upcoming comprehensive plan update, it will be important for the county to clearly make this distinction. PEC recommends updating the overall Comprehensive Plan, including the Places 29 Master Plan, to appropriately address targeted housing via phased development efforts. The Comprehensive Plan recommends that the county should "Use Development Area land efficiently to prevent premature expansion of the Development Areas".⁶ How we develop within the development area will ultimately determine when the growth area may expand. Therefore, it is critical the county prioritize developing greyfields/brownfields and areas located within existing developed areas, with good access to services, prior to developing greenfields and areas located beyond reasonable connection to core areas in the developed areas.

¹ Albemarle County, Places 29 Master Plan, Future Land Use North, p. 89

² Albemarle County Draft Housing Policy, March 2020. p.13. Accessed online via <https://www.albemarle.org/home/showpublisheddocument?id=7098>

³ Weldon Cooper Center, Virginia Population, Cooper Center 2020 Estimates. Accessed online via <https://demographics.coopercenter.org/virginia-population-estimates/>

⁴ Albemarle County, 2019 Growth Management Report, pg. 7. Accessed online via <https://www.albemarle.org/home/showpublisheddocument?id=322>

⁵ Albemarle County Community Development Department (2019), Albemarle County Development Dashboards, Accessed online via <https://www.albemarle.org/department.asp?department=cdd&relpage=23323>. Accessed February 23, 2021.

⁶ Albemarle Comprehensive Plan, Objective 4. p. 35.



RST Residences is not located within or adjoining the core development area near Hollymead nor Forest Lakes Town Centers, nor does it have the supporting infrastructure to successfully connect it to existing development. At best, we believe this proposal is premature.

Affordable Housing

RST Residences is proposed on the former Ridgewood Mobile Home Park, which provided the community with 68 mobile homes and 10 efficiency apartments.^{7,8} Replacing 68 mobile homes with apartments that only offer 10-years worth of affordability is not a desirable outcome -- it would mean displacing residents with stable housing solutions with new affordable housing units that do not provide long term living solutions. This is not the generational stability we need.

The Applicant has proffered at least 50% of the units (185 units) as affordable housing via “for-sale units or rental units, or a combination thereof, in the owner’s discretion”.⁹ At first glance, 185 affordable units seems quite appealing; however, there is no stipulation on how many units must be sold as such, and the rental-units are term-limited for a 10-year rental period.¹⁰ Therefore, it is reasonable to believe that each of the 185 units could be used as rental-units for 10-years, converted to market-rate units afterwards, then permanently sold or rented as such. This outcome would provide ZERO affordable housing after 10 years and create the need for a new batch of affordable housing units.

The first *Action Step* stated in the Draft Albemarle County Housing Policy is to “Ensure a mixture of housing types are provided, with a minimum of 20% of the total number of housing units in new developments being provided as affordable housing.”¹¹ Yet the proposed approach to affordable housing would leave the county constantly playing catch-up to replace expired affordable housing units and residents would be forced to find new homes after the 10-year affordable housing period expired.

The county should place emphasis on home ownership, in order to help families build personal wealth and remove themselves from the perpetual rental cycle. Affordable rental units should be provided for a longer period to provide generational affordability -- 30 years as a standard, 99 years as an aspiration.

Special Exceptions

⁷ <https://www.cvilletomorrow.org/articles/development-digest-ridgewood-mobile-home-park-sold-to-virginia-beach-based-developer>

⁸ <https://tjpc.org/wp-content/uploads/2020/05/2018-2022-Consolidated-Plan-Adopted-by-TJPC.pdf>

⁹ Zoning Map Amendment for RST Residences. January 19, 2021.

¹⁰ Id sec

¹¹ Albemarle County Draft Housing Policy, March 2020. p.13. Accessed online via <https://www.albemarle.org/home/showpublisheddocument?id=7098>



The associated Special Exception ([SE202000003](#)) has requested 10 setback exceptions for Building 1 (two buildings connected by pedestrian walkways) and eight (8) townhouses, in conjunction with the proposed rezoning.

Building 1

The “Applicant estimates that strict application of a 15-foot setback to Building 1 would result in the loss of ten residential units. As a reduction in the number of residential units is contrary to the Comprehensive Plan’s recommendation for the Property, a special exception from the setback is warranted.”¹²

PEC emphasizes that the Comprehensive Plan and the Places 29 Master Plan depict the proposed site as Urban Density in the Future Land Use Map, which provides a density range between 6.01 and 34 units/acre. A reduction of 10 units would not substantially change the overall density (e.g., 18.96 units/acre reduced to 18.45 units/acre).

Eight (8) Townhouses

The Applicant states “waiving setback requirements [for the 8 townhouses] allows for additional living space in the Project. Given the Project’s focus of providing affordable housing to Albemarle County citizens, waiving the setback requirement would help balance the County’s design requirement with important housing priorities.”¹³

PEC emphasizes the importance of providing ample living space for affordable housing units; however, the applicant has not provided sufficient reasoning nor evidence to support the above claim. Therefore, PEC recommends the eight (8) townhouses adhere to the 15-foot setback requirement.

Connectivity

RST Residences does not provide sufficient connectivity to create a livable community in which residents can easily walk, bike, nor utilize public transportation to go to work, school, essential stores, and other everyday destinations. There are no bus stops, bike lanes, nor pedestrian crosswalks proffered in this rezoning to help residents move along and across Route 29, yet the Comprehensive Plan states that their inclusion is “considered necessary”,¹⁴ emphasizing the importance of expanding the transportation network via public transportation and bike/ped connectivity.^{15,16,17}

¹² SE202000003 Correspondence 2020-09-10, p.3

¹³ Id sec, p.2

¹⁴ Places 29 Master Plan, p.10. “Expansion of transit service (including hours of operation, headways, extension of service to unserved areas, and supporting infrastructure, such as sidewalks, crosswalks, and shelters)...It should be noted that all of the transportation improvements recommended in this Plan are considered necessary.”

¹⁵ Places 29 Master Plan, p. 67. “...the transportation network needs to expand the choices for movement within and through the area, while the pattern of development takes advantage of and facilitates those expanded choices.”

¹⁶ Places 29 Master Plan, p.87. “An expanded and enhanced transit system is recommended for the Places29 area. As new blocks and streets are created, it is important to include areas for transit. In order to attract passengers and provide needed services throughout the area, transit stops should be provided in strategic places and should incorporate amenities to make the system easy to use.”

¹⁷ Places 29 Master Plan, Figure 7. Parks and Green Systems Map, p. 91



Walking distances between $\frac{1}{4}$ to $\frac{1}{2}$ -mile are broadly considered within a comfortable walking distance from one's home.¹⁸ Despite the application stating that "Hollymead Town Center area is in the immediate vicinity of the Property,"¹⁹ RST Residences is located approximately:

- 1.2 miles from Hollymead Elementary School
- 1.2-miles from Harris Teeter
- 1.3-miles from Target
- 1.5-miles from CVS
- 1.6-miles from Food Lion
- 2.9-miles from Baker-Butler Elementary School
- 4.3-miles from Albemarle High School

Public transportation is not provided in this area by the Charlottesville Area Transit (CAT), with the nearest bus stop located approximately 1.5-miles away at Walmart.²⁰ JAUNT services are limited and do not operate on a recurring schedule and requires scheduling two (2) days in advance.²¹

A majority of offsite trips will require a vehicle or bicycle for transportation; however, public transportation is limited and bicycle facilities are not adequately developed for safe travel along Route 29. The Places 29 Master Plan highlights 12 principles for both new development and redevelopment in the Master Plan Area; the first three principles being:

- Pedestrian Orientation;
- Neighborhood Friendly Streets and Paths; and
- Interconnected Streets and Transportation Networks.²²

RST Residences is not located within a core development area of Places 29; therefore, it does not conform to nor provide opportunities for these principles. The county should not approve residential development in the growth area that does not have connectivity to create a livable community.

Private Roads

PEC raises the importance of including streets into the public road system. Private roads should be avoided, as they could cause significant fiscal impacts to future housing prices, create dangerous conditions for first response access, and hinder the public from comfortably using onside sidewalks due to the perception of private ownership. County planning staff has recommended onsite streets be developed and incorporated into the public road system.

¹⁸ Design Concepts, Walkability Standards, Robby Layton. October 12, 2017. Accessed online via <https://www.dcla.net/blog/walkability-standards>

¹⁹ RST Residences, Zoning Map Amendment, Application Narrative ZMA 2020-00007 (October 5, 2020), p. 2

²⁰ Charlottesville Area Transit, Riders Guide. Accessed online via <https://www.charlottesville.gov/DocumentCenter/View/1023/Riders-Guide-PDF>

²¹ JAUNT. Accessed online via <https://ridejaunt.org/how-to-ride/>

²² Places29 Master Plan, p.6

Public Schools

RST Residences will add approximately 84 school-age children,²³ causing Hollymead Elementary School to approach capacity and Albemarle High School to remain in an over-capacity status.²⁴ The county needs to ensure school capacity is addressed as development occurs and that associated proffers meet the needs to the greatest extent possible.

Tree Canopy

PEC calculated the approximate tree canopy in both Places 29 North and RST Residences, in order to understand their correlation and potential carbon sequestration values (**Attachment A** and **Attachment B**).

Results from these analyses suggest that both Places 29 North and RST Residences have a tree canopy coverage of approximately 50%, meaning that half of the land mass in each area is covered by tree canopy. Urban tree canopies provide many of the same benefits as rural tree canopies, including

- “Stormwater management functions;
- Reduction in the urban heat island effect, resulting in lower heating/cooling costs;
- Lowers air temperatures;
- Reduces air pollution;
- Increases property values;
- Provides wildlife habitat; and
- Provides aesthetic and community benefits such as improved quality of life.”²⁵

The current onsite tree canopy provides annual carbon sequestration of an estimated 46.74 tons CO₂, equivalent to the CO₂ emissions from 4.9 homes’ energy use for one year.²⁶ The current onsite carbon stored in tree mass is estimated to be 1,173.72 tons CO₂, equivalent to the CO₂ emissions from 123 homes’ energy use for one year.²⁷

Albemarle’s Climate Action Plan emphasizes the importance of providing urban tree canopies to all populations,²⁸ and includes Priority L.2.2 to ensure that “that overall tree canopy is not reduced by development in the Development Areas”.²⁹

²³ RST Residences, Albemarle Staff Review, ZMA202000007 RST Residences; 3rd Submittal, p.4

²⁴ Id sec

²⁵ Center for Watershed Protection, Urban Tree Canopy. Accessed online via <https://www.cwp.org/urban-tree-canopy/>

²⁶ Environmental Protection Agency, Greenhouse Gas Equivalency Calculator. Accessed online via <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

²⁷ Id sec

²⁸ Albemarle Climate Action Plan, p.46. “For local environmental stewardship to advance equity, the location and prioritization of projects like reforestation and tree planting are paramount. Urban tree canopies tend to be highly unequal, with tree canopy and income positively correlated. If improvements to local environmental health—including conservation and tree canopy increases—occur in more affluent areas but not in areas with lower income and historically marginalized populations, these inequities will persist. Attention to the effect on housing affordability of environmental improvements should also be monitored”.

²⁹ Albemarle Climate Action Plan, p. 48. “Evaluate a requirement that overall tree canopy is not reduced by development in the Development Areas. Pursue increases in tree canopy in new and existing developed areas.”



PEC recommends that future tree canopy estimates be provided for the site, and that the comprehensive plan and Climate Action Plan set target tree canopy coverage values for both the rural and urban areas.

It is for the above mentioned reasons that PEC recommends denial of this rezoning. PEC supports affordable housing, but the proposed rezoning does not provide:

- Meaningful or lasting contributions to the county's affordable housing needs;
- Density that fits within the site boundaries without requiring 10 stepback variances;
- Connectivity for public transit, pedestrians, nor bicyclists;
- Road infrastructure that addresses the impact of the development nor benefits the general public; and
- Retention nor replacement of the existing tree canopy.

Thank you for taking the time to review PEC's thoughts on this important matter. Please include this letter in the county's public submission forum, and feel free to contact me with any questions or requests for additional information.

Sincerely,

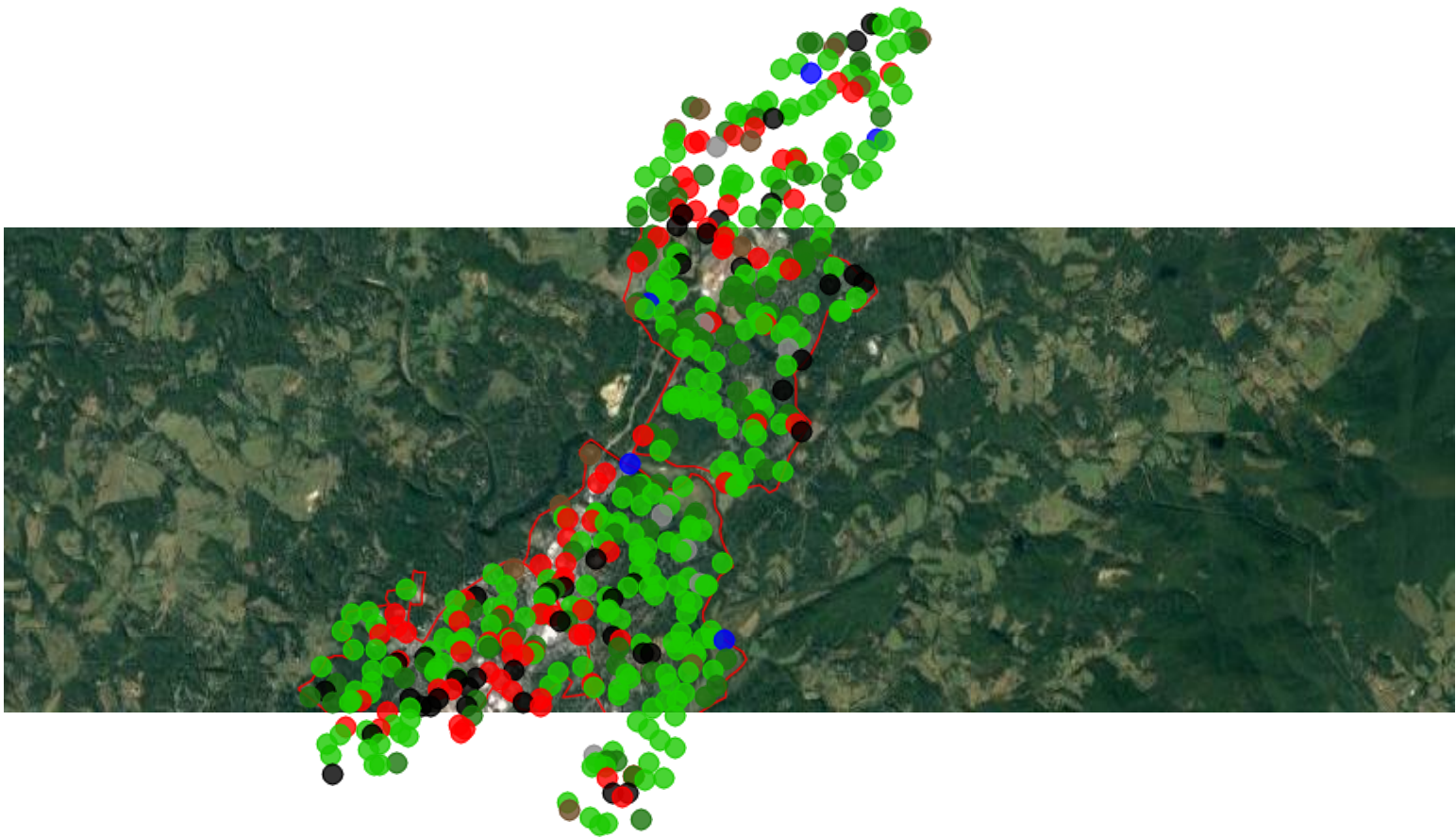
A handwritten signature in black ink, appearing to read "Chris Hawk", written in a cursive style.

Christopher Hawk

Land Use Representative - The Piedmont Environmental Council
(804)337-6716



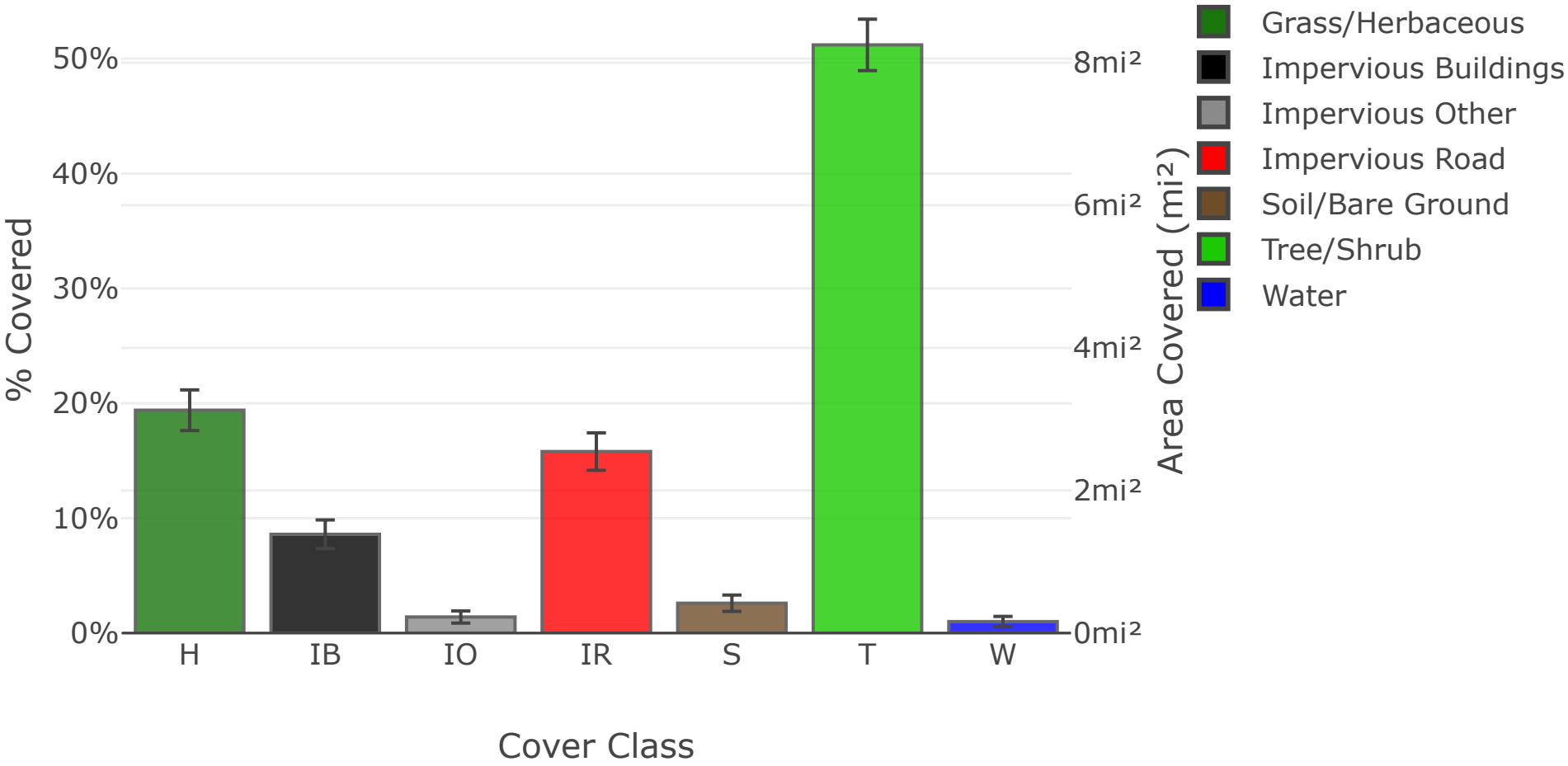
Attachment A
Tree Canopy Analysis
Places 29 North



Google

Imagery ©2020 TerraMetrics

Land Cover



Abbr.	Cover Class	Description	Points	% Cover ± SE	Area (mi²) ± SE
H	Grass/Herbaceous		97	19.40 ± 1.77	3.13 ± 0.29
IB	Impervious Buildings		43	8.60 ± 1.25	1.39 ± 0.20
IO	Impervious Other		7	1.40 ± 0.53	0.23 ± 0.09
IR	Impervious Road		79	15.80 ± 1.63	2.55 ± 0.26
S	Soil/Bare Ground		13	2.60 ± 0.71	0.42 ± 0.11
T	Tree/Shrub		256	51.20 ± 2.24	8.25 ± 0.36
W	Water		5	1.00 ± 0.45	0.16 ± 0.07
Total			500	100.00	16.12

Tree Benefit Estimates: Carbon (English units)

Description	Carbon (kT)	±SE	CO ₂ Equiv. (kT)	±SE	Value (USD)	±SE
Sequestered annually in trees	7.21	±0.31	26.43	±1.15	\$1,229,556	±53,683
Stored in trees (Note: this benefit is not an annual rate)	181.05	±7.90	663.86	±28.98	\$30,878,771	±1,348,186

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Amount sequestered is based on 0.874 kT of Carbon, or 3.203 kT of CO₂, per mi²/yr and rounded. Amount stored is based on 21.940 kT of Carbon, or 80.446 kT of CO₂, per mi² and rounded. Value (USD) is based on \$170,550.73/kT of Carbon, or \$46,513.84/kT of CO₂ and rounded. (English units: kT = kilotons (1,000 tons), mi² = square miles)

Tree Benefit Estimates: Air Pollution (English units)

Abbr.	Description	Amount (T)	±SE	Value (USD)	±SE
CO	Carbon Monoxide removed annually	2.38	±0.10	\$203	±9
NO2	Nitrogen Dioxide removed annually	12.98	±0.57	\$349	±15
O3	Ozone removed annually	129.31	±5.65	\$18,164	±793
SO2	Sulfur Dioxide removed annually	8.18	±0.36	\$61	±3
PM10*	Particulate Matter greater than 2.5 microns and less than 10 microns removed annually	43.31	±1.89	\$13,186	±576
PM2.5	Particulate Matter less than 2.5 microns removed annually	6.28	±0.27	\$37,548	±1,639
Total		202.46	±8.84	\$69,510	±3,035

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Air Pollution Estimates are based on these values in T/mi²/yr @ \$/T/yr and rounded:
CO 0.289 @ \$85.08 | NO2 1.573 @ \$26.86 | O3 15.670 @ \$140.47 | SO2 0.991 @ \$7.45 | PM10* 5.249 @ \$304.43 | PM2.5 0.761 @ \$5,975.67 (English units: T = tons (2,000 pounds), mi² = square miles)

Tree Benefit Estimates: Hydrological (English units)

Abbr.	Benefit	Amount (Kgal)	±SE	Value (USD)	±SE
AVRO	Avoided Runoff	2.73	±0.12	\$24	±1
E	Evaporation	225.48	±9.84	N/A	N/A
I	Interception	226.75	±9.90	N/A	N/A
T	Transpiration	305.11	±13.32	N/A	N/A
PE	Potential Evaporation	1,708.59	±74.60	N/A	N/A
PET	Potential Evapotranspiration	1,394.07	±60.87	N/A	N/A

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Hydrological Estimates are based on these values in Kgal/mi²/yr @ \$/Kgal/yr and rounded:
AVRO 0.331 @ \$8.94 | E 27.324 @ N/A | I 27.477 @ N/A | T 36.974 @ N/A | PE 207.046 @ N/A | PET 168.932 @ N/A (English units: Kgal = thousands of gallons, mi² = square miles)

About i-Tree Canopy

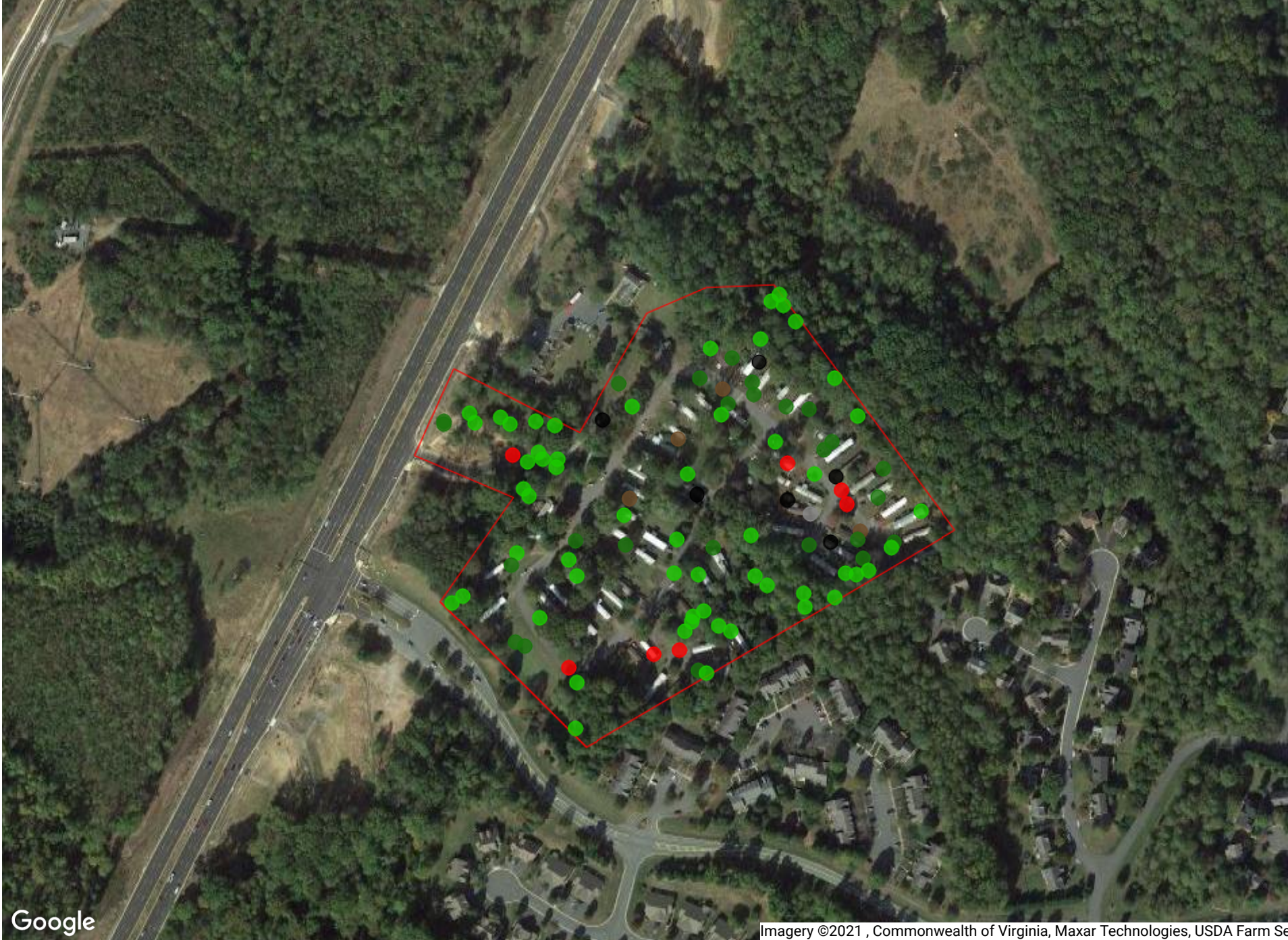
The concept and prototype of this program were developed by David J. Nowak, Jeffery T. Walton, and Eric J. Greenfield (USDA Forest Service). The current version of this program was developed and adapted to i-Tree by David Ellingsworth, Mike Binkley, and Scott Maco (The Davey Tree Expert Company)

Limitations of i-Tree Canopy

The accuracy of the analysis depends upon the ability of the user to correctly classify each point into its correct class. As the number of points increase, the precision of the estimate will increase as the standard error of the estimate will decrease. If too few points are classified, the standard error will be too high to have any real certainty of the estimate.

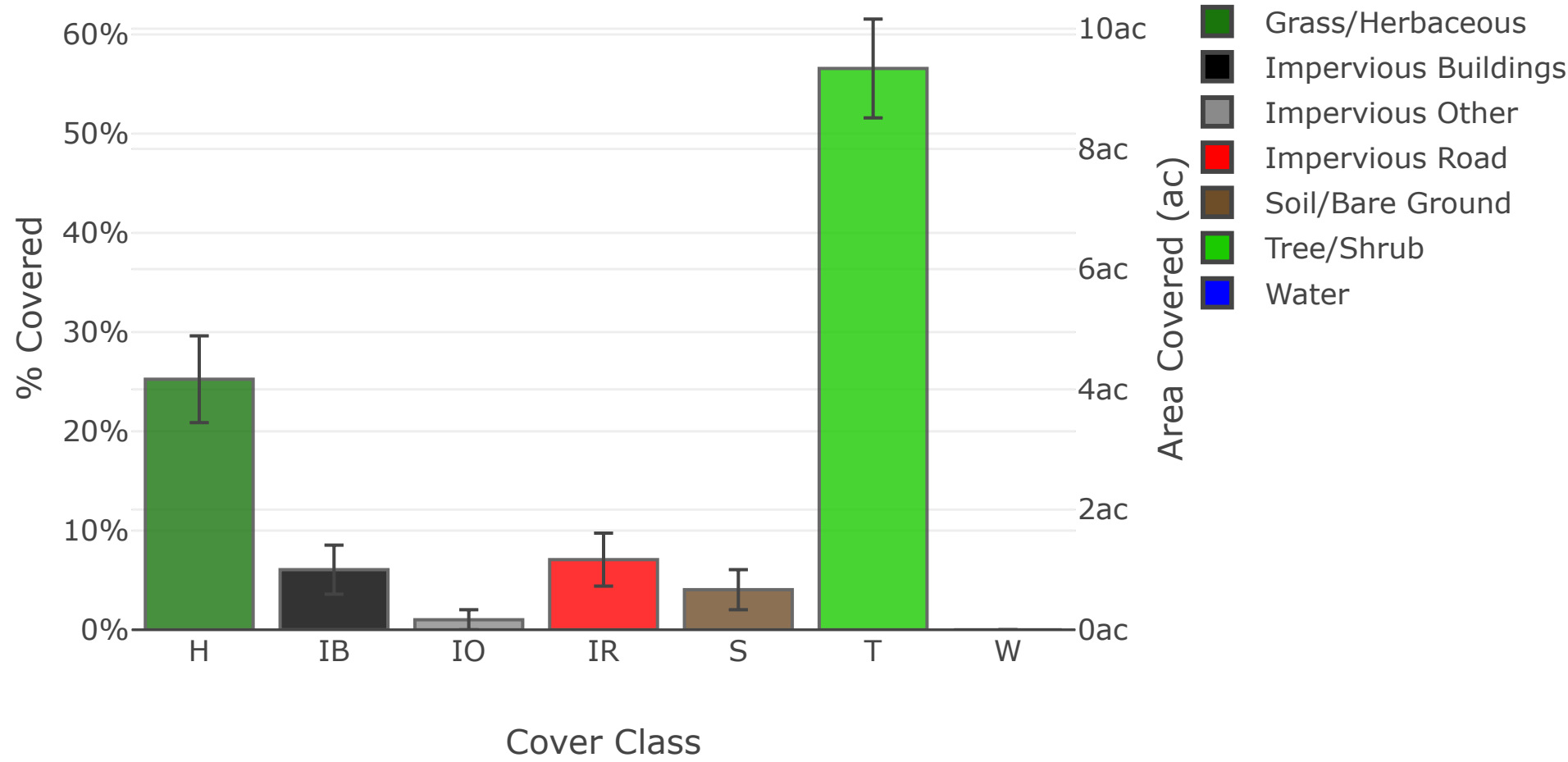


Attachment B
Tree Canopy Analysis
RST Residences



Imagery ©2021 , Commonwealth of Virginia, Maxar Technologies, USDA Farm Service Agency

Land Cover



Abbr.	Cover Class	Description	Points	% Cover ± SE	Area (ac) ± SE
H	Grass/Herbaceous		25	25.25 ± 4.37	4.17 ± 0.72
IB	Impervious Buildings		6	6.06 ± 2.47	1.00 ± 0.41
IO	Impervious Other		1	1.01 ± 1.01	0.17 ± 0.17
IR	Impervious Road		7	7.07 ± 2.67	1.17 ± 0.44
S	Soil/Bare Ground		4	4.04 ± 2.02	0.67 ± 0.33
T	Tree/Shrub		56	56.57 ± 4.98	9.34 ± 0.82
W	Water		0	0.00 ± 0.00	0.00 ± 0.00
Total			99	100.00	16.51

Tree Benefit Estimates: Carbon (English units)

Description	Carbon (T)	±SE	CO ₂ Equiv. (T)	±SE	Value (USD)	±SE
Sequestered annually in trees	12.75	±1.12	46.74	±4.12	\$2,174	±191
Stored in trees (Note: this benefit is not an annual rate)	320.11	±28.19	1,173.72	±103.37	\$54,594	±4,808

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Amount sequestered is based on 1.365 T of Carbon, or 5.005 T of CO₂, per ac/yr and rounded. Amount stored is based on 34.281 T of Carbon, or 125.697 T of CO₂, per ac and rounded. Value (USD) is based on \$170.55/T of Carbon, or \$46.51/T of CO₂ and rounded. (English units: T = tons (2,000 pounds), ac = acres)

Tree Benefit Estimates: Air Pollution (English units)

Abbr.	Description	Amount (lb)	±SE	Value (USD)	±SE
CO	Carbon Monoxide removed annually	8.42	±0.74	\$0	±0
NO2	Nitrogen Dioxide removed annually	45.91	±4.04	\$1	±0
O3	Ozone removed annually	457.25	±40.27	\$32	±3
SO2	Sulfur Dioxide removed annually	28.93	±2.55	\$0	±0
PM10*	Particulate Matter greater than 2.5 microns and less than 10 microns removed annually	153.16	±13.49	\$23	±2
PM2.5	Particulate Matter less than 2.5 microns removed annually	22.22	±1.96	\$66	±6
Total		715.89	±63.05	\$123	±11

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Air Pollution Estimates are based on these values in lb/ac/yr @ \$/lb/yr and rounded:
CO 0.902 @ \$0.04 | NO2 4.917 @ \$0.01 | O3 48.968 @ \$0.07 | SO2 3.098 @ \$0.00 | PM10* 16.403 @ \$0.15 | PM2.5 2.379 @ \$2.99 (English units: lb = pounds, ac = acres)

Tree Benefit Estimates: Hydrological (English units)

Abbr.	Benefit	Amount (gal)	±SE	Value (USD)	±SE
AVRO	Avoided Runoff	4.83	±0.43	\$0	±0
E	Evaporation	398.66	±35.11	N/A	N/A
I	Interception	400.89	±35.31	N/A	N/A
T	Transpiration	539.45	±47.51	N/A	N/A
PE	Potential Evaporation	3,020.82	±266.04	N/A	N/A
PET	Potential Evapotranspiration	2,464.74	±217.07	N/A	N/A

Currency is in USD and rounded. Standard errors of removal and benefit amounts are based on standard errors of sampled and classified points. Hydrological Estimates are based on these values in gal/ac/yr @ \$/gal/yr and rounded:
AVRO 0.517 @ \$0.01 | E 42.694 @ N/A | I 42.933 @ N/A | T 57.771 @ N/A | PE 323.509 @ N/A | PET 263.956 @ N/A (English units: gal = gallons, ac = acres)

About i-Tree Canopy

The concept and prototype of this program were developed by David J. Nowak, Jeffery T. Walton, and Eric J. Greenfield (USDA Forest Service). The current version of this program was developed and adapted to i-Tree by David Ellingsworth, Mike Binkley, and Scott Maco (The Davey Tree Expert Company)

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Use of this tool indicates acceptance of the [EULA](#).