

REVISED AGENDA

Meeting of the Town of Biltmore Forest Board of Commissioners

To be held Tuesday, March 8, 2022 at 4:30 p.m.

A. Roll Call by the Clerk

Mayor George F. Goosmann, III
Commissioner Fran G. Cogburn
Commissioner E. Glenn Kelly
Commissioner Doris P. Loomis

B. The minutes of the February 8, 2022 meeting will be presented for approval.

C. Reports of Officers

1. Chief of Skyland Fire and Rescue
2. Chief of Police Chris Beddingfield
3. Public Works Director Harry Buckner
4. Town Manager Jonathan Kanipe

D. New Business

1. Consideration of Resolution 2022-01 – A Resolution of Appreciation for Sgt. John Driver
2. Consideration of Resolution 2022-02 – A Resolution authorizing Badge and Service Sidearm to Sergeant John Driver
3. Consideration of Resolution 2022-03 – A Resolution authorizing the Surplus of Town Personal Property
4. Consideration of Ordinance 2022-03 – An Ordinance to Amend the Town of Biltmore Forest Town Code
5. Discussion of Special Separation Allowance Policy for Early Retiree Law Enforcement Officers
6. Biltmore Forest Transportation Study Presentation – Mr. Kenny Armstrong, J.M. Teague Engineering

E. Public Comment

F. Adjourn

**Town of Biltmore Forest
Board of Commissioners Meeting
March 8, 2022**

Topic: March Board of Commissioners Meeting
Time: Mar 8, 2022 04:30 PM Eastern Time (US and Canada)

Join Zoom Meeting

<https://us02web.zoom.us/j/81179330220?pwd=VUg1UzUwSGNEQkpETEjLb3FERTBZUT09>

Meeting ID: 811 7933 0220

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MINUTES OF THE MEETING OF THE MAYOR AND THE TOWN COMMISSIONERS OF
BILTMORE FOREST HELD FEBRUARY 8, 2022

Be it remembered by those that follow these proceedings that the Governing Board of the Town of Biltmore Forest met and conducted the following business:

Roll call taken by the Clerk:

Mayor George F. Goosmann, III, present

Commissioner Doris P. Loomis, present

Commissioner E. Glenn Kelly, present

Commissioner Fran Cogburn, present

Mr. Jonathan Kanipe, the Town Manager, and Mr. William Clarke, the Town Attorney, were also present. The meeting was held remotely via Zoom for purposes of limiting the spread of Covid-19.

Mayor Goosmann called the meeting to order at 4:30 pm.

Commissioner Kelly made a motion to approve the minutes from January 11, 2022. The motion was seconded by Commissioner Cogburn . Roll call was taken by the Clerk and the minutes were unanimously approved.

Assistant Chief Zach Cicillian gave the report for the Skyland Fire Department. There were 21 calls for service. Chief Cicillian told residents to check their carbon monoxide detector batteries and make sure they are functioning properly. Commissioner Kelly asked if the fire department has any N95 masks left to give away. Mr. Cicillian said they do not but they can go to the United States Postal Service website and request up to four COVID at home tests and two masks will also be distributed. Mayor Goosmann thanked the Skyland Fire Department for all their hard work.

Chief Chris Beddingfield gave the report for the Police Department. There were a total of 508 calls last month. One of the new hybrid police vehicles are now in service. The second vehicle

should be in service very soon. Two residential break-ins occurred in the Ramble subdivision. They are still working extensively on this. Chief Beddingfield said a new officer has been hired who is a Brevard College student and is finishing up Basic Law Enforcement Training. Chief Beddingfield said the Police Department worked well with Public Works during the snow storm. There was a significant car crash which damaged a power pole and concrete wall at Cedarcliff and Hendersonville Road. The driver was impaired and charged for this. Mayor Goosmann thanked the police department for all their hard work.

Mr. Harry Buckner gave the report for the Public Works Department. There were two substantial snow events that kept staff very busy. Mr. Kasey Lake was introduced and as a new hire. Mr. Lake is from Virginia and they are thankful to have him on board. Mr. Buckner said the leaf and brush collection is continuing. Mr. Buckner said the guys did a wonderful job working in the snow and was very pleased with their hard work. Three additional dog waste stations have been installed. Mr. Buckner said there will be some paving in the late spring/early summer. In February, Mr. Buckner said the meter bases and power supply for street lights is under way. The work should start at the end of February. Water bills will also go out in the middle of February.

Mr. Jonathan Kanipe gave the report for the Town. Like many individuals and organizations, the Town experienced a tough January due to the Omicron surge. Several staff members were out but thankfully, all experienced mild cases and have returned to work. We worked diligently during this time to make sure our facilities were deep cleaned and disinfected, even more than we do on a regular basis. We are continuing these measures and all staff have been reminded to be considerate of wearing their face coverings and social distancing.

The Town's traffic study is nearly complete. Mr. Kanipe asked the consultant to hold off on presenting this to the Board until our March meeting. This will provide Town staff additional time to review their final document and provide feedback and comments before presenting a final document. The study focuses on both short-term traffic safety recommendations and long-term projects the Town may want to consider in the future. The survey results and information gleaned from residents is being utilized extensively in the development of the study.

Regarding the Greenwood Park Stream Restoration project, Town staff continues to await final authorization to proceed from the Division of Water Infrastructure. Staff and consultants have checked with DWI staff over the course of the past month to ensure we have provided all documents and information needed to move forward.

Town staff met with the property owners adjacent to the road stabilization project along Cedar Hill Drive on February 1st. The meeting was fruitful, with the property owners receiving the new proposal warmly. They continue to be excited about this project and are looking forward to working with the Town to create a strengthened stream channel that protects the integrity of Cedar Hill Road.

Mr. Kanipe discussed the trash container project and said containers were ordered in late January. All told, the Town ordered 80 65-gallon containers and 700 95-gallon containers. These will be stamped with the Town logo on both sides and will be the dark brown color as reviewed by the Board previously. The lids will be hot-stamped with the words “Trash Only” on them so that there is no issue with residents mixing up the containers. We also ordered some replacement recycling containers as well. While we wait for delivery of these containers, the trash trucks will be outfitted with the grabbers necessary to remove the trashcans mechanically.

Consideration of a tax penalty waiver at 398 Vanderbilt Road. Request from a resident to waive a tax penalty which was \$540.33. The tax payer has paid the full taxes owed and requests a waiver of the initial interest penalty that remain on the account. In this case, the tax notice was mailed to the resident’s old address (also in Biltmore Forest) after they had moved and processed an address change with the Town. This is a similar circumstance to a waiver granted by the Board in April 2017. Commissioner Cogburn made a motion to approve the tax penalty waiver, Commissioner Kelly seconded the motion. Roll call was taken by the Clerk. The motion was unanimously approved.

Consideration of Ordinance 2022-03 which is an Ordinance amending the Town of Biltmore Forest Town Code. This is in regards to the “no trespassing” signs. Mr. Billy Clarke spoke and included a draft copy of the statute with the new sections highlighted in the attachment.

Mr. Clarke changed the signage distance to ten feet and also discuss the number of signs on the property. Mayor Goosmann said four feet above ground is too high. Mr. Clarke said real estate signs and political signs are allowed to be up to four feet above the ground. Mr. Clarke asked the Board for more input on how many signs a resident can have and where they can be placed.

Commissioner Loomis asked if we can refer to driveway entrances and exits. Commissioner Loomis also said if we are allowing to put a sign in between neighbors, should we refer to the setbacks. Mr. Clarke said there could be one at each driveway entrance. Mr. Clarke said there is an issue with properties that back up to the Blue Ridge Parkway or the Biltmore Estate and may want to give people an option to put a sign on the rear of their property.

Commissioner Kelly said he had the same thoughts as Commissioner Loomis and also asked what contents can be put on a sign. Commissioner Kelly also wanted to make sure the signs are not reflective and what color they can be. Mr. Clarke said lighting is already prohibited for signs. Mr. Clarke said in terms of content on signs, one must be careful but suggested saying the content should say “no trespassing and advice intruders not to enter the premises.” Commissioner Kelly said the wordage should just simply say “no trespassing.” Also, how close it should be to the neighbor’s property. Mr. Kanipe suggested a rear sign could be installed if it backs up to non-residential properties.

Mr. Perry Bartsch said the purpose of the no trespassing is to keep intruders from entering property and it doesn’t matter if they back up to a commercial property. Most of the time, intruders enter a property from places other than the front of the property. If the Town is going to allow ideological signs exactly on the lot line, Mr. Bartsch wasn’t sure why the Town wouldn’t allow “no trespassing” signs in the same location. Mr. Bartsch also mentioned the color of the sign and said, if one puts a green sign that is shielded by a rhododendron, it is not likely to be seen. Mr. Bartsch said the way Mr. Clarke wrote this with one sign on each side is a reasonable compromise. It also needs to be seen clearly.

Mr. Rich Wyde and Ms. Angela Branch responded by saying the point is the written by Mr. Clarke to comply with State law, the sign should likely come to the attention of intruders. Mr.

Wyde said if the sign is on the side of the house on the setback, it is highly unlikely to come to the attention of intruders. Mr. Wyde said blaring red and white signs is not aesthetically consistent with the neighborhood. The signs on Browntown are green and easily visible. Mr. Wyde said one can also create a waiver or have an exception made. Mr. Wyde said standards should be set and a sign should be placed no more than twenty feet from the road.

Mr. Bartsch said the State Statute needs to be followed and intruders can come from anywhere. A green sign behind a bush is not adequate visibility.

Mr. Clarke asked Mr. Wyde asked what he meant when he said no more than twenty feet from the road. Mr. Wyde said twenty feet or closer to the street.

Mr. Bartsch said one cannot predict where an intruder will enter a home. The intent is to be able to protect yourself on all sides which is a reasonable request. Mayor Goosmann verified with Chief Beddingfield as to where the intruder entered the home in The Ramble that was recently broken into. Chief Beddingfield said they were not sure because they were gone when officers arrived, however, the front door was busted in.

Commissioner Loomis said we can make a difference about placement of the sign whether it backs up to a non-residential property or residential property. You could say it can't be in the back yard setback if it's a residential property but have no restrictions if it backs up to a non-residential property. It would be good to warn the people who are coming from the Biltmore Estate that this an area you are not supposed to enter.

Commissioner Cogburn said the number of signs need to be addressed and we do need to allow signs on the property line if it's backing up to non-residential property.

Mr. Wyde said this is about notice. A notice that is reasonably likely to inform intruders not to enter the home. The definition that has been included is about notice. A sign will not keep someone out but is to give someone notice.

Commissioner Kelly addressed Mr. Bartsch about his comment he made regarding the green sign behind the green bush. Commissioner Kelly said any sign behind a bush will not give anyone notice no matter what color it is. Mr. Bartsch said in the particular case he is involved in, the neighbor of Mr. Wyde decided to plant bushes in front of the “no trespassing” sign and it needs to be reasonably visible. No one can predict where an intruder will enter the property.

Mayor Goosmann said we will bring this up next month and make a decision.

Mr. Kanipe discussed the Tax Collection Report and Consideration of Tax Collection legal remedies schedule. Mr. Kanipe said NCGS 105-350 requires the Tax Collector to submit a report of the amount collected on each year’s taxes with which he is charged, the amount uncollected, and the steps to encourage or enforce payment of uncollected taxes.

NCGS 369(a) requires the Tax Collector to report on unpaid taxes for the current fiscal year on the second Monday in February. Since the February Commissioners meeting precedes the second Monday, this report is of current standings as of February 3, 2022. As of February 3, 2022, the total levy billed for fiscal year 2022 is 97.57% collected. After that amount is reported to the Board, the Board must order the Tax Collector to advertise tax liens. This is only done if the Board is not able to collect taxes from parties that are delinquent.

A motion was made by Commissioner Loomis to approve the Order of Collection and seconded by Commissioner Kelly. Commissioner Cogburn asked Mr. Kanipe if the Town sends notice to a resident before advertising. Mr. Kanipe said yes, notices are mailed on a monthly basis if they are past due. Ms. Krystal Curtis said 30 days notice is given to the resident. Roll call was taken by the Clerk and unanimously approved.

Artificial turf zoning regulations review was discussed by Mr. Kanipe. Last month, the Board of Commissioners requested staff review land use regulations related to artificial turf. This request came after a request that the Town consider regulating artificial turf installation on residential properties within the Town. Municipal or county land use regulations regarding artificial turf are not prominent in North Carolina, if in use at all. Mr. Kanipe was unable to find

any direct regulation through zoning ordinances related to artificial turf installation at private residences. There were regulations in North Carolina communities related to artificial turf installation, but those were all portions of parks and recreation guidelines. The most significant land use regulation related to artificial turf in North Carolina is along the coast. This is regulated through the Coastal Resources Commission (CRC) and not through a local government. The CRC's involvement is due to the 30-foot buffer rule that exists along the North Carolina coast, and not the result of any local land use regulations against artificial turf. I have provided a news article about the CRC's discussion of this issue, as well as a letter from the state agency designated with enforcing the CRC's 30-foot buffer rule.

There are examples of local zoning regulations throughout other parts of the United States, however, and Mr. Kanipe provided several of those to the Board. Nearly all zoning regulations found were from parts of the country where drought and water conservation efforts are mandated, so one will see several ordinances and staff reports that advocate for the inclusion of artificial turf as a landscaping element. Other places have modified their existing ordinances to allow limited use of artificial turf and devised specific regulations for doing so. Most of these ordinances were amended or created within the past 2-3 years as artificial turf has become increasingly popular in residential use. Mr. Kanipe said artificial turf cannot currently be regulated but could be considered an accessory structure if the zoning ordinance was amended. Mr. Clarke said criteria would have to be included like permeability and color. Commissioner Loomis said she needed more information about artificial turf before we enacted an ordinance containing specifications on approved types of turf, location and placement. She asked if there were a way in which to allow discretion in the Town Manager to approve artificial turf with the criteria for such turf being listed outside the Town Ordinances since they will likely change as we learn more about turf and its uses in residential areas.

Mr. Clarke said it can also be done outside the zoning ordinance. Mr. Clarke said Mr. Kanipe, Mr. Buckner, and him can come up with a way to address the issues like permeability and installation for future use.

Mr. Kanipe discussed the Duke Energy targeted underground project update. Duke Energy has started the construction process for Phase 2 of their targeted underground project (TUG). The first phase for the TUG project was completed last year, with lines and poles being removed from rear property lines in the late summer. Phase 2 is underway with the first construction work occurring through Carolina Day School property. Additional work during this phase will focus on Brookside, Westwood, and Hilltop Roads. Portions of Stuyvesant Road, Greenwood Road, and the eastern side of Hilltop Road and Ridgefield Place will be completed within this phase as well.

There was no public comment.

Mayor Goosmann adjourned the meeting at 5:30 p.m. The next meeting is scheduled for Tuesday, March 8, 2022 at 4:30 pm.

ATTEST:

Ms. Laura Jacobs

Town Clerk

George F. Goosmann, III

Mayor



Skyland Fire & Rescue

Biltmore Forest Valley Springs Station



Phone: (828) 684-6421 Address: PO Box 640 Skyland NC 28776 Fax (828) 684-1010
www.skylandfire.com

Biltmore Forest Valley Springs Station

Incident Response

February 2022

Station: 4 - BILTMORE FOREST STATION	
311 - Medical assist, assist EMS crew	3
322 - Motor vehicle accident with injuries	1
324 - Motor vehicle accident with no injuries.	2
412 - Gas leak (natural gas or LPG)	1
442 - Overheated motor	1
510 - Person in distress, other	1
550 - Public service assistance, other	1
552 - Police matter	1
611 - Dispatched & cancelled en route	3
622 - No incident found on arrival at dispatch address	1
713 - Telephone, malicious false alarm	1
744 - Detector activation, no fire - unintentional	1
745 - Alarm system activation, no fire - unintentional	1

Incidents for 4 - Biltmore Forest Station: 18

Respectfully Submitted,

Trevor Lance

Chief Trevor Lance
Skyland Fire Rescue

Biltmore Forest Police
 Department
 355 Vanderbilt Road
 Biltmore Forest, NC 28803
 828-274-0822
 www.biltmoreforest.org



George F. Goosmann, III, Mayor
 Doris P Loomis, Mayor-Pro Tem
 E. Glenn Kelly, Commissioner
 Fran Cogburn, Commissioner
 Jonathan Kanipe, Town Manager
 M. Chris Beddingfield, Police Chief

February 2022 Department Head Report
 02/01/2022-02/28/2022

	Count	Percent
911 HANG-UP	2	0.35%
ALARM	24	4.23%
ANIMAL CONTROL	4	0.71%
ASSIST MOTORIST	9	1.59%
ASSIST OTHER AGENCY	13	2.29%
ASSIST RESIDENT	9	1.59%
BUSINESS CHECK	199	35.10%
CRIME PREVENTION	9	1.59%
DEBRIS IN ROADWAY	2	0.35%
DEPARTMENT OTHER	2	0.35%
EXTRA PATROL	12	2.12%
FIRE	2	0.35%
FOLLOW-UP INVESTIGATION	4	0.71%
HOUSE CHECK	133	23.46%
IMPROPER PARKING	2	0.35%
JUVENILE ISSUE	2	0.35%
LARCENY	1	0.18%
MEDICAL EMERGENCY	3	0.53%
No CallType	1	0.18%
NOISE COMPLAINT	1	0.18%
ORDINACE VIOLATION	7	1.23%
PROPERTY DAMAGE	3	0.53%
RADAR OPERATION	4	0.71%
ROAD BLOCKED	2	0.35%
SPECIAL ASSIGNMENT	2	0.35%
SPECIAL CHECK	17	3.00%
SUSPICIOUS ACTIVITY	5	0.88%
SUSPICIOUS PERSON	12	2.12%
SUSPICIOUS VEHICLE	15	2.65%
TALK WITH OFFICER	3	0.53%
TEST CALL	1	0.18%
TOWN HALL BUSINESS	1	0.18%
TRAFFIC CONTROL	6	1.06%
TRAFFIC STOP	40	7.05%
TREE DOWN	4	0.71%
VEHICLE ACCIDENT	7	1.23%
WELFARE CHECK	4	0.71%
Total Records For BILTMORE FOREST POLICE DEPARTMENT	567	Dept Calls/Total Calls 100.00%

Total Calls For Service:

567 (508 last month)

Arrests:

0-Felony Arrests

1-Misdemeanor Arrests-One out of a traffic stop for court violations.

Citations:

15-Citations for various traffic violations (5 last month)

Time Consumption Summary:

Approximations:

Business Checks- 5 hours

House Checks- 4 hours

Radar Operation- 3 hours

Vehicle Crash Investigation- 7 hours

Notable Calls and Projects:

Conducted a community relations and crime prevention presentation for the Ramble

All budgeted vehicles are now in-service

Held a retirement celebration for Sergeant John Driver

Mobile phone app is progressing well

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George F. Goosmann, III, Mayor
Doris P. Loomis, Mayor-Pro Tem
E. Glenn Kelly, Commissioner
Fran G. Cogburn, Commissioner

Jonathan B. Kanipe,
Town Manager

MEMORANDUM

To: Jonathan Kanipe, Town Manager

Mayor and Board of Commissioners

From: Harry B. Buckner, PE, Director of Public Works 

Re: Public Works Department February 2022 Monthly Report

Date: March 4, 2022

Recurring Activities:

The Public Works Department has completed the following activities during the month of February:

- Collected 28.85 tons of garbage.
- Diverted 14.62 tons of recycled goods from garbage.
- Picked up 26 loads of brush (approximately 780 cubic yards) over 12 days.
- Responded to 116 total utility locate requests, comprised of 32 new requests, 71 updates, and 13 rush requests. This total includes 2 short-notice and 1 emergency request.
- Visited 8 residences for Tree Assessments, approving the removal of 58 trees, and requiring the installation of 61 trees. This does not include a review that also occurred at the BFCC.
- Completed daily chlorine residual tests across town and passed the required two bacteriological tests. Results are reported via the State's on-line reporting system.
- Completed quarterly disinfection byproduct testing and reported the results to the State.
- Used the Beacon/Badger Meter automated meter reading system to monitor for water leaks daily and informed residents of suspected leaks.
- Assisted Ms. Jacobs with the completion of the bi-monthly water billing.
- We continue to perform litter pick-ups as needed, focusing on the entrances.
- Normal brush collection continued on the North Route on February 15th, and the South Route on February 28th. This schedule will continue with one collection for each route per month.

Coronavirus (COVID-19) Related Activities:

- The Public Works facility remains open to the public and all indoor masking requirements were lifted effective with the expiration of the Buncombe County order.
- The Department did not have any COVID related absences during February.

Miscellaneous Activities in February

- Our new employee, Mr. Kasey Lake, is continuing his departmental training. We have been very happy with his work thus far and he is already a valued team member, having taken primary responsibility of the B garbage route.
- We completed some minor hydrant flushing in conjunction with the routine quarterly disinfection byproduct testing, which was also completed in February.
- We completed the bi-monthly manual meter readings to assist Ms. Jacobs with water billing efforts.
- We met with residents in the Ramble section about unauthorized parking by people accessing the Mountains to Sea Trail. We are installing signage at the Niagara Drive cul-de-sac to assist with this issue.
- Normal brush collection continued on the North Route on February 15th, and the South Route on February 28th. This schedule will continue with one collection for each route per month.
- We are continuing to clean and improve the organization of the Public Works building.
- We emptied and removed the temporary storage unit from the Town Hall Complex.
- We installed a water tap and irrigation meter for the new construction at 19 Cedar Hill Rd.
- We responded to two (2) significant downed trees across the roadway on Friday February 18th and one (1) on Saturday the 19th.
- We completed shoulder repairs at 314 Vanderbilt Rd.
- We continue to work on the street light system upgrades, and have made application for service at 15 locations. We are awaiting information from Duke Energy-Progress to complete permitting activities. This includes the relocated streetlight at Parkway and Stuyvesant.
- We made substantial progress on invasive removals and general maintenance in Brookside Park this month. We anticipate the bulk of the work will be completed in March.
- We made the decision to pick-up the back-up garbage truck from the shop it has been at and have another vendor complete the repairs. We are anticipating having the truck available for service in March.
- We completed routine maintenance on the mowers and small engine equipment in preparation for the mowing season.
- We installed three dog waste stations on February 2nd, 2022. The stations were installed near the intersections Forest Road and East Forest Road; Browntown Road and Buena

Vista Road; and along Cedar Hill Road south of Hemlock Road. We are monitoring the usage and will adjust the locations if necessary.

- We met with a paving contractor on February 1st, 2022 to discuss our annual paving program, which is going to be Vanderbilt Road between the I-40 bridge and Cedarcliff Road as the target project, pending finalization of pricing and scope.

Larger/Capital Projects Updates

Greenwood Park Stream Restoration

- The notice of award has been issued to the Contractor for this work, and we are in the process of scheduling the preconstruction conference. A separate agenda item for this topic in the Manager's report.

Automatic Water Meter Reading System Endpoint Replacement Program

- We received the 715 replacement LTE endpoints on March 4th. I will be preparing a schedule for the replacements to begin most likely this month.

Cedar Hill Road Stream Stabilization Project

- We received the Permit Level drawings from the consultant on February 16th and are executing the necessary forms and paperwork in conjunction with the underlying property owner in order to submit the required permit applications.
- The schedule remains unchanged, with the design and permitting phase of the project being completed in the spring, allowing us to pursue informal bids. Construction is anticipated to be completed by the end of the 2022, pending Board approval.

Town-wide Traffic Study

- The final study is being delivered under a separate agenda item at this Board meeting.

Master Plan Project Area 2 – 13/15 Park Rd. Culvert Replacement

- The 401 Water Quality Certification was approved on February 24th, and the Army Corps Nationwide Permit 3, Section 404 permit was received on March 2nd. We received a final draft of the easement plat on March 3rd, and I am scheduling meetings with the adjoining property owners for the week of the 7th.
- I met with Hyatt Pipeline on March 4th to review the project and they are tentatively scheduling work to begin the week of March 14th or March 21st, weather permitting. We do have an acceptable proposal from that we received on December 30th.

Master Plan Project Area 1 & Area 9 – Vanderbilt/Stuyvesant/Lone Pine Stormwater Project

- We are in receipt of the final draft of the 30% plans and a draft cost estimate, effectively completing this stage of the work. Manager Kanipe has a project update in his Manager's report, and additional staff level reviews will occur in March. I will be working with

Manager Kanipe to determine how we may incorporate or phase this work into the 2022-2023 budget.

Upcoming in March

- Training will continue with our new Public Works employee.
- Brush collection will occur on the North Route, as usual, beginning Tuesday, March 15th, and on the South Route on Wednesday, March 30th.
- We have tentatively scheduled the forensic pavement work for later in the week of March 7th, weather pending.
- We anticipate receipt of the park benches from Robinson Iron in mid-March and will be coordinating the final installation locations.
- We will likely complete our initial clean-up in Brookside Park, and will be continuing additional improvements in the Busbee Wye.
- We have a water tap scheduled for installation at 414 Vanderbilt Road.
- We anticipate the installation of the new meter bases and electrical equipment will begin in March.
- We are having additional maintenance work on both Ford F-550 garbage/recycling trucks in March.
- Repairs are scheduled on a damaged storm drain box at the corner of Browntown Road and Deerfield Road.
- Storm drain repairs between 105 and 111 Stuyvesant Road were completed on March 3rd.
- I am working with CES on scheduling the installation of the cart grabbers on the garbage trucks, to be completed in the first quarter of 2022.
- We are awaiting the delivery of the new garbage cans in the next 60 days or so.
- We have scheduled the repair of two (2) small potholes; one on Arboretum Road, and one on Forest Road.
- Supervisor Dale and I are continuing to work on internal planning goals for the year.
- I will be working with Manager Kanipe on the 2022-2023 department budget.

As always, please do not hesitate to contact me with any questions or feedback.

BOARD OF COMMISSIONERS MEETING STAFF MEMORANDUM

March 8, 2022



Agenda Item C-4

Town Manager's Monthly Report

Covid-19 Update

The Town continued to work with Buncombe County and other local government partners and allowed the indoor mask requirement to expire on February 16. This was done after receiving feedback from Buncombe County Public Health and reviewing data for the county and region. Just a few days after this order expired, Governor Roy Cooper announced that he was recommending all local governments and school systems consider removing their mask mandates effective March 7. We continue to proceed with CDC recommended isolation and quarantine standards, if necessary.

The Board meetings for March are scheduled to return to in-person format.

Greenwood Park Stream Restoration Project

The Town send the Notice of Award packet to Baker Landscaping and Construction in the middle of February. This notice was sent after receiving final approval from the Division of Water Infrastructure to proceed. The contractor is currently working on the schedule for construction and finalizing their portions of the contract. The pre-construction meeting is likely to occur sometime within the next few weeks. We will post signage in the park approximately two (2) weeks before construction begins alerting people to the disruptions in the Park and letting them know how long the park will be closed.

Emergency Preparedness Information

Mayor Goosmann, Commissioner Loomis, and I attended an emergency preparedness seminar in February. All Buncombe County municipalities, Buncombe County leadership and their departments, and other community agencies were present to receive information from the Naval Postgraduate Academy regarding emergency preparedness. The panelists for this seminar included a former Assistant Secretary in the Department of Homeland Security, a former FEMA division head, and a former Senate aide whose portfolio included FEMA funding.

Discussion centered on natural disasters and continuing to work well together during these emergencies. An emerging focus is on the threat of cybercrime to our units of government, and Buncombe County provided specific information regarding their current plans. The Town, through our IT contractor, is prepared for these types of attacks as well and we continue to activate any threat detection or mitigation software that may prove useful. We utilize anti-phishing software, endpoint detection software, quarantine emails, and ensure all software and hardware that we operate is fully

up to date. Staff will begin working on reviewing our existing disaster plans, improving techniques and policies that are already existing, and making determinations about what improvements can be made moving forward.

Stormwater Projects

Park Road

The Town received both the U.S. Army Corps of Engineers 401 and 404 permits within the past month. This allows us to proceed with the repair of the storm water pipe underneath Park Road. The engineer is finalizing the easement needed for this portion of the project, and we hope to have that reviewed and approved within the next few weeks.

Fairway Place/Browntown Road

This project is a similarly failed storm water pipe underneath Fairway Place. There are no federal or state permits necessary for this work, and staff is coordinating with the contractor to perform this job.

Stuyvesant Road Work

You may have noticed Town public works staff working on the western side of Stuyvesant Road, south of Hilltop Road, within the past week. This work was to replace failed “bell ends” of several storm water segments. The repairs were performed all in-house and staff did a good job securing these areas and making necessary repairs.



Lone Pine/Stuyvesant/Vanderbilt Roads Design

This large master plan project has been in schematic design phase and the consultants are nearing the conclusion of this schematic design. Because of the scope and size of this project, staff will provide options and information regarding the construction project as part of our annual budget process.

Planning Commission Comprehensive Planning

The Planning Commission will host a public meeting on Tuesday, March 22 beginning at 5:30 p.m. The purpose of this public meeting is to gather feedback and input from residents regarding the Town's comprehensive planning process. This is an additional opportunity for the public to provide feedback before the draft Comprehensive Plan is pulled together. This will likely occur in April, with the Planning Commission reviewing the draft at their April meeting. We anticipate presenting this Comprehensive Plan to the Board of Commissioners for consideration at the May 2022 meeting.

REVENUE & EXPENDITURE STATEMENT

Town of Biltmore Forest

07/01/2021 To 02/28/2022

FY 2021-2022

Account	Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
3010 Ad Valorem Tax						
Revenue						
3010 Ad Valorem Tax						
10-3010-0000 AD VALOREM TAXES (PROPERTY)	2,835,096.00	2,263,473.39	2,263,473.39	0.00	571,622.61	80
10-3010-0100 AD VALOREM TAXES (DMV)	104,332.00	64,635.91	64,635.91	0.00	39,696.09	62
10-3010-0200 TAX INTEREST & PENALTIES	10,000.00	4,576.86	4,576.86	0.00	5,423.14	46
3010 Ad Valorem Tax Subtotal	\$2,949,428.00	\$2,332,686.16	\$2,332,686.16	\$0.00	\$616,741.84	79
Revenue Subtotal	\$2,949,428.00	\$2,332,686.16	\$2,332,686.16	\$0.00	\$616,741.84	79
After Transfers	Excess Of Revenue Subtotal	\$2,949,428.00	\$2,332,686.16	\$2,332,686.16	\$0.00	79
3020 Unrestricted Intergovernm						
Revenue						
3020 Unrestricted Intergovernm						
10-3020-0000 FRANCHISE & UTILITIES TAX DIST.	205,227.00	100,941.09	100,941.09	0.00	104,285.91	49
10-3020-0100 ALCOHOL BEVERAGE TAX	6,000.00	0.00	0.00	0.00	6,000.00	0
10-3020-0200 BUNCOMBE COUNTY 1% TAX	540,724.00	464,406.53	464,406.53	0.00	76,317.47	86
10-3020-0300 1/2 CENT SALES TAX A.40	227,111.00	192,184.74	192,184.74	0.00	34,926.26	85
10-3020-0400 1/2 CENT SALES TAX A.42	282,736.00	245,486.95	245,486.95	0.00	37,249.05	87
10-3020-0600 SALES TAX REFUND	10,000.00	0.00	0.00	0.00	10,000.00	0
10-3020-0700 GASOLINE TAX REFUND	3,500.00	0.00	0.00	0.00	3,500.00	0
3020 Unrestricted Intergovernm Subtotal	\$1,275,298.00	\$1,003,019.31	\$1,003,019.31	\$0.00	\$272,278.69	79
Revenue Subtotal	\$1,275,298.00	\$1,003,019.31	\$1,003,019.31	\$0.00	\$272,278.69	79
After Transfers	Excess Of Revenue Subtotal	\$1,275,298.00	\$1,003,019.31	\$1,003,019.31	\$0.00	79
3030 Restricted Intergovernmen						
Revenue						
3030 Restricted Intergovernmen						
10-3030-0000 SOLID WASTE DISPOSAL TAX	950.00	803.77	803.77	0.00	146.23	85
10-3030-0100 POWELL BILL	55,505.00	67,821.50	67,821.50	0.00	-12,316.50	122
3030 Restricted Intergovernmen Subtotal	\$56,455.00	\$68,625.27	\$68,625.27	\$0.00	-\$12,170.27	122
Revenue Subtotal	\$56,455.00	\$68,625.27	\$68,625.27	\$0.00	-\$12,170.27	122
After Transfers	Excess Of Revenue Subtotal	\$56,455.00	\$68,625.27	\$68,625.27	\$0.00	122
3040 Permits & Fees						
Revenue						
3040 Permits & Fees						
10-3040-0000 BUILDING PERMITS	30,000.00	64,860.00	64,860.00	0.00	-34,860.00	216
10-3040-0100 DOG LICENSE FEE	1,300.00	1,200.10	1,200.10	0.00	99.90	92
3040 Permits & Fees Subtotal	\$31,300.00	\$66,060.10	\$66,060.10	\$0.00	-\$34,760.10	211
Revenue Subtotal	\$31,300.00	\$66,060.10	\$66,060.10	\$0.00	-\$34,760.10	211
After Transfers	Excess Of Revenue Subtotal	\$31,300.00	\$66,060.10	\$66,060.10	\$0.00	211
3050 Investment Earnings						
Revenue						
3050 Investment Earnings						
10-3050-0000 INTEREST EARNED	1,000.00	342.87	342.87	0.00	657.13	34
3050 Investment Earnings Subtotal	\$1,000.00	\$342.87	\$342.87	\$0.00	\$657.13	34

REVENUE & EXPENDITURE STATEMENT

Town of Biltmore Forest

07/01/2021 To 02/28/2022

FY 2021-2022

Account	Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
Revenue Subtotal	\$1,000.00	\$342.87	\$342.87	\$0.00	\$657.13	34
After Transfers	Excess Of Revenue Subtotal	\$1,000.00	\$342.87	\$342.87	\$0.00	34
3060 Miscellaneous						
Revenue						
3060 Miscellaneous						
10-3060-0100 AMERICAN TOWER AGREEMENT	38,000.00	29,444.39	29,444.39	0.00	8,555.61	77
10-3060-0200 MISCELLANEOUS	18,000.00	38,051.74	38,296.77	-245.03	-20,296.77	213
3060 Miscellaneous Subtotal	\$56,000.00	\$67,496.13	\$67,741.16	-\$245.03	-\$11,741.16	121
Revenue Subtotal	\$56,000.00	\$67,496.13	\$67,741.16	-\$245.03	-\$11,741.16	121
After Transfers	Excess Of Revenue Subtotal	\$56,000.00	\$67,496.13	\$67,496.13	-\$245.03	121
3290						
Revenue						
3290						
30-3290-0000 INTEREST EARNED	50.00	5.75	5.75	0.00	44.25	12
3290 Subtotal	\$50.00	\$5.75	\$5.75	\$0.00	\$44.25	12
Revenue Subtotal	\$50.00	\$5.75	\$5.75	\$0.00	\$44.25	12
After Transfers	Excess Of Revenue Subtotal	\$50.00	\$5.75	\$5.75	\$0.00	12
3350 Commissions, Sw Chg Coll						
Revenue						
3350 Commissions, Sw Chg Coll						
30-3350-0000 COMMISSIONS, SEWER CHARGE COLL	8,000.00	4,917.30	4,917.30	0.00	3,082.70	61
3350 Commissions, Sw Chg Coll Subtotal	\$8,000.00	\$4,917.30	\$4,917.30	\$0.00	\$3,082.70	61
Revenue Subtotal	\$8,000.00	\$4,917.30	\$4,917.30	\$0.00	\$3,082.70	61
After Transfers	Excess Of Revenue Subtotal	\$8,000.00	\$4,917.30	\$4,917.30	\$0.00	61
3500 Other Financing						
Other Financing Source						
3500 Other Financing						
10-3500-0000 SALE OF PERSONAL PROPERTY	15,000.00	3,520.00	3,520.00	0.00	11,480.00	23
10-3500-0700 INTERGOVERNMENTAL LOAN (RESTRIC	300,000.00	0.00	0.00	0.00	300,000.00	0
3500 Other Financing Subtotal	\$315,000.00	\$3,520.00	\$3,520.00	\$0.00	\$311,480.00	1
Other Financing Source Subtotal	\$315,000.00	\$3,520.00	\$3,520.00	\$0.00	\$311,480.00	1
After Transfers	Excess Of Revenue Subtotal	\$315,000.00	\$3,520.00	\$3,520.00	\$0.00	1
3710 Water Sales						
Revenue						
3710 Water Sales						
10-3710-0000 TAX REFUNDS	0.00	-224.75	-224.75	0.00	224.75	0
30-3710-0000 WATER CHARGES	442,800.00	227,488.85	227,488.85	0.00	215,311.15	51
30-3710-0100 MSD CHARGES	338,789.00	175,736.74	175,736.74	0.00	163,052.26	52
30-3710-0200 AMI TRANSMITTER CHARGES	7,700.00	4,074.42	4,074.42	0.00	3,625.58	53
3710 Water Sales Subtotal	\$789,289.00	\$407,075.26	\$407,075.26	\$0.00	\$382,213.74	52
Revenue Subtotal	\$789,289.00	\$407,075.26	\$407,075.26	\$0.00	\$382,213.74	52
After Transfers	Excess Of Revenue Subtotal	\$789,289.00	\$407,075.26	\$407,075.26	\$0.00	52
3730 Water Tap & Connect Fees						

REVENUE & EXPENDITURE STATEMENT

Town of Biltmore Forest

07/01/2021 To 02/28/2022

FY 2021-2022

Account	Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
Revenue						
3730 Water Tap & Connect Fees						
30-3730-0000 WATER TAP AND CONNECTION FEES	6,000.00	2,600.00	2,600.00	0.00	3,400.00	43
3730 Water Tap & Connect Fees Subtotal	\$6,000.00	\$2,600.00	\$2,600.00	\$0.00	\$3,400.00	43
Revenue Subtotal	\$6,000.00	\$2,600.00	\$2,600.00	\$0.00	\$3,400.00	43
After Transfers	Excess Of Revenue Subtotal	\$6,000.00	\$2,600.00	\$2,600.00	\$0.00	43
4000						
Revenue						
4000						
40-4000-1100 ARP DISTRIBUTION	451,275.58	225,637.79	225,637.79	0.00	225,637.79	50
4000 Subtotal	\$451,275.58	\$225,637.79	\$225,637.79	\$0.00	\$225,637.79	50
Revenue Subtotal	\$451,275.58	\$225,637.79	\$225,637.79	\$0.00	\$225,637.79	50
After Transfers	Excess Of Revenue Subtotal	\$451,275.58	\$225,637.79	\$225,637.79	\$0.00	50
4200 Administration						
Expenditure						
4200 Administration						
10-4200-0200 SALARIES	214,530.00	142,982.35	142,982.35	0.00	71,547.65	67
10-4200-0300 OVERTIME	5,000.00	85.14	85.14	0.00	4,914.86	2
10-4200-0500 FICA	16,794.00	8,694.29	8,694.29	0.00	8,099.71	52
10-4200-0600 HEALTH INSURANCE (MEDICAL)	28,502.00	15,459.20	15,459.20	0.00	13,042.80	54
10-4200-0650 DENTAL, VISION, LIFE INSURANCE	4,470.00	3,093.28	3,093.28	0.00	1,376.72	69
10-4200-0675 HEALTH REIMBURSEMENT ACC	3,750.00	2,500.00	2,500.00	0.00	1,250.00	67
10-4200-0700 LGERS RETIREMENT	39,581.00	21,136.93	21,136.93	0.00	18,444.07	53
10-4200-0800 401K SUPP RETIREMENT	10,976.00	6,954.99	6,954.99	0.00	4,021.01	63
10-4200-1000 ACCOUNTING & TAXES	45,000.00	30,280.49	30,280.49	0.00	14,719.51	67
10-4200-1200 POSTAGE, PRINTING, STATIONARY	6,000.00	4,407.54	6,037.86	1,630.32	-37.86	101
10-4200-1400 MILEAGE & BOARD SALARY	22,000.00	14,400.00	14,400.00	0.00	7,600.00	65
10-4200-3300 SUPPLIES AND EQUIPMENT	8,750.00	5,762.70	5,762.70	0.00	2,987.30	66
10-4200-5300 DUES & FEES	5,000.00	6,600.23	7,165.23	565.00	-2,165.23	143
10-4200-5700 MISCELLANEOUS	1,000.00	2,964.50	2,964.50	0.00	-1,964.50	296
10-4200-6500 STAFF DEVELOPMENT	16,000.00	5,807.75	6,991.76	1,184.01	9,008.24	44
4200 Administration Subtotal	\$427,353.00	\$271,129.39	\$274,508.72	\$3,379.33	\$152,844.28	64
Expenditure Subtotal	\$427,353.00	\$271,129.39	\$274,508.72	\$3,379.33	\$152,844.28	64
Before Transfers	Deficiency Of Revenue Subtotal	-\$427,353.00	-\$271,129.39	-\$271,129.39	-\$3,379.33	63
After Transfers	Deficiency Of Revenue Subtotal	-\$427,353.00	-\$271,129.39	-\$271,129.39	-\$3,379.33	63
4300						
Expenditure						
4300						
4300 Subtotal	\$0.00	\$0.00	\$64.11	\$64.11	-\$64.11	0
Expenditure Subtotal	\$0.00	\$0.00	\$64.11	\$64.11	-\$64.11	0
Before Transfers	Deficiency Of Revenue Subtotal	\$0.00	\$0.00	\$0.00	-\$64.11	0
After Transfers	Deficiency Of Revenue Subtotal	\$0.00	\$0.00	\$0.00	-\$64.11	0
5100 Police Department						

REVENUE & EXPENDITURE STATEMENT

Town of Biltmore Forest

07/01/2021 To 02/28/2022

FY 2021-2022

Account	Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
Expenditure						
5100 Police Department						
10-5100-0200 SALARIES	908,986.00	628,130.49	628,130.49	0.00	280,855.51	69
10-5100-0300 OVERTIME	26,000.00	16,585.44	16,585.44	0.00	9,414.56	64
10-5100-0400 SEPARATION ALLOWANCE	30,617.00	20,019.03	20,019.03	0.00	10,597.97	65
10-5100-0500 FICA	71,526.00	40,747.88	40,747.88	0.00	30,778.12	57
10-5100-0600 HEALTH INSURANCE (MEDICAL)	148,416.00	97,564.64	97,564.64	0.00	50,851.36	66
10-5100-0650 DENTAL, VISION, LIFE INSURANCE	18,892.00	12,966.32	12,966.32	0.00	5,925.68	69
10-5100-0675 HRA HEALTH REIMB ACCT	25,500.00	16,750.00	16,750.00	0.00	8,750.00	66
10-5100-0700 LGERS RETIREMENT	168,681.00	97,142.06	97,142.06	0.00	71,538.94	58
10-5100-0800 401K SUPP RETIREMENT	45,474.00	31,501.80	31,501.80	0.00	13,972.20	69
10-5100-1500 MAINT/REPAIR - BLDG/GROUNDS	20,000.00	4,711.70	9,496.81	4,785.11	10,503.19	47
10-5100-1600 MAINT/REPAIR - EQUIPMENT	2,000.00	346.26	858.24	511.98	1,141.76	43
10-5100-1700 MAINT/REPAIR - VEHICLES	12,000.00	4,921.55	6,371.22	1,449.67	5,628.78	53
10-5100-3100 MOTOR FUELS	13,000.00	11,007.20	11,007.20	0.00	1,992.80	85
10-5100-3300 SUPPLIES	10,000.00	3,124.56	3,124.56	0.00	6,875.44	31
10-5100-3600 UNIFORMS	7,500.00	3,351.25	7,133.36	3,782.11	366.64	95
10-5100-3700 SOFTWARE	50,000.00	46,396.90	56,833.89	10,436.99	-6,833.89	114
10-5100-3800 TECHNOLOGY	60,000.00	43,238.17	46,194.09	2,955.92	13,805.91	77
10-5100-5700 MISCELLANEOUS	7,500.00	7,699.21	7,783.21	84.00	-283.21	104
10-5100-5800 PHYSICAL EXAMS	5,000.00	760.00	2,087.90	1,327.90	2,912.10	42
10-5100-6500 STAFF DEVELOPMENT	10,000.00	8,477.83	10,031.51	1,553.68	-31.51	100
10-5100-7400 CAPITAL EQUIPMENT PURCHASES	125,000.00	100,686.45	117,491.77	16,805.32	7,508.23	94
5100 Police Department Subtotal	\$1,766,092.00	\$1,196,128.74	\$1,239,821.42	\$43,692.68	\$526,270.58	70
Expenditure Subtotal	\$1,766,092.00	\$1,196,128.74	\$1,239,821.42	\$43,692.68	\$526,270.58	70
Before Transfers	Deficiency Of Revenue Subtotal	-\$1,766,092.00	-\$1,196,128.74	-\$1,196,128.74	-\$43,692.68	68
After Transfers	Deficiency Of Revenue Subtotal	-\$1,766,092.00	-\$1,196,128.74	-\$1,196,128.74	-\$43,692.68	68
5200 Fire Services						
Expenditure						
5200 Fire Services						
10-5200-0000 FIRE CONTRACT	425,000.00	318,750.00	318,750.00	0.00	106,250.00	75
5200 Fire Services Subtotal	\$425,000.00	\$318,750.00	\$318,750.00	\$0.00	\$106,250.00	75
Expenditure Subtotal	\$425,000.00	\$318,750.00	\$318,750.00	\$0.00	\$106,250.00	75
Before Transfers	Deficiency Of Revenue Subtotal	-\$425,000.00	-\$318,750.00	-\$318,750.00	\$0.00	75
After Transfers	Deficiency Of Revenue Subtotal	-\$425,000.00	-\$318,750.00	-\$318,750.00	\$0.00	75
5600 Public Works						
Expenditure						
5600 Public Works						
10-5600-0200 SALARIES	239,707.00	152,546.82	152,546.82	0.00	87,160.18	64
10-5600-0300 OVERTIME	15,000.00	0.00	0.00	0.00	15,000.00	0
10-5600-0500 FICA	19,485.00	9,373.38	9,373.38	0.00	10,111.62	48
10-5600-0550 UNEMPLOYMENT INSURANCE	500.00	0.00	0.00	0.00	500.00	0
10-5600-0600 HOSPITAL INSURANCE (MEDICAL)	46,872.00	22,562.77	22,562.77	0.00	24,309.23	48

REVENUE & EXPENDITURE STATEMENT

Town of Biltmore Forest

07/01/2021 To 02/28/2022

FY 2021-2022

Account	Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
10-5600-0650 DENTAL, VISION, LIFE INSURANCE	6,739.00	2,607.76	2,607.76	0.00	4,131.24	39
10-5600-0675 HRA HEALTH REIMB ACCT	9,000.00	4,062.50	4,062.50	0.00	4,937.50	45
10-5600-0700 LGERS RETIREMENT	45,924.00	22,320.36	22,320.36	0.00	23,603.64	49
10-5600-0800 401K SUPP RETIREMENT	12,735.00	7,045.56	7,045.56	0.00	5,689.44	55
10-5600-1000 OUTSIDE SERVICES	10,000.00	0.00	997.54	997.54	9,002.46	10
10-5600-1300 STREETLIGHTS ELECTRIC	7,000.00	1,772.54	1,772.54	0.00	5,227.46	25
10-5600-1500 MAINT/REPAIR - BLDG/GROUNDS	10,000.00	1,517.08	1,517.08	0.00	8,482.92	15
10-5600-1600 MAINT/REPAIR- STREETLIGHTS	10,000.00	807.89	1,024.89	217.00	8,975.11	10
10-5600-1700 MAINT/REPAIR - VEHICLES	10,000.00	1,418.40	2,508.24	1,089.84	7,491.76	25
10-5600-3100 MOTOR FUELS	12,000.00	8,805.73	8,805.73	0.00	3,194.27	73
10-5600-3300 SUPPLIES	10,000.00	3,543.70	3,841.47	297.77	6,158.53	38
10-5600-3400 STREET SIGNS & NUMBERS	1,000.00	179.88	424.91	245.03	575.09	42
10-5600-3600 UNIFORMS	8,000.00	2,362.76	7,267.51	4,904.75	732.49	91
10-5600-3800 TECHNOLOGY	10,000.00	3,740.60	4,040.19	299.59	5,959.81	40
10-5600-5200 PARKS	50,000.00	5,581.54	12,526.30	6,944.76	37,473.70	25
10-5600-5202 GREENWOOD PARK STREAM RESTORA	300,000.00	16,423.28	16,423.28	0.00	283,576.72	5
10-5600-5800 PHYSICAL EXAMS	500.00	0.00	0.00	0.00	500.00	0
10-5600-5900 MISCELLANEOUS	1,000.00	648.23	1,049.48	401.25	-49.48	105
10-5600-6500 STAFF DEVELOPMENT	8,000.00	898.22	898.22	0.00	7,101.78	11
40-5600-7401 ARP CAPITAL PROJECTS	451,275.58	0.00	0.00	0.00	451,275.58	0
5600 Public Works Subtotal	\$1,294,737.58	\$268,219.00	\$283,616.53	\$15,397.53	\$1,011,121.05	22
Expenditure Subtotal	\$1,294,737.58	\$268,219.00	\$283,616.53	\$15,397.53	\$1,011,121.05	22
Before Transfers	Deficiency Of Revenue Subtotal	-\$1,294,737.58	-\$268,219.00	-\$268,219.00	-\$15,397.53	21
After Transfers	Deficiency Of Revenue Subtotal	-\$1,294,737.58	-\$268,219.00	-\$268,219.00	-\$15,397.53	21
5700 Streets & Transportation						
Expenditure						
5700 Streets & Transportation						
10-5700-1700 VEHICLE REPAIRS - STREET DEPT.	5,000.00	4,371.77	4,692.77	321.00	307.23	94
10-5700-2200 CONTRACTS- PAVING & STRIPING	77,907.00	0.00	0.00	0.00	77,907.00	0
10-5700-2300 SUPPLIES	10,000.00	4,762.18	9,875.60	5,113.42	124.40	99
10-5700-2400 TRAFFIC SIGNS	500.00	0.00	0.00	0.00	500.00	0
10-5700-2500 STORM WATER DRAINAGE	100,000.00	2,831.95	3,062.00	230.05	96,938.00	3
10-5700-3800 TECHNOLOGY	5,000.00	2,283.89	2,283.89	0.00	2,716.11	46
10-5700-6500 STAFF DEVELOPMENT	1,000.00	157.83	157.83	0.00	842.17	16
10-5700-7400 CAPITAL EQUIPMENT PURCHASES	5,000.00	199.95	199.95	0.00	4,800.05	4
10-5700-7500 ENGINEERING	75,000.00	57,200.40	57,200.40	0.00	17,799.60	76
5700 Streets & Transportation Subtotal	\$279,407.00	\$71,807.97	\$77,472.44	\$5,664.47	\$201,934.56	28
Expenditure Subtotal	\$279,407.00	\$71,807.97	\$77,472.44	\$5,664.47	\$201,934.56	28
Before Transfers	Deficiency Of Revenue Subtotal	-\$279,407.00	-\$71,807.97	-\$71,807.97	-\$5,664.47	26
After Transfers	Deficiency Of Revenue Subtotal	-\$279,407.00	-\$71,807.97	-\$71,807.97	-\$5,664.47	26
5800 Sanitation & Recycling						
Expenditure						
5800 Sanitation & Recycling						

REVENUE & EXPENDITURE STATEMENT

Town of Biltmore Forest

07/01/2021 To 02/28/2022

FY 2021-2022

Account	Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
10-5800-0200 SALARIES	121,642.00	80,235.70	80,235.70	0.00	41,406.30	66
10-5800-0300 OVERTIME	10,000.00	286.10	286.10	0.00	9,713.90	3
10-5800-0500 FICA	10,071.00	5,158.92	5,158.92	0.00	4,912.08	51
10-5800-0600 HEALTH INSURANCE (MEDICAL)	34,400.00	13,727.04	13,727.04	0.00	20,672.96	40
10-5800-0650 DENTAL, VISION, LIFE INSURANCE	4,170.00	1,309.12	1,309.12	0.00	2,860.88	31
10-5800-0675 HRA HEALTH REIMB ACCT	4,500.00	3,000.00	3,000.00	0.00	1,500.00	67
10-5800-0700 LGERS RETIREMENT	23,735.00	12,178.62	12,178.62	0.00	11,556.38	51
10-5800-0800 401K SUPP RETIREMENT	6,582.00	4,069.32	4,069.32	0.00	2,512.68	62
10-5800-1700 MAINT/REPAIRS - VEHICLES	13,000.00	14,746.86	21,288.89	6,542.03	-8,288.89	164
10-5800-3100 MOTOR FUELS	12,000.00	13,104.92	13,104.92	0.00	-1,104.92	109
10-5800-3300 SUPPLIES	0.00	202.45	202.45	0.00	-202.45	0
10-5800-3600 UNIFORMS	1,000.00	632.72	632.72	0.00	367.28	63
10-5800-3800 TECHNOLOGY	1,000.00	368.38	368.38	0.00	631.62	37
10-5800-5800 PHYSICAL EXAMS	500.00	0.00	0.00	0.00	500.00	0
10-5800-5900 MISCELLANEOUS	1,000.00	531.64	531.64	0.00	468.36	53
10-5800-6000 CAPITAL OUTLAY	55,000.00	0.00	49,900.00	49,900.00	5,100.00	91
10-5800-8000 TIPPING FEES & BRUSH REMOVAL	50,000.00	35,914.97	35,914.97	0.00	14,085.03	72
10-5800-8100 RECYCLING	12,000.00	0.00	0.00	0.00	12,000.00	0
5800 Sanitation & Recycling Subtotal	\$360,600.00	\$185,466.76	\$241,908.79	\$56,442.03	\$118,691.21	67
Expenditure Subtotal	\$360,600.00	\$185,466.76	\$241,908.79	\$56,442.03	\$118,691.21	67
Before Transfers	Deficiency Of Revenue Subtotal	-\$360,600.00	-\$185,466.76	-\$185,466.76	-\$56,442.03	51
After Transfers	Deficiency Of Revenue Subtotal	-\$360,600.00	-\$185,466.76	-\$185,466.76	-\$56,442.03	51
6600 General Government						
Expenditure						
6600 General Government						
10-6600-0401 LEGAL SERVICES	35,000.00	17,946.90	17,946.90	0.00	17,053.10	51
10-6600-1100 TECHNOLOGY	95,000.00	54,122.08	61,183.66	7,061.58	33,816.34	64
10-6600-1300 MUNICIPAL UTILITIES	20,000.00	13,014.29	13,014.29	0.00	6,985.71	65
10-6600-1500 GE. REPS. AND MAINT.	25,000.00	23,197.67	23,740.34	542.67	1,259.66	95
10-6600-5400 INSURANCE	90,000.00	81,542.15	81,542.15	0.00	8,457.85	91
10-6600-6000 CONTINGENCY	48,931.00	0.00	0.00	0.00	48,931.00	0
10-6600-6100 MISCELLANEOUS	5,000.00	5,225.31	5,225.31	0.00	-225.31	105
10-6600-6301 4TH OF JULY	7,500.00	5,675.45	6,786.54	1,111.09	713.46	90
10-6600-6302 NATIONAL NIGHT OUT	2,000.00	3,327.90	3,465.67	137.77	-1,465.67	173
10-6600-6303 HOLIDAY LIGHTING	14,000.00	10,842.70	20,892.70	10,050.00	-6,892.70	149
10-6600-6304 ARBOR DAY EVENT	2,000.00	0.00	0.00	0.00	2,000.00	0
10-6600-6400 WILDLIFE MANAGEMENT	1,000.00	926.92	1,419.12	492.20	-419.12	142
10-6600-6500 FOREST MANAGEMENT	60,000.00	13,400.00	17,800.00	4,400.00	42,200.00	30
6600 General Government Subtotal	\$405,431.00	\$229,221.37	\$254,152.61	\$24,931.24	\$151,278.39	63
Expenditure Subtotal	\$405,431.00	\$229,221.37	\$254,152.61	\$24,931.24	\$151,278.39	63
Before Transfers	Deficiency Of Revenue Subtotal	-\$405,431.00	-\$229,221.37	-\$229,221.37	-\$24,931.24	57
After Transfers	Deficiency Of Revenue Subtotal	-\$405,431.00	-\$229,221.37	-\$229,221.37	-\$24,931.24	57
6700 Debt Service						

REVENUE & EXPENDITURE STATEMENT

Town of Biltmore Forest

07/01/2021 To 02/28/2022

FY 2021-2022

Account	Budget (\$)	Current Period (\$)	YTD With Encumbrance (\$)	Encumbrance (\$)	Remaining Balance (\$)	% Used
Expenditure						
6700 Debt Service						
10-6700-0100 Police Dept Renovations-Principal	23,334.00	17,499.99	17,499.99	0.00	5,834.01	75
10-6700-0200 Street Improvements-Principal	6,667.00	5,000.01	5,000.01	0.00	1,666.99	75
10-6700-0500 Public Works Building-Principal	84,211.00	42,458.79	42,458.79	0.00	41,752.21	50
10-6700-0600 2020 POLICE CARS-PRINCIPAL	28,327.00	56,654.00	56,654.00	0.00	-28,327.00	200
10-6700-1100 Police Dept Renovations-Interest	2,334.00	1,833.57	1,833.57	0.00	500.43	79
10-6700-1200 Street Improvements-Interest	667.00	523.87	523.87	0.00	143.13	79
10-6700-1500 Public Works Building-Interest	20,514.00	10,257.00	10,257.00	0.00	10,257.00	50
10-6700-1600 2020 POLICE CARS-INTEREST	1,580.00	3,157.52	3,157.52	0.00	-1,577.52	200
6700 Debt Service Subtotal	\$167,634.00	\$137,384.75	\$137,384.75	\$0.00	\$30,249.25	82
Expenditure Subtotal	\$167,634.00	\$137,384.75	\$137,384.75	\$0.00	\$30,249.25	82
Before Transfers	Deficiency Of Revenue Subtotal	-\$167,634.00	-\$137,384.75	-\$137,384.75	\$0.00	82
After Transfers	Deficiency Of Revenue Subtotal	-\$167,634.00	-\$137,384.75	-\$137,384.75	\$0.00	82
8100 Water Dept.						
Expenditure						
8100 Water Dept.						
30-8100-0200 SALARIES	142,619.00	64,854.15	64,854.15	0.00	77,764.85	45
30-8100-0400 PROFESSIONAL SERVICES	10,000.00	2,685.84	3,642.50	956.66	6,357.50	36
30-8100-0500 FICA	10,910.00	4,363.00	4,363.00	0.00	6,547.00	40
30-8100-0600 HEALTH INSURANCE (MEDICAL)	18,351.00	11,026.63	11,026.63	0.00	7,324.37	60
30-8100-0650 DENTAL, VISION, LIFE INSURANCE	2,718.00	1,674.84	1,674.84	0.00	1,043.16	62
30-8100-0675 HRA HEALTH REIMBURSEMENT ACCT	2,250.00	1,937.50	1,937.50	0.00	312.50	86
30-8100-0700 LGERS RETIREMENT	25,714.00	10,579.00	10,579.00	0.00	15,135.00	41
30-8100-0800 401K SUPP RETIREMENT	7,131.00	3,870.63	3,870.63	0.00	3,260.37	54
30-8100-1200 POSTAGE, PRINTING, & STATIONARY	5,000.00	1,921.01	2,398.21	477.20	2,601.79	48
30-8100-1500 GENERAL REPAIRS	10,000.00	0.00	0.00	0.00	10,000.00	0
30-8100-3300 SUPPLIES & EQUIPMENT	15,000.00	4,427.98	6,586.29	2,158.31	8,413.71	44
30-8100-3800 TECHNOLOGY	5,000.00	2,283.89	2,283.89	0.00	2,716.11	46
30-8100-4800 WATER PURCHASES	146,066.00	130,676.78	130,676.78	0.00	15,389.22	89
30-8100-4900 SEWER PURCHASES	275,595.00	119,888.17	119,888.17	0.00	155,706.83	44
30-8100-5000 AMI TRANSMITTER FEES	7,700.00	5,040.07	5,040.07	0.00	2,659.93	65
30-8100-5700 MISCELLANEOUS	14,284.00	0.00	0.00	0.00	14,284.00	0
30-8100-6500 STAFF DEVELOPMENT	5,000.00	3,558.65	5,429.29	1,870.64	-429.29	109
30-8100-7400 CAPITAL IMPROVEMENT	100,000.00	0.00	18,511.35	18,511.35	81,488.65	19
8100 Water Dept. Subtotal	\$803,338.00	\$368,788.14	\$392,762.30	\$23,974.16	\$410,575.70	49
Expenditure Subtotal	\$803,338.00	\$368,788.14	\$392,762.30	\$23,974.16	\$410,575.70	49
Before Transfers	Deficiency Of Revenue Subtotal	-\$803,338.00	-\$368,788.14	-\$368,788.14	-\$23,974.16	46
After Transfers	Deficiency Of Revenue Subtotal	-\$803,338.00	-\$368,788.14	-\$368,788.14	-\$23,974.16	46

**BOARD OF COMMISSIONERS MEETING
STAFF MEMORANDUM**

March 8, 2022



Agenda Item D-1

**Resolution 2022-01 – A Resolution in Appreciation for
Sgt. John Driver**

Background

Sergeant John Driver has served as a member of the Biltmore Forest Police Department since 2007. Prior to joining the BFPD, Sgt. Driver served in the Asheville Police Department, the United States National Guard, and the United States Navy. Sgt. Driver completed the Law Enforcement Leadership Academy (LELA) last year, and has been a strong example of service for the Town and its officers.

We are saddened to see Sgt. Driver retire, but wish him well in his future endeavors. The Town held a drop-in retirement reception for Sgt. Driver last Wednesday. This formal resolution will indicate the Town's appreciation of his service.

STATE OF NORTH CAROLINA)
)
COUNTY OF BUNCOMBE)

TOWN OF BILTMORE FOREST
BOARD OF COMMISSIONERS

RESOLUTION 2022-01

RESOLUTION OF APPRECIATION

WHEREAS, Sergeant John Driver has faithfully completed 15 years of service to the Town of Biltmore Forest, serving admirably as an Officer and then a Sergeant of the Town’s Police Department; and

WHEREAS, Sergeant Driver served as a member of the Asheville Police Department from February 1999 through April 2006; and

WHEREAS, Sergeant Driver served his country as a member of the United States Army North Carolina National Guard from June 1998 through August 2003, including two deployments for Operations Enduring Freedom and Iraqi Freedom; and

WHEREAS, Sergeant Driver previously served as a member of the United States Navy from August 1994 through March 1997; and

WHEREAS, the Mayor and Town Board of Commissioners recognize the valuable service that Sergeant Driver has provided to the Town, this community, and the United States of America; and

WHEREAS, the Mayor and Town Board of Commissioners take this opportunity to express their thanks and gratitude formally to Sergeant Driver for outstanding dedication to the Town; and

THEREFORE, the Mayor and Town Board of Commissioners express their appreciation for the outstanding manner in which Sergeant Driver performed his duties, for his dedication in serving the citizens of the Town of Biltmore Forest each day, and for his work to improve the lives of Biltmore Forest citizens.

This the 8th day of March, 2022.

George F. Goosmann, III
Mayor

ATTEST:

Laura M. Jacobs
Town Clerk

**BOARD OF COMMISSIONERS MEETING
STAFF MEMORANDUM**

March 8, 2022



Agenda Item D-2

**Resolution 2022-02 – A Resolution Awarding Badge and
Service Sidearm to Sergeant John Driver**

Background

Sergeant Driver's service to the Town has been well documented and we would like to award his service sidearm and badge to him upon his retirement. In order to do so, the Board of Commissioners must approve a resolution authorizing this disbursement. N.C.G.S. 20-187.2 governs this allowance as noted in the attached resolution.

Action Requested

Approval of Resolution 2022-02

**BOARD OF COMMISSIONERS MEETING
STAFF MEMORANDUM**

March 8, 2022



Agenda Item D-3

Consideration of Resolution 2022-03

A Resolution Authorizing the Surplus of Personal Property

Background

The Town received delivery of two new patrol vehicles and both were placed into service within the past month. As a result, Chief Beddingfield has recommended the following two vehicles be declared surplus and sold via GovDeals.

1. 2016 Ford Explorer VIN# 1FM5K8AR7HGA63784 - Mileage 129,135
2. 2017 Ford Explorer VIN# 1FM5K8AR9JGA05374 – Mileage 84,915

The Town still maintains auxiliary vehicles that are in excellent operating condition. The surplus of old cars and purchase of new cars is part of the Town's vehicle program that ensures the most appropriate and effective equipment for our officers.

Action Requested

Approval of Resolution 2022-03

STATE OF NORTH CAROLINA)
)
COUNTY OF BUNCOMBE)

TOWN OF BILTMORE FOREST
BOARD OF COMMISSIONERS

RESOLUTION 2022-02

WHEREAS, the Board of Commissioners of the Town of Biltmore Forest desires to dispose of certain surplus property of the Town;

NOW, THEREFORE, BE IT RESOLVED by the Biltmore Forest Board of Commissioners that the following described property is hereby declared surplus to the needs of the Town of Biltmore Forest:

- 1. 2016 Ford Explorer VIN# 1FM5K8AR7HGA63784 - Mileage 129,135
- 2. 2017 Ford Explorer VIN# 1FM5K8AR9JGA05374 – Mileage 84,915

BE IT FURTHER RESOLVED that the Town Manager is authorized to receive on behalf of the Biltmore Forest Board of Commissioners bids at electronic auction for the purchase of the described property. The highest bid, if it complies with the terms of sale, may be accepted by the Town Manager and the sale consummated.

The Town Manager shall cause a notice of the electronic auction to be published in accordance with G.S. 160A-270(b).

This the 8th day of March, 2022.

George F. Goosmann, III
Mayor

Attest:

Laura Jacobs
Town Clerk

BOARD OF COMMISSIONERS MEETING
STAFF MEMORANDUM
March 8, 2022



Agenda Item D-4

Consideration of Ordinance 2022-03
An Ordinance amending the Town Code

Background

The Board of Commissioners has reviewed the Town's existing sign ordinance over the course of the past three months. As part of this review, the Board has received feedback from residents regarding the existing sign ordinance as it specifically relates to "no trespassing" signs. The Board has provided feedback to the residents as well as staff regarding potential amendments to the sign ordinance that are specifically geared to "no trespassing" signage.

Attachment

Draft Resolution 2022-03 – Ordinance Amending the Town Code

ORDINANCE 2022-03
AN ORDINANCE TO AMEND CHAPTER 93 OF THE TOWN CODE
OF THE TOWN OF BILTMORE FOREST

§93.02. POLICY REGARDING SIGNS.

This subchapter sets forth the Town of Biltmore Forest policies and regulations regarding the size, type and location of signs. The subchapter is intended to regulate size, type and location of signs, ensure that signs are not located in the public right of way, do not pose a threat to public safety, do not unreasonably interfere with aesthetic quality and are consistent with the nature of a primarily residential community. It is not the intent of this ordinance to regulate the content of signs or to limit the right of free speech.

(Ord. 2021-02, passed 2-9-21)

§ 93.03 SIGNS AND POSTERS GENERALLY.

Except as set forth herein, no sign of any kind, including posters, advertisements, billboards, announcements and like, shall be erected by any person in any district zoned R-1, R-2, R-3, R-4 or R-5 unless the sign, type, size and intended location comply with this subchapter or unless prior approval of the sign type, size, and intended location are first obtained from the Town Manager or Board of Commissioners. Any sign erected in violation of this subchapter shall be promptly removed.

(2013 Code, § 15-2) (Ord. 2021, passed 2-9-2021)

§93.04 DEFINITIONS

For the purposes of this subchapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

CONSTRUCTION SIGNS. Signs identifying a company or individual constructing or renovating a house or building on a property in the town.

IDEOLOGICAL SIGNS. Signs advocating support for a particular system of ideas and ideals which may form the basis of an economic or political theory and policy.

INVISIBLE FENCING SIGNS. Signs advertising the location of underground (invisible) fencing on a property or the location of installed underground utilities

[NO TRESPASSING SIGNS.](#) [Signs providing notice, in a manner reasonably likely to come to the attention of intruders, not to enter the property on which the sign\(s\) are located.](#)

ON-PREMISES COMMERCIAL SIGNS. On Premises Commercial signs – signs located on or attached to buildings in the zoning districts in the Town where commercial businesses are allowed.

POLITICAL SIGNS. Signs advocating support for a particular candidate for political office or political party.

REAL ESTATE SIGNS. Signs advertising the sale or lease of residential or commercial real property.

SECURITY COMPANY SIGNS. Signs indicating that a security system has been installed on a property.

§ 93.05 SIGNS AND POSTERS; REQUIREMENTS.

(A) *Real Estate Signs.* No person, either as owner or real estate agent, shall post any sign except as follows:

- (1) One sign per lot, not to exceed six square feet in size, not to contain any electrical component and not to be lighted in any way;
- (2) If the sign is posted by a real estate agency, the wording shall be limited appropriately to indicate that the property is for sale or rent, the name and telephone number of the agency, the listing firm website, and the multiple listing service number, texting code, or individual website assigned to the home for sale;
- (3) If the sign is posted by an owner, the wording shall be limited to appropriately indicate that the property is for sale or rent, the name of seller, if so desired, a telephone number, and individual website assigned to the home for sale;
- (4) Wording shall be the same on both sides of the sign if both sides are exposed to the roadway;
- (5) The sign shall be set back at least 20 feet from the nearest edge of the pavement of the public road on which the house fronts or faces and in no event shall the sign be located within any public road right-of-way;
- (6) No portion of the sign shall extend more than four feet above the ground;
- (7) The sign shall be removed no later than three days after the closing of the sale of the property;
- (8) If a sign is for commercial use in the R-4 or R-5 Residential Zoning District and does not comply with the limitations herein, application must be made to the Board of Commissioners for approval; and
- (9) The owner of a residential lot and the real estate agent placing a real estate sign on the residential lot shall each be responsible for any violation of this section.

(B) *Construction Signs.* Signs advertising the name of an individual or company constructing or renovating a house or other building on a property are allowed as follows:

- (1) On any residential lot on which construction or renovation has begun, neither the general contractor nor the owner of the residential lot shall post or permit to be posted more than one sign in addition to any sign required by law to be posted (i.e., building permits and the like);
- (2) The general contractor may place one sign on the residential lot on which construction or

renovation has begun which sign shall not exceed six square feet in size and shall be limited in wording to the street number or address of the property and the name, address, and telephone number of the general contractor. The general contractor's sign shall also be subject to divisions (A) (1), (A) (4), (A) (5), and (A) (6) above. The general contractor's sign shall be removed from the property not later than three days from the completion of construction by the general contractor or occupancy by the owner of the property being constructed, whichever comes first; and

- (3) The sign shall be set back at least 20 feet from the nearest edge of pavement of the public road on which the house fronts or faces. The sign shall not be posted in the public right of way.
- (4) The owner of the residential lot and the general contractor shall be responsible for any violation of this section.

(C) No Trespassing Signs – No Trespassing Signs are allowed on private property provided the signs are erected as follows:

(1) The sign(s) shall be posted in manner reasonably likely to come to the attention of intruders and include notice not to enter the premises, with verbiage limited to the following, or some combination thereof:

No Trespassing
Do Not Enter
Private Property

(2) The sign(s) shall not exceed two square feet in size, not contain electrical components, and not be lighted in any way, including reflective, luminous, or “glow in the dark” components.

(3) The sign(s) must be set back at least ten feet from the nearest edge of the pavement on the public road or street, and in no event shall the sign be located within any public road or right-of-way.

(4) If a property has multiple driveways, a sign may be allowed at each driveway entrance.

(5) There may be no more than one (1) sign every fifty (50) feet. There may be no more than four (6) signs on a single parcel.

(7) Signs may not be placed within a side yard or rear yard setback, according to the setbacks in place for that specific zoning district. The only exception to this provision is found in part 8 below.

(8) Properties that abut non-residential property may place no trespassing signs on the property line, but only on the property line where these properties abut non-residential property.

(9) No portion of the sign(s) shall extend more than two (2) feet above the ground.

(10) Signs may not include neon, “day-glow”, or fluorescent colors.

(11) The owner of a residential property placing a no trespassing sign on the property shall be responsible for any violation of this section.

(D) *Political and Ideological Signs.* Political and ideological signs are allowed on private property provided the signs are erected as follows.

(1) Each sign shall not exceed four square feet in size and not contain any electrical component or be lighted in any way;

(2) The sign shall not be located within the Town owned public right-of-way or on Town property and must be set back at least twenty feet from the nearest edge of the paved road on which the house fronts or faces and shall not encroach on the public right of way;

- (3) No portion of the sign is to extend more than four feet above the ground;
- (4) A sign located on private property requires the owner's approval;
- (5) Up to four (4) political signs may be placed on private property beginning thirty days before the beginning of early voting for a primary or general election. Political signs should be removed within five days after the primary, general or special election; and
- (6) Political and ideological signs are not allowed on Town property.

(E) Security Company Signs. Security Company signs are allowed on private property as follows:

- (1) On any residential or business property with a commercial security system, up to two (2) signs bearing the name of the security company and appropriate contact information, may be posted;
- (2) The signs shall not exceed one (1) square foot in size, not contain electrical components and not be lighted in any way;
- (3) The signs shall be set back at least ten (10) feet from the nearest edge of the pavement on the public road or street.

(F) Invisible Fencing Signs. Signs indicating the presence and location of underground fencing are allowed as follows:

- (1) On any property with an underground "invisible fence," up to two signs noting the presence of the invisible fence and the name of the company providing the fence may be posted on the property;
- (2) The signs shall not exceed one (1) square foot in size, not contain electrical components and not be lighted in any way;
- (3) The signs shall be set back at least ten feet from the nearest edge of the pavement on the public road or street.
- (4) For the purpose of this subchapter, temporary flags indicating the installation of underground (invisible) fencing shall be removed no later than forty-five (45) days after installation.

(G) Flags for Underground Utilities. – Are allowed on a temporary basis to indicate the presence and location of underground utilities.

(H) Signs Located in the R-4 and R-5 Zoning Districts.

- (1) On any lot occupied by a business in the R-4 and R-5 Districts, on-premises signs are allowed provided the following definitions and permit requirements are met.
- (2) For the purpose of this division (G), the following definitions shall apply unless the context clearly indicates or requires a different meaning.

ATTACHED SIGN. Any sign attached to, applied on, or supported by the front wall or wall facing street of a building.

CLEARANCE. The vertical distance from the established finished grade to the lowest edge of the sign.

DEVELOPMENT IDENTIFICATION SIGN. A sign bearing only the name of the multiple tenant development.

ERECT. To construct, build, raise, assemble, install, place, replace, locate, affix, attach, display, alter, use, create, paint, draw, illuminate, or in any other way bring into being or establish.

FREESTANDING POLE SIGN. A sign which is permanently affixed to the ground by a pole or other structure and which is not part of the building.

GRADE. The lowest point at which a sign is attached to the ground.

GROUND SIGN. A freestanding sign flush to the ground and not elevated upon poles or stanchions and not attached to the building.

HEIGHT. The vertical distance between the highest part of the sign or its supporting structure, whichever is highest, and the base of the sign at grade.

INTERNALLY ILLUMINATED. Any sign designed to provide artificial light either through exposed lighting on the sign face or through transparent or translucent material, from a light source within the sign.

LOT. A parcel of land occupied or capable of being occupied by a building or group of buildings devoted to a common use.

MULTIPLE TENANT DEVELOPMENT. A development in which there exists a number of individual or separate activities and in which there are appurtenant-shared facilities (such as parking areas).

NONCONFORMING SIGN. Any sign, which was allowed when, erected or displayed but which does not conform to the standards of this ordinance and any sign, which was not allowed, but was nonetheless impermissibly created or displayed before the effective date of this ordinance and any amendments thereto.

ON-PREMISES SIGN. Any sign used for the purpose of displaying, advertising, identifying, or directing attention to a business, products, operations, or services sold or offered on the lots where the sign is located.

SETBACK. The horizontal distance between the leading face of the curb of a street and the closest point of a sign or sign structure on such lot. Where there is not a curb, the measurement shall be made from the edge of the pavement.

SIGN. Any words, lettering, numerals, parts of letters or numerals, figure, phrases,

sentences, emblems, devices, designs, trade names, or trademarks by which anything is known, made of any material, except live vegetation, including any surface, fabric, or other material background structure designed to carry such devices, as are used to designate or attract attention.

SIGN STRUCTURE. Any structure, which supports, has supported or is capable of supporting a sign.

SINGLE TENANT. A single business establishment, activity or use.

WALL SIGN. Any sign painted or attached flat against and parceled to the exterior wall or surface of a building or other structure and/or which projects from the wall or surface.

(3) *On-premises single-tenant signs.*

(a) Allowed within the R-4 and R-5 Zoning District may be either:

1. *Freestanding.* Pole or ground; or
2. *Attached.* Wall.

(b) Two business identification signs are allowed per lot, only one of which shall be a freestanding or ground sign. For freestanding or attached signs, the total allowable area per face of selected sign(s) shall not exceed 40 square feet per face, with two faces per freestanding or ground sign allowed. In the event the freestanding sign is less than the 40 square feet per face allowed, the size of the attached sign erected may be increased by that difference. Signs may be internally or externally illuminated.

(c) Additionally, the following requirements must be met based on the type of sign selected:

1. If freestanding pole or ground, then the sign shall be a maximum of eight feet in height with a minimum setback of ten feet; and
2. If wall, then the maximum projection from a wall shall be six inches.

(4) *On-premises multiple-tenant development signs.*

(a) On-premises multiple-tenant development signs allowed within the R-4 and R-5 zoning district may be either:

1. Freestanding; pole or ground attached; or
2. Wall.

(b) For a multiple-tenant development, the development itself is allowed one identification sign. For a freestanding sign, the total allowable area per face of selected sign shall not exceed 60 square feet with two faces per freestanding or ground sign allowed. If freestanding pole or ground, the sign shall be a maximum of 20 feet in height and minimum setback of 15 feet. Individual tenants within the development shall be allowed one attached wall sign not to exceed ten square feet, and at the due discretion of the Board of Commissioners, not more than two, not to exceed ten square feet. The maximum projection from a wall shall be six inches.

(I) The owner of the business establishment erecting a sign shall be responsible for any violation of this ordinance.

(J) Any sign removed by the Town for violation of (A) or (B) of this ordinance shall be disposed of by the Town within five days from the date the sign is removed from the residential lot unless the residential lot owner, real estate agent or general contractor, as the case may be, claims said sign within the five-day period.

[This section as amended on March 8, 2022, shall become effective on March 9, 2022.](#)

(2013 Code, § 15-2) (Ord. passed 9-15-1987; Ord. passed 12-8-1990; Ord. passed 9- -2002; Ord. passed 2/9/2021, [Ord. passed 3/8/2022](#))

This 8th day of March, 2022.

George F. Goosmann, III
Mayor

Attest:

Laura Jacobs
Town Clerk

SEAL

**BOARD OF COMMISSIONERS MEETING
STAFF MEMORANDUM**

March 8, 2022



Agenda Item D-5

Discussion of Special Separation Allowance Policy for Early Retiree Law Enforcement Officers

Background

North Carolina Law regarding Full Pension Eligibility

North Carolina law enforcement officers and other local government employees who serve (30) years in the local government retirement system are eligible to receive full pensions under state law. Additionally, North Carolina law provides and requires a Special Separation Allowance be paid to any qualified law enforcement officer who retires with thirty (30) years of service and is between the ages of 55 and 62 ½. This special separation allowance is a percentage of their annual income and is paid on a bi-weekly or monthly basis.

Legislative Changes in 2018

The North Carolina General Assembly passed a bill in 2018 that allows law enforcement officers to retire at 25 years of service with a reduced pension. The General Statutes provide authority to local governments to consider paying early retirees a one-time, lump sum payment in lieu of the special separation allowance if the officer achieved a full, 30-year retirement status. The statute does not require these payments and allows them only at the local government's option. If the local government elects to make this lump sum payment, the legislation stipulates the payment cannot exceed the total amount available to the law enforcement officer if full retirement eligibility was achieved. As noted above, the payment must be made in one lump sum and from the Town's available funds. In other words, it cannot be paid on a monthly or bi-weekly basis to the employee over the course of multiple years.

Previous History

In September 2019, the Town awarded a lump-sum payment to a retiring law enforcement officer after twenty-five (25) years of service. Some of this officer's service was as a public safety officer when the Town still operated in this manner. The Board of Commissioners authorized a payment of \$1,000.00 per year of service to the officer and stipulated that the amount be in recognition of his combined service as a public safety officer.

Action Requested

With this as background and as more long-tenured Town officers consider whether to retire early, staff requests the Board to consider a policy regarding lump sum payments for early retirees. The State statute is attached to this memorandum, and the highlighted portion (Section 143.166.43)

specifically speaks to separation buyouts. Section (b) of that provision requires a written policy by the employing agency and this is a good opportunity to consider what parameters to include so there is a consistent policy moving forward.

If the Board would like to consider a specific policy, Chief Beddingfield and I can return next month with ideas regarding tenure of service, amount of payment, and additional criteria. If the Board does not want to consider this as an option for early retirees, then no formal policy or criteria are needed.

Article 12D.

Separation Allowances for Law-Enforcement Officers.

§ 143-166.40. Rules for selection and retention of law-enforcement officers; rules exempt from Administrative Procedure Act.

(a) Except as otherwise provided by State and federal law, the head of each principal State department may establish rules and procedures for the selection and retention of sworn law-enforcement officers to ensure that they are physically, emotionally, and intellectually qualified to perform their duties. These rules and procedures shall not establish any mandatory age limit for service as a law-enforcement officer that conflicts with a federal statute.

(b) These rules and procedures are exempt from the provisions of Chapter 150B of the General Statutes. (1983 (Reg. Sess., 1984), c. 1034, s. 104; 1987, c. 827, s. 1.)

§ 143-166.41. Special separation allowance.

(a) Notwithstanding any other provision of law, every sworn law-enforcement officer as defined by G.S. 135-1(11c) or G.S. 143-166.30(a)(4) employed by a State department, agency, or institution who qualifies under this section shall receive, beginning in the month in which he retires on a basic service retirement under the provisions of G.S. 135-5(a), an annual separation allowance equal to eighty-five hundredths percent (0.85%) of the annual equivalent of the base rate of compensation most recently applicable to him for each year of creditable service. The allowance shall be paid in equal installments on the payroll frequency used by the employer. To qualify for the allowance the officer shall:

- (1) Have (i) completed 30 or more years of creditable service or, (ii) have attained 55 years of age and completed five or more years of creditable service; and
- (2) Not have attained 62 years of age; and
- (3) Have completed at least five years of continuous service as a law enforcement officer as herein defined immediately preceding a service retirement. Any break in the continuous service required by this subsection because of disability retirement or disability salary continuation benefits shall not adversely affect an officer's qualification to receive the allowance, provided the officer returns to service within 45 days after the disability benefits cease and is otherwise qualified to receive the allowance.

(a1) Repealed by Session Laws 2014-88, s. 3(j), effective July 30, 2014.

(b) As used in this section, "creditable service" means the service for which credit is allowed under the retirement system of which the officer is a member, provided that at least fifty percent (50%) of the service is as a law enforcement officer as herein defined or as a probation/parole officer as defined in G.S. 135-1(17a).

(c) Payment to a retired officer under the provisions of this section shall cease at the first of:

- (1) The death of the officer;
- (2) The last day of the month in which the officer attains 62 years of age; or
- (3) The first day of reemployment by any State department, agency, or institution, except that this subdivision does not apply to an officer returning to State

employment in a position exempt from the North Carolina Human Resources Act in an agency other than the agency from which that officer retired.

(d) This section does not affect the benefits to which an individual may be entitled from State, federal, or private retirement systems. The benefits payable under this section shall not be subject to any increases in salary or retirement allowances that may be authorized by the General Assembly for employees of the State or retired employees of the State.

(e) The head of each State department, agency, or institution shall determine the eligibility of employees for the benefits provided herein.

(f) The Director of the Budget may authorize from time to time the transfer of funds within the budgets of each State department, agency, or institution necessary to carry out the purposes of this Article. These funds shall be taken from those appropriated to the department, agency, or institution for salaries and related fringe benefits.

(g) The head of each State department, agency, or institution shall make the payments set forth in subsection (a) to those persons certified under subsection (e) from funds available under subsection (f). (1983 (Reg. Sess., 1984), c. 1034, s. 104; 1985, c. 479, s. 143; 1985 (Reg. Sess., 1986), c. 1014, ss. 51, 52; 2002-126, s. 28.14; 2007-69, s. 1; 2011-232, s. 9; 2013-382, s. 9.1(c); 2014-88, s. 3(j); 2017-57, s. 35.19B(b).)

§ 143-166.42. Special separation allowances for local officers.

(a) On and after January 1, 1987, every sworn law enforcement officer as defined by G.S. 128-21(11d) or G.S. 143-166.50(a)(3) employed by a local government employer who qualifies under this section shall receive, beginning in the month in which the officer retires on a basic service retirement under the provisions of G.S. 128-27(a), an annual separation allowance equal to eighty-five hundredths percent (0.85%) of the annual equivalent of the base rate of compensation most recently applicable to the officer for each year of creditable service. The allowance shall be paid in equal installments on the payroll frequency used by the employer. To qualify for the allowance, the officer shall:

- (1) Have (i) completed 30 or more years of creditable service or (ii) have attained 55 years of age and completed five or more years of creditable service; and
- (2) Not have attained 62 years of age; and
- (3) Have completed at least five years of continuous service as a law enforcement officer as herein defined immediately preceding a service retirement. Any break in the continuous service required by this subsection because of disability retirement or disability salary continuation benefits shall not adversely affect an officer's qualification to receive the allowance, provided the officer returns to service within 45 days after the disability benefits cease and is otherwise qualified to receive the allowance.

(b) As used in this section, "creditable service" means the service for which credit is allowed under the retirement system of which the officer is a member, provided that at least fifty percent (50%) of the service is as a law enforcement officer as herein defined.

(c) Payment to a retired officer under the provisions of this section shall cease at the first of:

- (1) The death of the officer;
 - (2) The last day of the month in which the officer attains 62 years of age; or
 - (3) The first day of reemployment by a local government employer in any capacity.
- (c1) Notwithstanding the provisions of subdivision (3) of subsection (c) of this section, payments to a retired officer shall not cease when a local government employer employs a retired officer for any of the following:
- (1) In a public safety position in a capacity not requiring participation in the Local Governmental Employees' Retirement System.
 - (2) In service to a county board of elections on an election day in a capacity that complies with G.S. 128-21(19) and does not result in cessation or suspension of the retiree's benefit from the Local Government Employees' Retirement System.
- (d) This section does not affect the benefits to which an individual may be entitled from State, local, federal, or private retirement systems. The benefits payable under this section shall not be subject to any increases in salary or retirement allowances that may be authorized by local government employers or for retired employees of local governments.
- (e) The governing body of each local employer shall determine the eligibility of employees for the benefits provided herein.
- (f) The governing body of each local employer shall make the payments set forth in subsection (a) of this section to those persons certified under subsection (e) of this section from funds available. (1985 (Reg. Sess., 1986), c. 1019, s. 2; 2009-396, s. 1; 2018-25, s. 1.)

§ 143-166.43. Separation buyouts for law enforcement officers.

(a) Any State department, agency, or institution, or any local government employer, may, in its discretion, offer a lump sum separation buyout to a law enforcement officer who leaves employment prior to reaching the officer's eligibility for a separation allowance under this Article. The lump sum separation buyout shall be paid from funds available and shall not exceed the total that would otherwise be paid in separation allowance payments under G.S. 143-166.41 or G.S. 143-166.42.

(b) Prior to the transfer by a State department, agency, or institution, or any local government employer, of a lump sum separation buyout described in subsection (a) of this section to the Teachers' and State Employees' Retirement System (TSERS) pursuant to G.S. 135-5(m2) or to the Local Governmental Employees' Retirement System (LGERS) pursuant to G.S. 128-27(m2), the State department, agency, or institution, or the local government employer, shall have in place a written policy duly adopted by the employing unit that does not allow employees to choose between accepting the lump sum separation buyout as a cash payment or transferring the lump sum separation buyout to TSERS or LGERS. (2018-22, s. 1; 2021-75, s. 4.1(a).)

§ 143-166.44: Reserved for future codification purposes.

§ **143-166.45**: Reserved for future codification purposes.

§ **143-166.46**: Reserved for future codification purposes.

§ **143-166.47**: Reserved for future codification purposes.

§ **143-166.48**: Reserved for future codification purposes.

§ **143-166.49**: Reserved for future codification purposes.

**BOARD OF COMMISSIONERS MEETING
STAFF MEMORANDUM**

March 8, 2022



Agenda Item D-6

**Biltmore Forest Transportation Study Presentation
Mr. Kenny Armstrong, J.M. Teague Engineering**

Background

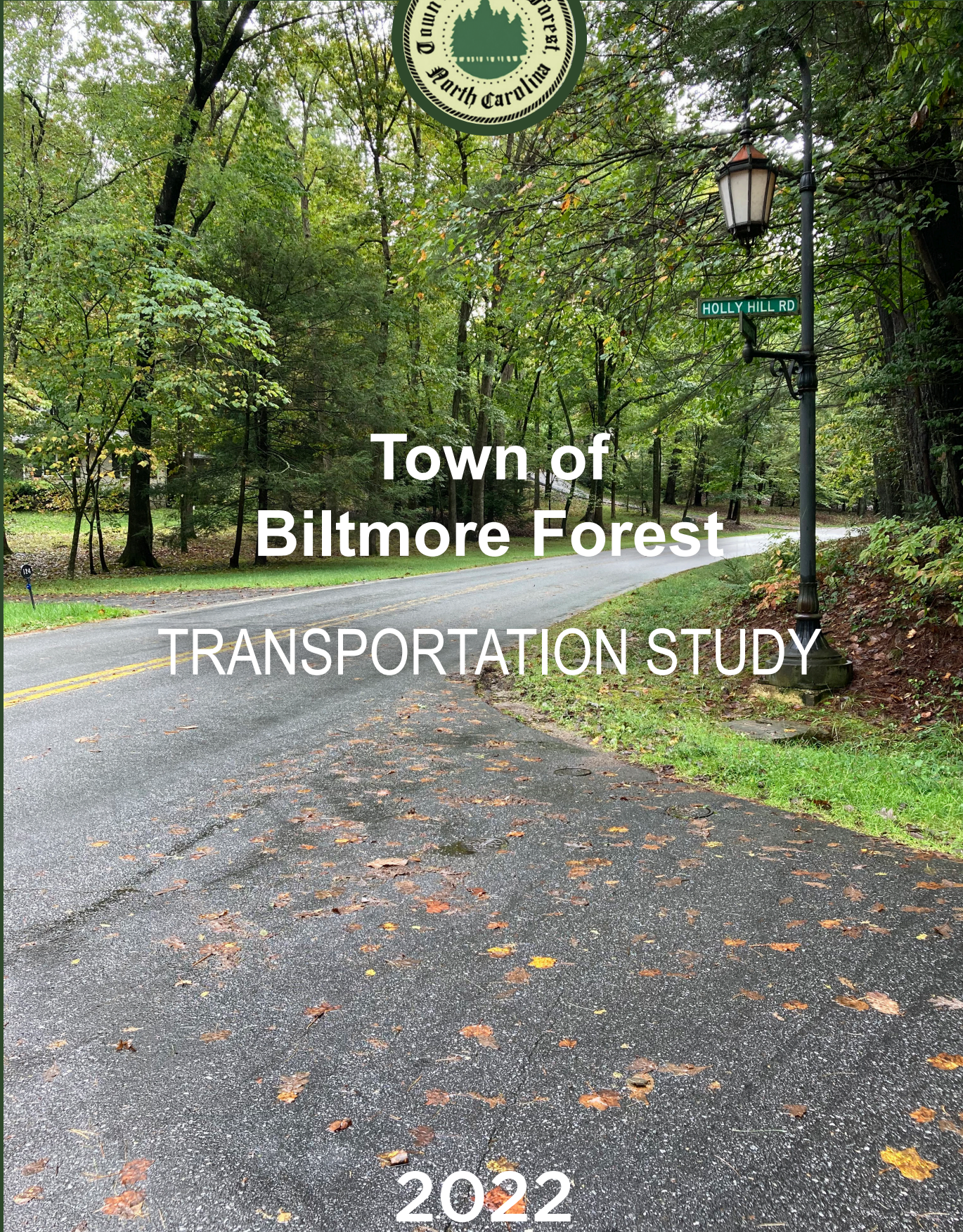
In September 2021, the Board of Commissioners authorized an agreement with J.M. Teague Engineers to perform a transportation study for the Town. The focus for this transportation study was to identify challenges and opportunities regarding traffic and transportation within Biltmore Forest, while utilizing survey tools to gauge resident opinions on the matter. Specifically, the study focused on the following three items.

1. Researching and cataloging relevant existing plans from other jurisdictions that border Biltmore Forest, including these plans' data and recommendations.
2. Collect and coordinate traffic-related community concerns.
3. Provide recommendations to the Board of Commissioners that promote safety for all roadway users.

Over the course of the past six months, JMTE performed work related to these focus areas, including conducting a Town-wide survey. Verbatim survey responses are found in the appendix of the attached report. The report includes specific recommendations for the Town to consider. These recommendations range in timeframe (from short term to long term) as well as financial commitments.

Presentation

Kenny Armstrong, Senior Transportation Planner from J.M. Teague, will present the study findings to the Board of Commissioners at the meeting on March 8, 2022.



Town of Biltmore Forest

TRANSPORTATION STUDY

2022



Study commissioned by:

Mayor George F. Goosmann, III
Mayor Pro-Tem Doris P. Loomis
Councilwoman Fran G. Cogburn
Councilman E. Glenn Kelly

Study managed by:

Town Manager Jonathan Kanipe
Public Works Director Harry Buckner
Public Works Supervisor Mike Dale

Documentation prepared by:



1155 North Main Street
Waynesville, NC 28786
www.jmteagueengineering.com



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CHAPTER 1: Project Summary

Background

The Town of Biltmore Forest hired J.M. Teague Engineering & Planning (JMTE) to conduct a town-wide transportation study in order to identify challenges and opportunities while gauging residents' opinions about transportation in the community.

Transportation is always a topic of diverse and passionate opinion. Whether or not those views are validated by data, they matter. It is always important to give people an opportunity to voice their concerns and enable them to share frustrations and creative ideas. Public input is always valuable, and can often inform municipal staff with essential information to steer policy changes, program implementation, and infrastructure investments. Qualitative data can also shed light on unexpected opportunities and lend credence to long-standing anecdotal testimony.

The study evaluates existing plans and reports from the Asheville area, assesses current conditions and trends, and incorporates input from community members to develop a summary of opportunities and challenges for transportation in Biltmore Forest. Recommendations focus on key locations and address concerns to enhance roadway safety for all users and improve the quality of life for residents and visitors. The purpose of this study and resulting recommendations is to focus on creating an overall safe roadway for all users while acknowledging the need for practical vehicular movement and effective traffic circulation. The study is designed help the Town of Biltmore Forest assess challenges, prepare for future scenarios, and provide the community with an opportunity to introduce fresh thoughts and perspectives while reinforcing what makes Biltmore Forest such a unique and special place to live, work, and play.

Study Objectives

- Research and catalog relevant **existing plan** data and recommendations.
- Collect and coordinate traffic-related **community concerns**.
- **Provide recommendations** to that promote safety for all roadway users.

Key Findings

- Residents like to walk and do so often along many roadways.
- Overgrown shrubs cause concern for visibility at driveways and intersections.
- Left turns onto and from Hendersonville Road are seen as dangerous.
- Construction and landscaping vehicles occasionally cause safety concerns.
- Residents have various concerns about Valley Springs Road.

FIGURE 1 - RECOMMENDATIONS MATRIX

<u>Recommendation</u>	<u>Timeframe</u>	<u>Cost Estimate</u>
1) Rethink the Busbee Road Interface with Hendersonville Road	Short- to Medium-term	\$300,000
2) Study Valley Springs Road	Short- to Medium-term	\$12,000 - \$20,000 (depending on scope)
3) Limit Left Turns onto Hendersonville Road	Medium-term	\$10,000 per intersection
4) Add a Right Turn Lane on Eastwood Road	Medium- to Long-term	\$15,000
5) Work to Fix the Blue Ridge Parkway Ramp	Long-term	n/a
6) Focus on the Edges	Ongoing	Additional cost to regular repaving and restriping allocations
7) Establish a Traffic Calming Policy	Short- to Medium-term	\$8,000 - \$15,000 (or staff time)
8) Provide Traffic Cones for Residents	Short-term	\$3,000 (preliminary allocation)
9) Install a Pair of Roundabouts at Town Hall	Medium- to Long-term	\$700,000
10) Install a Series of Mini Roundabouts	Medium- to Long-term	\$150,000 per mini roundabout
11) Develop a Recreational Trail Master Plan	Medium-term	\$30,000 - \$40,000
12) Install Bike Racks	Short-term	\$500+ per rack
13) Expand Brooklawn Park	Long-term	unknown

These recommendations are color-coded to reflect their overall feasibility (timeframe, cost, ease of implementation) where green is the most feasible, red the least, and yellow in between. The goal is to help the Town prioritize which recommendations to pursue first and allocate appropriate funding and resources for successful implementation.

Cost estimates were developed by consolidating estimates from prior engineering and planning studies, documentation by the Federal Highway Administration (FHWA), current market rates for roadway supplies, and the cost estimating tool from the North Carolina Department of Transportation (NCDOT).

3 CHAPTER ONE : PROJECT OVERVIEW



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CHAPTER 2: Existing Plan Review

The Biltmore Forest Town-Wide Transportation Study is built upon a foundation of past transportation planning efforts in the region. This study considers key findings and recommendations of previously adopted plans that could affect the Biltmore Forest community's traffic and transportation system overall. Relevant information is summarized on the following pages.

French Broad River MPO Comprehensive Transportation Plan (2008; amended 2013)

The French Broad River Metropolitan Planning Organization's Comprehensive Transportation Plan (CTP) is a long-range multimodal transportation plan that assesses the MPO's existing and future transportation needs including roadways, bicycle and pedestrian facilities, transit services, and freight considerations. The CTP is intended to ensure that the region's transportation system is developed in a coordinated and efficient manner that anticipates future needs and minimizes negative impacts on communities, cultural resources, and the natural environment. By providing a consistent, comprehensive, geographical database of recommendations for all modes, the CTP helps elected officials, local planners, NCDOT engineers, and others to program and implement individual projects while considering potential interactions with other planned projects, regardless of mode.

Plan recommendations are based on forecasts of expected growth and development in the planning area, which includes most of Buncombe County, all of Henderson County, and portions of Madison and Haywood Counties, over the next 25 years. Recommendations are presented for three transportation elements through the Highway Map, Public Transportation and Rail Map, and Bicycle Map.

While the CTP does not address any roadways within the Biltmore Forest community, it acknowledges Hendersonville Road in several ways. First, it classifies Hendersonville Road as a major thoroughfare that needs improvement. It also identifies Hendersonville Road as a bus route that needs improvement and on-road bicycle route that needs improvement. The CTP recommends adding a new bus route that runs on Sweeten Creek Road from Rock Hill Road southward as a new bus route. Sweeten Creek Road is also mentioned as an on-road bicycle route that needs improvement. The CTP lists recommended, or considered but not recommended, projects. The following is a list of those projects that would most directly affect traffic into, out of, and proximate to Biltmore Forest.

A19: US 25A (Sweeten Creek Road) – Rock Hill Road (SR 3081) to US25/NC 280

Purpose and Need: South Asheville has grown rapidly in recent years and is expected to

experience continued growth. In 2005, ADT [Average Daily Traffic] for the roadway exceeded the daily capacity of the roadway and volumes are expected to increase noticeably in the coming years. This corridor provides the only alternative to US 25 which is frequently congested. There were several dozen comments received during the CTP process from area residents complaining about the inability to turn onto or off of US 25A and many had witnessed accidents or near accidents.

Recommendation: The corridor should be widened to four lanes with a median. There was strong citizen support for a landscaped median. This project has already been identified in the LRTP and the TIP as project U-2801. This project should be coordinated with bicycle improvements identified in the Asheville Comprehensive Bicycle Master Plan and Greenway Master Plan.

A30: US 25 (Hendersonville Road) – I-40 to Mills Gap Road (SR 3116)

Purpose and Need: This is the primary transportation corridor serving South Asheville and connecting it and the surrounding area to points north and south. Daily volumes in 2005 noticeably exceed the ultimate (LOS E) capacity and the corridor is subject to frequent, recurring congestion. Volumes are expected to remain high and travel along the corridor will become increasingly difficult as the intensity of development increases, particularly as there is no access management along the corridor. There are four intersections with high crash rates along this corridor.

Recommendation: In order to maintain an acceptable level of service along the corridor access management should be implemented along the corridor, including possible medians, driveway consolidation, etc. Additional spot intersection improvements may be warranted. This project should be coordinated with bicycle improvements identified in the Asheville Comprehensive Bicycle Master Plan and the Hendersonville Road Corridor Study.

A48: US 25A (Sweeten Creek Road) – I-40 to London Road

Purpose and Need: This facility provides an alternative access to Biltmore Village and will have additional mobility needs with the further improvements to Sweeten Creek Rd south of I-40. Volumes today exceed the ultimate (LOS E) capacity of the roadway and are expected to continue to do so in the future without improvements to the roadway.

Recommendation: In order to provide an acceptable level of service along the corridor turn lanes should be added at intersections or possibly a two-way left-turn lane installed for all or part of the corridor. Access management such as medians or driveway consolidation near points of congestion and adjacent to intersections may also be warranted. This project should be coordinated with bicycle improvements identified in the Asheville Comprehensive Bicycle Master Plan.

A1, A2: Open passenger rail and intermodal terminal at the Biltmore Station Shops in Biltmore Village

The extension of passenger rail service to the Asheville area will increase the long-distance

transportation options of persons to and from the region. Rail service would connect in Salisbury to existing Amtrak service and allow travel to Charlotte, Raleigh and beyond. The high-speed rail corridor passes through Salisbury as well, further reducing travel time to the entire eastern seaboard upon its completion. Passenger rail service would also serve tourists traveling to the region. Asheville Transit has considered the creation of a transfer center in Biltmore Village to serve the immediate vicinity and the Wilma Dykeman Riverway. By incorporating an intermodal transfer center, users of the rail station could easily connect to existing and planned fixed-route bus service to Asheville and across the region including Hendersonville and Waynesville.

A9: Local bus service along US 25A (Sweeten Creek Rd) and US 25 (Hendersonville Rd) to Fletcher

Travel along this corridor continues to increase and it is expected to experience significant development in the coming years. Bus service would enhance residents' transportation options and could help to alleviate congestion along the roadway.

ALTERNATIVES CONSIDERED BUT NOT RECOMMENDED:

Biltmore Village Bypass

For many years, there have been discussions of a bypass around Biltmore Village, to reduce congestion by removing traffic from Brook Street, McDowell Street, Hendersonville Road, and Biltmore Avenue. Several alternatives were analyzed as part of the LRTP update in 2005, and results from the new travel demand model remain consistent with these assumptions and findings.

Several alternative routes were considered, all of which require a new bridge over the Swannanoa River, and at least one railroad overpass to connect Sweeten Creek Road with Swannanoa River Road (or a new facility) east of Biltmore Avenue.

While some of these alternatives have the potential to remove 4,500 or more vehicles from Brook Street each day, traffic reductions on Biltmore Avenue to the north and Hendersonville Road (US 25) to the south are insignificant (fewer than 500 vehicles per day [vpd]). Introducing grade-separated rail crossings would reduce train-related delays and eliminate potential crashes, but there are no other obvious traffic benefits to a Biltmore Village Bypass.

Undesirable traffic impacts include:

- Minor/moderate increases (500 – 2,000 vpd) on Sweeten Creek Road (US 25A).
- Minor/moderate increases (500 – 1,500 vpd) along portions of Caribou, London, and West Chapel Road.
- Minor/insignificant increases (<500 vpd) on McDowell Street (US 25) and Forest Hill Drive. Given the likely expense of this project and its potential for substantial disruption of the local community and natural environment, it is difficult to justify based on travel benefits.

Asheville in Motion Mobility Plan: City of Asheville Comprehensive Transportation Plan (2016)

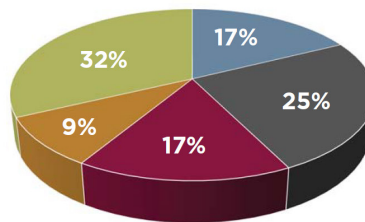
Asheville in Motion (AIM) is the City of Asheville’s mobility plan. This Plan, adopted in 2016, consolidates a variety of modal plans into one cohesive strategy to be used in prioritizing transportation investments.

The Plan acknowledges that, by 2041, Asheville’s population will likely exceed 115,000, and thus, providing an effective and connected transportation system with multimodal options is critical to meeting the economic and social needs of the city’s residents, visitors, and other stakeholders. AIM seeks to provide strategies that yield travel mode shift, which translates into users moving away from individual motorized trips and towards incorporating walking, biking, and taking transit into their transportation patterns. While AIM promotes the pedestrian mode as the top modal priority, it also notes the importance of expanded transit service, safer bicycle infrastructure, and improved roads. Significant issues to mobility in Asheville include, but are not limited to, topographical constraints, scarce resources, and state/federal control of major thoroughfares.

AIM’s mobility strategy is comprised of four key components: framework plans, street type, community type, and blended typology. The street type component “creates a classification of roadways that balances and blends the relationship between transportation, local land use context, and urban form. AIM expresses this in a street type that relates the destinations served by the road to how people travel.”

Using this concept, AIM identifies Hendersonville Road as a Workhorse Street which is categorized as such due to its high traffic volumes, number of travel lanes (4+), and a functional classification as a principal/minor arterial roadway. AIM notes that Workhorse Streets “require safe separation between bicyclists/pedestrians and the travelway” and “accommodate traffic in and out of the city with connections to the transportation network.”

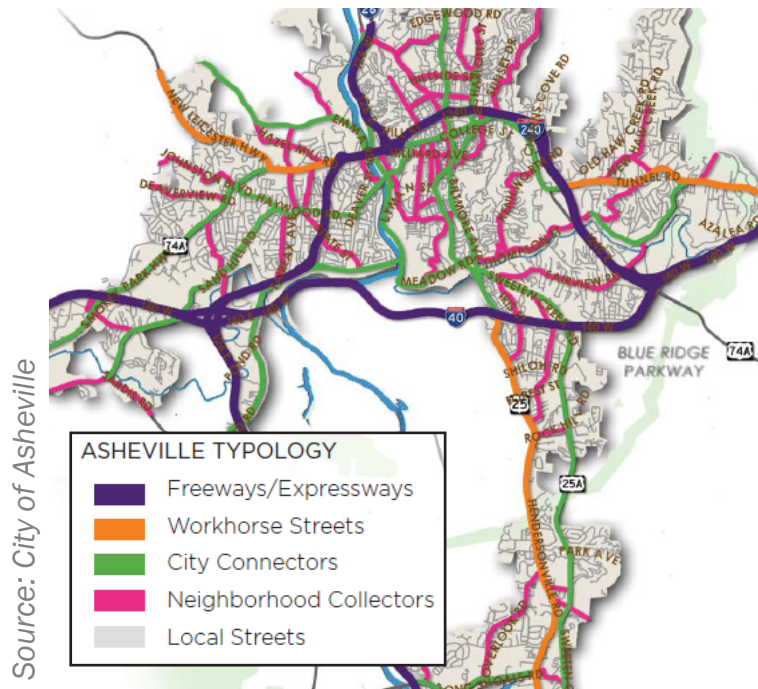
Most community types identified in the AIM plan proximate to Biltmore Forest are Suburban Centers/Corridors and Regional Centers/Corridors.



New Walking Facilities
Expanded Transit Service
Additional Bike Facilities
Improved Roads
More Trails

The Asheville in Motion plan’s public engagement efforts helped influence overall recommendations, including the need for new walking facilities. These priorities will affect transportation decision-making for years to come.

FIGURE 2 - ASHEVILLE ROADWAY TYPOLOGIES (AIM)



Asheville in Motion redefines the street typologies into a simpler hierarchy based on surrounding land use and transportation needs along a particular corridor.

For example, Hendersonville Road is listed as a “Workhorse” street because it must accommodate heavy commuter traffic and commercial uses while also serving as a key north-south alternative route for I-26.

Since most residential traffic from Biltmore Forest funnels onto Hendersonville Road, this is an important corridor with future changes that could affect residents’ ability to travel on foot and by car.

- Suburban Centers and Corridors serve the daily needs of nearby residents and tend to locate along roads with higher traffic volumes and near prominent intersections. These areas typically include multi-tenant strip centers and big box stores. Smaller professional offices not part of the city’s large medical campuses are included. Buildings typically are set back from the road behind large surface parking lots with limited connectivity between adjacent businesses.
- Regional Centers and Corridors attract people beyond Asheville for shopping, entertainment, and employment. These areas typically are large-scale, master planned developments built in phases with a mix of residential, non-residential, and civic uses. Regional Centers and Corridors are located near major highways to ensure ease of access for longer trips. These areas include major shopping centers, tourist attractions, office parks, and medical campuses.
- Manufacturing, Logistics, and Aerospace areas support large-scale manufacturing and production, including assembly and processing, regional warehousing and distribution, bulk storage, and utilities. These areas are found near major transportation corridors (highway or rail) and generally are buffered from surrounding development. Clusters of supportive uses or serve heavy industries are generally located nearby. The Asheville Regional Airport and adjacent supporting facilities are included.

AIM also identifies a list of projects “where ‘more’ complete streets designs could have transformative impacts on the community.” In the AIM context, ‘more’ complete streets are developed with context-sensitivity in mind. One such recommended project is the Biltmore Avenue segment that stretches from College Street south to All Souls Crescent: “This 1.7-mile connection is needed to improve north-south connectivity between Downtown Asheville, Lee Walker Heights, and Biltmore Village.” Recommendations include a road diet to accommodate 5-foot bike lanes, wider sidewalks, and limited curb cuts.

Living Asheville: City of Asheville Comprehensive Plan (2018)

Living Asheville was adopted in 2018 and is Asheville’s comprehensive planning tool to inform its future growth pattern. This comprehensive plan identifies a high-level vision for the City and establishes goals and priorities that guide future growth and development. It also serves as a basis for decision-making, problem-solving and policy development for the City over the next 10-20 years.

Six overarching themes emerged from the Plan: *A Livable Built Environment*, *A Resilient Economy*, *Harmony with the Natural Environment*, *A Healthy Community*, *Interwoven Equity*, and *Responsible Regionalism*. Each theme includes related topics, identified goals, and performance measures.

A Livable Built Environment acknowledges that transportation and land use are inseparable and includes specific transportation-related goals such as:

- Make streets more walkable, comfortable and connected
- Increase access to safe bicycling
- Improve the multimodal transportation system
- Improve transit service
- Build out the greenway network

Along with “increased mixed-use development along transit corridors” and “enhanced parking management strategies”, these goals apply directly to Hendersonville Road and its adjacent land use.

“With a national reputation and growth to prove it, Asheville is at the point where it cannot afford to embark on a planning cycle without prudent, collaborative decision-making that reflects on its role as part of a larger region. Hence the theme: Responsible Regionalism.”

While much of *Living Asheville* concerns Asheville-proper in particular, one of the goals housed under the Responsible Regionalism theme is “Enhance transportation to and from Asheville.” The overview of this goal is that strong transportation networks between regional destinations will benefit Asheville residents. Living Asheville acknowledges that commuting patterns across the WNC region are widespread, and thus, prioritizing the efficiency of all transportation modes will be crucial, especially as the region continues to grow.

Living Asheville leans into the connection between development and transportation. It calls for a new zoning category of “Transit-Supportive Center” featuring higher densities and walkable development patterns,

FIGURE 3 - TOWN CENTER DESIGN



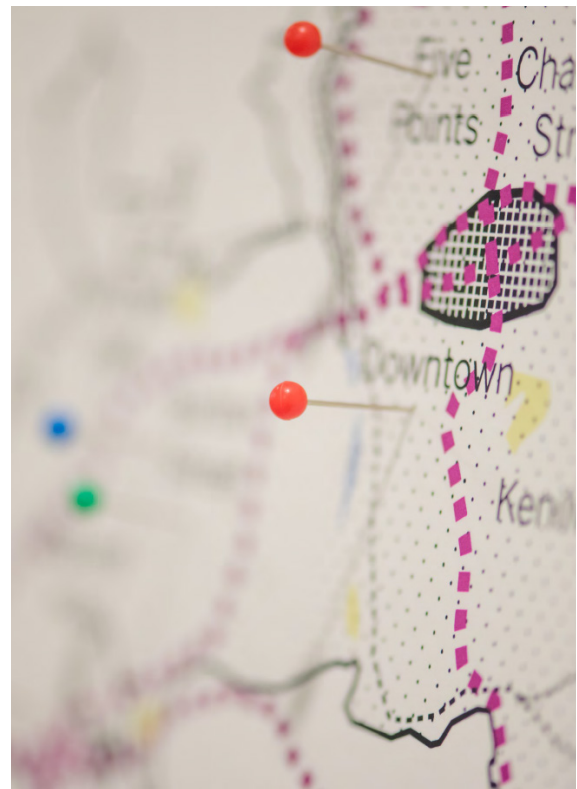
Living Asheville identifies Biltmore Village as a “Town Center” able to support strong growth as Asheville’s population continues to increase in the future. The town center development pattern typically incorporates a compact urban street grid with smaller blocks in order to promote walkability.

Source: City of Asheville

with incentives for redevelopment within these established centers. Hendersonville Road is identified as a transit-supportive Urban Corridor with Town and Urban Centers in the Gerber Village area, Long Shoals Road (NC 146), and Mills Gap Road. The Plan calls for Hendersonville Road to shift to a multimodal, attractive urban boulevard, with bicycle and pedestrian connections between centers. Development along this corridor should encourage multi-story structures, with multimodal access and transit facilities.

Other recommendations in the Plan include:

- Locate park-and-ride lots in strategic locations, proximate to high-frequency transit routes.
- Add pedestrian infrastructure at street crossings on major streets and where there are high volumes of traffic and pedestrians.
- Create dedicated bicycle lanes, preferred buffered or separated lanes where feasible.
- Encourage cross-access between parcels.
- Increase park-and-ride spaces throughout the corridor.



Living Asheville identifies Hendersonville Road as an “Urban Corridor”, which would benefit from refocusing development and land use patterns to include multimodal access and transit facilities, as well as parking lot placement that enhances the pedestrian experience.

French Broad River MPO 2045 Metropolitan Transportation Plan (2020)

The French Broad River Metropolitan Planning Organization’s 2045 Metropolitan Transportation Plan (MTP) is a federally required plan for MPOs that looks 25 years into the future to prioritize transportation investments and planning efforts in the region. The MTP, overall, provides a snapshot of major planning factors and trends in the region, projected growth, planned investments, and a consideration of goals for improving the region’s transportation network

The goals of the MTP include Addressing Congestion, Improving Safety, Improving Multimodal Transportation, Improving Transit, Protecting the Environment and Unique Places, Improving Freight Movements, and (new goal) Improving the Overall Equity of the Transportation Network.

The MTP notes the following existing trends and conditions:

1. The region is growing.
2. Roadway safety is a growing concern.
3. Roadway volumes are increasing, and overall system reliability is above targets.
4. Vulnerable users are an increasing concern.
5. Truck volumes continue to increase.
6. Resiliency is a major and growing issue in the region.
7. Transit demand is increasing.
8. Commuting in the region is changing rapidly.

The MTP notes that every jurisdiction within the MPO’s planning area has experienced an estimated increase in population between 2010 and 2018. Biltmore Forest grew 4 percent during that time period compared to Buncombe County increasing in population by 9 percent. South of Asheville has experienced even greater growth, with the Town of Fletcher growing 15 percent between 2010 and 2018. Such growth affects congestion and traffic volumes on roadways accessed by Biltmore Forest residents.

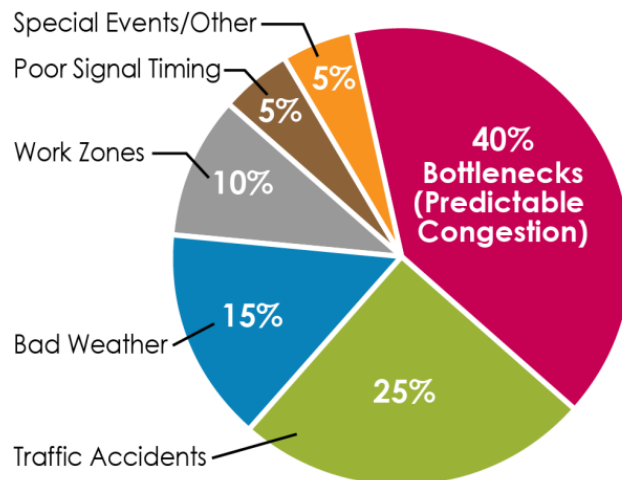
FIGURE 4 - FRENCH BROAD RIVER MPO 2045 MTP GOALS



The French Broad River MPO’s Metropolitan Transportation Plan includes eight key goals, focusing on safety, mobility, and accessibility.

“If construction or an accident causes severe congestion on I-26, there are few alternatives to continue northward travel through Buncombe County. NC 191 (Brevard Road) to the west of I-26, is a two-lane facility with already high-volumes that often lead to congestion during peak travel times. This corridor does not provide an ideal alternative to I-26 given its own congestion issues, as well as the limited number of intersections to access it. US-25 (Hendersonville Road) running parallel to I-26, is a five-lane facility but has similar issues as NC 191, and experiences major congestion during peak and non-peak travel times. Given the volume of commuter traffic traveling between Buncombe and Henderson counties, all these roadways experience problematic congestion with not enough options or capacity to alleviate it.”

FIGURE 5 - MAJOR CAUSES OF CONGESTION



Source: FHWA

The MTP provides corridor recommendations for Hendersonville Road, including a focus on access management, improved signal timing (for vehicles and EMS service), and encouraging transit and pedestrian-friendly activity centers through land use changes. Secondary recommendations include encouraging public transit use through park-and-ride opportunities and improved transit service and implementing a broader transportation demand management (TDM) strategy.

Projects relevant to Biltmore Forest that are included in the MPO's prioritization process for horizon years 2040 and 2045 include:

- **HR-4516:** Access management with Complete Streets improvements on US 25 (Hendersonville Road) from Blue Ridge Parkway to NC 146 (Long Shoals Road).
- **HD-134517:** Access management with Complete Streets improvements on US 25 (Hendersonville Road) from I-40 to Blue Ridge Parkway.
- **HD-134519:** Modernization with Complete Streets improvements on Rock Hill Road from US 25 (Hendersonville Road) to US 25A (Sweeten Creek Road).
- **HD-134524:** Access management with Complete Streets improvements on US 25A (Sweeten Creek Road) from I-40 to Rock Hill Road.
- **HD-134525:** New roadway with Complete Streets improvements (Peachtree Road Extension) from US 25 (Hendersonville Road) to US 25A (Sweeten Creek Road).

City of Asheville Biltmore Avenue & McDowell Street Corridor Study (2021)

The Biltmore Avenue and McDowell Street Corridor Study set out to explore how feasible it would be to improve the bicycling, pedestrian and transit user environment along those two key north-south corridors in Asheville by reallocating some of the travel lanes away from vehicular travel lanes. The goal is to convert these corridors into complete streets.

Biltmore Avenue and McDowell Street are major north-south roadway corridors that connect downtown Asheville and Biltmore Village, while also serving as important gateways to Mission Hospital, Asheville High School, Asheville-Buncombe Technical Community College, and other key regional destinations. Biltmore Avenue and McDowell Street are NCDOT-maintained roadways, with McDowell Street carrying the US 25 designation through the study area.

The study identified existing congestion and roadway user delay issues that are present and are expected to get worse by the year 2045, especially at the southern end of the corridor and in Biltmore Village. When participants were asked about their top transportation issues for Biltmore Avenue and their top transportation issues for McDowell Street corridors, the same issues took the top three spots:

1. Safety: speeding, narrow lanes, visibility
2. Pedestrian realm: narrow sidewalks, sidewalk gaps, lack of safe crosswalks, ADA issues
3. Bicycling conditions: lack of safe bicycle facilities

Traffic congestion was also cited as an issue, more so on Biltmore Avenue and Biltmore Village in general.

Respondents were asked to come up with a future vision for Biltmore Avenue and McDowell Street. Respondents indicated they wanted to see:

- Bicycle and pedestrian improvements to make the corridor safe for non-motorists
- Improved roadway design and traffic management to allow for easier turning and traveling along the corridor
- Slower speeds
- Potential circulator or shuttle service to connect Biltmore Village to Downtown Asheville.

The study's recommendations are centered around three key themes, or pillars, that emerged from the stakeholder engagement process, existing conditions review, and project analysis. These three pillars are: *Connect the Neighborhoods*, *Bike the Biltmore*, and *Keep Biltmore Moving*.

The planning study identified several intersections upgrades, bicycle and pedestrian improvements and additional follow-up studies that could be implemented as stand-alone projects separately from consideration for travel lane reallocation along Biltmore Avenue and McDowell Street. For the purpose of this study report, "reallocation" and "rebalancing" and both used to describe taking away one travel lane to devote that space to bicycle and pedestrian infrastructure or streetscape improvements. This converts the typical 4-lane

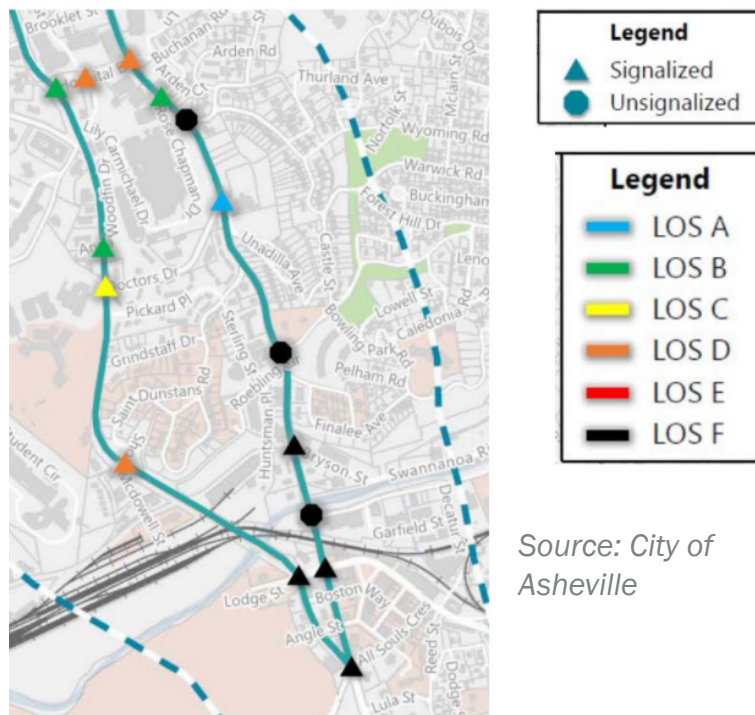
section to an imbalanced cross-section with two travel lanes in one direction and one lane in the other direction. Roadway widening was considered for short segments and for intersection improvements. The study presents three alternatives for travel lane reallocation

- Alternative A: Reallocating one travel lane from Biltmore Avenue from Caledonia Road to Southside Avenue
- Alternative B: Reallocating one travel lane from McDowell Street from Lodge Street to Southside Avenue
- Alternative C: Reallocating one travel lane from Biltmore Avenue and one travel lane from McDowell Street

McDowell Street ties into All Souls Crescent, which meets Hendersonville Road and Vanderbilt Road at a key intersection – perhaps the primary access point to Biltmore Forest. Each of the considered alignments would have a direct effect on general traffic circulation in the Biltmore Village area, but all three have been designed with additional intersection improvements to ensure that potential delay is maintained at manageable levels by 2045. Traffic conditions at All Souls Crescent/Vanderbilt Road/Hendersonville Road are already operating at Level of Service “F”, meaning the intersection currently sees considerable delay and queuing at peak hours (rush hour) in the morning and afternoon. Vehicular Level of Service (LOS) is rated on an “A” through “F” range, with “A” representing free-flow conditions and “F” as stop-and-go or gridlock conditions.

Most intersections in Biltmore Village are currently rated as LOS D-F, and all intersections are projected to be an LOS F by the year 2045. With proposed changes to both McDowell Street and Biltmore Avenue, LOS is projected to improve to a rating of “D” on Lodge Street in Biltmore Village by 2045, but will likely continue to operate at LOS “F” at the Vanderbilt Road entrance to Biltmore Forest. To improve the LOS at the intersection, Vanderbilt Road is proposed to be realigned to a new location south of the intersection (with conversion to right-in/right-out movement); this would impact the Double Tree by Hilton property parking lot. It would also impact Hendersonville Road by creating an additional connection to the roadway. Additionally, a second northbound through lane was analyzed to improve operations at the intersection. The second

FIGURE 6 - BILTMORE & MCDOWELL LOS



Source: City of Asheville

The Biltmore Ave & McDowell Street Corridor Study used pre-COVID travel volumes and assumed an eventual recovery to existing travel patterns and levels. These Levels of Service (LOS) show PM peak conditions predicted for 2045 if no changes are made to the roadways.

northbound through lane is proposed from Lula Street to the All Souls Crescent intersection. The additional through lane would require ROW acquisition extending from All Souls Crescent to Lula Street.

The Corridor Study also suggests studying the feasibility of realigning the existing marked crossing across Hendersonville Road at Vanderbilt Road to the existing island on the southwest corner of the intersection, modifying the island to include channels for pedestrian accessibility, adding a marked crosswalk across the channelized right turn, and adding warning signage. Moving the crosswalk to the “porkchop”-shaped island significantly shortens pedestrian crossing distances, reduces risk to a right-turning vehicle crash, and provides marginal improvements to the overall intersection’s performance.

Additionally, the Corridor Study recommends establishing a Biltmore Village Bicycle Gateway: installing bicycle parking, a micro-mobility station (e.g. e-bikeshare) and wayfinding on the northside of the railroad tracks at Hendersonville Road. This location would serve as a gateway for those on bicycle to dismount and lock their bicycles before entering Biltmore Village on foot given the lack of connected bicycle facilities. The project would likely necessitate coordination with private property owners to identify the most appropriate location. A recommendation for future study is widening the existing sidewalk along All Souls Crescent from Lodge Street to Vanderbilt Road to accommodate bicyclists, providing a connection for cyclists and pedestrians to Vanderbilt Road. Due to the constrained right-of-way, topography, adjacent historic properties, and involvement of multiple stakeholders and jurisdictions, this project would necessitate a detailed follow-up study. While these recommendations do not directly impact Biltmore Forest residents (at least not in the short-term), it does demonstrate the emphasis that the City of Asheville is placing on bicycling and investing in that infrastructure – a service to residents and an acknowledgement of its tourism potential.

Survey responses were not clear in a preference for a particular rebalancing approach, but more did favor focusing on Biltmore Avenue first, then considering changes to McDowell Street. It should be noted that some respondents did not support the proposed changes and urged the City to address more urgent concerns first. While many voiced support for

FIGURE 7 - BILTMORE VILLAGE RECOMMENDATIONS



The Biltmore Ave & McDowell Street Corridor Study recommends improvements to several streets in Biltmore Village.

more bicycle and pedestrian safety, there were concerns about making congestion worse by reducing speeds and taking away vehicular lanes in exchange for bicycle infrastructure. The study recommends additional follow-up studies to explore elements that are more challenging to implement or require additional consideration before moving to construction and implementation. These future studies are important because they will detail implementation strategies, timelines, and budgets.

The following strategies from the Corridor Study focused on alternative transportation modes and Transportation Demand Management (TDM) for the Biltmore Estate, which could impact traffic in Biltmore Village and affect access to Biltmore Forest.

- Review ticketing location for needed modifications; since the Biltmore Estate ticketing point has been moved to the interior, there is a significant length of vehicular storage already allocated on site.
- Configuration of Biltmore Estate driveway travel lanes is recommended for further study to examine if restriping to add an additional exit lane might be feasible (to help the traffic exiting the Estate while making sure the entryway is easy to navigate for visitors entering Biltmore Estate).
- TDM measures that could be considered include the following:
 - Consider Biltmore Estate shuttles that would travel outside of the Estate to pick up visitors at downtown hotels and off-site parking areas.
 - Provide off-peak discounts to incentivize visitors to tour the Estate outside of peak days (pricing differences by season are already in place).
 - Allow bicycling and walking access to the estate for paid visitors, with incentives (such as discounted admission or other benefits).
 - Separate the cost of parking on Biltmore Estate grounds from the ticket fee.
 - Set up reserved admission times (if not already in place).
 - Continue to expand on-site accommodations/hotel options.
- Review Approach Road connection to Meadow Road for needed upgrades, to allow easier exit for peak demand periods via Meadow Road.
- Consider upgrading western access points from NC 191 (Brevard Road) at Jones Farm Road and/or Long Valley Road to allow visitors to utilize western access for key peak demand events, taking advantage of the existing bridge over the French Broad River near the Biltmore Estate Winery.

If the MPO, NCDOT, and the City of Asheville move ahead with considerations for the Biltmore Avenue and McDowell Street corridors, the Town of Biltmore Forest would benefit from representation at meetings throughout the planning and design processes. Improving pedestrian safety and access at the Vanderbilt Road/All Souls Crescent/Hendersonville Road intersection would benefit Biltmore Forest residents and anyone staying at one of the hotels in Biltmore Village or enjoying the other businesses. However, reconfiguring that intersection altogether could have a more drastic impact to Biltmore Forest residents and should be weighed with consideration to the importance of that access point to the town.

City of Asheville Hendersonville Road Corridor Study (2021)

The Hendersonville Road Corridor Study stakeholder groups identified key themes, including access management, network connectivity, mobility & safety, and mitigating the impacts from I-26 construction. Following these themes, the Corridor Study based its recommendations on several core principles:

- Principle 1 - Safety for All: Whether on two feet or two wheels, the notion that the corridor should be safe for everyone to move across and through is essential.
- Principle 2 - Choices for All: The vulnerability of bicyclists and pedestrians is high compared to automobile drivers and passengers. It is better to create an environment where walking and biking are not only encouraged but are the priority.
- Principle 3 - A Better Fit for All: Hendersonville Road can be transitioned into a Complete Street through re-purposing asphalt, better access management and development standards.
- Principle 4 - A Place (and Space) for All: Creating an aesthetic environment and enhanced beautification through the use of improved streetscaping details and repair/maintenance is vital to this objective. Just as important is creating attractive and convenient destinations along the corridor through placemaking and quality Urban design principles.

Survey respondents indicated a strong preference for a mix of uses in future development and redevelopment along the corridor. Respondents indicated the following transportation improvements for Hendersonville Road in order of preference:

1. Pedestrian facilities & sidewalks
2. Bicycle facilities
3. Greenways & trails
4. Intersection & traffic signals
5. Transit routes & stops
6. Connections to other roads
7. Road & bridge maintenance
8. Park-and-ride lots

FIGURE 8 - HENDERSONVILLE ROAD CORRIDOR STUDY GOALS

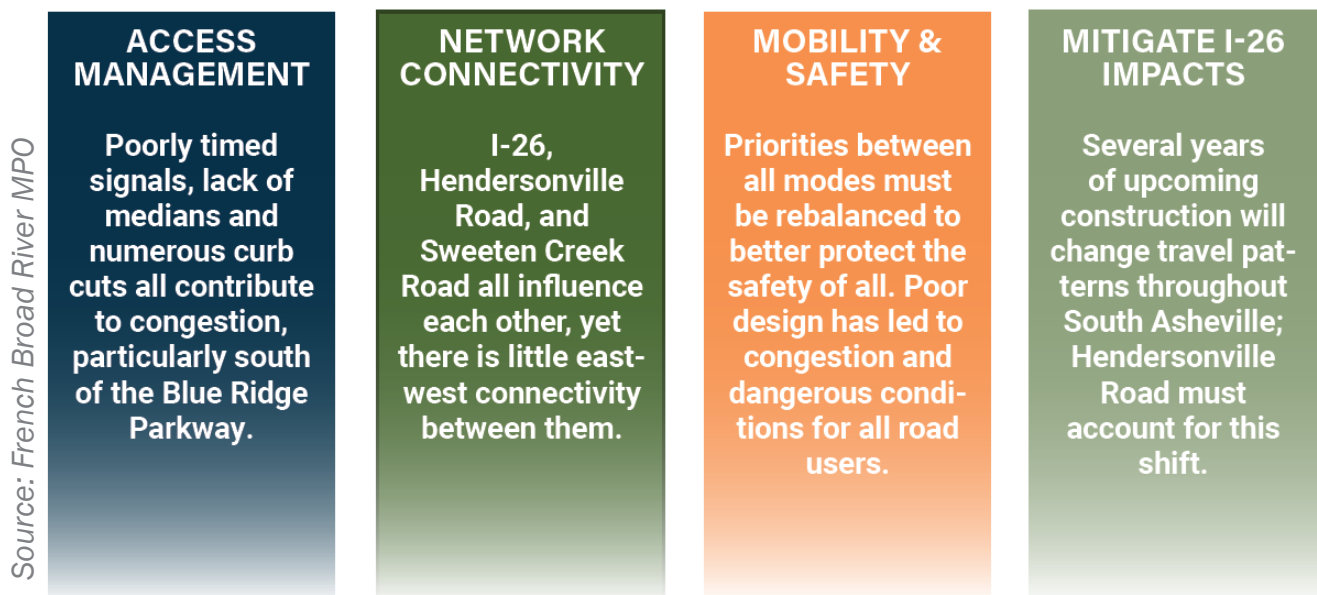


FIGURE 9 - HENDERSONVILLE ROAD CORRIDOR STUDY PRIORITIES

The Safety of All Users is Paramount.

Reducing crashes and slowing speeds is a must. High quality pedestrian crossings, bike facilities street trees for enclosure, and a consistent corridor cross-section are vital.

Right-size Hendersonville Road.

Repurpose asphalt, dedicate space to planted medians, control left turns, better access management treatments all improve operations and more effectively use precious curb space.

Pedestrians, Transit Riders & Bicyclists must be a Priority.

Closing sidewalk gaps, context-sensitive bicycle treatments, sidepaths, and dedicated transit facilities are some of the treatments recommended.

Support surrounding uses with attractive urban design.

Spur reinvestment and development with quality design and placemaking opportunities to maximize return on investment.

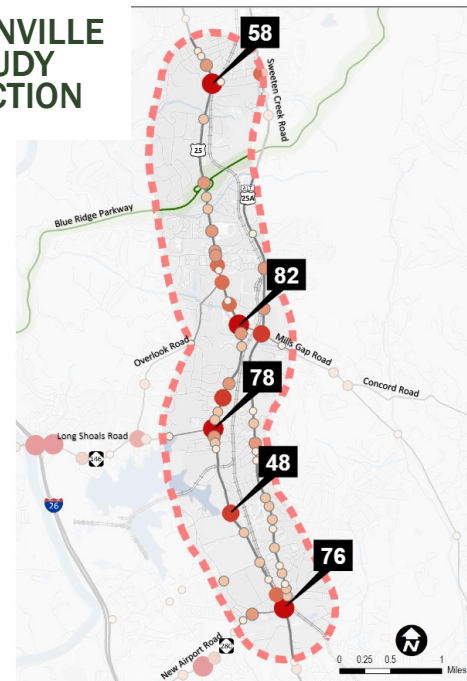
Source: French Broad River MPO

The vision for this corridor places Hendersonville Road as the anchor for a vibrant, transit-supportive South Asheville. Plans call for a truly multi-modal workhorse corridor, moving users to and throughout South Asheville and the city-at-large through balanced means including motor vehicles, transit, bicycle and pedestrian. With walkable, higher-density communities lining the corridor, Hendersonville Road facilitates the connections between people and place that will realize Asheville’s greater community vision.

The Corridor Study notes that vehicle Level of Service is rated as “E” at the Blue Ridge Parkway access point on Hendersonville Road, particularly between Carolina Day School and Racquet Club Drive, where “high traffic volumes and poor access management lead to queuing and travel delays during peak demand periods.” With residential communities and the high-traffic commercial destinations further south, traffic entering from the Blue Ridge Parkway, the high number of uncoordinated signals and driveways are likely contributors to the high congestion in this area.

FIGURE 10 - HENDERSONVILLE ROAD CORRIDOR STUDY CRASHES BY INTERSECTION

- Crash rate **148%** the state average crash rate for similar
 - US Highway – Urban 4L w/CLTL
- Top five intersections:
 - Mills Gap Road (82)
 - NC 146 Long Shoals Road (78)
 - NC 280 / US 25 Alt (76)
 - Royal Pines Drive (48)
 - Rock Hill Road (58)
- **49%** are rear-end crashes
- **29%** are turning crashes



Source: French Broad River MPO

The Hendersonville Road Corridor Study looked at crash rates along the corridor, as well as sidewalk gaps and transit access, as an indication of unsafe design for current land use and transportation needs.

FIGURE 11 - KEY RECOMMENDATIONS (HENDERSONVILLE ROAD CORRIDOR STUDY)

<p>1 Install a planted median from Blue Ridge Parkway to Long Shoals Road.</p>		<p>2 Build two-lane roundabouts at Haywood Road & Lambeth Drive.</p>
	<p>3 Build a 10-foot sidepath from Rock Hill Road to the Walmart Supercenter.</p>	
<p>4 Make street-scape improvements from Lambeth Drive to Davis Grey Drive.</p>		<p>5 Provide financial incentives to businesses & developers to reinvest along Hendersonville Road.</p>

Source: French Broad River MPO

Recommendations for this area include improvements to the Hendersonville Road intersections with Eastwood Road and the Carolina Day School main entrance. This would include high visibility crosswalks, pedestrian signal countdowns, street trees, ADA curb ramps, and pedestrian-scaled lighting. The study also recommends a planted median along this stretch of Hendersonville Road. The study recommends a right-in/right-out configuration for both Blue Ridge Parkway access points. This would limit left-turn movements, which are often dangerous.

General policies for the Hendersonville Road corridor are to create higher density housing around urban/commercial centers, require plantings and landscaping for all new development, limit the number of driveways, and identify greenway opportunities.

FIGURE 12 - BLUE RIDGE PARKWAY RAMPS (HENDERSONVILLE ROAD)



The Hendersonville Road corridor is envisioned as a boulevard (11'-12' planted median with limited left turns), keeping traffic moving smoothly with fewer conflict points. Bicycle accommodations are proposed along the western side with a buffered 10-foot multiuse path. Other improvements include ADA curb ramps at all intersection legs, pedestrian lighting and vehicular streetlamps along both sides, and streetscape features (community banners, street trees, and stormwater drainage).

Five core elements were identified to initiate the implementation process over the next five years:

1. Install a planted median from Blue Ridge Parkway to Long Shoals Road.
2. Build two-land roundabouts at Haywood Road and Lambeth Drive.
3. Build a 10-foot sidepath from Rock Hill Road to the Walmart Supercenter.
4. Make streetscape improvements from Lambeth Drive to Davis Grey Drive.
5. Provide financial incentives to businesses and developers to reinvest along Hendersonville Road.

Most recommended improvements focus on pedestrian crossings, a landscaped median, access management, and some bicycle and transit improvements. Total estimated design and construction costs for this 5-mile section of Hendersonville Road are approximately \$22 million.

NCDOT STIP (2020-2029)

The North Carolina Department of Transportation State Transportation Improvement Program (STIP) is a 10-year State and Federal-mandated plan that identifies the construction funding for and scheduling of transportation projects throughout the state. For the Biltmore Forest area, it is administered through the French Broad River MPO. While there are many planned projects for the Asheville area, these will have the most direct impact on Biltmore Forest and its residents.

- **STIP W-5813D:** Install curb ramps, sidewalk, and signal upgrades at the intersections of Hendersonville Road with All Souls Crescent and Lodge Street. Scheduled for construction in 2022.
- **STIP U-4739:** Widen Amboy Road and Meadow Road (SR 3556) to multi-lanes with a new bridge over the French Broad River. Construction is scheduled for 2029.
- **STIP U-5832:** Widen Swannanoa River Road (NC 81) from Biltmore Avenue (SR 3214) to South Tunnel Road (US 74A). Right-of-way acquisition scheduled for 2029.
- **STIP I-4400, I-4700:** Interstate 26 widening from Brevard Road in Asheville to US64 in Hendersonville.
- **STIP U-2801A:** Sweeten Creek Road from Rock Hill Road to Hendersonville Road. Planned for construction in 2027, this effort will see Sweeten Creek Road widened to four lanes, with a landscaped median, sidewalks and a shared-use path intersecting Hendersonville Road.
- **STIP U-5834:** Planned for construction in 2024, will widen Mills Gap Road to four lanes, with a landscaped median and sidewalks intersecting Hendersonville Road just south of Gerber Road.
- **STIP I-5889B, I-6063:** Pavement rehabilitation on I-40.

Some STIP projects will cause long construction delays and reroute traffic, while others will have a relatively quick, unimpactful turnaround. NCDOT funding is often delayed and, as such, some of these projects might be behind schedule or removed from the STIP list altogether. Following the planning process for state-funded transportation projects is a good idea for any municipality.



Where the French Broad River West Greenway meets Haywood Road is the only place in the City where a greenway, an on-road bicycle facility, sidewalks, and a bus stop converge at one location. This is an example of a complete multimodal network and the City of Asheville's vision for areas like Biltmore Village.

City of Asheville Greenway, ADA, Pedestrian Plan (2022)

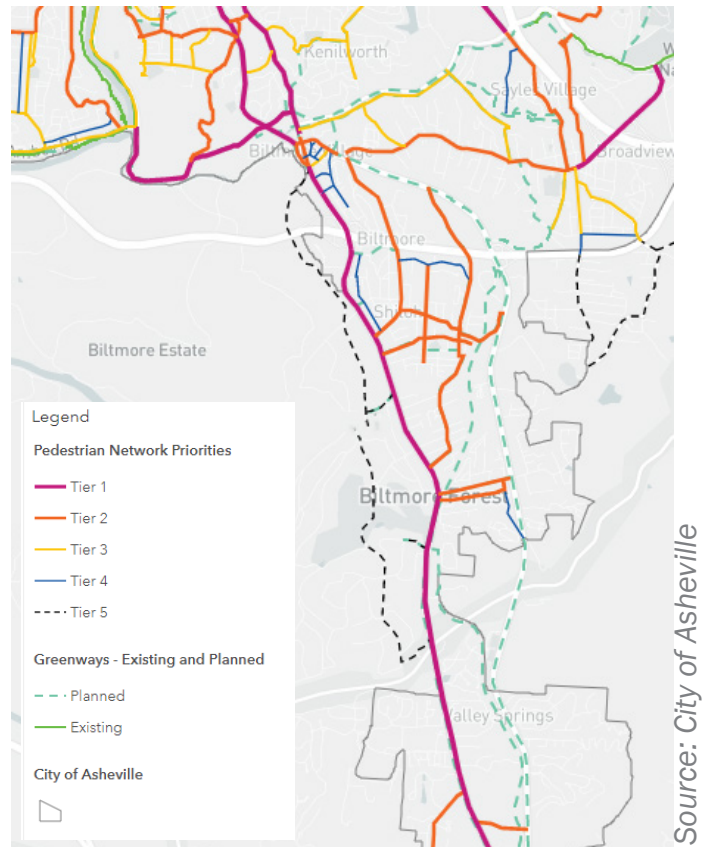
The City of Asheville is in the midst of a large project to update the City's Greenway Plan (G), ADA Transition Plan* (A), and Pedestrian Plan (P) (**By ADA transition the plan is specifically looking at accessibility improvements within the rights-of-way on Asheville's street network*). The planning process, known as Close the GAP, will identify a network of the pedestrian, greenway, and accessibility networks for our community as well as programs and policies to support it. These plans were combined because the overall network will be stronger if greenways, ADA transitions, and pedestrian networks are planned at the same time.

This plan identified several corridors in Biltmore Forest that would benefit from pedestrian infrastructure:

- A continuous sidewalk or off-street path along Vanderbilt Road and Stuyvesant Road from All Souls Crescent to the Blue Ridge Parkway ramp – Tier 5.
- Robust sidewalks along the length of Hendersonville Road (including the Biltmore Forest side) – Tier 1.
- A short greenway trail segment along Busbee Road from Vanderbilt Road to Hendersonville Road.
- A short sidewalk or trail segment along Eastwood Road from Hendersonville Road to Hilltop Road – Tier 5.
- A rail-to-trail or rail-with-trail greenway along the existing railroad tracks roughly parallel to Hendersonville Road, with access at the Eastwood Road intersection.

The “Tier” system is a prioritization method, whereby Tier 1 is the highest priority. So, while Hendersonville Road ranks highly for needed pedestrian infrastructure, Vanderbilt Road and Stuyvesant Road are listed as Tier 5. This suggests that while some Biltmore Forest corridors are recommended for sidewalk and greenway improvements, they are not a high priority overall.

FIGURE 13 - GAP PLAN PRIORITIES



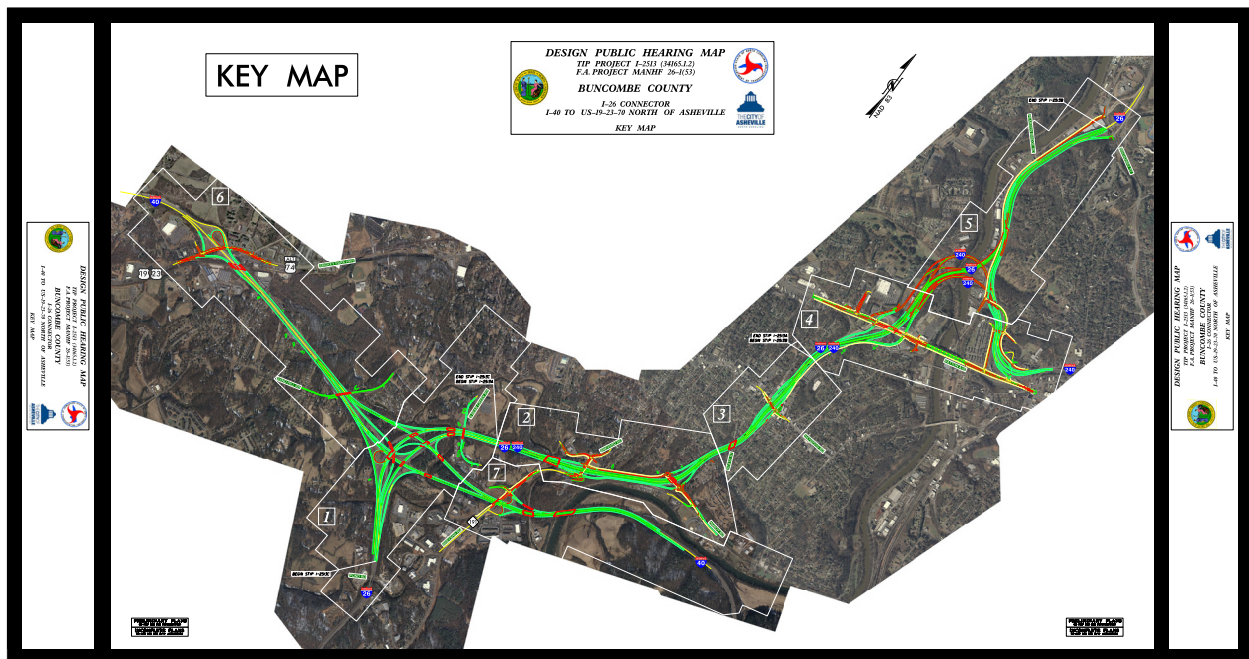
The Vanderbilt/Stuyvesant corridor is slated as a Tier 5 pedestrian priority, while greenways are proposed along Busbee Road and Eastwood Road to enable residents to safely access Hendersonville Road amenities on foot.

Key Takeaways from Existing Plans

The City of Asheville is in the midst of continued growth, and regional transportation systems will be affected. This includes Hendersonville Road, which all of Biltmore Forest's access points (not counting the Blue Ridge Parkway). The City has adopted the Hendersonville Road Corridor Study and its recommendations to improve that road's multimodal infrastructure and access management. The end result for the segment adjacent to Biltmore Forest will likely be a boulevard-style roadway, with a planted median. This means that left turns out of Busbee, Cedarcliff, Eastwood, and others will be limited due to safety concerns and that traffic should flow more freely between signalized intersections. Some key "nodes" at main intersections are envisioned as more urban areas, with a walkable mixed-use aesthetic. Overall, a Hendersonville Road improvement project will help drivers make safer decisions while having only a minimal effect on Biltmore Forest residents' travel patterns. People may have to turn at a traffic signal, but this shift is unlikely to cause much consternation.

Ongoing and future large-scale construction projects may increase traffic on Hendersonville Road for some time, as I-26 and Sweeten Creek Road are widened and the untangling of I-26 from Patton Avenue and I-240 begins, people may decide to drive more frequently on Hendersonville Road - indeed, there are not many other workable alternatives. So, Biltmore Forest residents need to be aware that delays and closures in the Asheville vicinity could impact their daily commute, school, and errands. However, each of these roadway projects are designed to alleviate congestion, improve mobility, and help create a more functional system overall for projected population growth. Post-construction transportation should be better for all users.

FIGURE 14 - I-26 CONNECTOR PROJECT MAP (NCDOT)

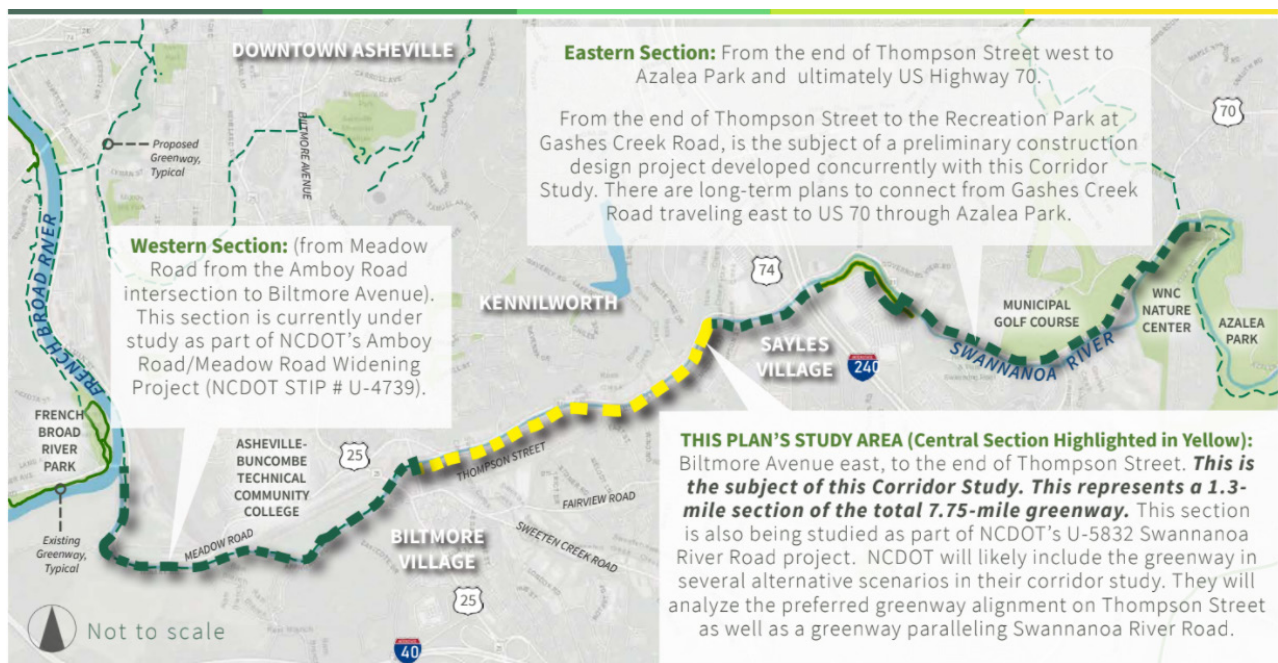


NCDOT's Interstate projects will be under construction for years, with closures and work zones affecting traffic throughout the area for a decade or more.

Biltmore Village is likely to see several changes in the coming years, though nothing near-term. The City of Asheville adopted the Biltmore Avenue & McDowell Street Corridor Study, which seeks to improve the efficiency of those roadways and enable better connectivity between Biltmore Forest and downtown Asheville, with the High School, A-B Tech, and Mission Hospital. There are likely to be pedestrian improvements for Biltmore Village in the short-term, such as safer crossings, longer signal timing, and some sidewalk and ADA accessibility treatments. The area is envisioned as a “Town Center”, with accommodations for walking and bicycling, and potentially even transit on the existing rail lines. As the City and NCDOT develop plans for the web of streets in Biltmore Village, this area should become safer to walk around and through traffic should see improvements as well.

The City is moving forward with plans for a greenway along Meadow Road and the Swannanoa River, which will link Biltmore Village to a broader network of bicycle commuters and recreational trail users. Visitors staying at nearby hotels will be able to walk to the River Arts District and people living in West Asheville would be able to safely get to a job on Tunnel Road by bike. This could spur additional development, with more hotels and apartments nearby, and more density in Biltmore Village.

FIGURE 15 - SWANNANOA GREENWAY OVERVIEW MAP



The future Swannanoa River Greenway could have a big impact on Biltmore Village. The City is swiftly moving forward with the Eastern Section and working with NCDOT to design the Central and Western sections.

These peripheral plans will affect Biltmore Forest over the coming years, but are unlikely to have a dramatic effect on transportation within the town. Construction on Hendersonville Road would have the most direct impact and residents should keep abreast of plans for that work, if funded.

3



CHAPTER 3: Public Input

The Survey

The project team developed a community survey to garner public input from residents about transportation in Biltmore Forest. The survey was made available both in print and online versions and advertised by the Town alongside the survey for the Town's Comprehensive Plan project. Hard copies were available at Town Hall, while a link to the online survey was featured prominently on the Town's website. The survey was available for one month between November and December 2021, resulting in 246 responses (approximately 15% of the total population).

Survey questions focused on perceptions about different modes of transportation in Biltmore Forest, ideas about safety, and commuting patterns. Twenty-four questions were developed, with inquiries about residents' habits, preferences, and challenges, along with a few demographic questions and space to address additional topics that were not covered. Questions were structured so that responses provide the Town with a holistic picture of residents' transportation perceptions and concerns to identify trends and work towards an overall vision for the future of Biltmore Forest's transportation system.

Once the online survey was closed, the project team input all hand-written data from hard copies that had been dropped off at Town Hall. The responses were downloaded into a summary report and reviewed in their entirety, including all comments, to find commonalities, interesting ideas, and support for possible changes to the transportation system.

This information was pivotal in the analysis of existing conditions and formulation of recommendations for this study. Survey responses are provided on the next several pages.

TOWN of Biltmore Forest Town-Wide Transportation Study

PUBLIC SURVEY

We want to know your thoughts about transportation in Biltmore Forest. How do you currently use the streets? What are your concerns about safety? What should be the Town's priorities for infrastructure investments? Help us identify issues and ideas to promote safe, efficient transportation for all roadway users.

1. How do you typically use the Town's streets? (Select all that apply)

- By car
- On foot
- By bicycle
- On transit or vanpool services
- Other: _____

2. Do you feel safe driving in Biltmore Forest?

- Never
- Occasionally
- Often
- Always

3. What does it mean to feel safe when driving?

4. Which access points do you use most often on your way **OUT** of Biltmore Forest? (Rank in order of frequency of use where 1 is the intersection used the most)

- Vanderbilt Road at All Souls Crescent
- Cedar Cliff Road at Hendersonville Road
- Busbee Road at Hendersonville Road
- Brownstone Road at Hendersonville Road
- Eastwood Road at Hendersonville Road
- Ridgefield Place at Hendersonville Rd
- Blue Ridge Parkway ramp at Hendersonville Rd
- Valley Springs Road at Hendersonville Road

5. Which access points do you use most often on your way **INTO** Biltmore Forest? (Rank in order of frequency of use where 1 is the intersection used the most)

- Vanderbilt Road at Hendersonville Road
- Cedar Cliff Road at Hendersonville Road
- Busbee Road at Hendersonville Road
- Brownstone Road at Hendersonville Road
- Eastwood Road at Hendersonville Road
- Ridgefield Place at Hendersonville Rd
- Blue Ridge Parkway ramp at Hendersonville Rd
- Valley Springs Road at Hendersonville Road

6. Do you avoid traveling on any specific roadways in Biltmore Forest due to safety or congestion issues? If so, please specify the area and the concern.

7. Do you feel that construction/landscaping vehicles pose a specific concern for roadway safety? If so, please specify your concern.

Page 1 of 3

8. Would you support having a roundabout at key intersections in town?

- Yes
- No
- I would need more information to decide.

9. How often do you walk in town? (This includes use of a mobility device such as a wheelchair)

- Everyday
- Once or twice a week
- A few times a month
- Rarely
- Never

10. When you walk, which streets in Biltmore Forest do you walk along the most?

11. For what purpose(s) do you walk in Biltmore Forest? (Select all that apply)

- Recreation/exercise
- Walk the dog
- Commuting (work, school, etc.)
- Shopping/dining/errands
- Visiting neighbors
- Other: _____

12. Which of the following destinations do you walk to from home? (Select all that apply)

- Work
- House of a friend/family
- School/child's school
- Church/civic meeting
- Neighborhood parks
- Grocery
- Country Club
- Grocery/Shopping/dining/errands on Hendersonville Road
- Transit stop on Hendersonville Road
- Other: _____

13. Do you feel safe walking in Biltmore Forest?

- Never
- Occasionally
- Often
- Always

14. What does it mean to feel safe when walking?

15. What factors discourage you from walking in Biltmore Forest? (Select only those that apply to you and rank them where 1 is the most discouraging factor)

- Lack of sidewalks/paths
- Uneven surfaces/cracks/crossings
- Few destinations within walking distance
- Dangerous/distracted motorist behavior
- Heavy or high-speed traffic
- Construction/landscaping vehicles
- Lack of street lighting
- Personal safety concerns
- Other: _____

16. Which of the following improvements would encourage you to walk more often? (Select all that apply)

- Designated walking trails
- Lateral access to Hendersonville Road
- Traffic calming street designs
- Improved visibility/lighting
- Other: _____

17. What is your level of support for a natural surface (unpaved) trail system for Biltmore Forest residents?

- Strongly Support
- Somewhat Support
- Neutral
- Somewhat Oppose
- Strongly Oppose

Page 2 of 3

18. How often do you ride your bicycle in town?

- Everyday
- Once or twice a week
- A few times a month
- Rarely
- Never

19. Which areas of focus are most important for a successful roadway network in Biltmore Forest? (Rank in order of priority where 1 is the most important)

- Maintaining trees and landscaping along streets
- Pursuing traffic calming methods
- Ensuring safety for all users (pedestrians, bicyclists, cars/trucks)
- Improving access to Hendersonville Road

20. Is there something you would like to fix about transportation/traffic that wasn't covered in previous questions?

21. How old are you?

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75+

22. If you work outside the home, how do you commute most days?

- Drive
- Walk
- Bicycle
- Bus

23. If you have children in the household, how do they get to/from school most days?


- Drive
- Walk
- Bicycle
- Bus


24. How did you hear about this survey?

- Saw a flyer
- Word of mouth
- Town website
- Town newsletter/mailer
- Other: _____

THANK YOU!

If you would rather complete this survey online, use the QR codes below or type in the corresponding Web address. Please also use the online mapping tool to provide specific contextual information.

Online Survey: 

Online Mapping Tool: 

<https://survey.alchemer.com/s3/6594809/Biltmore-Forest-Transportation-Study>

<https://wikimapping.com/Biltmore-Forest-Transportation-Study.html>

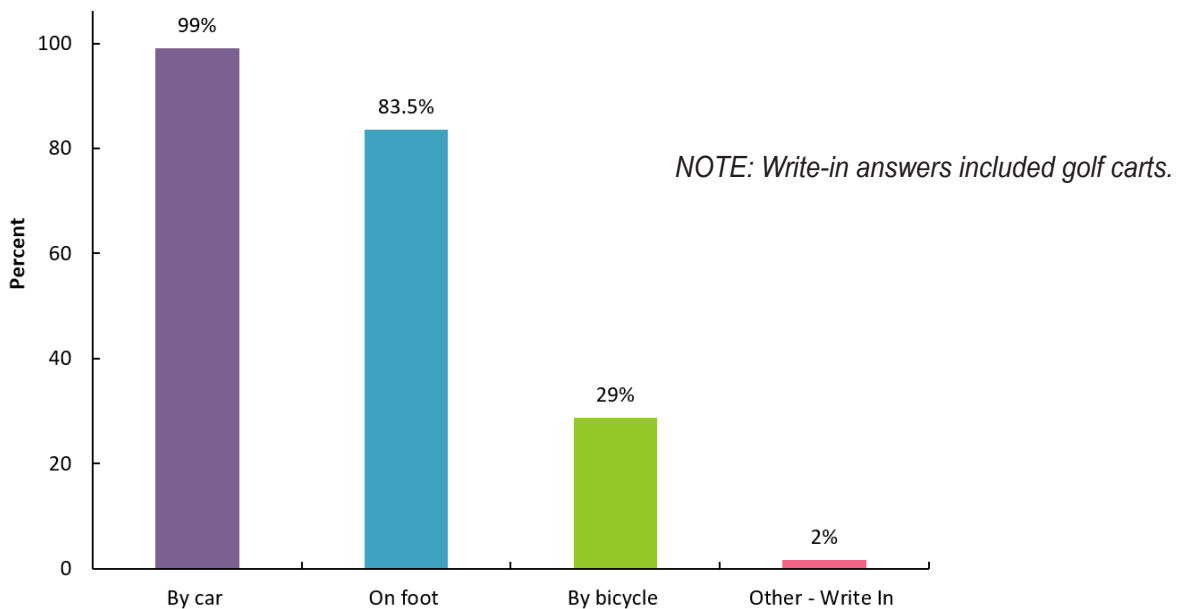
Page 3 of 3

FIGURE 16 - PUBLIC INPUT FLYER

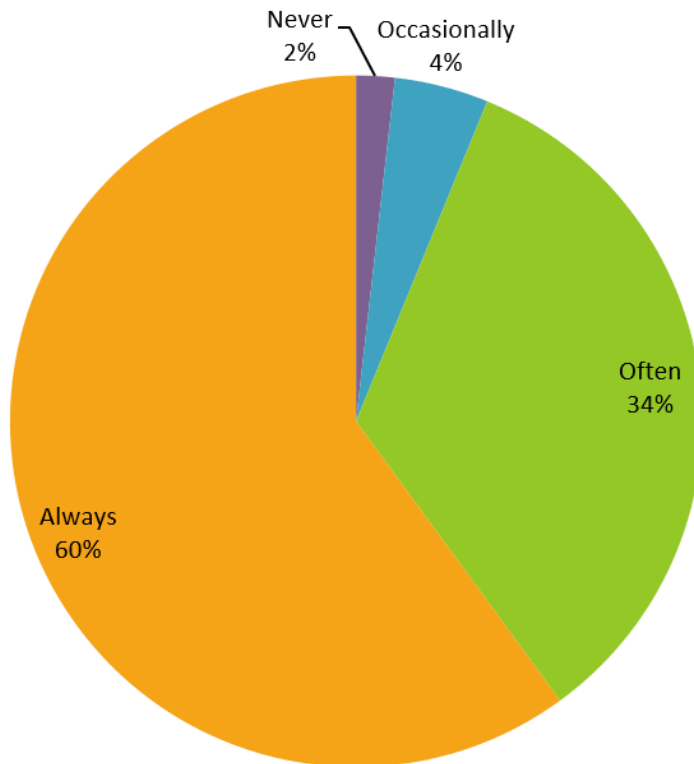


This flyer was used to promote the survey and online mapping tool. Over a one month period, 246 people took the survey.

1.) How do you typically use the Town’s streets? (select all that apply)



2.) Do you feel safe driving in Biltmore Forest?



94%
of survey
respondents
often or always
feel safe driving
in town.

3.) What does it mean to feel safe when driving?

- Lower speeds. Other drivers are generally respectful of the speed limit.
- For other drivers to drive predictably and safely.
- The police will come to help you if you have car trouble.
- Everyone follows traffic laws and signage.
- Roads are clean, well maintained, traffic laws are obeyed by other drivers, road design encourages attentive driving. Road signs are visible and clear.
- Other drivers are safe and responsible, and the speed limits are appropriate.
- Having pedestrians walking/running on the correct side of the street.
- All users of streets being alert, safe, and considerate.
- Speed is slow, cars keeping a safe speed. Proper signage.
- Knowing the police are monitoring the Town and enforcing speed limits.
- Cars AND pedestrians follow rules of the road.
- The streets are in good condition and well-marked with painted lines and adequate signage. I would say that some of them could use more lighting.
- Safe when driving means that all cars, bikers, walkers and impediments to traversing the streets can be seen. That is not always the case.
- Traffic laws are obeyed. Traffic lanes are clear of parked vehicles and debris. Bicyclists ride single file. Pedestrians walk on or near road shoulder.
- Slow speeds. Road shoulders are even with road.
- You have to really watch at 4 way stops. People don't always stop.

NOTE: This represents a sample of responses for Question 3. For a complete list of write-in responses, please see the Appendix.

4.) Which access points do you use most often on your way OUT of Biltmore Forest? (Ranked in order of frequency of use where 1 is the intersection used the most)

Item	Overall Rank	Rank Distribution
Busbee Road at Hendersonville Road	1	
Vanderbilt Road at All Souls Crescent (Biltmore Village)	2	
Blue Ridge Parkway ramp at Hendersonville Road	3	
Browntown Road at Hendersonville Road	4	
Eastwood Road at Hendersonville Road	5	
Cedarcliff Road at Hendersonville Road	6	
Ridgefield Place at Hendersonville Road	7	
Valley Springs Road at Hendersonville Road	8	


5.) Which access points do you use most often on your way IN to Biltmore Forest? (Ranked in order of frequency of use where 1 is the intersection used the most)

Item	Overall Rank	Rank Distribution
Vanderbilt Road at All Souls Crescent (Biltmore Village)	1	
Busbee Road at Hendersonville Road	2	
Blue Ridge Parkway ramp at Hendersonville Road	3	
Browntown Road at Hendersonville Road	4	
Eastwood Road at Hendersonville Road	5	
Cedarcliff Road at Hendersonville Road	6	
Ridgefield Place at Hendersonville Road	7	
Valley Springs Road at Hendersonville Road	8	

6.) Do you avoid traveling on any specific roadways in Biltmore Forest due to safety or congestion issues? If so, please specify the

NOTE: This represents a sample of responses for Question 6. For a complete list of write-in responses, please see the Appendix.

- I am not comfortable walking or riding bicycle on Stuyvesant. We use Frith.
- When walking I feel a little weary about (a) the section of Vanderbilt between Town Hall and Rosebank Park, and (b) the section of Stuyvesant near the county club.
- Avoid Blue Ridge parkway at Hendersonville Rd. 5-6 PM
- Eastwood road is too congested, so yes, I avoid it.
- Vanderbilt Rd (between Biltmore Village and Town Hall) isn't a safe place to walk.
- Avoid Stuyvesant because of excessive speed bumps.
- Exiting the Forest from Eastwood Rd at peak hour is a nightmare.
- Left Exiting Browntown Rd. Due to traffic. Cedarcliff entrance/exit due to visibility and exposure to Hendersonville Rd. Traffic.
- Turning left off Hendersonville Rd. (while headed North) onto the Blue Ridge Parkway is a very dangerous venture.
- The light at Valley Springs is extremely long when leaving Biltmore Forest. Currently only 4 cars can safely traverse the intersection.
- I don't make a left from Cedarcliff onto Hendersonville Road.
- Valley Springs Road and Chauncey Circle has no stop sign.
- The Deerfield - Browntown intersection is particularly unsafe because it is a blind intersection, on a curve, over the crest of a hill
- Walking on Browntown, Busbee and Stuyvesant is dangerous.
- I don't turn left from Browntown because its safer to go to Busbee.
- I avoid turning from Chauncey Circle onto Valley Springs from the SW corner because of poor visibility of traffic approaching from the left.
- I avoid walking on Busbee between Vandy and HVL Rd, and Stuyvesant from #1 to top of that hill. Blind due to always-overgrown vegetation.
- I avoid the intersection of Cedarcliff and Hendersonville Road when I am going out. The sign says no right turn and the left turn feels dangerous to me.
- The Vanderbilt Stuyvesant intersection is dangerous and needs 4 way stop signs. Vanderbilt at Busbee; Stuyvesant at Hilltop; Left turn of Stuyvesant getting to Hendersonville Rd; Curve of Stuyvesant Road by Park
- Vanderbilt Rd south from Biltmore Village is dangerous for cyclists because cars/trucks pass on the curves.
- Don't like walking on Busbee--need sidewalk from Vanderbilt to Hendersonville Rd
- Cedarcliff Road @ Hendersonville Road--difficult in and out during peak traffic.
- Eastwood in the late afternoon - light takes a long time w not all cars clearing the light.
- Turning left onto Hendersonville Rd from Browntown during higher traffic times.
- Avoid going in and out Ridgefield due to traffic congestion, safety.
- I try to avoid turning left onto Hendersonville Rd from Browntown - for both the sanity of those behind me as well as my own safety.
- I walk around town quite often and, depending on the time of day, will avoid Stuyvesant and Vanderbilt due to heavy traffic and speeding vehicles.
- Don't use cedar cliff to exit to Hendersonville Rd....its dangerous.
- Browntown Road has become a nightmare to exit because we allow left hand turns! We tend not to walk on Busbee, Vanderbilt, or Stuyvesant

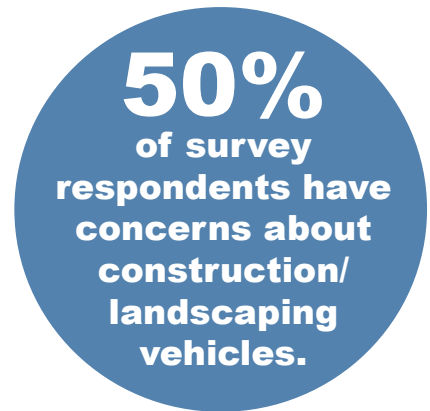


35%
of survey
respondents stated
that they do **NOT**
avoid any specific
roadways.

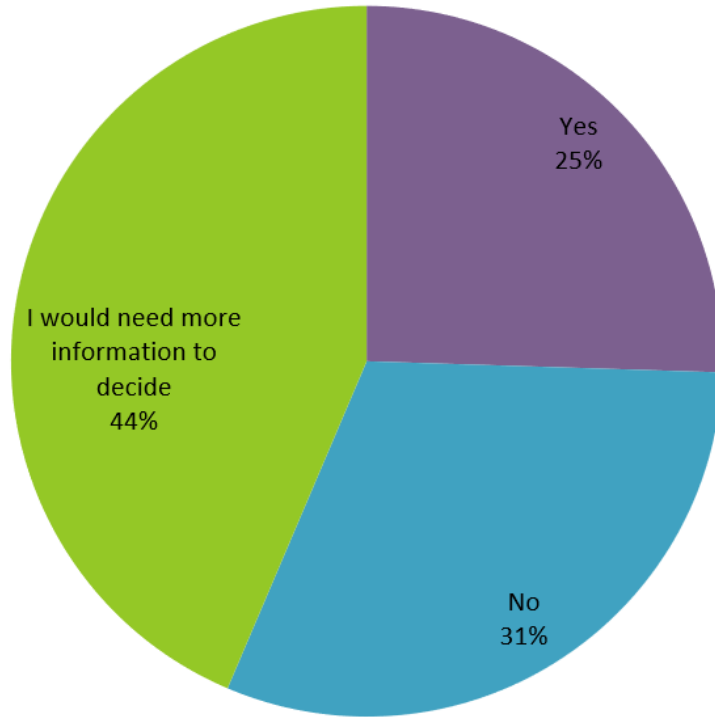
7.) Do you feel that construction/landscaping vehicles pose a specific concern for roadway safety? If so, please specify your concern.

NOTE: This represents a sample of responses for Question 7. For a complete list of write-in responses, please see the Appendix.

- They are often on the road but the “forest” needs care they provide.
- These are indeed the greatest hazards, but I don’t think there’s a grand solution to them except talking to them when they’re particularly poorly parked.
- Only when they park in the roadway on a blind turn
- Yes! They park on the street while working on homes which hinders visibility. They also drive way too fast.
- If they’re parked along a major road like Vanderbilt, yes. This could be mitigated by better use of reflective triangles.
- Of course with some narrower roadways one must be careful when passing the commercial vehicles, but that is not an unreasonable requirement.
- Keep police patrolling for problematic areas instead of some new ordinance.
- I don’t feel that construction vehicles pose a roadway safety issue but I wish construction traffic entering the Ramble wouldn’t pass through town.
- Landscape more than construction. Trucks with trailers should park in a driveway.
- The worst streets are where houses are closer together.
- Yes. For instance when landscapers are blowing leaves they have on ear protectors and cannot hear when traffic is coming.
- There should be a limit to the number of constructions vehicles on site at any one time. I’ve counted 15 trucks parked around a new construction.
- Yes. I would like to see warning markers placed early on roadways.
- No and their presence is a necessity.
- Rarely, there are landscaping vehicles with trailers blocking significant parts of lanes, but for the most part I don’t think they are a big concern
- Overall, not in particular, but from time to time I feel that they could have been parked in a less obstructive location and away from blind intersections - they should also set out traffic cones or other warnings for approaching traffic. Most appear more considerate than the rest of traffic in my experience
- Yes, at times. Some go too fast, but also some go very slowly and back up traffic. Some are considerate and pull over to let traffic pass. Also, some who are working after dark need to provide more light and reflectors so that drivers can see them.
- Construction/landscape vehicles have an important role in Biltmore Forest. They usually have to occupy a lane. Yes, these vehicles block appropriate two way traffic and make it difficult to see oncoming traffic. Also, pose a threat to walkers forcing them to walk on the wrong side of the road.
- There are times when roads can be completely blocked by construction and landscaping vehicles making it difficult if not impossible to pass. More importantly it makes it difficult for emergency vehicles.
- Landscaping vehicles aren’t an issue for me since they are in and out. Construction vehicles are often overwhelming by their sheer number and length of presence.
- I respect these workers and they tend to be very careful and thoughtful.

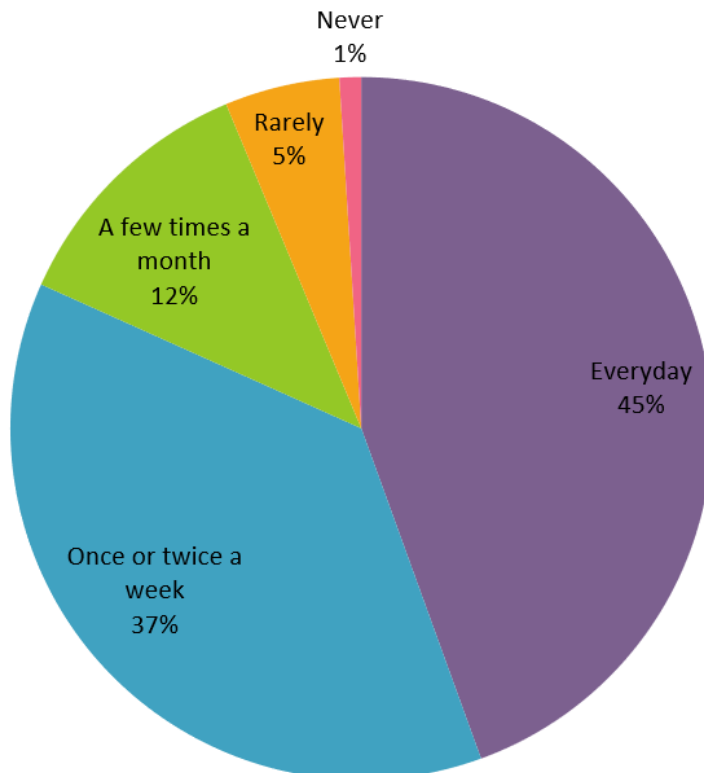


8.) Would you support having a roundabout at key intersections in town?



1/3
of survey
respondents don't
like the idea of
roundabouts in
Biltmore Forest.

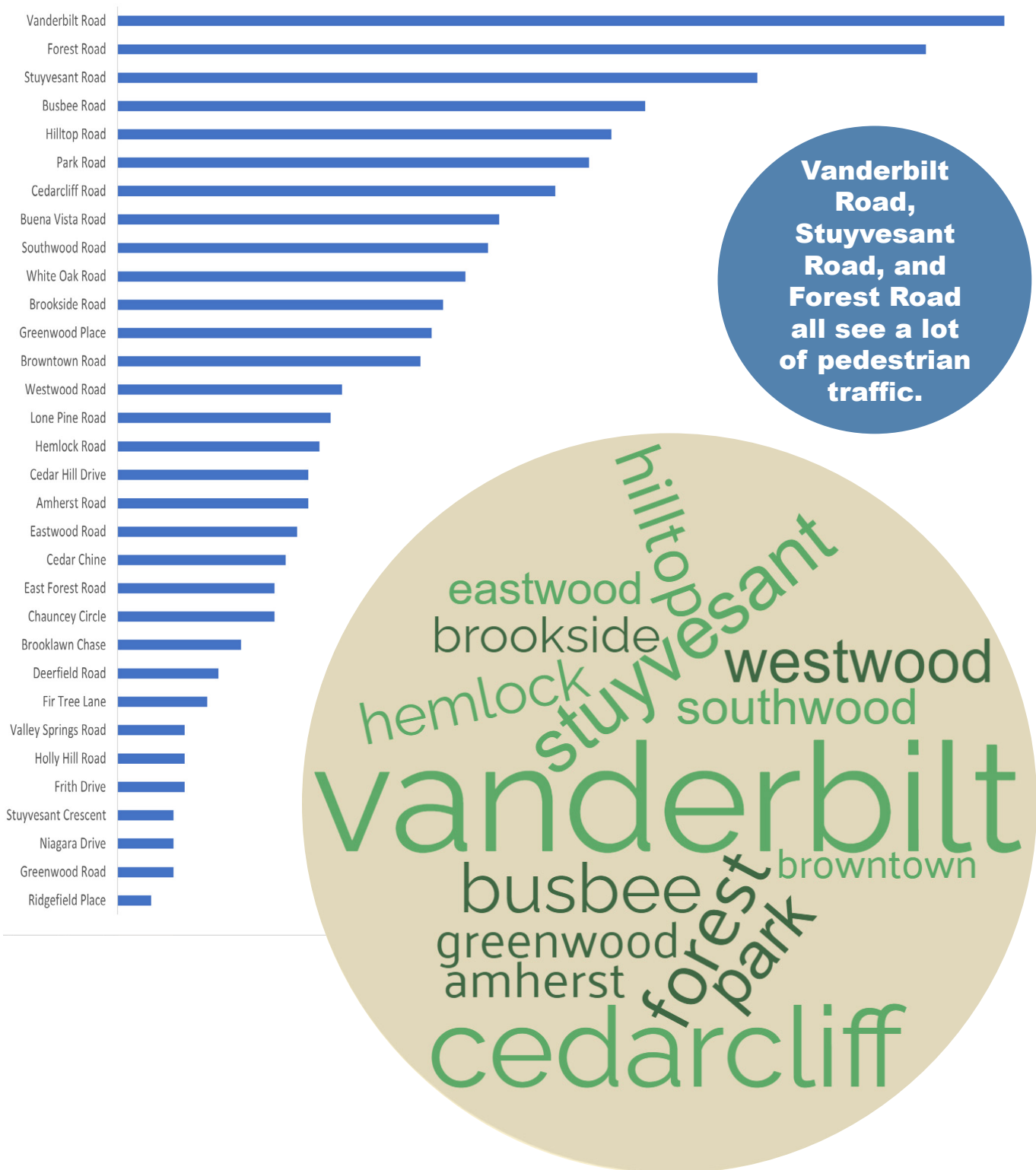
9.) How often do you walk in town? *(This includes use of a mobility device such as a wheelchair)*



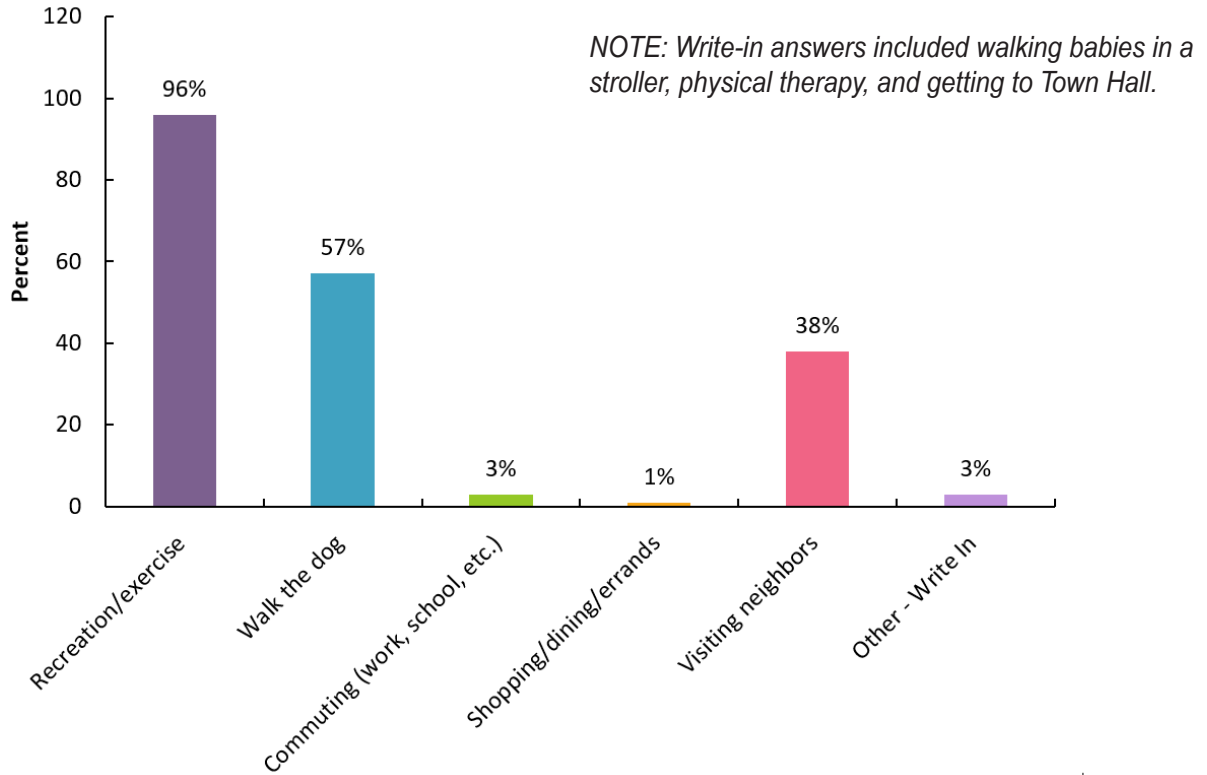
82%
of survey
respondents go
for a walk at
least once or
twice a week.

10.) When you walk, which streets in Biltmore Forest do you walk along the most?

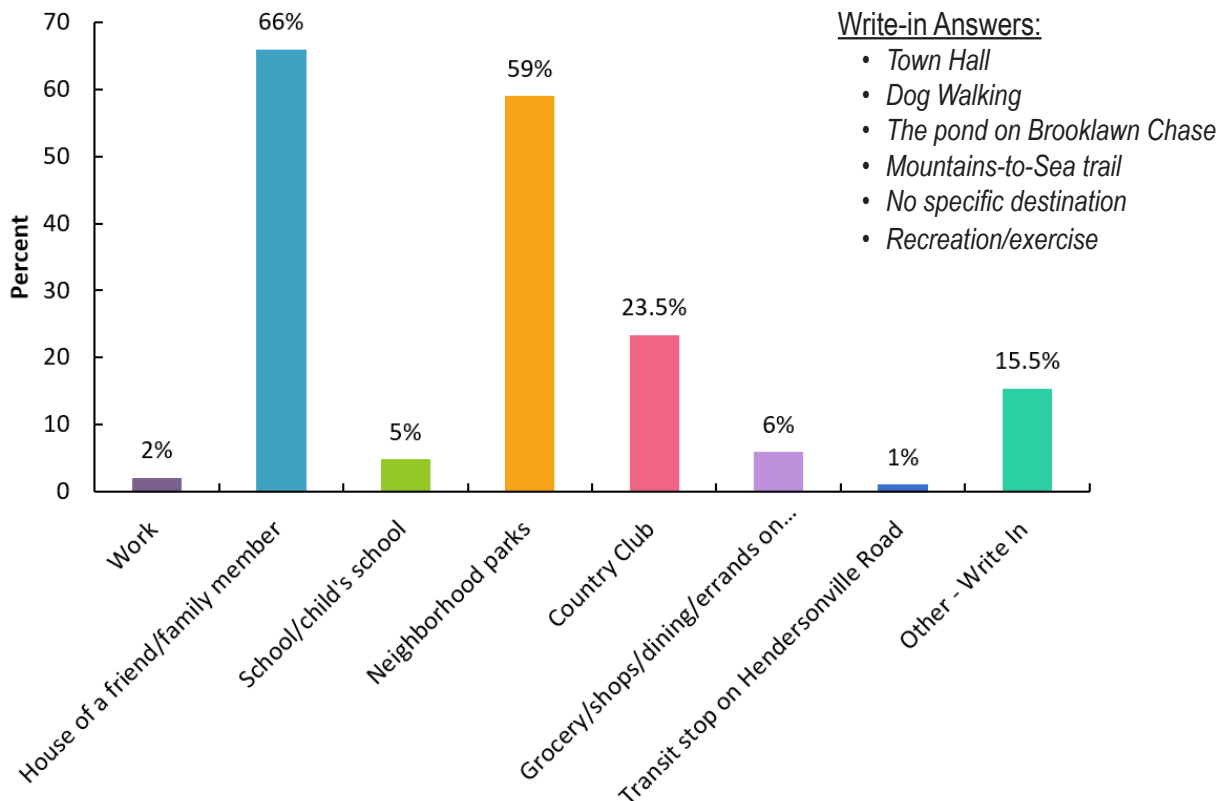
NOTE: This represents a sample of responses for Question 10. For a complete list of write-in responses, please see the Appendix.



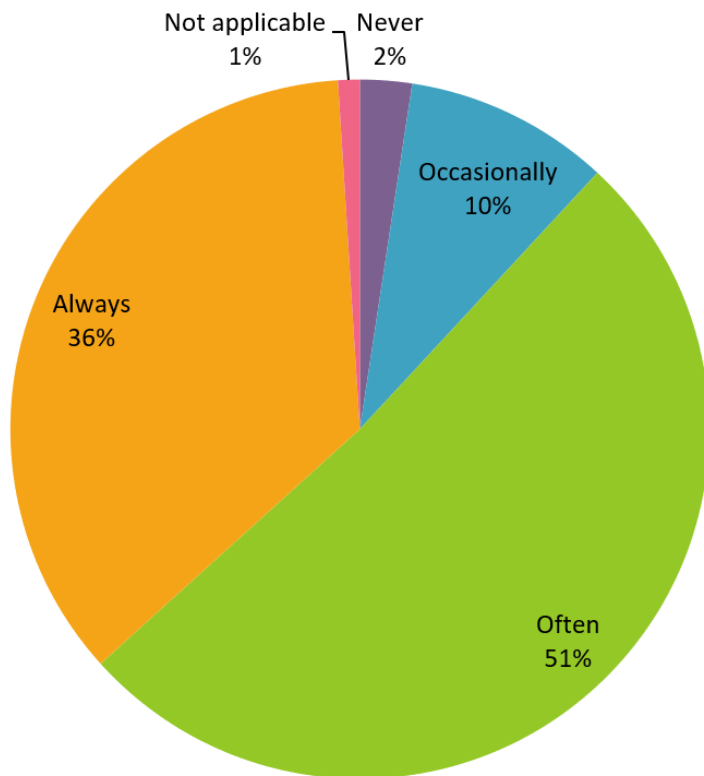
11.) For what purpose(s) do you walk in Biltmore Forest? (select all that apply)



12.) Which of the following destinations do you walk to from home? (select all that apply)



13.) Do you feel safe walking in Biltmore Forest?



86%
of survey
respondents often
or always feel safe
walking in town.

14.) What does it mean to feel safe when walking?

NOTE: This represents a sample of responses for Question 14. For a complete list of write-in responses, please see the Appendix.

- Cars are driving slowly and with high awareness of pedestrians.
- Speed bumps on Eastwood Rd and other busy streets
- I feel safe most of the time...not always or often. Around 95% of the time.
- Not worried that a car is flying down the road which might hit my children or pet.
- Cars obeying speed limit, attentive and aware, and give pedestrians adequate space.
- You don't have to worry about an inattentive or speedy driver running you over! And
- Physical safety due to traffic, road layout, etc.; and personal safety related to my ability to walk alone without worrying about being bothered or harmed.
- Driver awareness; observance of speed limits
- Not having to "dive" for the grass to avoid approaching vehicles.
- Vehicular traffic that is aware of walkers - follow speed limits and move over for walkers that are in the road or on the shoulder. Police can help.
- I don't worry too much about getting run over. But I do often worry about my child riding their bike in the neighborhood.
- I wish we had sidewalks or designated walking lanes on the road. Shoulders of the roadway should be filled periodically to prevent drop-offs.
- To feel comfortable that I am not at risk - and our dogs are not at risk - of being hit by a speeding, distracted driver.
- Speed limits, road shoulders; Good visibility and slow traffic.

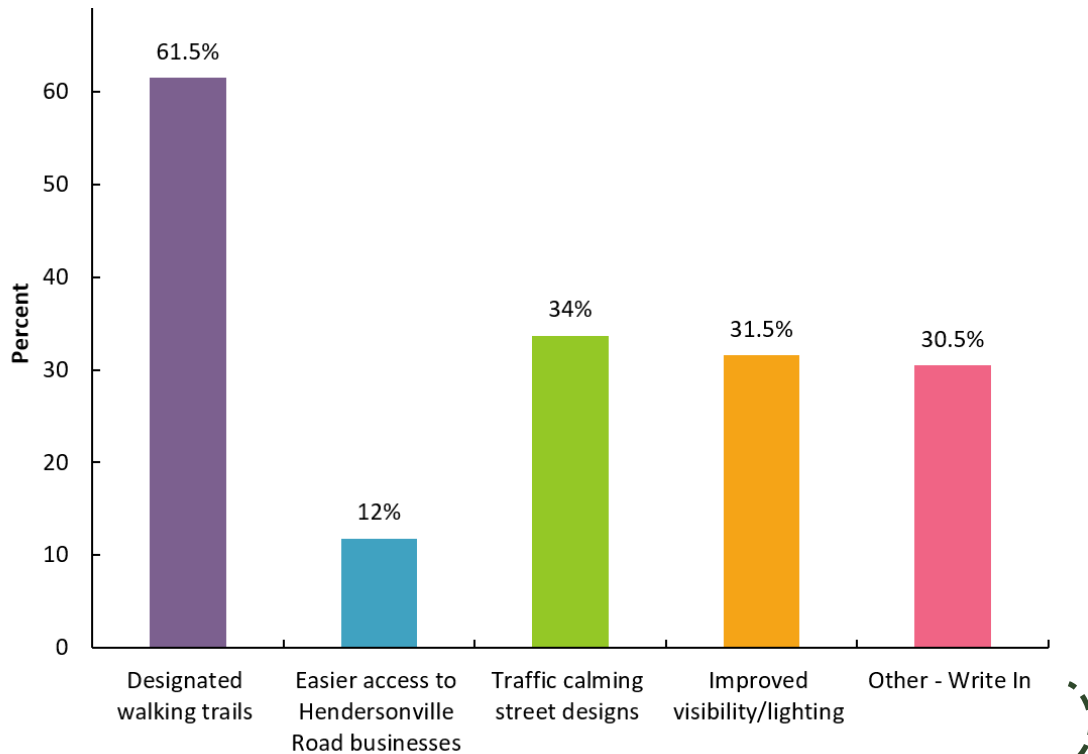
- Cars slow down when they approach us (particularly with children).
- That there is space for pedestrians AND cars.
- Cars obeying speed limit, feeling safe around curves, cars move over to give pedestrians space.
- We feel very comfortable that the overall majority of drivers maintain the posted speed limits which we feel are appropriate for the roadways. We are also thankful for the constant police patrols.
- Roads well maintained. Drivers paying attention/not speeding. Space to step off of the road when a car approaches.
- Alert and courteous drivers who move over. Generally true.
- Alert drivers, shoulders to retreat to, good police presence.
- I think the safety concern is getting hit by a car. Otherwise I feel safe
- Clear areas to walk; drivers drive cautiously
- Being alert and watching oncoming traffic; Walking facing traffic.
- Car speed is appropriate, dogs are on a leash, bikes are not speeding, and I know that the police are nearby patrolling.
- It means I'm not fearful of being struck by a reckless or inattentive driver, or bicyclist, and dog walkers have their dogs on leash and under control.
- Biggest concern is whether automobiles see me since there are no sidewalks.
- Having a place to walk without fear of being run over by a vehicle. Knowing that BF is a safe community with an excellent police department. Access to well lit streets.
- Knowing that oncoming cars are adhering to the speed limit and most walkers face oncoming traffic.



**15.) What factors discourage you from walking in Biltmore Forest?
(Ranked where 1 is the most discouraging factor)**

Item	Overall Rank	Rank Distribution
Lack of sidewalks/trails	1	
Heavy or high-speed traffic	2	
Dangerous/distracted motorist behavior	3	
Construction/landscaping vehicles	4	
Lack of street lighting	5	
Unsafe intersections/crossings	6	
Few destinations within walking distance	7	
Personal safety concerns	8	

16.) Which of the following improvements would encourage you to walk more often? (select all that apply)

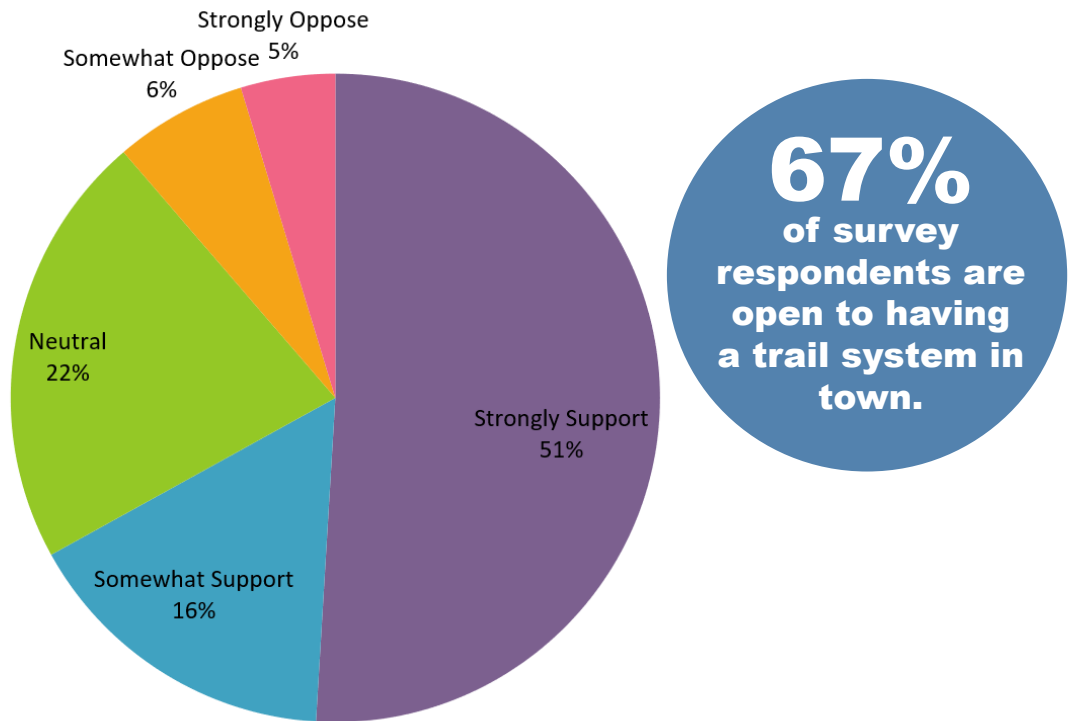


Question 16 Write-in Comments:

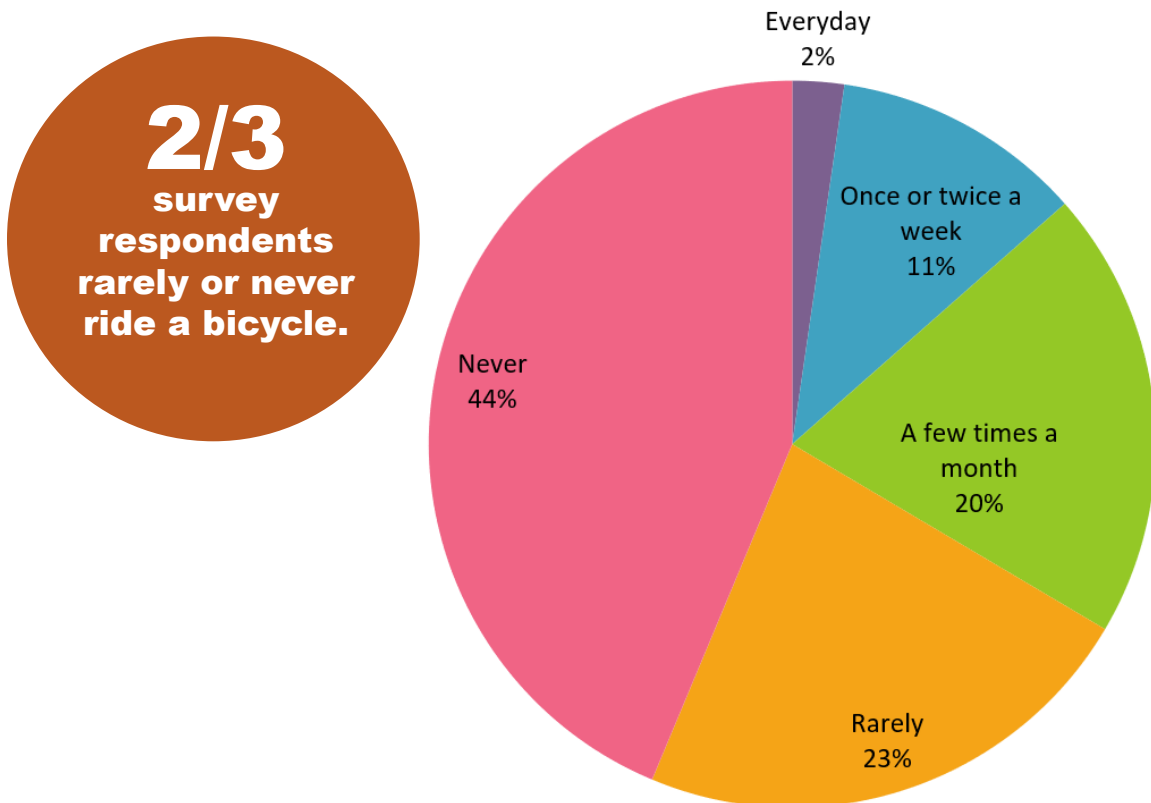
- Sidewalks
- sidewalks
- None
- (comment from #15: We do not need more street lights--perfect # as is; Comment from #16:it would be hard to cross Hendersonville Rd. anyway
- A pedestrain path connecting Biltmore Forest Ramble to rest of Biltmore Forest without having to cross Blue Ridge Parkway
- Biltmore Forest becoming a gated community
- Closing off ridgefield, to make it safe to walk
- Crosswalks might help with signs for pedestrian crossing, especially on Stuyvesant at Southwood.
- Don't change anything. No need for sidewalks that would mean sacrificing trees. Less is more.
- Gated entrance to the neighborhood with an armed guard
- Gated to know who is coming in and out if neighborhood
- Have always thought a sidewalk on Stuyvesant road from Browntown to Southwood would increase safety. Club traffic, tight curve etc is dangerous, as we have already seen. Only on 1 side
- I do not walk
- I do not walk at night because of lack of visibility but I also love how dark it is at night so I am willing to limit my walking to day time

- I feel pretty safe in BF
- Increased visibility would come from uniform levels of vegetation trimming. Vegetation can swat passing cars in some spots.
- Less cyclists that do not live in our neighborhood/do not follow posted ordinances, possibly a sidewalk on Vanderbilt would help!?
- Monitoring driving speed
- More speed limit signs & enforcement
- More trimming of line of sight to see further
- More white lines on roads; more people driving on 'my' side of the road, especially on curves; It is a mess and is dangerous especially the park on Brooklawn Chase and Hemlock road
- N/A
- NONE
- No changes needed.
- No improvements needed.
- None needed
- None of the above
- None of the above-I am careful and we do live in a forest where curvy roads are part of the charm.
- Not necessary
- Pedestrian walk on one side of Vanderbilt/Stuyvesant
- Prefer things as they are.
- Side walks
- Sidewalk on Vanderbilt
- Sidewalks
- Sidewalks on two busiest streets: Vanderbilt and Stuyvesant
- Sidewalks wide enough for two people to walk side by side
- Slow down! Respect walker safety.
- Speeding motorist
- The neighborhood being gated
- Video cameras at busy intersections
- Visibility is more important than lighting as I don't walk in the dark.
- Walking conditions are already perfect. No recommendations for change.
- courteous neighbor/kids
- enforcement of the towns traffic ordinances and speed limits
- greater speed enforcement
- none of these really
- sidewalk along Vanderbilt Rd
- speed enforcement on Valley Springs Road
- stop speeding cars and have motorists adhere to the three foot rule and/or slow down
- town right of way along the road is clear and walkable
- walking/biking designations on the 3 busiest streets
- we don't have a strong deterrent to walking but neighbors not messing with their phones while driving would be good.

17.) What is your level of support for a natural surface (unpaved) trail system for Biltmore Forest residents?



18.) How often do you ride your bicycle in town?



19.) Which areas of focus are most important for a successful roadway network in Biltmore Forest? (Ranked where 1 is the most important)

Item	Overall Rank	Rank Distribution
Ensuring safety for all users (pedestrians, bicyclists, cars/trucks)	1	
Maintaining trees and landscaping along streets	2	
Pursuing traffic calming methods (e.g., speed humps)	3	
Improving access to Hendersonville Road	4	

20.) Is there something you'd like to fix about transportation/traffic in Biltmore Forest that wasn't covered in previous questions?

NOTE: This represents a sample of responses for Question 19. For a complete list of write-in responses, please see the Appendix.

“I wish there were sidewalks along a couple of busy sections of streets with poor visibility.”

“Need a right turn lane [at] the Eastwood light.”

“I prefer paths to concrete sidewalks, the roundabout concept instead of stop signs.”

“Please get residents to cut back foliage hanging over the road--line of sight needs to be clear.”

“I would like to see more bus shelters along Hendersonville Road.”

“Improve shoulders.”

“Reflective clothing!”

“Roundabout at Vanderbilt/Busbee intersection would make sense.”

“More stop signs.”

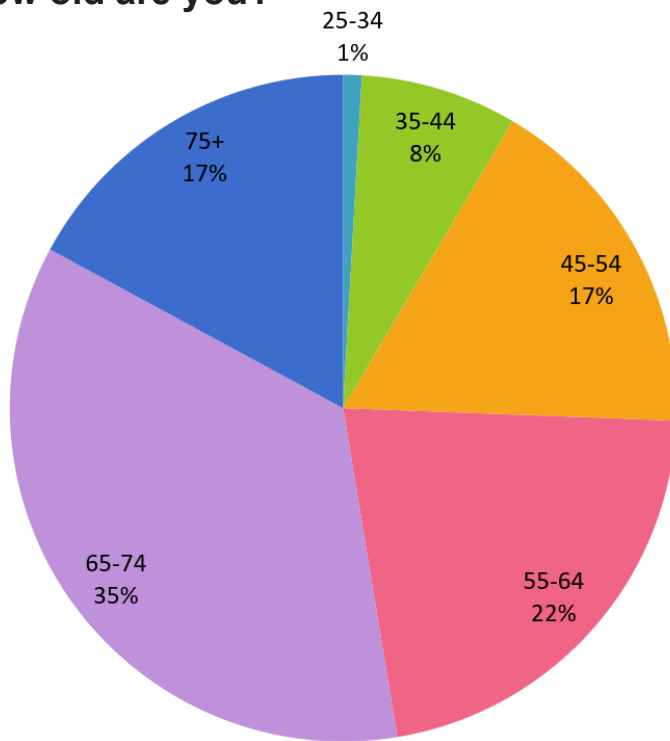
“Hedges blocking visibility at intersections.”

“Many damaged and dying trees along roads that I feel could fall down.”

“Please put a stop sign at Valley Springs Road and Chauncey Circle!”

“Consider speed cameras if police enforcement is not practical or possible.”

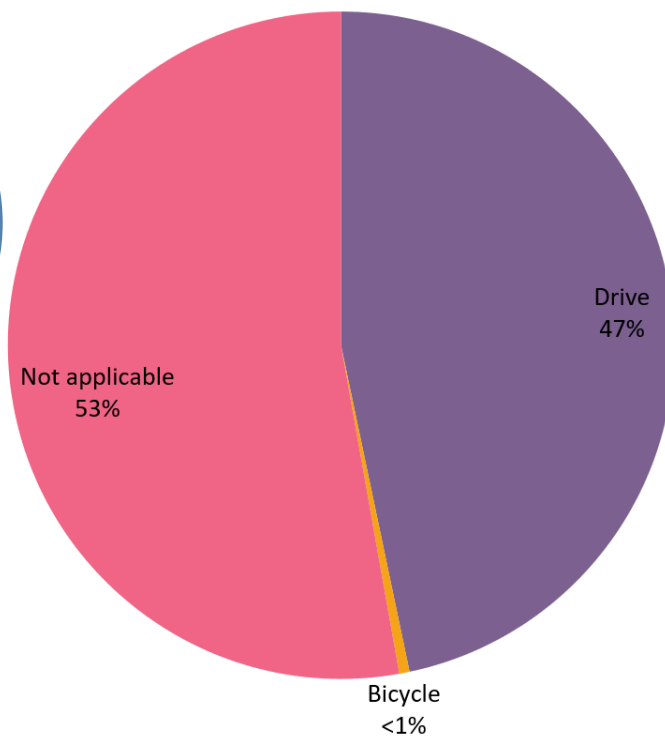
21.) How old are you?



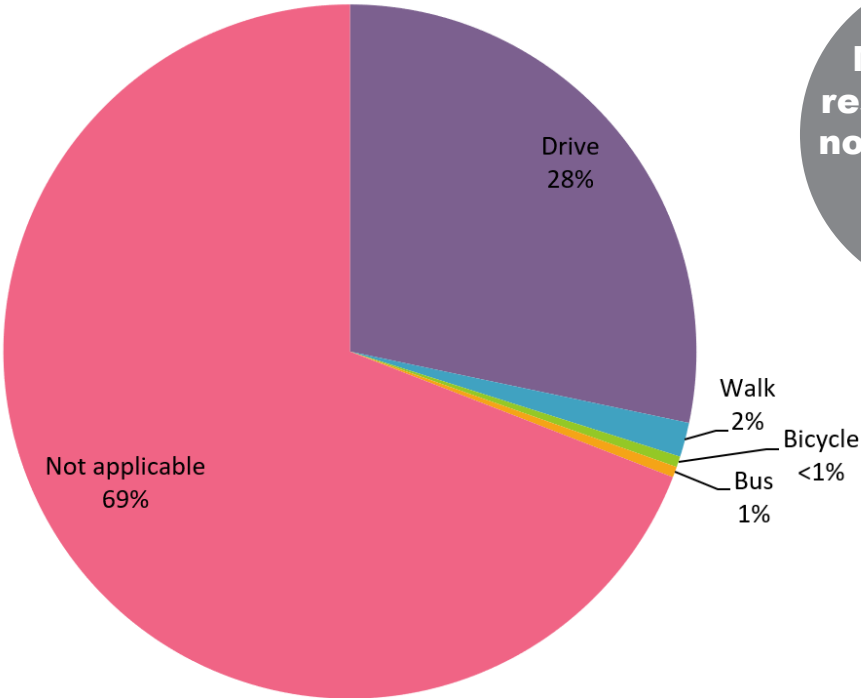
52%
of survey
respondents are
65+
years old.

22.) If you work outside the home, how do you commute most days?

**Essentially
all survey
respondents
working outside
the home get to
work by car.**

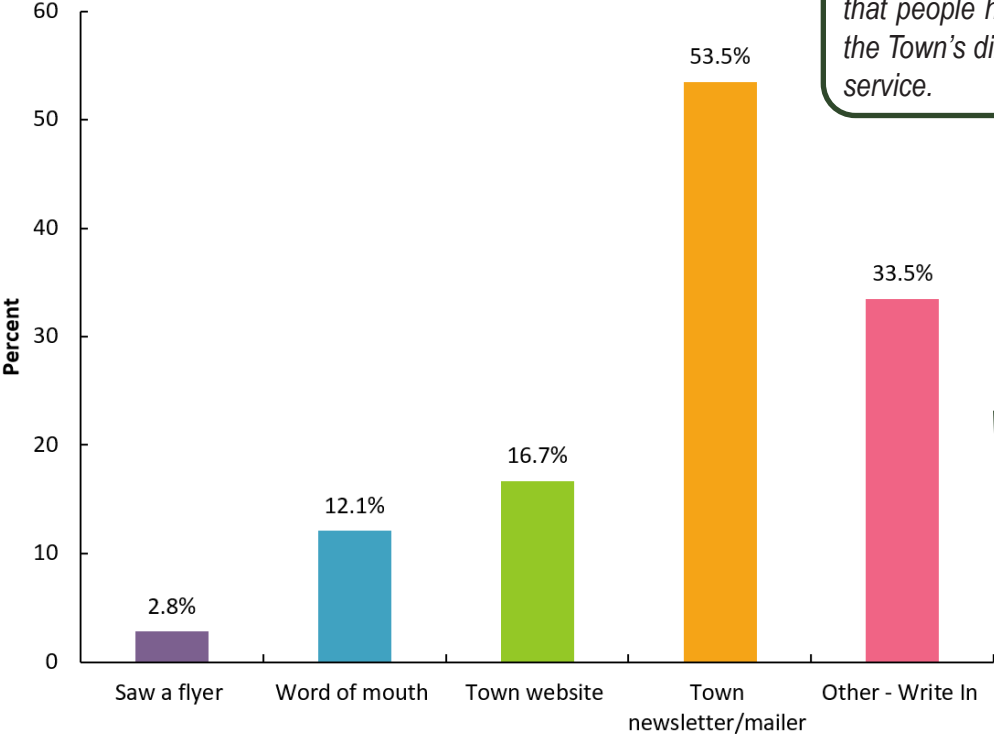


23.) If you have children in the household, how do they get to/from school most days?



Most survey respondents do not have school age kids at home.

24.) How did you hear about this survey?



NOTE: Most write-in answers stated that people heard about the survey via the Town's direct text/phone messaging service.



The Online Mapping Tool

The survey was complemented by a customized interactive online mapping tool that allowed users to identify barriers, problems, and safety concerns by adding geographic points and comments. This interactive map provided multiple ways for Biltmore Forest residents to provide their input about transportation in the community.

Residents were instructed to either draw a line or add a point - with different categories for each. Once a point or line had been drawn, more information could be added about the issue, idea, or opportunity shared. In addition, comments could be added to existing points and lines.

Public Input Takeaways

Survey input and comments on the online map provide a glimpse into Biltmore Forest residents' concerns about traffic and transportation overall, offering some solutions for particular issues and specific locations. General feedback reflects a desire to make Biltmore Forest streets safer for all users, without changing so much that it affects the town's unique aesthetic and quiet, historic charm.

KEY TAKEAWAYS

- **Visibility is an issue (keeping hedges trimmed and wearing reflective clothing).**
- **Left turn movements onto Hendersonville Road are dangerous at unsignalized intersections.**
- **A designated walking trail would be welcome.**
- **Police patrols (for speeding and general safety) are seen positively.**
- **Don't neglect Valley Springs Road.**

FIGURE 17 - ONLINE MAPPING TOOL COMMENTS

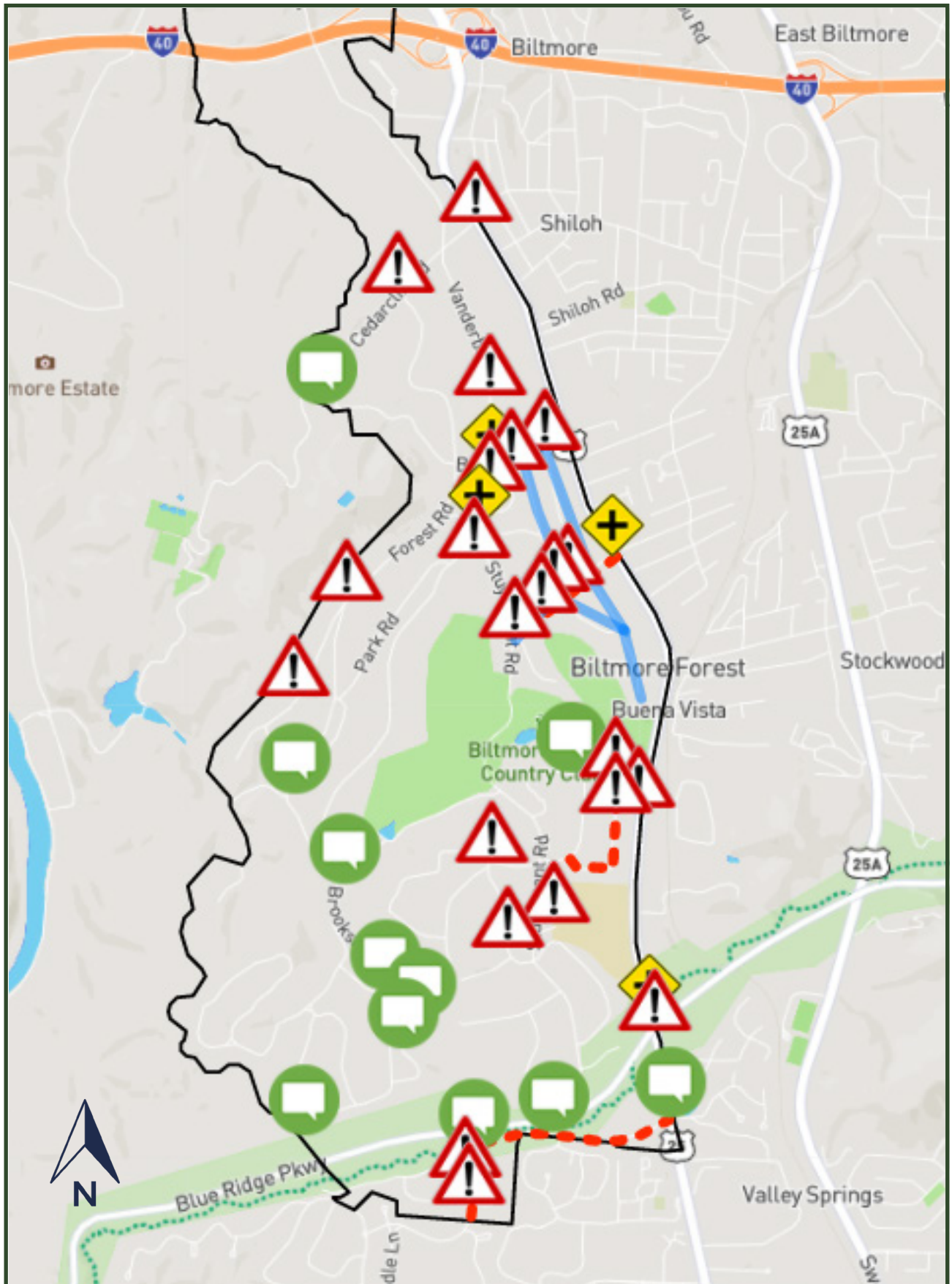
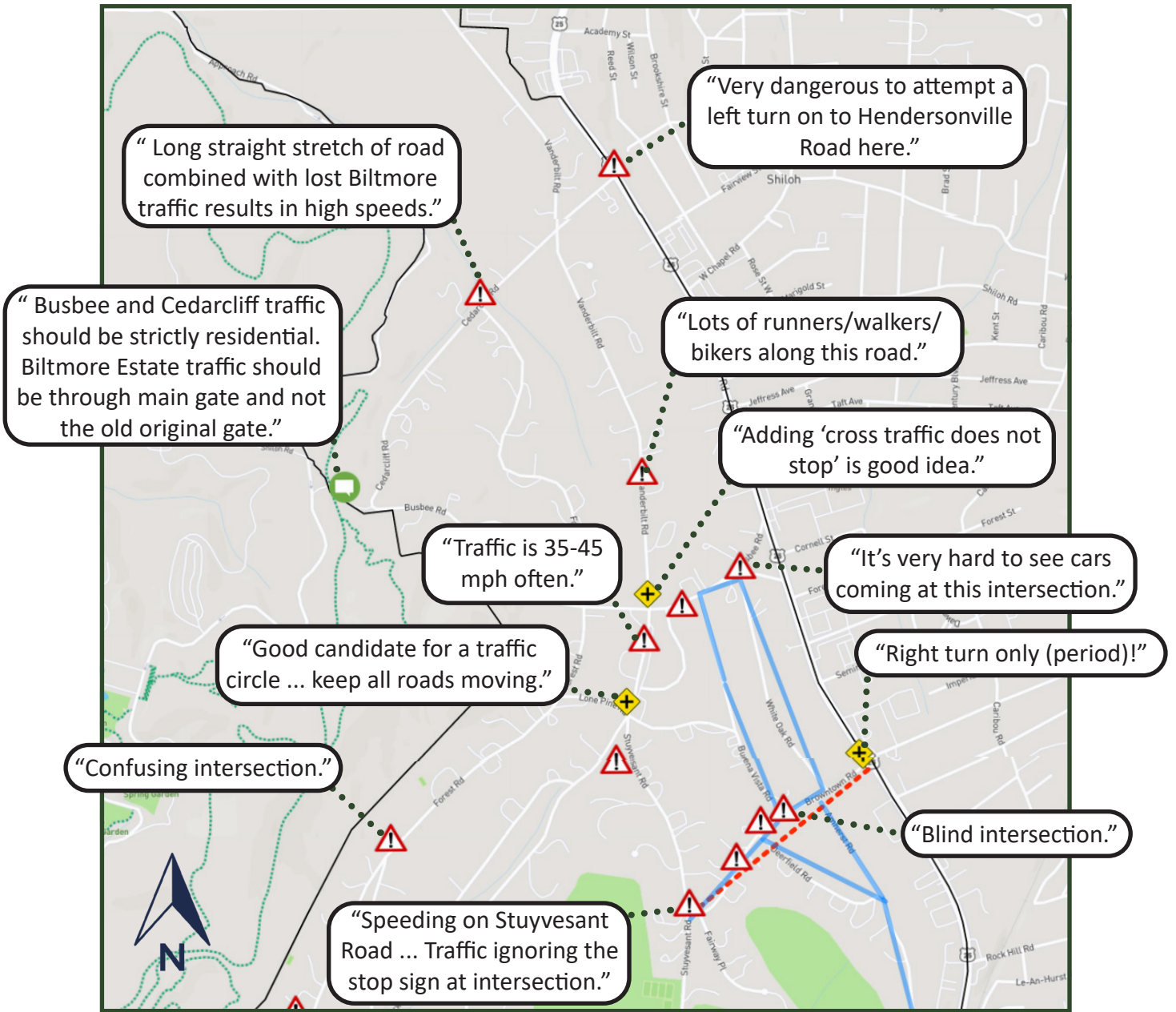


FIGURE 18 - ONLINE MAPPING TOOL COMMENTS (NORTH END)



Points



Safety Concern



Intersection Improvements



General Comment or Idea

Routes



Where Do You Walk?

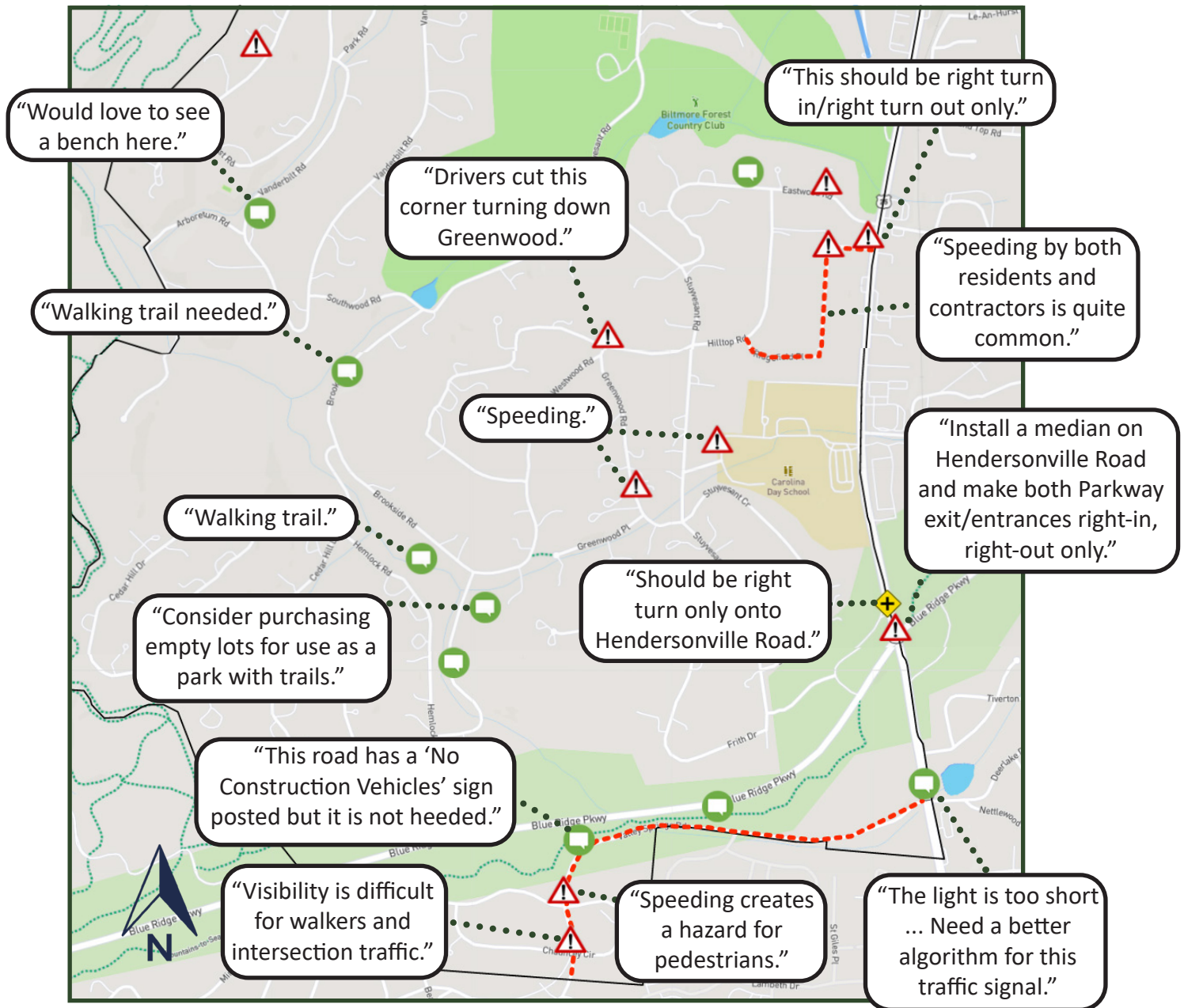


Where Do Cars Speed?



Recommended Trail

FIGURE 19 - ONLINE MAPPING TOOL COMMENTS (SOUTH END)



Points



Safety Concern



Intersection Improvements



General Comment or Idea

Routes



Where Do You Walk?



Where Do Cars Speed?



Recommended Trail

4

HOLLY HILL RD

STUYVESANT RD

CHAPTER 4: Recommendations

The purpose of this study is to provide a range of tools that the Town of Biltmore Forest can use to address safety concerns along its primary roadways and intersections, addressing public concerns and taking into account implications from existing studies, plans, projects, and NCDOT traffic projections.

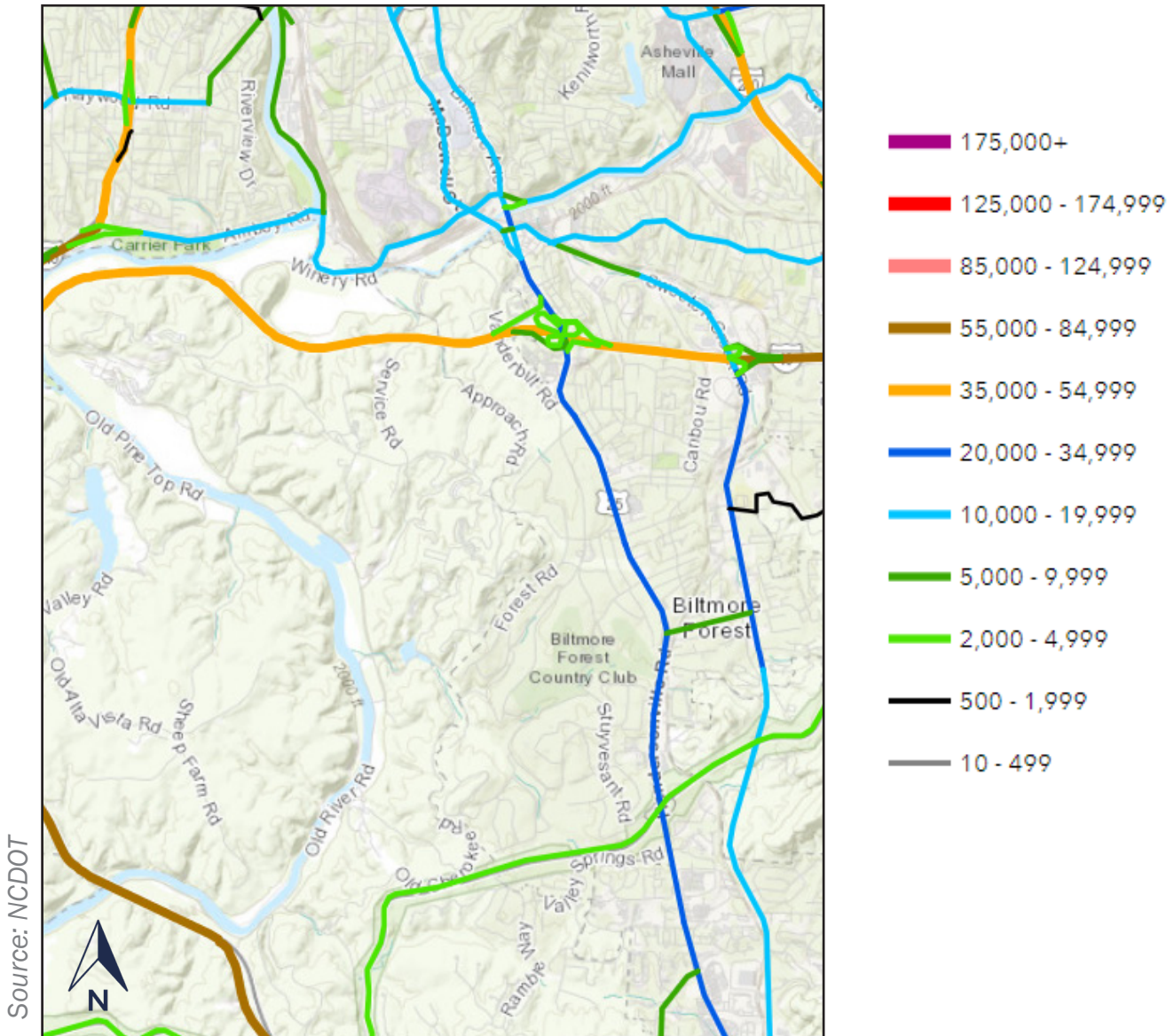
Biltmore Forest's entire eastern edge aligns with Hendersonville Road and all entry and exit points to the town rely on Hendersonville Road. The Blue Ridge Parkway access area will also be affected by any future changes to Hendersonville Road. The French Broad River MPO's 2021 Hendersonville Road Corridor Study highlighted several priorities for improving the transportation infrastructure along this major roadway (see Figure X below). These are important because they reflect an overall need for more effective intersections, better pedestrian access via sidewalks and trails, and a safer system for all users. These priorities coincide with many of the recommendations in this chapter and will support proposed changes to Biltmore Forest's transportation system.

FIGURE 20 - TRANSPORTATION IMPROVEMENTS FOR HENDERSONVILLE ROAD, RANKED (1 = MOST IMPORTANT)



Source: French Broad River MPO

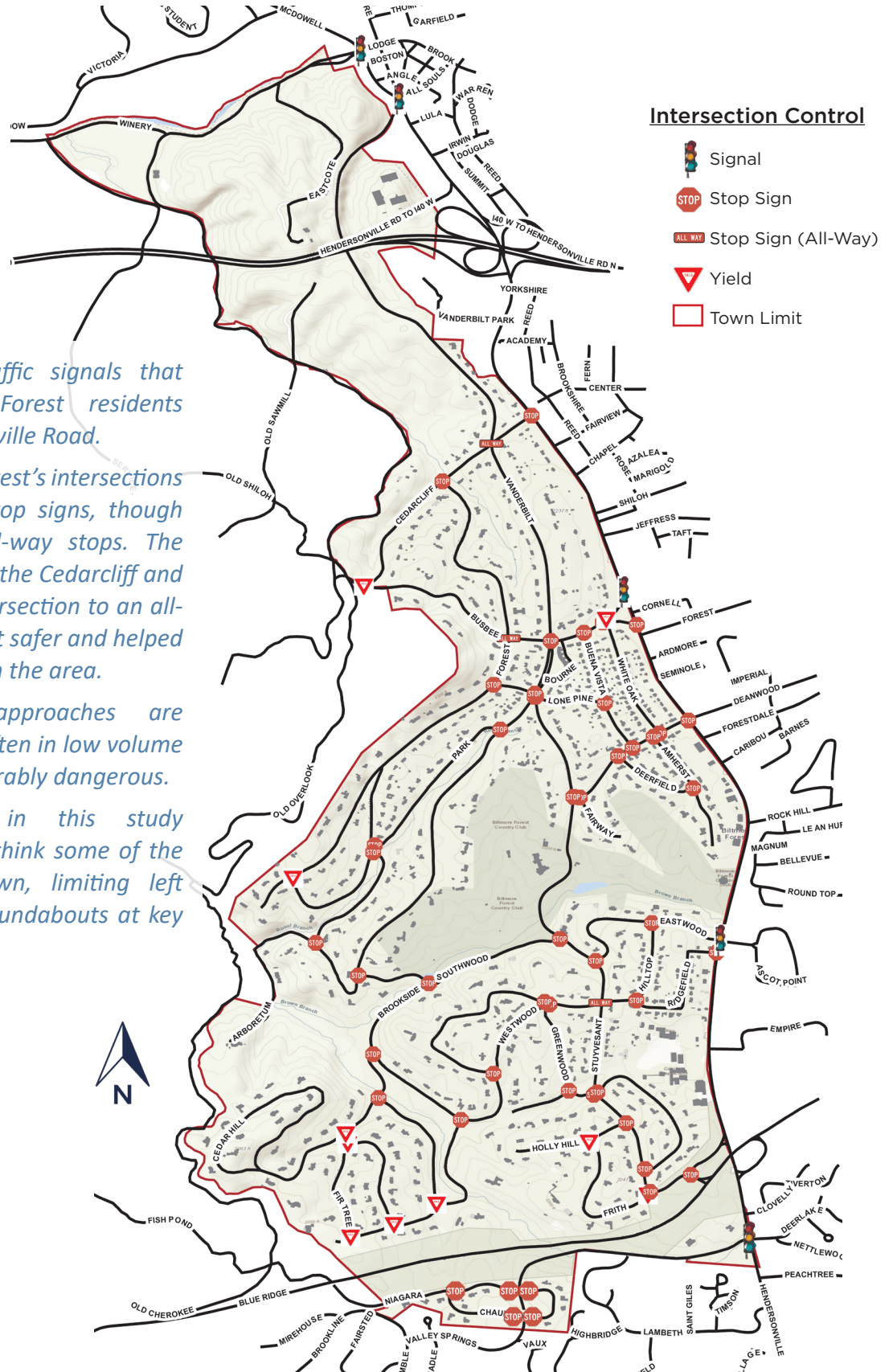
FIGURE 21 - NCDOT ANNUAL AVERAGE DAILY TRAFFIC (AADT) MAP



Annual average daily traffic (AADT) is an approximation of the daily number of vehicles on a roadway segment. The AADT is calculated by the total volume of vehicle traffic on a roadway for a year divided by 365 days. This number is used in transportation planning and engineering as an indicator of overall capacity under current conditions and can demonstrate traffic volume trends and help make forecasts of future demand.

With about 30,000 cars per day traveling along Hendersonville Road, the corridor plays a crucial role for the Biltmore Forest community. Impacts from cut-through traffic, delays at traffic signals, and risky left turns are all part of residents' daily transportation decisions. NCDOT and the City of Asheville seeks to make the corridor safer and easier to use for bicyclists and pedestrians, while also more efficient for cars, buses, and trucks. These eventual changes, along with recommendations from this chapter, mean that transportation in Biltmore Forest will look different in years to come.

FIGURE 22 - EXISTING INTERSECTION CONTROL MAP



There are four traffic signals that provide Biltmore Forest residents access to Hendersonville Road.

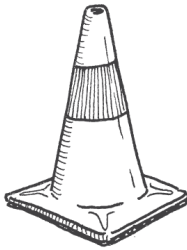
Many of Biltmore Forest's intersections are controlled by stop signs, though only a few are all-way stops. The recent conversion of the Cedarcliff and Vanderbilt Road intersection to an all-way stop has made it safer and helped bring speeds down in the area.

Several "yield" approaches are confusing, though often in low volume areas so not considerably dangerous.

Recommendations in this study reflect a need to rethink some of the intersections in town, limiting left turns and adding roundabouts at key locations.

Transportation considerations were developed from public input (both the survey and the online mapping tool), field observations, Town staff expertise, and takeaways from the existing plan review. These observations are depicted in the Opportunities & Challenges Map, highlighted over the next few pages. Notes from this map became the basis for final recommendations.

This chapter presents recommendations for the Town to consider and implement as funding becomes available and based on consensus between the Board of Commissioners, Town staff, consultants (if needed), and residents. Each recommendation is provided to offer a benefit to the community with varying degrees of effectiveness. Selection of final recommendations were selected with multiple goals in mind and weighted based on the following four criteria: Do the recommendations improve safety? Does it enhance mobility? Is it relatively feasible? Will it benefit the community and contribute to a sense of place?



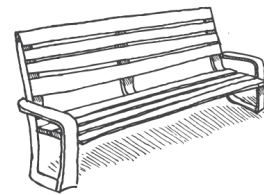
safety



mobility



feasibility



community

FIGURE 23 - OPPORTUNITIES & CHALLENGES MAP

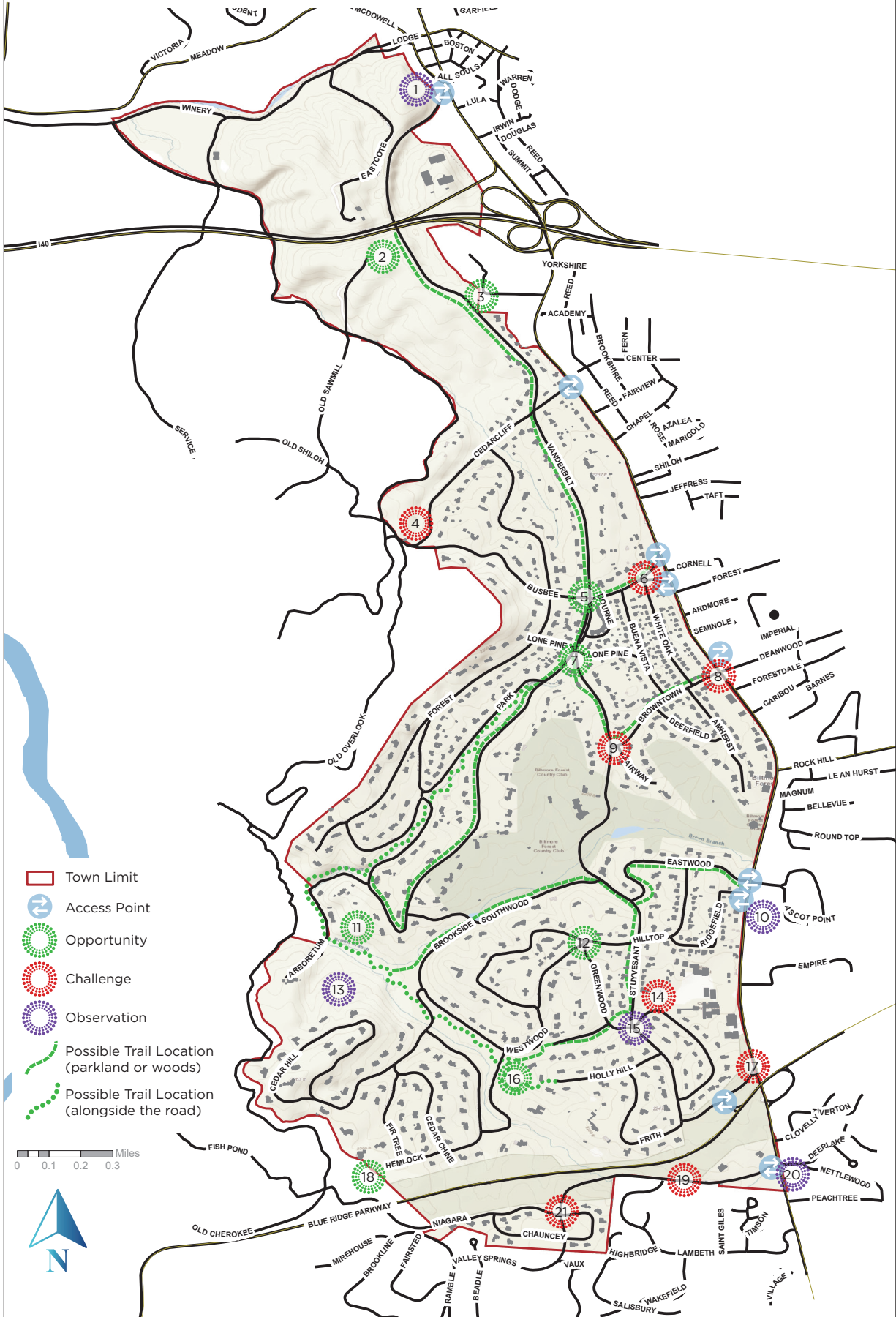
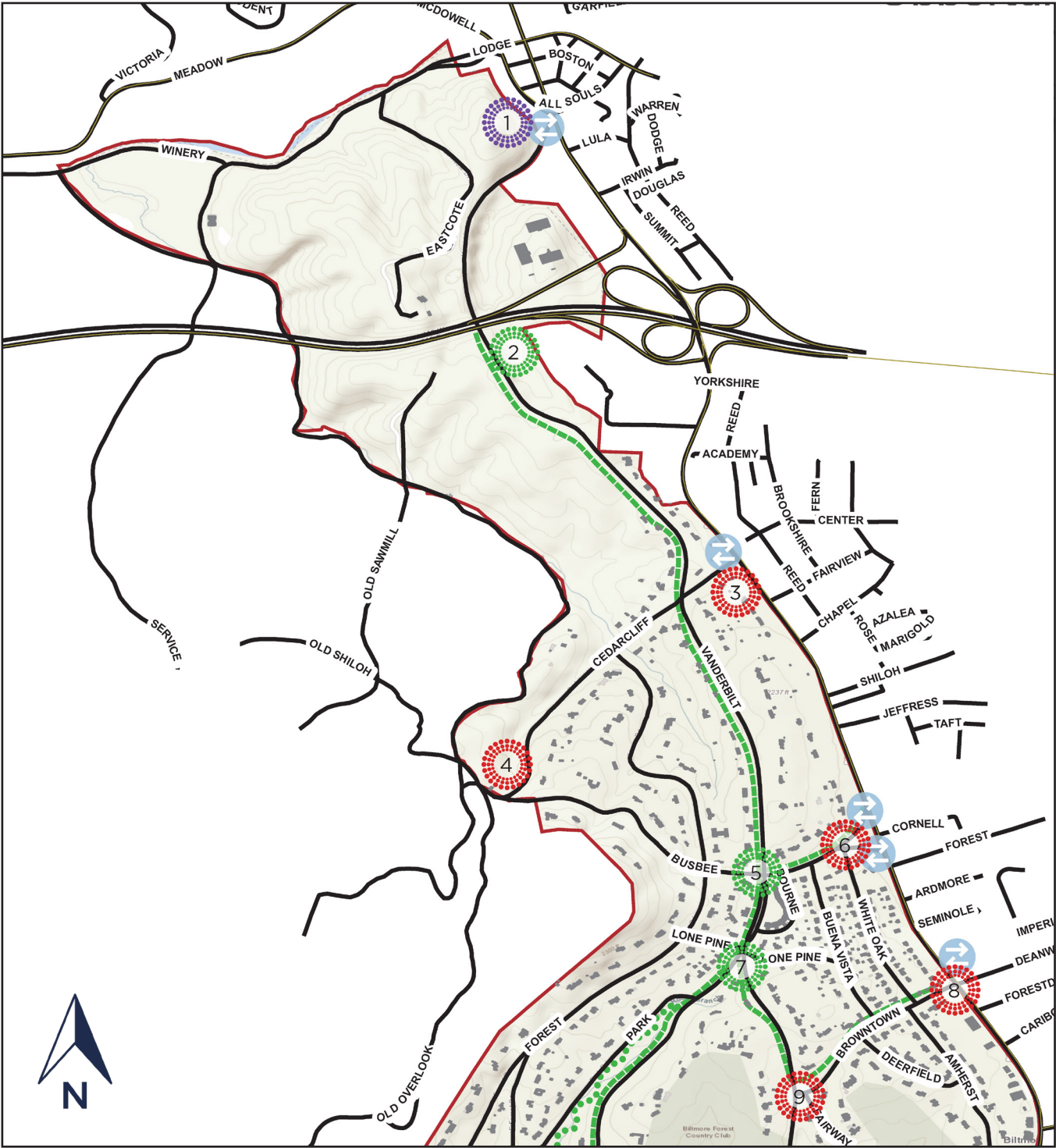


FIGURE 24 - OPPORTUNITIES & CHALLENGES MAP (NORTHERN SEGMENT)



- Town Limit
- Access Point
- Opportunity
- Challenge
- Observation
- Possible Trail Location (parkland or woods)
- Possible Trail Location (alongside the road)



The City of Asheville and NCDOT plan to eventually reconfigure several intersections in Biltmore Village (including All Souls Crescent and Vanderbilt Road, which is highlighted in a recently adopted corridor study as in need of pedestrian safety improvements and an extra northbound vehicular travel lane). Construction and final designs could affect ingress and egress here, one of the residents' primary access points to the town.



This is a logical terminus for a town-wide walking trail and could include amenities like a park bench, trail system map, doggie bag station, etc. The Vanderbilt Road bridge over I-40 does not have safe pedestrian facilities, so any extension of a Biltmore Forest trail beyond this point would require construction of a new bridge.



The Cedarcliff Road intersection with Hendersonville Road has some sight distance challenges and can be dangerous when attempting left turns, especially by wide landscaping or construction vehicles.



When the Biltmore Estate main entrance is closed, visitor traffic comes through this alternate entrance, temporarily increasing the number of vehicles within Biltmore Forest.



This intersection would benefit from a "Cross Traffic Does Not Stop" sign for drivers on Busbee Road approaching Vanderbilt Road. A longer-term solution would be to install a roundabout, which would mitigate confusion about who needs to yield, ensure safer speeds, allow U-turn access to Town Hall, and provide an opportunity for a gateway sign or monument. An All-Way Stop could be used as an interim safety measure.



This area is unnecessarily confusing, and the southern portion is unnecessary. A redesign of the area could eliminate the southern access altogether (while adding a dedicated right-turn-only lane to the northern access), keeping all drivers at the signalized intersection and opening space for park amenities, gateway signage, and pedestrian connectivity.



This five-pronged intersection is confusing. The blind curves and minimal signs limit drivers' ability to safely turn and create uncertainty about yield behavior. A roundabout would make navigating this area much safer and easier to understand, while also enabling people leaving the Town Hall area to make a proper U-turn to head back north on Vanderbilt Road.

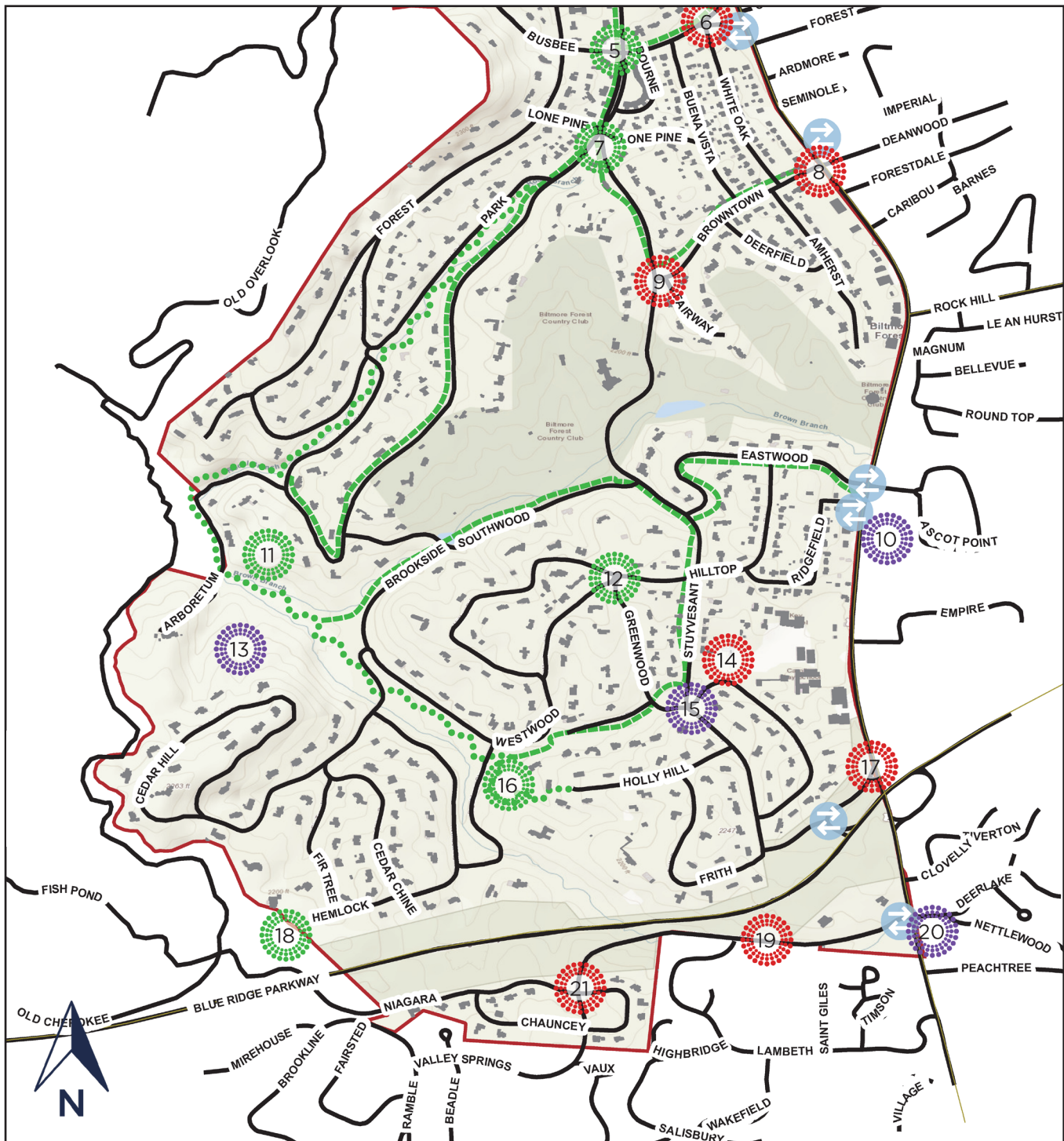









Full access to and from Hendersonville Road from Browntown Road is not necessary, with signalized intersections nearby at Busbee Road and Eastwood Road. Limiting this access to right in – right out only movements would help avoid potentially dangerous left turns.



This intersection has room to reconfigure into a roundabout, which would mitigate some speeding tendencies and could include Fairway Place as one of four legs.

FIGURE 25 - OPPORTUNITIES & CHALLENGES MAP (SOUTHERN SEGMENT)



-  Town Limit
-  Access Point
-  Opportunity
-  Challenge
-  Observation
-  Possible Trail Location (parkland or woods)
-  Possible Trail Location (alongside the road)

10

The Ridgefield Place intersection with Hendersonville Road is unnecessary with the signalized Eastwood Road intersection nearby. Limiting left-turn movements or closing this intersection altogether may be prudent with adjacent resident support if accompanied by adding a designated right-turn lane on Eastwood Road.

11

Biltmore Forest's existing parks provide an opportunity for a long, off-road unpaved trail system following the creeks. These could connect to facilities along key roadways as well. Some possible routes are illustrated on the Opportunities & Challenges Map.

12

This intersection is confusing but could easily be fixed by installing a roundabout – giving drivers clarity about the flow of traffic and who is responsible for yielding, while acting as a traffic calming device. A mini-roundabout could work at this location.

13

A large (45-acre) parcel here could be subdivided into many new smaller lots. New homes would add considerable strain to the adjacent roadway network with construction traffic as they are built and day-to-day trips thereafter.

14

Car line pick-up at Carolina Day School sometimes backs up onto Stuyvesant Road, which can cause congestion and make the area less safe.

15

This intersection is confusing and could accommodate a roundabout to help slow traffic on Vanderbilt Road, while improving the overall flow of vehicles and safety for pedestrians (especially important near Greenwood Park). Planned improvements to the park and stream restoration efforts would make this an opportune time to review this intersection.

16

The Town could acquire property (or easements) on Brooklawn Chase to extend Brooklawn Park across the street, add walking trails, and possibly provide a pedestrian connection to Holly Hill Road.

17

The northern access for the Blue Ridge Parkway at Hendersonville Road is designed in a way that invites drivers to make unsafe left turning movements.

18

A direct connection between Biltmore Forest and the Ramble neighborhood would enable residents to visit friends and community parks without having to use Hendersonville Road. This will require cooperation with the National Parks Service and Biltmore Estate.

19

Anecdotal speeding on Valley Springs Road could be an opportunity to conduct traffic counts (speed, volumes) to see if long-term traffic calming solutions are needed along the corridor.

20

Signal timing at the intersection of Valley Springs Road and Hendersonville Road could be changed, if warranted, to improve egress from this area (including The Ramble).

21

To slow traffic coming from both directions and improve the overall movement of cars around Chauncey Circle, an all-way stop or roundabout could be installed here.



ROADWAY RECOMMENDATIONS

RECOMMENDATION 1: Rethink the Busbee Road Interface with Hendersonville Road

The intersection of Busbee Road and Hendersonville Road has an odd alignment; almost as if it is trying to do too many things, but none well. Coupled with the fact that White Oak Road also intersects Busbee Road in the vicinity, there are many more conflict points (i.e. potential crash sites) than there needs to be (see “Existing Conditions” in Figure 26).

The recommended roadway changes include eliminating the southern access leg altogether and adding a right-out-only lane to the northern access (see “Proposed Redesign” in Figure 26). Redesigning this area would maximize safety without sacrificing access, while freeing up newfound space for stormwater retention, park space, and/or gateway signage. A natural surface walking trail along Busbee Road from Vanderbilt to Hendersonville Road would be helpful, ensuring residents could access the ART transit stop and cross the street.

A roundabout at the Busbee Road and White Oak Road intersection could provide an opportunity for a gateway monument, but driveway accesses complicate the design.

Timeframe: *Short-term for design; Medium-term for implementation.*

Estimated Cost: \$300,000

RECOMMENDATION 2: Study Valley Springs Road

Hire a consultant to conduct a traffic study on Valley Springs Road to determine if speeding is a real concern, whether traffic calming is appropriate, and if the signal at Hendersonville Road should be coordinated differently. Many survey respondents indicated a need to address multiple issues on this street, including reportedly high vehicular speeds, near-misses at Chauncey Circle, and long waits to turn onto Hendersonville Road.

Possible considerations (if warranted by the traffic study) could include speed humps, center medians (as horizontal deflection measures), extending the right-turn lane at Hendersonville Road to allow for more vehicles to queue at a red light without impeding right turn movements, and adjusting the signal timing.

Timeframe: *Short- or Medium-term for a traffic study; Medium- or Long-term for implementation of recommendations.*

Estimated Cost: \$12,000-\$20,000 (depending on the traffic study scope)

FIGURE 26 - CONCEPT FOR BUSBEE ROAD AT HENDERSONVILLE ROAD



The proposed redesign would eliminate some unnecessary conflict points and the confusing interplay between Busbee Road and White Oak Road, without losing any access to Hendersonville Road or driveways along the corridor.

RECOMMENDATION 3: Limit Left Turns onto Hendersonville Road

Convert Cedarcliff Road, Ridgefield Place, and Browntown Road to right in, right out only at their Hendersonville Road intersections. Limiting that movement will encourage left turning vehicles (i.e. those seeking to head north on Hendersonville Road) to use the signalized intersections at Busbee Road and Eastwood Road. Right turn movements are much safer and will eliminate possible queuing of backed-up vehicles.

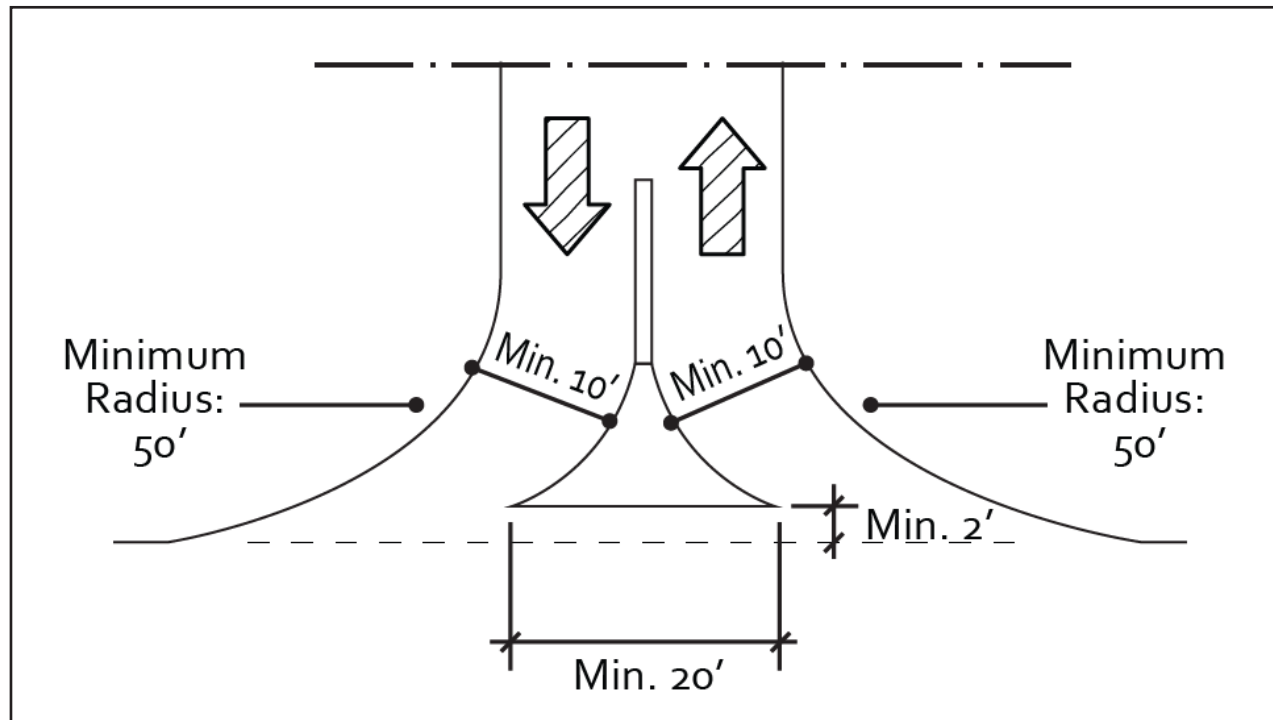
Most residents use Vanderbilt Road (at All Souls Crescent and at the Blue Ridge Parkway ramp) as their primary routes into and out of town, so restricting movements at some of the other access points should have a minimal negative impact on traffic habits or commute times. One possible effect is to discourage some through-traffic and construction vehicles on these roadways.

Full closure of Ridgefield Place was recommended in a 2018 Traffic Calming Study. If residents along the street are amenable, blocking access to Hendersonville Road altogether could be prudent.

Timeframe: *Medium-term for design and implementation.*

Estimated Cost: \$10,000 per intersection.

FIGURE 27 - GENERAL DIMENSIONS AND ORIENTATION FOR RIGHT-IN, RIGHT-OUT INTERSECTIONS



Each intersection will have unique challenges, include utility rights-of-way, adjacent property lines, and overall dimensions. The final design for Cedarcliff Road will look quite different from the design for Browntown Road.

RECOMMENDATION 4: Add a Right Turn Lane on Eastwood Road

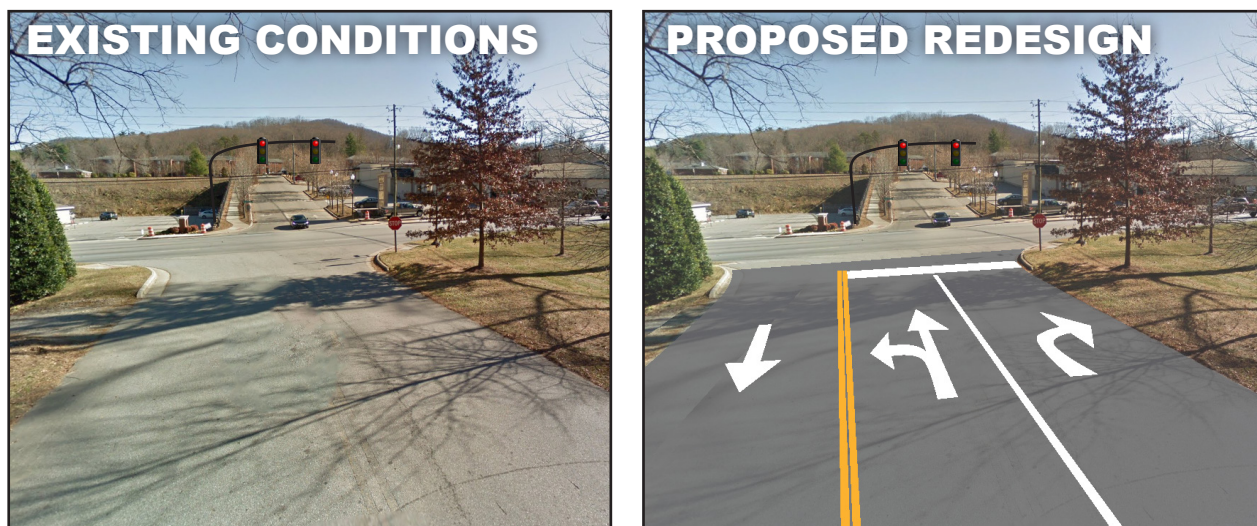
Widen a short segment of Eastwood Road to accommodate a designated right-turn lane at the Hendersonville Road intersection. This will enable people turning right to avoid any queueing from those waiting to turn left at the light, which will be especially helpful if Ridgefield Place is limited to right in, right out only or closed at the intersection (see Recommendation 3).

Coordination with NCDOT will be necessary to implement this recommendation.

Timeframe: *Medium-term for coordination and design; Long-term for implementation.*

Estimated Cost: \$15,000

FIGURE 28 - EASTWOOD ROAD REDESIGN (RIGHT-TURN LANE)



Widening Eastwood Road near the intersection with Hendersonville Road will enable the addition of a right-turn lane. This will mean that people turning right onto Hendersonville Road won't have to wait while other vehicles are stopped at the light. They can make a right on red.

RECOMMENDATION 5: Work to Fix the Blue Ridge Parkway Ramp

Work with The National Park Service (NPS) and NCDOT to officially make the northern ingress/egress access to the Blue Ridge Parkway on Hendersonville Road right-in, right-out only, similar to the southern ingress/egress access point. Consider also a median on Hendersonville Road at the Blue Ridge Parkway (as proposed in the Hendersonville Road Corridor Study) to eliminate northbound left turn onto Parkway access road or attempted left turns north onto Hendersonville Road from the Parkway access road.

Timeframe: *Long-term.*

Estimated Cost: None. Coordinate with NCDOT and NPS on planning and design.

RECOMMENDATION 6: Focus on the Edges

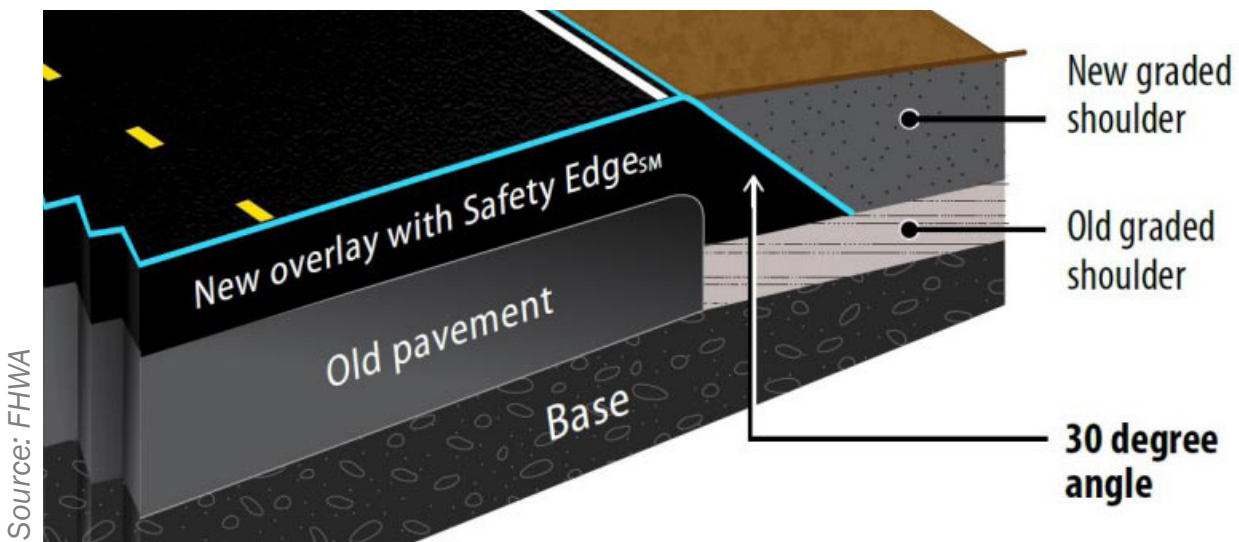
Safety Edges: Work to install a “safety edge” on roadways with high drop-offs. When a vehicle drifts too far over a tall drop-off, it could roll over, increasing the chance of serious injury or death.

lane, and struck an oncoming vehicle. Flat side slopes help make sure a driver can recover from leaving the roadway without the vehicle rolling over, and a safety edge can improve overall conditions. Instead of a vertical drop-off, a safety edge shapes the edge of the pavement to 30-35 degrees, enabling drivers who drift off the side of the road to safely get back into the lane, while also helping pedestrians maneuver on and off the asphalt more smoothly.

Updating repaving processes can provide a safer roadway edge, and a stronger interface between the roadway and the graded shoulder. The additional cost of the asphalt edge is minimal when included as part of resurfacing projects. Benefits include the avoided economic and social impacts of fatalities, injuries, and property damage.



FIGURE 29 - SAFETY EDGE DEPICTION



This diagram shows how a safety edge is created during a repaving project. As the new graded material begins to settle or erode, the angled and more durable safety edge prevents a vertical edge from forming, making the pavement edge safer for drivers and cyclists.

Edge Lines: Begin painting thick (6" or 8") white edge lines on most roads through Biltmore Forest. These lines can alert drivers in dark or shady conditions so they do not run off the edge of the roadway. Research suggests that wide edge lines promote driver safety by mitigating the need to pay attention to the edge of the roadway and allowing more time to focus on other critical tasks. Edge lines can also have the effect of visually narrowing the width of the road so that drivers subconsciously feel they have less space within their lane and should pay closer attention. An additional benefit to having easily seen edge lines is improved detection and tracking for lane departure warning (LDW) and lane keeping assistance (LKA) systems in newer cars and autonomous vehicles.

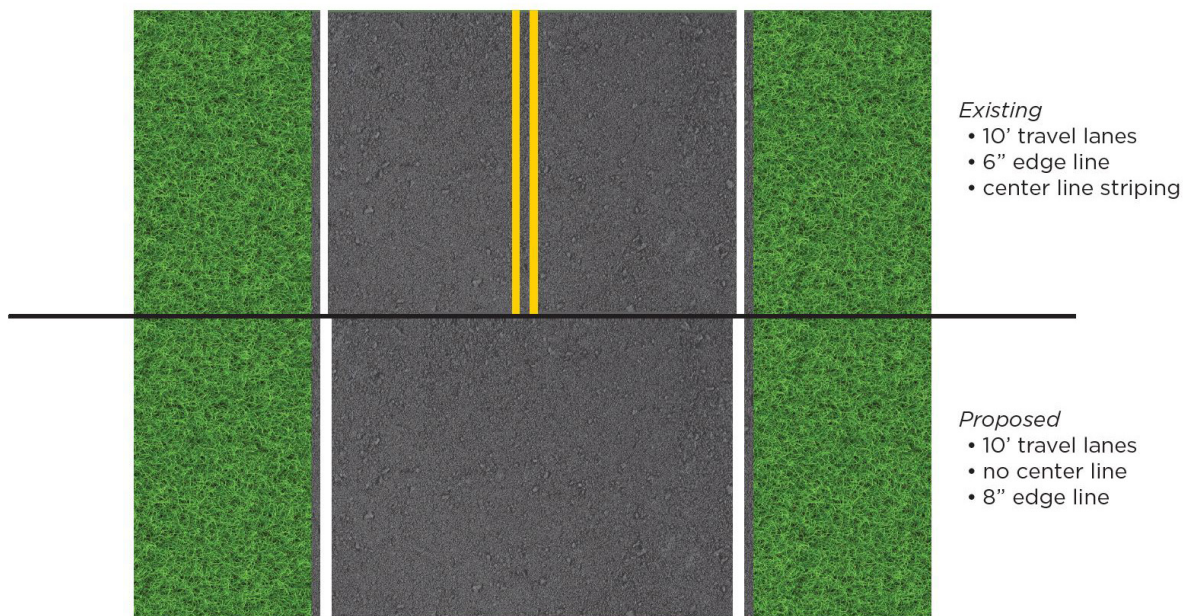
Only stripe the yellow centerline in short sections of specific locations, such as around curves, over hills, on approaches to grade crossings, at grade crossings, and at bridges. Keep most roads without a centerline, in an effort to remind drivers that Biltmore Forest's streets are shared with pedestrians and short-term parked vehicles.

Timeframe: *Ongoing (as repaving and restriping schedules dictate).*

Estimated Cost: The cost of incorporating edge lines will likely be negligible for hot-mix asphalt. It does depend somewhat on the specific parameters, but typically the process compacts asphalt that often otherwise would break off because it was loose. (Add one percent to the total asphalt material needed for the total cost of repaving).

For edge line striping, add the cost of the extra width to the linear foot cost of the project. For instance, if the cost to stripe a 4" edge line is \$0.50/linear foot, then an 8" edge line is approximately \$1.00/linear foot.

FIGURE 30 - PAVEMENT STRIPING IDEA (TRAFFIC CALMING STUDY)



The 2018 Biltmore Forest Traffic Calming Study recommended removing the center line striping and widening the edge line striping to create a subconscious feeling that the roadway is narrower than it actually is and encourage drivers to be more cautious.

RECOMMENDATION 7: Establish a Traffic Calming Policy

Create standard operating procedures that quantify speed and volume problems prior to installation of future traffic calming devices. Perceptions of speeding and dangerous behavior may not align with actual vehicular traffic data. The Town should identify criteria for initiating the process to implement various traffic calming measures. For example, when the 85th percentile vehicular speeds are 10 miles per hour above the posted speed limit, that section of roadway qualifies for a range of traffic calming tools.

Enable residents to initiate this process by petition, with the following next steps:

- Conduct a traffic study (speeds/volumes)
- Recommend traffic calming measure (if warranted)
- Gather neighbor support for implementation (% threshold)
- Prioritize measures based on established criteria
- Allocate an annual budget amount for traffic calming implementation

Follow up with data collection to quantify speed and volume of traffic at least six months after new traffic calming devices are installed. Before and after speed data will indicate how successful that particular measure has been and whether it warrants removal or additional traffic calming in the area. This information can be presented to the residents of Biltmore Forest as demonstrative of the Town's efforts to address speeding concerns and will ensure that appropriate measures are selected.

A traffic calming policy will guide Town staff and inform residents about the processes and procedures for implementing traffic calming on residential streets.

Timeframe: *Short- to Medium-term to develop and adopt a traffic calming policy.*

Estimated Cost: staff time (or approximately \$8,000-\$15,000 to hire a consultant)

RECOMMENDATION 8: Provide Traffic Cones for Residents

Provide retroreflective traffic cones for all residents to use whenever landscaping or construction vehicles will be parked on the roadway for more than an hour. The Town could order traffic cones in bulk and have a ready supply for any resident who requested them - either at low cost to keep or free to rent.

Timeframe: *Short-term.*

Estimated Cost: \$3,000 (100 cones @ \$30/each). Some retailers offer to have a logo printed on traffic cones, which might be a good option.

Source: Burkholder Landscape



Construction and landscaping crews are welcome on Biltmore Forest's roads, but visibility is key. It is important to get high quality, durable, reflective cones that are tall and visible at night.

RECOMMENDATION 9: Install a Pair of Roundabouts at Town Hall

Install roundabouts at both Vanderbilt/Busbee and Vanderbilt/Stuyvesant/Lone Pine in order to effectively slow traffic, promote safety, and offer easy turnaround access to Town Hall, Public Works, and the Police Department. Roundabouts are most effective in reducing speeds throughout a neighborhood when several are used in a series (i.e. two or more consecutive intersections). Each roundabout will encourage drivers from every approach to slow down through an intersection, so the overall speed reduction through this key corridor could be great if two roundabouts are installed as recommended.

Roundabouts help to minimize confusion, maintain traffic flow, slow speeds, and improve safety for all roadway users. They can also handle more traffic in the same amount of time because vehicles are not required to stop - only yield - which can improve travel times for most users. Having the Town Hall area buffered by roundabouts will also enable easier u-turn movements for people to better access the Town's facilities, and could offer a great opportunity to incorporate landscaping and gateway elements.

It is important to communicate the Town's plans for specific intersection reconfigurations early and frequently, especially on projects that contain features

"In typical traffic engineering, there's a tradeoff between safety and operations. Generally, 'safe' equals 'inefficient.' Our research has shown roundabouts offer benefits in both safety and operations."

- David Noyce, Chair
UW-Madison Civil and Environmental
Engineering Department

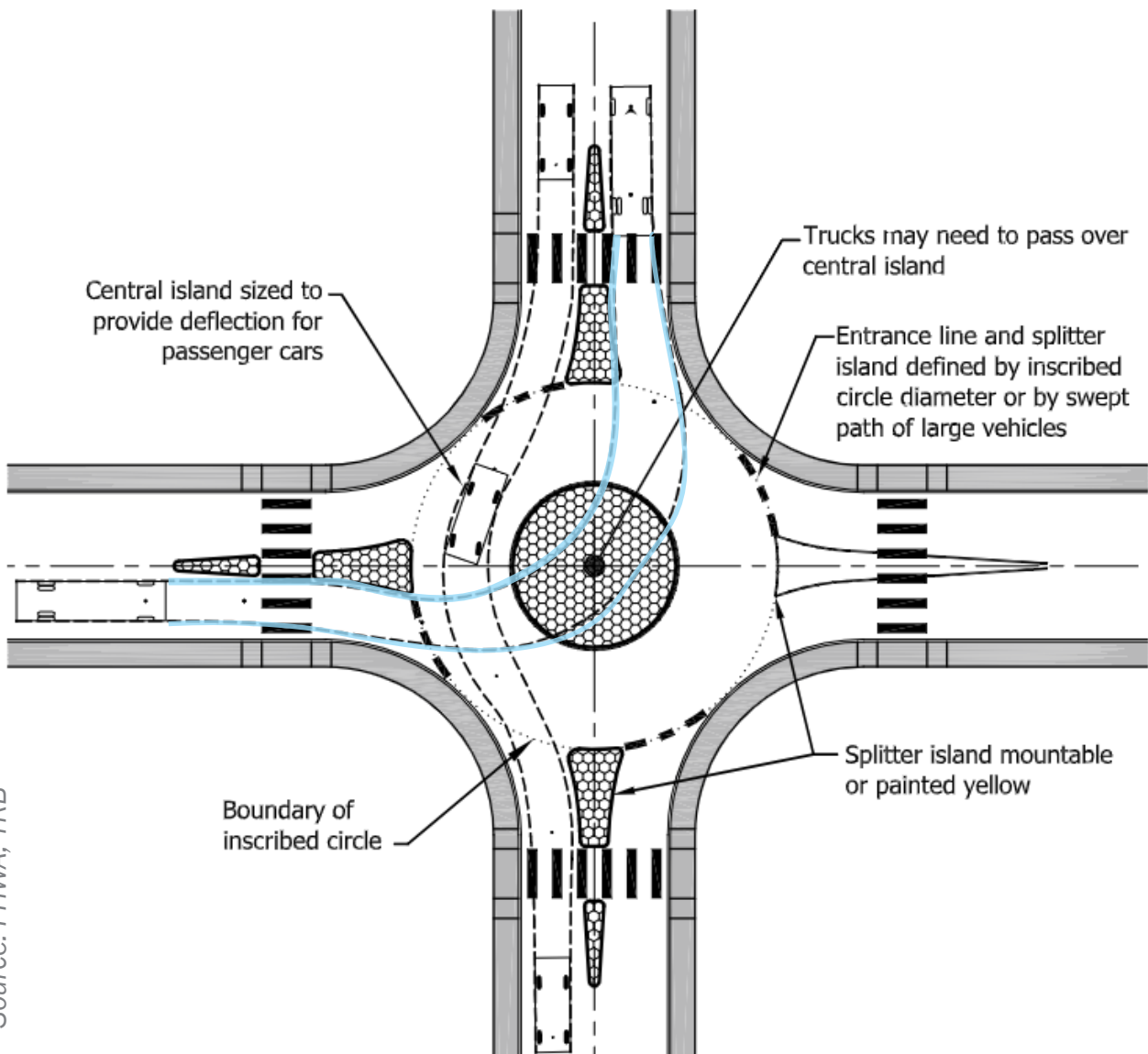
that may be new to the community. Roundabouts are especially contentious, so the Town should make sure that residents understand the reasoning behind proposed changes and have access to accurate and timely information about designs, construction schedules, and roadway closures. Research suggests that the number of people who favor roundabouts increases as they gain experience with them.

NOTE: Consider an all-way stop as a short-term/interim measure to improve safety at these intersections. .

Timeframe: *Short-term for community input; medium-term for design; long-term for implementation.*

Estimated Cost: \$350,000 per roundabout (Actual costs depend on site specific conditions)

FIGURE 31 - ROUNDABOUT DESIGN CONSIDERATIONS



RECOMMENDATION 10: Install a Series of Mini Roundabouts

Determine the best design for smaller (mini) roundabouts at other key intersections throughout Biltmore Forest to minimize confusion, maintain traffic flow, slow speeds, and improve safety for all roadway users. Because mini roundabouts are smaller than standard modern single-lane roundabouts, there is likely a reduction of additional costs from utilities relocation, grading, center island landscaping, and right-of-way acquisition.

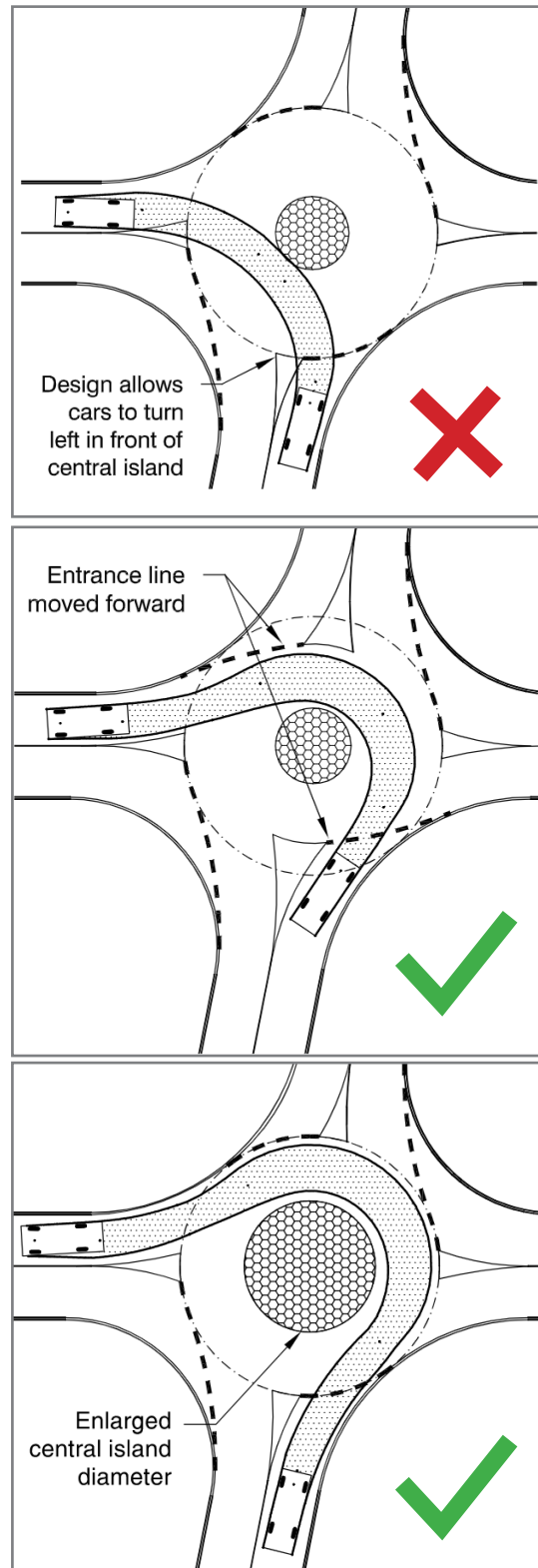
As the name implies, mini roundabouts are roundabouts that are smaller than the typical sized roundabout. The inscribed circle diameter of a typical roundabout is 132 feet, while a mini roundabout is supposed to have a diameter of less than 90 feet so it can fit inside a standard intersection. Mini roundabouts operate in the same manner as larger roundabouts, with yield control on all entries and counterclockwise circulation around a mountable (traversable) central island.

The mini roundabout is ideal for areas requiring a small footprint, which includes most intersections in Biltmore Forest (see Figure 35). The town's general traffic characteristics area ideal for mini roundabouts, which are suitable for roadways with average daily traffic (ADT) of 15,000 vehicles or fewer, less than three percent truck volume, and approach speeds of under 35 MPH. The challenge with mini roundabouts is ensuring that drivers see them. Modern roundabouts have signs and raised landscaping in the center island that draws the driver's attention, whereas the central island of a mini roundabout often has a low profile to allow for large trucks and emergency services vehicles to drive onto it.

Considerations to keep in mind when designing a mini roundabout include:

- Slow entry speeds and consistent speeds through the roundabout by using deflection.

FIGURE 32 - ROUNDABOUT DESIGN CONSIDERATIONS



Mini roundabouts should be designed to direct vehicles around the central island.

- Smooth channelization that is intuitive to drivers.
- Adequate accommodation for the design vehicles.
- Appropriate sight distance and visibility.
- Lighting surrounding the intersection.
- Future trail crossings (which should be set back a minimum of one car length).
- Slope of center island.

The Town of Biltmore Forest should explore the concept of mini roundabouts as a low cost, low physical impact intersection solution that still achieves the operational and safety benefits of a standard single-lane roundabout. Mini roundabouts are generally not recommended for intersections with more than four legs.

Timeframe: *Short- to Medium-term for location prioritization and community input; Long-term for implementation.*

Estimated Cost: \$150,000 (Actual costs depend on site specific conditions. Construction costs are expected to cost approximately \$80,000 for an installation consisting entirely of pavement markings and signage, but up to \$250,000 for mini roundabouts that include raised islands and pedestrian improvements).

FIGURE 33 - ROUNDABOUT CHARACTERISTICS & COMPARISON TABLE

Category	Modern Roundabout ¹	Mini Roundabout
Inscribed Diameter	90' – 150'	45' – 90'
Island Diameter	58' – 110'	13' – 58'
Approach Speed	25 – 45 MPH	<35 MPH
Maximum Speed	25 MPH	15 MPH
Capacity (ADT)	17,000	15,000
Signage	On approach and on island	On approach
Curb Height	Varies. Traditionally has curb separation	Varies. Traditionally domed. 5% – 6% cross slope
Pedestrian/Bike	Yes	Yes
Construction Cost Range	\$200,000 - \$500,000	\$25,000 - \$400,000
Construction Median Cost	\$250,000	\$125,000

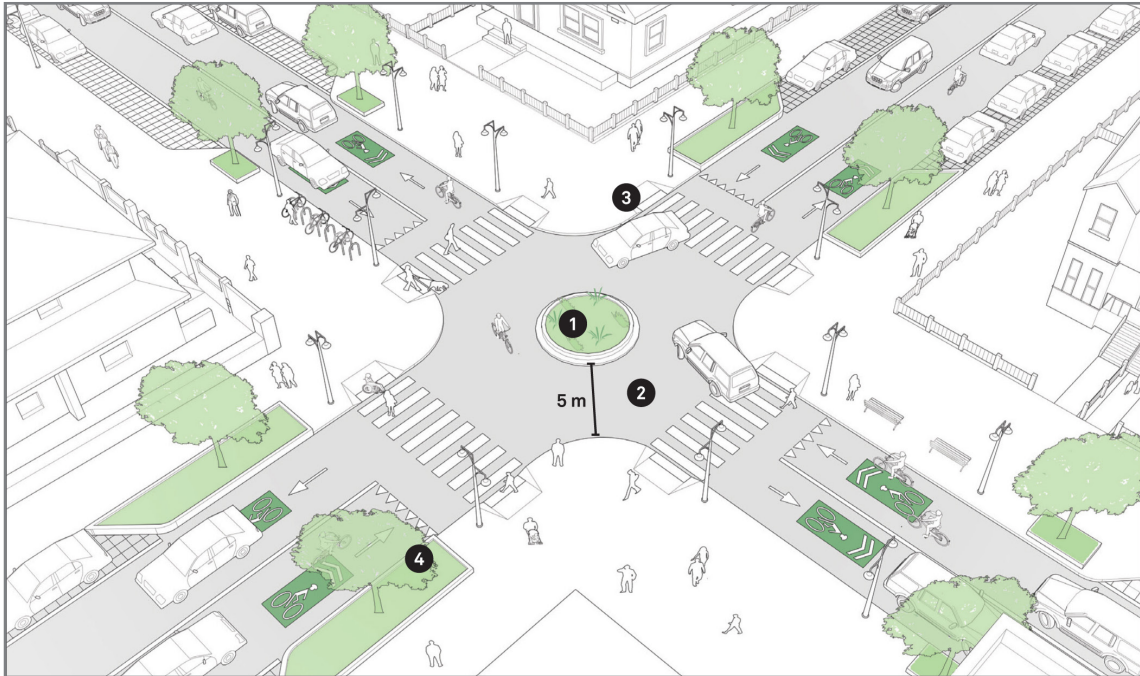
Source: FHWA, TRB

¹ Assumes single lane roundabout

Many of Biltmore Forest's intersections have limited space, but could accommodate a mini roundabout. It is important to engineer each roundabout for their specific context (right-of-way, slope, utilities, traffic speeds, and overall benefit). For some intersections, an all-way stop conversion could offer similar benefits at a fraction of the cost.

FIGURE 34 - MINI ROUNDABOUT CONCEPT

Source: Global Designing Cities Initiative



Source: FHWA/NACTO



Mini roundabouts generally have an inscribed circle that is small enough to stay within the existing right-of-way of an intersection. Designs should ensure at least 15 feet between the central island and the edge of the pavement and, generally, the center island should be “mountable” to allow EMS vehicles to navigate the intersection without unnecessary delay.

FIGURE 35 - POSSIBLE MINI ROUNDABOUT LOCATIONS











INTERSECTION	NOTES	IMAGE
<p>Busbee Rd @ White Oak Rd (could also be a gateway)</p> 	<p>This one simplifies traffic movements and would offer an opportunity for a nice gateway feature. Could be coordinated with the proposed elimination of the southern leg of Busbee Road at the Hendersonville Road intersection.</p>	
<p>Busbee Rd @ Forest Rd</p> 	<p>Good site for a roundabout, but there is limited diameter. There is room for a wider intersection, but the residents might not be amenable, especially with several large boxwood bushes and other hedges that would need to be removed.</p>	
<p>Busbee Rd/Cedarcliff Rd</p> 	<p>A logical site for a roundabout but complicated due to the rear gate to the Biltmore Estate. It is also out of the way and has limited benefit, therefore not worthwhile as a priority expense.</p>	
<p>Cedarcliff Rd @ Forest Rd</p> 	<p>There appears to be room to work with and could help slow traffic while improving circulation. Recent efforts to clarify Apple Maps GPS coordinates to the Biltmore Estate have improved traffic volumes already, so this is a lower priority.</p>	
<p>Hilltop Rd @ Westwood Rd @ Greenwood Rd</p> 	<p>It is a little tight, but there should be enough room for a successful roundabout. It also resolves a complicated traffic pattern.</p>	

FIGURE 35 - POSSIBLE MINI ROUNDABOUT LOCATIONS, CONT'D









INTERSECTION	NOTES	IMAGE
<p>Stuyvesant Rd/ Stuyvesant Crescent/ Greenwood Road</p> 	<p>This site would improve a confusing traffic flow. It looks as though there is a 100-foot diameter to work with. There might be some concern about the proximity to Greenwood Park and its possible effects. If feasible, this could also be a logical place for Carolina Day School to create a spur off the traffic circle directly into the school (and therefore keeping traffic off Stuyvesant).</p>	
<p>Cedar Hill Dr/Cedar Chine</p> 	<p>This area would be close to the minimum 45' radius but would help solve a confusing intersection.</p>	
<p>Cedar Hill Dr loop connection point</p> 	<p>This site would improve a confusing traffic flow and sight distance problem. However, the location is pretty far removed from anything else and so a lower priority.</p>	
<p>Hilltop Rd/Westwood Rd</p> 	<p>This would be a pretty tight fit (the longest current width is around 45'). While it is a good location for a roundabout, the constraints are challenging.</p>	

FIGURE 35 - POSSIBLE MINI ROUNDABOUT LOCATIONS, CONT'D

INTERSECTION	NOTES	IMAGE
<p>Stuyvesant Rd/Hilltop Rd</p> 	<p>This site is on the crest of a hill with 3 of 4 legs going uphill to get there. Therefore, a roundabout would improve safety, though neighbors might not be amenable.</p>	
<p>Southwood Rd @ Stuyvesant Rd</p> 	<p>There should be enough room here for a mini roundabout (approx. 75-foot diameter), which would slow traffic approaching the Biltmore Forest Country Club and limit conflicts overall (including sight distance). However, the Country Club may have objections.</p>	
<p>Stuyvesant Rd @ Frith Dr @ Blue Ridge Parkway Access</p> 	<p>This is a good location and could work as a gateway for the town. However, the site is close to National Parks Service (NPS) property (the Blue Ridge Parkway), which could add significant cost and time to the project.</p>	
<p>Chauncey Circle @ Valley Springs Rd (north and south intersections)</p> 	<p>The traffic patterns would benefit from a roundabout and limited sight distance would be improved. While All-Way Stops are recommended, roundabouts could be a longer-term treatment.</p>	

ADDITIONAL RECOMMENDATIONS

- Maintain the Biltmore Forest Police Department's reputation for frequent patrols and enforcement of driving laws and install more real-time speed monitoring devices throughout town. For streets with speed problems that are either (a) ineligible for physical speed control devices, or (b) have constructability constraints, apply permanently mounted speed sensor signs to reduce speeds. The busiest streets entering Biltmore Forest would be the best use of this speed reduction tool.
- Work with individual property owners to make sure that vegetation is trimmed enough at intersections for clear visibility. Town staff should regularly conduct sight triangle assessments at each intersection in Biltmore Forest to make sure that people can see cars from all approaches. Continue to also implement the "Right-of-Way Renewal Program" to keep vegetation 10 feet away from the edge of pavement and communicate the benefits of this program.
- Work with the Biltmore Estate and the National Parks Service to identify opportunities to connect the areas of Biltmore Forest south of the Blue Ridge Parkway (near the Ramble) to the rest of the town. *NOTE: A possible strategy is to widen and pave a section of Fish Pond Road and connect Hemlock Drive to Fish Pond Road, moving the Biltmore Equestrian gate a little bit further up from Niagara Drive. This would enable residents of Chauncey Circle to connect directly (on foot or by car) to the other streets and amenities of Biltmore Forest. No new crossings of the Blue Ridge Parkway would be necessary, but coordination with the National Park Service would be necessary.*



Residents have responded positively to speed detection devices in town. They work to remind people to obey the speed limit and can imply that police enforcement is active in the area.



BICYCLE & PEDESTRIAN RECOMMENDATIONS

RECOMMENDATION 11: Develop a Recreational Trail Master Plan

Walkability is a true asset for the community and most residents cherish regular walks for exercise and recreation. The best way to create a safe transportation system for all users is to separate pedestrians from vehicular traffic. However, curb and gutter sidewalks are not desirable to many residents and would require intensive construction disturbance and cost. A natural surface walking trail could be a viable alternative - serving the same purpose at a fraction of the cost. Indeed, a trail would be easier to implement overall (and easier to decommission if unpopular or too hard to maintain) while maintaining Biltmore Forest's unique forested, natural aesthetic.

Residents (including survey respondents for this study) have shown strong support for a trail system that would enable safe walking from the I-40 bridge to the Blue Ridge Parkway, using Town-owned parcels and existing right-of-way to connect most streets in Biltmore Forest for pedestrian use. The Town should hire a consultant to develop a plan for a comprehensive natural surface trail system in Biltmore Forest, primarily for use by residents and their guests. A Recreational Trail Master Plan could take an in-depth look at the potential for a trail system in town, identifying preferred alignments, possible constraints, funding resources, and implementation recommendations (including phasing). A comprehensive trail plan would also distinguish between roadside trail (e.g., along Vanderbilt Road) and off-road trail facilities (e.g., along Roul Branch, Brooklawn Park), which could have separate design standards - trail surface material, signing scheme, and levels of accessibility.

A Trail Master Plan could also include an environmental analysis that focuses on topography, hydrology, floodplain locations, wetlands, and natural habitat areas, leading to targeted conservation areas and unique community amenities.

Timeframe: *Medium- to long-term to acquire funding and engage a consultant.*

Estimated Cost: \$30,000-\$40,000
(depending on the scope)

IMAGE 36 - TRAIL SIGN EXAMPLES



A trail system can have custom signs designed to help guide walkers along the paths. These can range from small blazes to large kiosks, depending on the level of visibility desired. Biltmore Forest's trail network would likely be designed for residents, so signs could be minimal.

FIGURE 37 - RENDERINGS OF ROADSIDE TRAIL CONCEPT



Roadside trails should be able to fit within the existing right-of-way. However, some stormwater culverts and ditches may have to be relocated or retrofitted to accommodate some trail segments. A Master Plan will identify preferred routes based on feasibility, making sure the Town invests strategically in a trail system that will be successful long-term.

RECOMMENDATION 12: Install Bike Racks

While there have been concerns expressed about cut-through bicycle traffic, usually going to and from the Blue Ridge Parkway, Biltmore Forest is a great place to ride a bike. The low traffic volumes, low speed limit, rolling hills, gentle curves, and consistent shade in summer months make it ideal for recreational riding. The Town can demonstrate support for residents who bicycle in the community by installing bike racks at Town Hall, Rosebank Park, Brooklawn Park, and Greenwood Park.

Timeframe: *Short-term.*

Estimated Cost: \$500+ per bike rack



Customizable bike rack.

FIGURE 38 - RECOMMENDED STANDARD SHORT-TERM BICYCLE PARKING TYPES

INVERTED U

also called
staple, loop



Common style appropriate for many uses; two points of ground contact. Can be installed in series on rails to create a free-standing parking area in variable quantities. Available in many variations.

POST & RING



Common style appropriate for many uses; one point of ground contact. Compared to inverted-U racks, these are less prone to unintended perpendicular parking. Products exist for converting unused parking meter posts.

WHEELWELL- SECURE



Includes an element that cradles one wheel. Design and performance vary by manufacturer; typically contains bikes well, which is desirable for long-term parking and in large-scale installations (e.g. campus); accommodates fewer bicycle types and attachments than the two styles above.

Source: Association of Bicycle & Pedestrian Professionals

The variety of bicycle sizes, shapes, and attachments continues to increase, and good bike parking should accommodate all types. The starting point for most bike parking projects is recognizing whether the installation should serve short-term users, long-term users, or both. If users will typically be parking for two hours or longer, they are likely to value security and shelter above the convenience and ease that should characterize short-term parking.

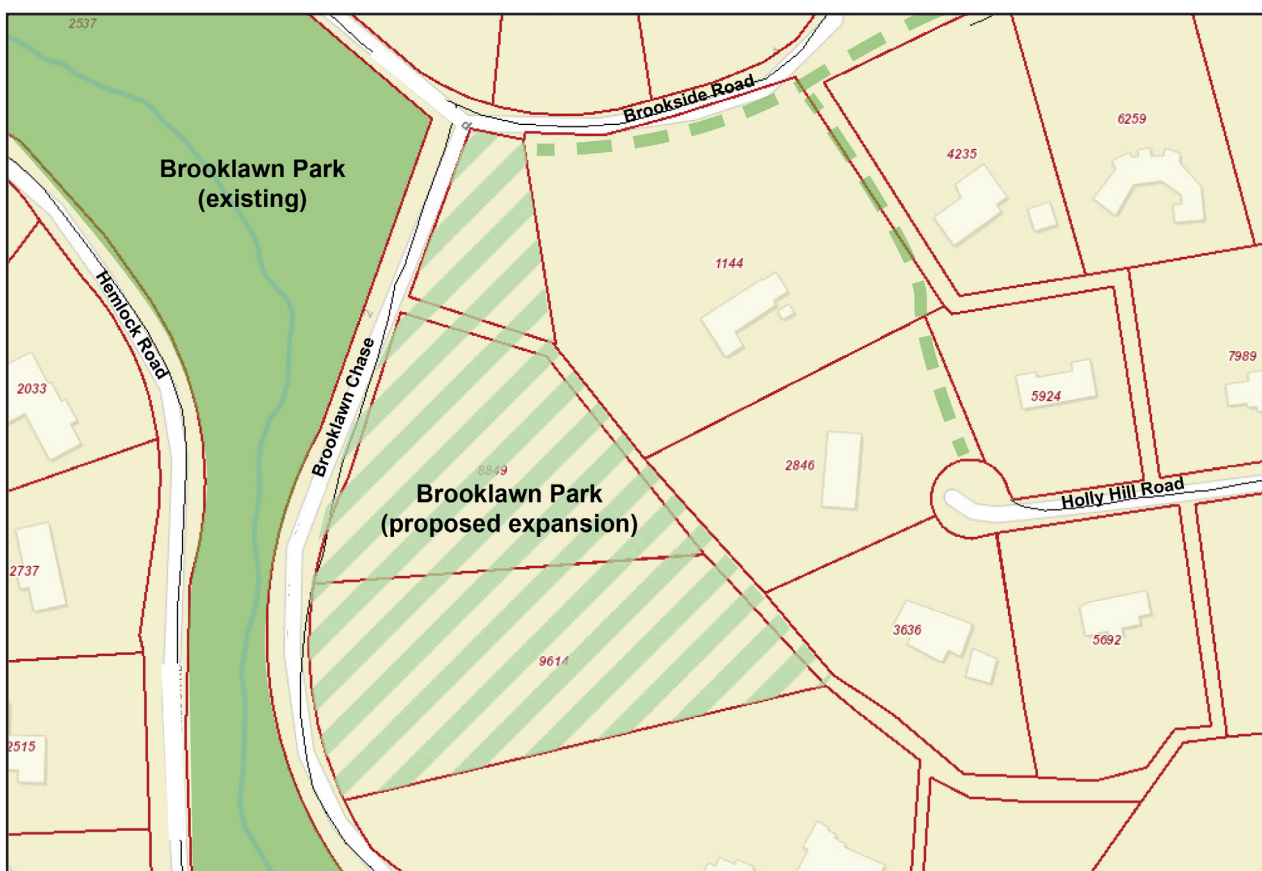
RECOMMENDATION 13: Expand Brooklawn Park

Explore options to purchase property (or easements) on Brooklawn Chase to extend Brooklawn Park across the street and add walking trails. This would become a cornerstone of the proposed future Biltmore Forest walking trail system and could accommodate trailhead facilities and other park amenities. Residents on Holly Hill Road might be amenable to having a walking trail connecting their cul-de-sac to Brooklawn Park. A longer term goal could be to reroute Brooklawn Chase several hundred feet to the east to accommodate a larger area for Brooklawn Park without having to cross a street.

Timeframe: *Long-term.*

Estimated Cost: dependent on the market value of properties.

FIGURE 39 - BROOKLAWN PARK EXPANSION CONCEPT



ADDITIONAL RECOMMENDATIONS

- Install more signs reminding people to walk facing traffic.
- Establish a donation-based park bench program, whereby residents can pay for the cost to install a bench (with or without a recognition plaque) at a park location of their choosing, to offer pedestrians a place to sit – likely near playgrounds and ponds.

FIGURE 40 - RECOMMENDATIONS MATRIX

<u>Recommendation</u>	<u>Timeframe</u>	<u>Cost Estimate</u>
1) Rethink the Busbee Road Interface with Hendersonville Road	Short- to Medium-term	\$300,000
2) Study Valley Springs Road	Short- to Medium-term	\$12,000 - \$20,000 (depending on scope)
3) Limit Left Turns onto Hendersonville Road	Medium-term	\$10,000 per intersection
4) Add a Right Turn Lane on Eastwood Road	Medium- to Long-term	\$15,000
5) Work to Fix the Blue Ridge Parkway Ramp	Long-term	n/a
6) Focus on the Edges	Ongoing	Additional cost to regular repaving and restriping allocations
7) Establish a Traffic Calming Policy	Short- to Medium-term	\$8,000 - \$15,000 (or staff time)
8) Provide Traffic Cones for Residents	Short-term	\$3,000 (preliminary allocation)
9) Install a Pair of Roundabouts at Town Hall	Medium- to Long-term	\$700,000
10) Install a Series of Mini Roundabouts	Medium- to Long-term	\$150,000 per mini roundabout
11) Develop a Recreational Trail Master Plan	Medium-term	\$30,000 - \$40,000
12) Install Bike Racks	Short-term	\$500+ per rack
13) Expand Brooklawn Park	Long-term	unknown

These recommendations are color-coded to reflect their overall feasibility (timeframe, cost, ease of implementation) where green is the most feasible, red the least, and yellow in between. The goal is to help the Town prioritize which recommendations to pursue first and allocate appropriate funding and resources for successful implementation.

Cost estimates were developed by consolidating estimates from prior engineering and planning studies, documentation by the Federal Highway Administration (FHWA), current market rates for roadway supplies, and the cost estimating tool from the North Carolina Department of Transportation (NCDOT).



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5



CHAPTER 5: Resources

AAA Foundation for Traffic Safety

AAA Foundation for Traffic Safety sponsors research to better understand traffic safety culture. The Foundation's long-term vision is to create a "social climate in which traffic safety is highly valued and rigorously pursued." In 2008, the AAA Foundation conducted the first Traffic Safety Culture Index (TSCI), a nationally representative survey, to begin to assess a few key indicators of the degree to which traffic safety is valued and is being pursued. The 2016 TSCI report continues this effort.

www.aaafoundation.org/2016-traffic-safety-culture-index

AARP Livable Communities

AARP Livable Communities is helping communities nationwide become livable places for people of all ages. AARP supports the efforts of neighborhoods, towns, cities and rural areas to be great places for people of all ages, believing that communities should provide safe, walkable streets; age-friendly housing and transportation options; access to needed services; and opportunities for residents of all ages to participate in community life.

www.aarp.org/livable-communities/

America Walks

America Walks is a national coalition of local advocacy groups dedicated to promoting walkable communities and helping communities form advocacy groups of their own. The group offers advice about effective partnerships between citizens, public officials, and engineering and design professionals.

www.americawalks.org

Association of Bicycle & Pedestrian Professionals (APBP)

APBP is a community of practitioners working to create more walkable, bikeable places. The organization fosters peer knowledge sharing, advances technical expertise, and supports professional development of those in the transportation field.

"*Essentials of Bicycle Parking: Selecting and Installing Bicycle Parking That Works (2015)*" can be downloaded from <https://www.apbp.org/bicycle-parking-solutions>

The Federal Highway Administration

The Federal Highway Administration (FHWA) provides high-quality information to serve government, industry and the public in a manner that promotes public understanding. Standards and policies are used to ensure and maximize the quality, objectivity, utility, and integrity of its information. FHWA periodically reviews quality issues and adjusts its programs and processes to ensure continuous quality improvement.

“*Developing Safety Plans: A Manual for Local Rural Road Users - 2012*” can be downloaded from www.safety.fhwa.dot.gov/local_rural/training/fhwas12017

“*Roundabouts: An Informational Guide*” can be downloaded from https://nacto.org/wp-content/uploads/2015/04/round-abouts_informational_guide_fhwa.pdf

“*Mini-Roundabouts Technical Summary*” can be downloaded from https://nacto.org/wp-content/uploads/2015/04/fhwas10007_MiniRoundabouts.pdf

The Institute of Transportation Engineers (ITE)

The Institute of Transportation Engineers (ITE) is an international membership association of transportation professionals who work to improve mobility and safety for all transportation system users and help build smart and livable communities. ITE makes available technical resources, including selected reports on various transportation-related topics. The “Traffic Calming ePrimer” is a free, online resource openly available for public use and can be downloaded here:

<https://www.ite.org/technical-resources/traffic-calming/selected-reports/>

The National Center for Bicycling and Walking (NCBW)

The National Center for Bicycling and Walking provides bicycle and pedestrian advocates and professionals, transportation engineers and planners, public health specialists, and others with easy access to the information, training, tools, and experts they need to foster active living through community design.

www.bikewalk.org

The National Highway Traffic Safety Administration (NHTSA)

NHTSA’s research offices are the Office of Vehicle Safety Research and the Office of Behavioral Safety Research. The Office of Vehicle Safety Research’s mission is to strategize, plan, and implement research programs to continually further the Agency’s goals of a reduction of crashes, fatalities, and injuries. Our research is prioritized based on the potential for crash/fatality/injury reductions and is aligned with Congressional Mandates, DOT & NHTSA goals. The Office of Behavioral Safety Research studies behaviors and attitudes in highway safety, focusing on drivers, passengers, pedestrians, and motorcyclists and use that to develop and refine countermeasures to deter unsafe behaviors and promote safe alternatives.

“Traffic Safety Fact Sheets 2010 Data” and “Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices” can be downloaded from the organization’s Web site at www.nhtsa.gov

The National Safety Council (NSC)

The National Safety Council is a nonprofit, nongovernmental, international public service organization dedicated to protecting life and promoting health. NSC is a membership organization; members include more than 48,000 businesses, labor organizations, schools, public agencies, private groups, and individuals.

www.nsc.org

Pedestrian & Bicycle Information Center (PBIC)

The Pedestrian and Bicycle Information Center (initiated and funded by the U.S. Department of Transportation’s Federal Highway Administration) hosts several Web sites that contain comprehensive information on walking and bicycling issues, and resources for community members and professionals to improve conditions for walking and biking.

www.pedbikeinfo.org

“PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System” can be downloaded from www.walkinginfo.org/pedsafe

“BIKESAFE: Bicycle Countermeasure Selection System” can be downloaded from www.bicyclinginfo.org/bikesafe

“Citizens’ Quick Reference Guide to Transportation Decision-Making” can be downloaded from <http://www.pedbikeinfo.org/cms/downloads/CitizensGuideTransportationDecisions.pdf>

Strong Towns

Strong Towns supports thousands of people across the United States and Canada who are advocating for a radically new way of thinking about the way we build our world. The Strong Towns approach believes and advocates for communities to:

- Stop valuing efficiency and start valuing resilience
- Stop betting our futures on huge, irreversible projects, and start taking small, incremental steps and iterating based on what we learn
- Stop fearing change and start embracing a process of continuous adaptation
- Stop building our world based on abstract theories, and start building it based on how our places actually work and what our neighbors actually need today
- Stop obsessing about future growth and start obsessing about our current finances

<https://www.strongtowns.org/>

CAUTION
SPEED
BUMPS
AHEAD

APPENDIX

Complete Survey Responses (Write-In)

3.) What does it mean to feel safe when driving?

- Lower speeds, more rational drivers, less congestion.
- Other drivers are generally respectful of the speed limit and I have experienced no aggressive Shavuot from other drivers.
- The roads are maintained. But I'm concerned about speeding on Stuyvesant.
- For other drivers to drive predictably and safely.
- Traffic is reasonable
- I think Eastwood Road needs speed bumps because feeling safe means not having to worry about people flying around a curve and hitting you.
- Speed limit and good clear visible signage
- Not at risk due to drivers exceeding the speed limits or driving in an unsafe or reckless manner. Clear and visible road signage. No street demonstrations or protests.
- Others obey traffic laws..
- No one tries to get in your car at a stop sign. The police will come to help you if you have car trouble.
- Everyone follows traffic laws and signage.
- Roads are clean, well maintained, traffic laws are obeyed by other drivers, road design encourages attentive driving. Road signs are visible and clear.
- To feel that I will arrive at my destination without incidence
- Not going to be hurt or intimidated
- Other drivers are: - observing the speed limits - completely stopping at stop signs -staying on their side of the road while driving
- Other drivers are safe and responsible, and the speed limits are appropriate for the roads we're on.
- Roads in good condition and well marked.
- That there will be no mishaps.
- 1-having pedestrians walking/running on the correct side of the street 2-not having crazy speeders
- Not too much traffic from non-residents
- Low probability of a collision
- 1. Reduced speed limit of 25 miles per hour enforces safety from encountering deer or pedestrians. 2. Police presence keeps the town safe from crime, which creates a sense of safety when walking.
- Supervised speed and police presence.
- Clear lane markings and signage. Unobstructed roadsides, particularly corner lots. When speed limits are observed
- Being vigilant while driving as there are often walkers; obeying speed limits;
- All users of streets being alert, safe, and considerate.
- Basically other drivers are typically courteous on our roadways.

- No threat from other drivers. Less fear from construction vehicles
- that the driving laws are obvious, make sense, and that they are adhered to by drivers
- Cars obeying traffic rules and pedestrians obeying pedestrian rules
- - Appropriate speed limits - Residents obeying traffic laws - Non-residents discouraged from using BF roads - BF public safety team active and visible
- Speed is slow, cars keeping a safe speed. Proper signage.
- Cars are not speeding and are following the rules.
- Knowing the police are monitoring the Town and enforcing speed limits. Need to work on opening up the streetscapes - keeping vegetation away from the edge of the roadways and keeping line of sight clear.
- People walking are on correct side and visible and usually step off road. Cars appear to maintain appropriate speed most of the time
- Cars generally are in the neighborhood of the speed limit and follow the traffic rules
- To drive without fear of others
- Cars AND pedestrians follow rules of the road.
- I don't feel there are roads that are inherently dangerous.
- I don't usually worry about other drivers speeding, running stop signs, or more troubling concerns like drive-by-shootings and things of that nature.
- I feel safe when other drivers exhibit courtesy and generally abide by regulations.
- I know that most cars will be driving a safe speed limit. There are sufficient speed reducing methods to help limit speeding.
- I am never fearful of speeding or reckless driving on the part of other drivers and the roads are very well maintained.
- Plenty of space and no other cars crowding you. Plenty of time to be able to react to conditions without fear of another car
- there are some blind corners or hills that make me nervous. Turning off Buena Vista, onto Browntown and off White Oak onto Busbee, the golf course area with street parking and speed mountains, turning onto Browntown from Amherst
- That other motorists are obeying traffic laws, especially speed limits and stop signs.
- The streets are in good condition and well-marked with painted lines and adequate signage. I would say that some of them could use more lighting.
- fellow drivers obey traffic laws I don't have to dodge bicycles or pedestrians taking up too much of the road I can see well (ex: there aren't obstacles or vehicles blocking my way)
- to feel that everyone in a vehicle is paying attention and not going to cause an accident of any kind
- we see parked and moving police cars, there are appropriate stop signs and speed bumps, we rarely see speeding cars
- An absence of apprehension when behind the wheel about my safety and the safety of others.
- Other drivers are handling their vehicles in a responsible manner.
- That there won't be sudden unexpected obstacles like racing cars or people dressed in dark clothing walking the streets at night - so that I can't see them when driving!
- Good visibility and good signage.
- That traffic is not speeding and everyone is on the lookout for each other. No horns blowing, and everyone is polite.
- So speeding, polite drivers, no horns
- Too many people especially trucks drive on or across the middle of the road or yellow line.
- Avoiding collisions
- Safe when driving means that all cars, bikers, walkers and impediments to traversing the streets can be seen. That is not always the case.

- It means that there are adequate signs and surveillance to insure that the roads are safe from reckless drivers. However, reckless deer are a different story...
- Reasonable speed limits and control of same
- That no one will intentionally run stop signs or ignore pedestrians on the roads.
- It means a great deal. Respect for the safe driving culture of Biltmore Forest makes me extra attentive when I get behind the wheel. This calm pastoral setting is a constant reminder that we share the roads with walkers and wildlife. Walking and observing wildlife are privileges of living in Biltmore Forest.
- It is a great feeling. It also instills in me the responsibility of operating a vehicle on our roads. We are constantly sharing these byways with walkers and wildlife. We must support or coexistence.
- Traffic laws are obeyed. Traffic lanes are clear of parked vehicles and debris. Bicyclists ride single file. Pedestrians walk on or near road shoulder.
- There are proper signs, lights, warnings posted where appropriate and that drivers pay attention to them and abide by them.
- Maintenance of speed limits and proper stop signs.
- Good road conditions, low volume of traffic and low speed limits.
- Devoid injury or death
- Drivers pay attention to stop signs, speed limits, and other rules of the road Workmen or other non-residents follow our rules Deer herds are kept at a level that keeps drivers safe Bicyclists follow the rules!
- Unlikely to have an accident - unlikely to be struck while walking by a speeding, distracted driver, by a driver who is ignoring traffic signs or is driving on the wrong side or down the middle of the road. Better traffic control is needed at blind intersections and at blind hills - the intersection and hill between Deerfield and Buena Vista on Browntown is particularly dangerous. The speeding on Browntown is frequent and excessive - and never enforced.
- People obey stop signs, safe speed limits, streets maintained
- Adequate signage and traffic law enforcement.
- Not being hit by a cyclist or car/truck when walking....I also walk at night and I love that I feel safe in the dark-
- the town has a reputation for frequent patrols and enforcement of driving laws~ Most people in the forest respect that. Unfortunately, one of the more commercial entrances is Browntown and alot of folks arent from here. Speeding, missing the pavement, littering, etc
- Very unlikely to get in an accident and very likely to get where I was planning on going
- Being able to see on coming traffic and people. Shadows create blind spots and pedestrians walk in the middle of the road.
- Not going to get injured or harassed
- for the most part other drivers are driving safely
- I'm not concerned about irresponsible drivers
- Traffic is abiding rules of the road. Care is taken to anticipate walkers/cyclists at blind curves and crests and considering that their options to leave the road safely for traffic may be limited by using traffic and shoulder conditions. Driveways may have limited visibility. Leaves, snow and debris are removed promptly. Salt is applied before icy conditions become hazardous. Road surfaces are maintained in serviceable condition.
- That someone isn't speeding around the corner and going to hit me. There are also so many construction trucks that are not monitored or kept track of
- Avoiding hitting someone or being hit.
- Almost all vehicles, pedestrians, bicyclists are following the rules. Predictability and politeness both help.
- I feel comfortable driving on Biltmore Forest streets.

- Not a lot of traffic and good speed limits
- Know that other drivers are obeying the speed limit, staying on the correct side of the road around blind curves.
- Other traffic obeying speed limits, especially around blind curves and coming off main roads.
- That there won't be any sudden unexpected obstacles (like speeding cars, darkly dressed pedestrians) in my pathway.
- Everyone drives responsibly.
- low traffic levels, low speed limits, walkers using proper side of street, no cars parked on shoulders or on roadway
- The posted speed limits allow for safe driving throughout the Town.
- The roads are well maintained. Stop signs are clearly visible. Efforts to enforce speed limits are evident.
- People following the speed limit and stopping at stop signs
- a slower speed with not much traffic
- Traveling in a safe manner for conditions, regardless of the speed limit.
- People, bicycles and parked cars in the road along with dappled sunlight, extreme darkness and curvy roads....these conditions make me feel unsafe when driving.
- No fear of collision.
- Protected by the police, most residents follow speed limits, roadways not crowded
- It means the absence of speeding, respect for traffic signals, respect for pedestrians and wildlife.
- Safe neighborhood, not a crime area.
- It means that the other drivers are driving responsibly. (Also, not being afraid of running into deer and nor being worried about snow during winter.)
- Other drivers are paying attention to driving not other activities. It is usually the case except some young mothers apparently have no other time to talk on the phone except while driving.
- Speed limits, and most drivers seem to abide by the rules.
- Pedestrians obey the walking rules and wear easily seen clothing and cyclists obey traffic rules
- Normal speed
- Confident other drivers are (mostly) attentive and minding speed limit.
- no high speed traffic or people running stop signs
- Everyone driving speed limit.
- I don't feel I'm likely to be hit by other cars however the streets are narrow and there is not a centerline on many of the streets. The main concern I have with driving particularly at night is deer
- That all vehicles drive reasonably safely and that there is enforcement when folks don't. BF roads feel a lot safer now than when I was growing up. Drunk driving laws have helped but also very excessive speeding seems less common (did even before the drop to all-25 mph). Drivers seem to respect walkers and bikers. It would be nice if bikers respected cars, such as via more single-file riding; slow bikes snarl traffic and encourage risky passing maneuvers.
- I feel safe when others obey the laws and heed right of way. Also when no one is speeding by or around my car.
- It is not dangerous. There are a lot of work trucks that are parked on the side of roads that do make it hard to pass in those areas
- That drivers obey speed limits. Concern of parking on roadside.
- Need to feel that cars are traveling at moderate speeds and children are safe in the streets when riding their bikes.
- Cautious, polite drivers
- Cars around me drive safely ; proper signage

- Speed limits obeyed by most, driving laws typically obeyed, typical courtesy's extended between drivers, police presence.
- Speed limits are low enough to allow for safety, and there are reasonable reminders (digital signs) of those limits and good enforcement.
- Well planned intersections and stop signs
- Roads are clear. Speed limits are posted and drivers abide by them.
- Primarily that MOST people obey the traffic speed, walking instructions.
- Being able to easily see pedestrians and bikes in our dappled light. Require light colors or reflective material
- Being able to easily see pedestrians and bikes in our dappled light. Require light colors or reflective material
- Speed limits are mostly adhered to and most drivers who appear to live here follow the driving rules
- Being able to easily see pedestrians and bikers in our dappled light. Require light colors or reflective material.
- Not hitting walker, runners, etc. Resident or not
- Good roads, kept in good shape, patrolled by police
- Obeying speed limits; awareness of people/pets walking; awareness of drivers rolling through stop signs and using their cell phones; very elderly drivers erratically driving.
- Most residents seem to follow the 25mph signage. Non resident (trucks in particular) typically go faster than the speed limit
- I feel safe in a car but not on bike or on foot
- Slowing down when people are walking, especially with dogs; obeying posted speed limits
- 1. No traffic congestion 2. walkers going correct towards traffic 3. Bikes in single lane 4. Drivers obey speed limits
- While driving carefully and thoughtfully--others are doing also
- low speed limits
- Slow speed, low traffic = safe.
- Not being concerned about getting into an accident
- That drivers are obeying the posted speed limit. That walkers are obeying the rules for walking on the correct side of the street.
- I feel comfortable that I can get through the neighborhood without incident.
- unlikely to get into a car accident
- Slow speeds
- That your not at risk of injury and there is an overall sense of calm and control.
- Lower speed limits and stop signs posted at dangerous intersections.
- I don't feel like I am at risk of being in accident with another car.
- Low speed and well maintained roads.
- Limited speeding. No blinks curbs or drunk drivers.
- Roads are clear and clean, not too many cars, etc.
- People obeying the speed limit
- ?
- Cars won't speed, people give way to pedestrians (with dogs or others), bikes, etc., anything that weighs less than them. This includes speeding bikes!
- Cars driving reasonably, clear sight lines of other cars, pedestrians, and bike riders
- Pedestrians will not move off the street to allow safe passage while driving. Too many walkers do not realize how disguised they are in the tree shade nor do they seem to care.
- People not running Stop signs and workman/construction people follow BF rules. People who walk against traffic and bikers in single file when car passing.
- Vehicles are following the speed limit; trucks and cars are not parked on the road blocking

two way traffic. Perhaps a speed bump on blind curves...

- Clear roadways, visible street signs, lit public areas. Known speed limits, room on roadways for others.
- It seems most folks are courteous drivers who are paying attention to what's going on. Sometimes someone will be going too fast on one of the main streets, but rarely causes a problem. Or backing out of a drive, but with traffic going so slowly there is plenty of time to resolve any issues.
- Not a lot of drivers, no crazy driving
- Speed limits, lack of traffic.
- I feel safe when I'm driving if other drivers are not speeding aggressively, rolling through stop signs and when they demonstrate awareness of pedestrians and road conditions.
- That I won't get into an accident because of a drunk or careless driver. And that the streets are maintained to a degree that they are drivable
- No speeding cars.
- Avoid accidents.
- Slow speeds
- No bike riders in sight
- There is not a lot of unsafe drivers on the road.
- No reckless drivers. Speed appropriate. No drivers courteous to walkers and bikers
- Not a lot of cars, and honoring speed limits
- Feeling safe is often associated with feeling secure. Feeling safe means that you do not feel like you will be harmed or are in physical danger in any way. I believe it is equally important to feel secure. Feeling secure means feeling protected from loss; being protected from harmful things.
- Safe: not having risks for my own or other road user's safety
- Knowing that no one is going to harm you, e.g., by speeding past intersections.
- Other drivers drive carefully and at a safe speed.
- No speeding cars No big trucks, traffic on small streets
- Road shoulders are even with road, people stop at intersections versus rolling through
- Not sure, exactly: but I always do.
- I'm not going to get hit by a semi careening out of control.
- People abiding by speed limit and rules
- Not a lot of tragic. Tragic should be respectful of others especially foot and bicycle.
- I do not feel safe driving because there are so many blind curves due to overgrowth that needs desperately to be cut back. Walkers and cyclists take over the roads and it is very dangerous.
- Other drivers seem alert and cautious for the most part, the speed limit is low, I often see patrol cars on duty which is definitely an added sense of security and safety.
- Streets are well lit Wide enough roads
- when people obey traffic rules, especially stop signs and especially at Busbee
- Safe means I do not worry about kids running into the street unexpectedly, safe means walkers were reflective clothing or lights to see when walking in the dark not dark clothing. Safe means I can give room to walkers in the road by moving to the other side of the street when no on coming traffic is coming. Safe means I have certainty of what to expect when driving.
- I drive at a comfortable speed and can feel that I will likely not get into any sort of accident.
- No worries about encountering unsafe drivers or situations.
- Feeling you can travel without endangering yourself or others
- Not threatened by speeding. Although bike and pedestrian traffic can create concerns.
- Few cars. Less dump trucks speeding. Less construction traffic. No one travels at 25 mph!
- You have to really watch at 4 way stops (Hilltop/Stuyvesant). People don't always stop.

- That I don't have to worry about bikers and pedestrians in my driving lane. This is especially an issue in the early mornings, but also throughout the day with dog walkers and visitors from outside neighborhoods. Somehow the road has become secondary to drivers...
- Not worried about car jackings or seeing a bear run across the road out of nowhere. Not worried about drunk or otherwise reckless drivers. Knowing the Biltmore police are always close by.
- Drivers adhering to speed limits, lane closures or work being properly marked with signage, roads being in good repair with right of ways maintained,
- Folks observing speed limit and walking on left side, visible presence of police all make it feel safe, as well as the generally very low amount of traffic
- That other cars are paying attention to what is happening around them—pulling onto roads and out of driveways safely.
- Well lit streets, room for pedestrians, roads well marked
- Slow speeds and good visibility
- If all cars drive under the speed limit, driving would be consistently safe.
- I do not feel safe when encountering pedestrians walking in dark clothes--(day or night) or when they are in the road or walking with traffic. I fear I will hit them
- Slow speeds Alert Drivers Police presence
- Speed Lane-cars stay in No parking in road
- Not fear speeders

6.) Do you avoid traveling on any specific roadways in Biltmore Forest due to safety or congestion issues? If so, please specify the area and the concern.

- Turning left from Cedarcliff is suicide.
- I am not comfortable walking or riding bicycle on Stuyvesant. We use Frith and connecting roads. People "fly" in front of our house and often miss the turn out of BMF to the parkway as they are driving too fast. We have asked for a flashing light but nothing transpired.
- No concerns when driving, but when walking I feel a little weary about (a) the section of Vanderbilt between Town Hall and Rosebank Park, and (b) the section of Stuyvesant near the county club (almost the whole length between Browntown and Southwood). If I could wish sidewalks into existence anywhere in town, these would be the places, but I know that's unlikely to be possible.
- No
- Avoid Blue Ridge parkway at Hendersonville Rd. 5-6 PM
- Eastwood road is too congested, so yes, I avoid it.
- no
- Don't avoid traveling on any road. Congestion most felt on Vanderbilt, Stuyvesant and Busbee, and access to BF from Blue Ridge Parkway and Hendersonville Toad.
- No
- No
- Any roadway without a designated center line is difficult to travel
- No
- I don't avoid any roads, but have concerns about some. 1. The Busbee/Vanderbilt intersection needs a stop sign! The Van.Rd. drivers get up a head of steam (going in both directions) and that corner has limited visibility all around because of foliage. One can hardly get going

from a full stop before a Van.Rd. driver is upon them. Last week a southbound driver on Vanderbilt, who was turning left onto Busbee, cut the corner so severely he drove over the word STOP that was painted on the street, appearing suddenly in front of me in my lane. If I hadn't been driving slowly in anticipation of having to stop at that intersection, I would have hit him. I had to slam on my brakes to avoid that. This wouldn't have happened if he had a stop sign also. 2. The lack of visibility because of bushes is also a problem at Forest/Lone Pine and Forest/Busbee. We keep hearing that line of sight is important, and that homeowners will be required to cut back their landscaping, but that NEVER HAPPENS. It is dangerous, especially for walkers. 3. I don't know if this is a Town or a DOT issue, but the signs indicating lanes when entering Vanderbilt from All Souls Crescent are confusing. It would help if the signs for the right lane (next to the church) showed TWO arrows for the 2 right turns, and a straight and left arrow for the left lane drivers. Have had more than one confusing merge situation as another driver also wants to enter the town via Vanderbilt Rd. at that intersection.

- Vanderbilt Rd (between Biltmore Village and Town Hall) isn't a safe place to walk. I live along Vanderbilt and need to walk or run for a bit along the road to get to a different, quieter street where I can run comfortably. I'd really be in favor of having a sidewalk for Vanderbilt.
- No
- No
- Avoid Stuyvesant because of excessive speed bumps. I think 7 in less than a mile is excessive.
- Exiting the Forest from Eastwood Rd at peak hour is a nightmare.
- Left Exiting Browntown Rd. Due to traffic. Cedarcliff entrance/exit due to visibility and exposure to Hendersonville Rd. Traffic.
- Stuyvesant Road
- No, but heavy traffic on Hendersonville Rd makes me avoid ingress and egress at rush hours, particularly on Fridays
- no
- No
- no
- no
- N/A
- I avoid making left turns out of Cedarcliff
- Congestion at Browntown and Hendersonville roads is a concern when exiting Biltmore Forest.
- Parkway in late afternoon.
- No
- I avoid driving by the country club because of the obnoxious speed bump/cart crossing. Otherwise, no
- We avoid certain areas during construction due to congestion
- No
- No
- I try to avoid Hendersonville Rd as much as possible because the traffic is so congested and it's very unnerving trying to cross from Browntown Rd especially. But all the grocery stores and medical facilities we frequent are along Hendersonville Rd so it is quite difficult to avoid it.
- no
- Turning left off Hendersonville Rd. (while headed North) onto the Blue Ridge Parkway is a very dangerous venture and probably should be made illegal.
- In the afternoon I try to avoid the entrance/exit near the Parkway, It is way too congested. Also the light at Valley Springs is extremely long when leaving Biltmore Forest

- The traffic light at Valley Springs Road onto Hendersonville road could be a little longer. Currently only 4 cars can safely traverse the intersection going northbound.
- I don't make a left from Cedarcliff onto Hendersonville Road-not anything the Town can do about that traffic!
- I avoid exiting the Town using the Blue Ridge Parkway exit in the mid-to-late afternoon due to congestion.
- No
- No
- No
- No
- No, although I often find I should have,
- If I know on a construction site, I avoid it. Don't think most workers are very considerate of the neighbors or pedestrians. Of course there's always exceptions
- No.
- Long traffic lights at Vanderbilt and all souls and intersection at busbee and Hendersonville rd
- I avoid the upper (Eastwood-Stuyvesant) part of Hilltop Rd because the speed humps will damage my vehicle at the posted speed limit. I don't often exit at Eastwood because the light cycle is too slow.
- Valley Springs Road and Chauncey Circle (closest to the Ramble gatehouse) has no stop sign. Valley Springs Road curves, so making a left turn from Chauncey Circle onto Valley Springs is a game of chicken. You can use all the caution, pull out when you think it's clear and still have to slam on brakes to avoid being broadsided. This has happened to my neighbors and me on many occasions. One of these days, someone's going to get hurt or worse,
- No.
- Area in front of the Country Club due to the too large speed humps
- No
- No
- Although we live on Deerfield Road, I avoid walking our dogs on Browntown because of safety issues - speeding, multiple blind intersections, distracted drivers, drivers in the middle or wrong side of the road, drivers ignoring the traffic signs on the intersecting roads, heavy contractor traffic early/late in the day. The Deerfield - Browntown intersection is particularly unsafe because it is a blind intersection, on a curve, over the crest of a hill
- Blue ridge at rush hour - backed up
- No
- Walking on Browntown, Busbee and Stuyvesant is quite dangerous due to trucks and cyclists-
- I don't turn left from Browntown because its safer to go to Busbee... no need for changes.
- No
- My house is on North end of Vanderbilt Rd. It would make most sense for me to use Cedarcliff to get onto Hendersonville Rd. Or as the main entry way to my house. But, I find that intersection to be more dangerous than others, so! I enter BF by Busbee Rd or Vanderbilt Rd from Biltmore village.
- I hate the length of the light at busbee intersection
- Entering Cedarcliff due to narrowness, property driveway at that entrance, blind curve from southbound traffic and speed of that traffic on Hendersonville. Blue Ridge Parkway to Hendersonville is frequently backed up to access from Stuyvesant. Any access to Hendersonville without a traffic light to make the left northbound.
- Yes.
- Cedar Cliff Road--no stop light.
- Southwood has a lot of truck traffic and curves. I don't turn in on Cedarcliff or Browntown much because the turns are sharp and the traffic on Hendersonville Rd. is fast.

- I avoid walking on the left side of Lone Pine Rd where it intersects with Forest Rd because I am concerned a driver might not see me due to the height of shrubbery.
- Yes. I avoid turning from Chauncey Circle onto Valley Springs from the SW corner because of poor visibility of traffic approaching from the left.
- no
- No
- No
- No
- Avoid Blue Ridge Parkway entrance/exit during rush hour because of backups from Parkway users.
- I avoid exiting at the Parkway during rush hours. There is often a line extending to the Parkway trying to get on Hendersonville Rd going south. The heavy traffic and poor visibility make exiting difficult. I avoid Stuyvesant/Vanderbilt when bikers are present.
- No
- no
- Turning in to Biltmore Forest at the Parkway is dangerous. Making a left turn onto Hendersonville Road is dangerous if not at a street light. And even then, drivers on Hendersonville Road routinely run the red lights.
- No
- avoid buena vista due to so many homes with possible obstructions, avoid leaving neighborhood on cedarcliff due to visibility with hedges/returning due to hard turn angle at 45 mph
- Occasionally Vanderbilt and Southwood, as Construction vehicles sometimes have one lane blocked.
- Yes, avoid hvl road from parkway access road during rush hour as exiting traffic can be backed up onto parkway, making it hard to exit BF. Also turning left from hvl road onto parkway access road, can be difficult due to heavy traffic and at other times to see speeding cars coming up hvl road hill- will use the parkway to enter at those times. Occasionally will avoid Eastwood stoplight leaving BF during evening rush hour as many cars and work trucks needing to turn left into hvl road, along with the cars turning right from apts. across the road. Sometimes have to wait for next round of green lights. Occas. when turning into BF from southbound hvl road onto Eastwood, have suddenly come upon walkers, cyclists a stalled car or BFPD stop near the hill/ blind curve, can be a problem in that area of Eastwood road. There are some other blind curves in BF that even at 20-25 mph, an oncoming car or truck have crossed over into my lane, or walkers walking side by side.
- Stuyvesant around the Country Club.
- No.
- No
- Southwood - blind corners with casual walkers that cannot be seen when driving Several blind corners
- Busbee due to long wait at light
- No
- No
- I avoid walking on Busbee between Vandy and HVL Rd, and Stuyvesant from #1 to top of that hill. Blind due to always-overgrown vegetation.
- I avoid the intersection of Cedarcliff and Hendersonville Road when I am going out. The sign says no right turn and the left turn feels dangerous to me.
- I don't like turning left out of Browntown.
- No
- No
- The parkway entrance or exit at rush hour

- No
- Avoid Vanderbilt North of Busbee as Hendersonville road is faster (higher speed limit -no complaints) Avoid Stuyvesant between Busbee and Club as facility users often tailgate (going towards or away from club)
- The Vanderbilt Stuyvesant intersection is dangerous and needs 4 way stop signs. Coming from Vanderbilt Road, cars going North on Stuyvesant often speed and it is very difficult to see them. I've had two very close calls here! Fix this before someone gets badly hurt. There is already one stop sign on Vanderbilt, and this one is badly needed.
- None. All roads feel safe.
- No
- Not really
- Day or night or dusk. You cant believe how stupid we are
- Parkway from Hendersonville Road in heavy traffic
- Vanderbilt at Busbee; Stuyvesant at Hilltop; Left turn of Stuyvesant getting to Hendersonville Rd; Curve of Stuyvesant Road by Park
- No
- Vanderbilt Rd south from Biltmore Village is dangerous for cyclists because cars/trucks pass on the curves. This is a serious issue all the way to the speed limit change sign
- no
- Don't like walking on Busbee--need sidewalk from Vanderbilt to Hendersonville Rd
- Cedarcliff Road @ Hendersonville Road--difficult in and out during peak traffic and commute times
- No--but I avoid the 'hump' roads as often as possible
- Long traffic light @ Busbee
- Eastwood in the late afternoon - light takes a long time w not all cars clearing the light leaving the Forest.
- None
- Making a left on to Blue Ridge Parkway entrance to BF going North on Hendersonville Rd.
- Turning onto Hendersonville Rd from Browntown during higher traffic times, especially if a car is turning left. Turning onto Browntown from Buena Vista and vice versa because the shrubs make a blind corner.
- None
- No
- I don't run or walk along Vanderbilt Road between the town hall and Biltmore Village. Many of the cars driving this section are going to fast and don't yield enough space to pedestrians and bikers along this section.
- No
- Yes, Parkway Ramp to HVL Road from 4:30 on weekdays
- No
- No
- Try to avoid speedbumps
- I typically don't have any issues with congestion.
- The turn from buena vista onto browntown (either left or right) can be tricky because of the slope of browntown and because of the hedges there; same for turning left or right onto Hendersonville from browntown
- No
- No.
- NO
- No
- No

- I try to not walk on Stuyvesant particularly between Hill Top and South Wood. I do try to not use Eastwood when driving after 8am because it is too crowded
- Avoid going in and out ridgefield due to traffic congestion, safety. The turn lane is dangerous with valvoline customers trying to turn into there, and us trying for ridgefield.
- no
- No
- No
- No
- Not really.
- No
- No, but I am leery of leaving White Oak Rd toward Busbee Rd due to cars speeding on the spur of Busbee that goes South onto Hendersonville Road. A caution sign on Busbee warning of cross traffic would help.
- not really
- No
- No
- No.
- No
- I avoid busbee and Eastwood
- Not really.
- I try to avoid turning left onto Hendersonville Rd from Browntown - for both the sanity of those behind me as well as my own safety... I worry about my child walking or biking on White Oak when traffic on Hendersonville Road sends people barreling down the street as a cut through but thankfully this isn't frequent.
- No
- I avoid White Oak because the kids are running in the road without looking or concern for cars and I worry about hitting a kid. The neighbors also do not think about staggering cars parked in the road so traffic can get by reasonably
- Browntown entrance. Really the exit onto Hendersonville seems dangerous. I also do not like taking Eastwood out on bike due to the curve... I do not feel safe in that section in anything other than a vehicle.
- I walk around town quite often and, depending on the time of day, will avoid Stuyvesant and Vanderbilt due to heavy traffic and speeding vehicles.
- Southwood
- No.
- Busbee exit backs up at the light. Vanderbilt exit backs up frequently.
- Don't use cedar cliff to exit to Hendersonville Rd...its dangerous. Can't see oncoming traffic well enough to exit. Leaving BF on Parkway ramp to Hendersonville Rd. is very crowded and congested sometimes
- Browntown Road has become a nightmare to exit because we allow left hand turns! It is also heavily traveled by people cutting through from outside neighborhoods walking their dogs and not getting out of the road when approached by vehicles. In addition, anywhere in the neighborhood where street parking is allowed causes a hazard; this is particularly true at the lower half of Browntown near Hendersonville Road.
- I do not actively avoid any roads
- We tend not to walk on Busbee, Vanderbilt, or Stuyvesant
- No
- No
- None
- no

- Cedarcliff--exit danger on Eastwood when large construction trucks are on it
- Cedarcliff--blind to traffic on H'ville Rd
- Trucks park on Eastwood curve Southwood @ Stuyvesant
- No

6.) Do you feel that construction/landscaping vehicles pose a specific concern for roadway safety? If so, please specify your concern.

- Yes - in general, they speed. BBarnes trucks are pretty good, though
- They are often on the road but it is my assumption the "forest" needs care they provide.
- These are indeed the greatest hazards, but I don't think there's a grand solution to them except talking to them when they're particularly poorly parked.
- No
- When they park in the road
- Yes. There are so many large, heavy trucks... again, especially on Eastwood Road
- sometimes
- Yes. Many are large and drive over the speed limit.
- No
- Yes. They park vehicles in the roadway.
- Yes, frequently obstructing roadways
- Only when they park in the roadway on a blind turn
- Since construction vehicles are to be parked on the property, this is less a concern while driving. However, while walking, construction vehicles pose a threat due to speed driven
- Not major concern but they are a concern when they block half the road and hard to see any oncoming traffic due to poor visibility due to hills.
- Yes! They park on the street while working on homes (sometimes LITERALLY FOR YEARS AT A TIME!!) which hinders visibility. They also drive way too fast.
- If they're parked along a major road like Vanderbilt, yes. This could be mitigated by better use of reflective triangles or signs.
- No
- On occasion, particularly when they are parked in the road
- Yes. They can be parked in the street taking up a full lane for up to several hours.
- The heavy vehicle traffic on Eastwood Rd can be heavy and noisy. Particularly when "Jake" brakes are used. Should be illegal
- Not at all.
- Absolutely. Trucks are getting larger and more frequent. The wear and tear is considerable. Also the noise is disturbing from early morning to almost dark
- Yes as these large vehicles reduce road passage to one lane or less
- occasionally
- Of course with some narrower roadways one must be careful when passing the commercial vehicles, but that is not an unreasonable requirement.
- yes speeding
- no
- N/A
- No
- To some extent as they often park on the streets. Keep police patrolling and looking for problematic areas instead of some new ordinance.
- No

- White Oak Rd has been COVERED UP with construction vehicles for the past year. This is rarely a problem except when they park on opposite sides of the road.
- Yes because many times there are multiple cars (sometimes over 20!) working on one house and the roadways become too crowded
- I do not feel that construction vehicles pose a roadway safety issue but I do request that construction traffic entering the Ramble not pass through the town (ie Valley Springs Rd, Chauncey Circle and Niagara) There are currently no construction traffic signs but they are small and there is no where to turn around once someone sees one. The Ramble guards are not diligent in enforcing the no construction traffic rule. Just like the residents of Cedar Cliff to not like it to be used as an entrance to the Biltmore Estate, I request that Valley Springs Rd not be used for Ramble construction traffic. I work in the yard often and see large equipment/building supply transport trucks, cement trucks and other construction traffic coming up and down valley springs every time I am out.
- No
- Yes, at times they drive too fast and frequently block roads, causing traffic to back up.
- Landscape more than construction. Trucks with trailers should either park in a driveway or on the owners grass. This is aggravated when the property is located in a curve.
- On occasion, too many vehicles are parked one after the other, forcing traffic into the opposite lane. This can force cars into head on situations and pedestrians into on coming traffic.
- No
- 100%, especially when they park on both sides of the street and across the street (behind) a driveway. The worst streets are the ones where houses are closer together. But if they all at least stuck to one side of the road instead of parking on BOTH sides you could at least see what is coming at you.
- "New" Construction Vehicles should not be allowed on Valley Springs Road before the Ramble Gate. All Ramble home sites outside the gate are sold and developed.
- Yes, especially when they just leave their vehicles in the road in a blind curve!
- absolutely! they limit visibility They should not park on curves/corners
- YES. THERE IS MUCH TOO MUCH CONSTRUCTION TRAFFIC COMING INTO THE RAMBLE AT THE MAIN GATE. THEY DRIVE TOO FAST, THEY USE THEIR CELL PHONES AND THEY MAKE HUGE RUTS IN THE GREEN AREAS WHEN DRIVING/TURNING.
- yes - whenever they desire to turn left exiting Eastwood
- Nope
- no
- Yes. For instance when landscapers are blowing leaves they have on ear protectors and cannot hear when traffic is coming. I am concerned that they will not see me.
- No
- No
- Too many heavy dump trucks & trucks pulling heavy equipment. It's increasing every year. Too many tear downs including BFCC.
- Yes
- Yes. Definitely.
- Often there are trucks (types mentioned above) that are blocking the roadway on curves and in areas that create blind spots. There should be someone to wave people around or parking in a more sensible location.
- Yes! Parking on the streets is inappropriate and blocks the roadways. There should be a limit to the number of construction vehicles on site at any one time. I've counted 15 trucks parked around a new construction.
- Yes. I would like to see warning markers placed early on roadways where construction will block a lane. An alternative would be workers station for traffic flow guidance (which is some-

times employed by not always). Changing lanes is most hazardous near blind curves (Southwood & Vanderbilt Roads).

- No
- Yes - town should require all service vehicles to park clear of traffic lanes and only on or in front of the property they're servicing, unless otherwise necessary for tree work, etc., in which case flaggers should be employed to direct traffic. Major house renovations should be limited to once per 10 years per residence, irrespective of change of ownership.
- Yes, same intersection as above...no regard for speed limit.
- Yes, On Valley Springs Rd. These vehicles often travel very rapidly. I live at 66 Chauncey Circle and have almost been hit on numerous occasions when turning left onto Valley Springs Rd. We have requested at stop sign at that location.
- No and their presence is a necessity.
- No
- Rarely there are landscaping vehicles with trailers blocking significant parts of lanes, but for the most part I don't think they are a big concern
- Overall, not in particular, but from time to time I feel that they could have been parked in a less obstructive location and away from blind intersections - they should also set out traffic cones or other warnings for approaching traffic. Given the lawns, gardens and trees (and leaves!) in BF, these vehicles are a necessary fact of life. BF should have a contractor vehicle policy that each homeowner could print out and hand to their contractors - governing parking, speeding, etc.
- No as long as they park in a meaningful manner to allow cars to pass
- Vegetation at junction of Vanderbilt and Stuyvesant (being stone wall) making exiting from Vanderbilt at stop sign difficult and dangerous.
- Absolutely, often over speed limit. I wish they were only allowed at one or two entrances and this could be enforced. The commercial traffic into the club ALWAYS comes down Browntown and (including the dump truck for the dumpsters at club) all Coca Cola trucks, Inland seafood, US foods, etc....very early in morning and drive very fast....all of them.
- Speed! Distracted Drivers... ALWAYS on their phones... I get it, its their office time but LET the other guy drive! Stay on the pavement. Busbee has houses set back so the noise is not obtrusive with big dump trucks, other streets are primarily residential... yes... Browntown
- Yes! It makes it very hard to see around their parked trucks and cars.
- Yes, especially when they are parked on a hill and can not see on coming traffic when trying to go around them.
- Yes! since I live on Vanderbilt rd on the North end of town, I see a huge volume of contractors coming in from Biltmore Village, and driving at excessive speeds even though the speed limit is 25. Contractors should be entering Biltmore Forest at the entrance closest to their destination.
- No
- Most appear more considerate than the rest of traffic in my experience
- Yes. Not only do they throw out there garbage out the window. They fly through the neighborhood
- 1. This is a big issue. 2. Large trucks partially blocking roadways with no one directing traffic. 3. Speeding vehicles are a constant problem. 4. The "Great White Whale" under construction at Southwood and Stuyvesant for several years now has presented perpetual problems for resident traffic and pedestrians walking on Southwood. There were approximately 30 vehicles both on the property and on Southwood on Oct. 26 of this year. Also as a general rule we have found that speeding trucks show little if any respect for pedestrians and on one occasion my wife, dog and I were nearly hit by a speeding dump truck. 5. Please keep shrubbery trimmed off the road where such shrubbery blinds a turn. 6. Really functional speed bumps on

congested construction/landscaping used roads would be helpful.

- Those vehicles are a problem when they park on the roadways; when they block visibility around curves; when they drive too fast!
- Yes. Many times these vehicles are going way too fast AND when they are on their jobs they block roads or block vision so you can't see if something is coming. In addition these workers (not residents) avoid Stuyvesant because of the speed bumps. They fly down Greenwood, for example..
- Yes. They often park on the road, making it difficult to see oncoming traffic around them. They also do not always stay on the correct side of the road around curves, meaning that oncoming traffic the opposite direction has to "dodge" them.
- Yes, parking in roadways blocking sight of oncoming traffic, going fast around blind curves.
- Yes, at times. Some go too fast, but also some go very slowly and back up traffic. Some are considerate and pull over to let traffic pass. Also, some who are working after dark (especially in winter) need to provide more light and reflectors so that drivers can see them
- yes but not sure much can be done about it. some of the more persnickety neighbors won't let their landscape people even park off of the roadway-making them park fully on the road.
- Yes. Often block too much of road and even leave street side doors open. Worse usually for construction vehicles.
- No
- The last lot on The Ramble area off Valley Springs Road is nearing completion. This should negate the need for construction traffic to use this road. Hopefully such traffic bound for inside the Ramble gate can be banned from Valley Springs Road -- as a small sign near the Hendersonville Road entrance states. This needs to be enforced.
- No.
- In some spots. It can be difficult to see whether there is oncoming traffic.
- Yes lately the excessive amount of huge dump trucks up and down Vanderbilt are a problem ..but I know necessary...not only dangerous to walkers and bikers..kids..but also some have flying debris...
- no
- Yes. They are typically going too fast.
- Yes..Landscaping people can't hear you coming because of their equipment. Construction people are parked in the roads creating a one-way problem
- I don't know how you solve but long term construction projects with many vehicles along the roadway become frustrating
- Yes. As of recently Southwood Rd. Particularly unsafe when trucks are totally parked in the road
- Construction/landscape vehicles have an important role in Biltmore Forest. They usually have to occupy a lane. This frequently means having to cross lanes at a blind curver. Cones placed well ahead would allow choosing another route.
- Yes but also realize they have work to do and some properties house the trucks better than others. Not sure how to get around that issue due to topography and design of roads. I have an issue when the neighbors' work trucks etc park on the town easement grass that I maintain. They destroy the grass and leave ruts.
- It depends. On some of the less-used roads, their okay. On Stuyvesant, on the other hand, it can be an issue.
- Yes. As you might suspect many tend to speed and God there are too many of them. Did you ask about noise? You should
- Occasionally. Sometimes vehicle width exceeds half the road width. Some vehicles are too heavy for some of our bridges, defying signs.
- Intersection of Southwood and Stuyvesant construction activity At times construction vehi-

- cles or landscaping vehicles park over the centerline
- No
- Landscapers/ construction vehicles frequently drive over speed limit. Large construction projects over many, many months (years) seem to feel too comfortable parking on shoulders. Thought there was a directive to hose down street in front of building site. Southwood and Stuyvesant is really bad!
- Not specifically.
- Because the streets are narrow in many places, lawn maintenance vehicles and construction can obstruct the roadways and cause slight danger
- If in an area with already-short sight lines, or within 1/10 ml of a stop sign or access road, yes.
- Coming in, the intersection of Busbee and Vanderbilt needs some trimming done on the Northeast corner. It is hard to see to the North on Vanderbilt.
- Yes. Not terrible but they do make it hard to see around if walking or driving.
- Blocking view of pedestrians
- Yes Large vehicles travel to fast.
- No
- No
- No
- I feel that they sometimes drive too fast!
- Not currently except at the Parkway intersection when cars park illegally.
- It's never been an issue for me.
- Yes. Ridgefield is a narrow street with two sharp, almost blind turns. Other narrow streets are similar. We've had several issues with construction vehicle issues
- Especially when parked on curve
- Sometimes they do not park far enough to the side
- Especially when parked on curve
- No
- All construction traffic, all landscaping vehicles, should always enter and exit only via Busbee Road, Vanderbilt Road and Stuyvesant Road via Parkway ONLY
- Leaves and trash on roads a concern
- Yes, mainly speeding; Items falling off trucks; excessive weight; noise; not observing speed bumps
- Construction vehicles do not follow the speed limit while driving in our town.
- Some noise Some speeding
- They don't obey speed limits but neither do most residents.
- no
- Not usually--but the event at Southwood and Stuyvesant is concerning
- Yes, but we have no choice
- I would prefer this question to be simplified to "...feel that vehicles parked in roadways pose a specific concern for..." then I would say "Yes"... and I believe the concern is obvious...
- No
- No.
- Sometimes on Browntown but not generally.
- yes, on Southwood lately the construction vehicles park on the curve, creating risk for drivers and pedestrians. homeowners renovating or building need to have their crews park more safely.
- No, helps keep traffic slow
- No
- Yes particularly in curvy, short sighted curves like Southwood along the golf course.
- No

- YES, DEFINITELY! Trucks fly on Eastwood Road. Extremely dangerous in the curve of Eastwood with walkers, children and cyclists. Also, the curve on Westwood is dangerous. Trucks are in the middle of the road driving too fast.
- They're driving to fast. Most do drugs
- Absolutely! Especially on Southwood and Westwood.
- No gotta have em
- Yes, they park on the roads-not on the side areas, jut out too far to make it safe or easy to pass, and they stay there for a long time.
- No
- Many landscape workers do not pay enough attention when working near the street. Most provide enough clearance with parked vehicles.
- Construction and vendor traffic on Browntown that I have seen is typically going faster than the speed limit, sometimes significantly, in both directions.
- Yes depending on how they park. If the park on peak of hill where opposing drivers can see to pass. Or just over hill crest where drivers don't even know they are there and might ram into them. They should be required to park with clear two way passing of vehicles.
- Yes, these vehicles block appropriate two way traffic and make it difficult to see oncoming traffic.nAlso, pose a threat to walkers forcing them to walk on the wrong side of the road.
- There are times when roads can be completely blocked by construction and landscaping vehicles making it difficult if not impossible to pass. More importantly it makes it difficult for emergency vehicles.
- Yes, when they park on the road. Especially the home under construction near #1 green at BFCC. Those construction vehicles make that intersection very difficult.
- No
- Landscaping vehicles aren't an issue for me since they are in and out. Construction vehicles are often overwhelming by their sheer number and length of presence which is often months.
- Yes absolutely! They drive too fast(especially at 5 minutes before 7), they park on the sides of the streets and they throw their trash on the streets (there is always a bunch of chicken bones that are left in the grass whenever the construction workers are there. My dog finds them and it is awful trying to get them out of her mouth)
- Yes, they are constantly using ridgefield as cut thru, and some pulling large equipment. Not obeying speed limit.
- No
- Landscaping vehicles. They have no where to go. Need to use Orange cones when stopped in roadway.
- No
- I respect these workers and most are careful within our neighborhood
- Construction/landscaping vehicles do pose a concern for roadway safety. The roads are not wide enough for these vehicles to park on the side of the street. They pose a problem with oncoming traffic, bicycles, and pedestrians.
- No
- Yes! Landscaping vehicles park without regard to sight-lines of drivers as they negotiate the parked vehicles. I support an ordinance that requires all commercial vehicles to be parked on the property that is being serviced and not in the public roadway.
- Yes-blocking roadways and speeding
- Construction will always annoy people but it is never an ongoing situation in any one area. There is always an end to it. People need to accept this.
- No
- No.
- No

- Yes... for size and volume
- They are generally less respectful.
- Not really. Except I am constantly having to deal with nails in my tires due to construction debris in roadways
- No. It's part of living in a community where improvements are constantly being made (which I see as a good thing) and I think it even helps slow traffic down.
- Sometimes
- When these type of vehicles are pulled over and staggered so traffic can get by, I do not have a concern. When landscapers park in front of neighbors driveways it's concerning for how to get out without hitting the vehicle.
- No
- Sometimes they do not respect our speed limits
- Yes. Construction and landscaping vehicles blocking one lane of the roads make roadways unsafe; this is especially an issue on Southwood
- No.
- Most trucks are speeding. Dump trucks should be forced to drive at 25 in and out and NOT decelerate/loud muffler- loud noise from truck.
- Yes, they park on & ride through peoples grass. Don't stay on their side of the road many times while driving. Many drive over speed limit.
- Yes. Many times because they are bigger, they park in ways that are unsafe and blocking traffic without appropriate staff in the road ensuring safety.
- I would like to see better marking requirements for commercial vehicles (both public and private) on the shoulder/right-of-way such as cones, flags, or signs.
- Yes depending on the size and duration of the project.
- Not really.
- Yes - the roads are narrow and hard to get around the vehicles safely
- None
- It is expecially troublesome when they clog both sides of the road
- not really
- At times--no cones around equipment vehickles, too far out in the roads
- Yes Often block roadway
- Speed and parking
- No, they tend to be very careful and thoughtful. They are necessary

10.) When you walk, which streets in Biltmore Forest do you walk along the most?

- Home street - Forest Rd
- Vanderbilt Road
- Forest, Stuyvesant, Vanderbilt, Southwood and Cedar Hill
- Frith
- Forest, East Forest, Vanderbilt, and Park.
- Stuyvesant rd Stuyvesant crescent Frith Holly hill Greenwood Greenwood place Westwood Hilltop
- Fir Tree Lane and Cedarcliff
- Eastwood Vanderbilt Forest south wood Stuyvesant
- hilltop, westwood , southwood

- Vanderbilt, Stuyvesant, Southwood and Brookside.
- Vanderbilt, Busbee, Stuyvesant, Forest, Cedar Cliff..Park..basically all roads south of the club
- Forest, E Forest. Vanderbilt
- Cedar Hill Brookside Hemlock
- Amherst, White Oak, Buena Vista, Forest Road
- Busbee, Forest, Vanderbilt, Park, White Oak, Browntown, Stuyvesant
- Cedar Chine, Hemlock, Southwood, Fir Tree Lane, Vanderbilt
- Forest, East Forest, Park, Vanderbilt, Busbee, & Cedarcliff (I walk a long time) Sometimes Arboretum, Lone Pine
- Vanderbilt, Busbee, Buena Vista, Park, Forest, E Forest, Browntown, Deerfield, Amherst
- Hilltop
- Vanderbilt, Busbee, Cedarcliff, Forest, Buena Vista and White Oak
- Forest/east forest/Vanderbilt/cedarcliff/buena vista
- Hilltop, Southwood, Stuyvesant
- Vanderbilt, Cedarcliff, Forest, Busbee
- White Oak, Amherst, Buena Vista, Lone Pine, Forest, Busbee. Also Hemlock, Cedar Chine, Brookside, Southwood, Eastwood, Hilltop
- Vanderbilt/Park Road
- Vanderbilt, Park, Forest , Buena Vista, White Oak, Amerherst
- Browntown, Amhearst; Deerfield; Stuyvesant; Lone Pine; Vanderbilt; Buena Vista
- Cedarcliff; Busbee; Vanderbilt
- Buena Vista and White Oak
- Vanderbilt Rd Forest Rd Park Rd
- Stuyvesant Lone Pine Buena Vista Browntown
- Cedarcliff and Forest Rd
- Stuyvesant Road
- White Oak, Buena Vista, Browntown, Stuyvesant, Vanderbilt, Forest, East Forest, Cedarcliff and Busbee.
- Vanderbilt, Cedarcliff, Busbee
- White Oak, Busbee, Forest, Lone Pine
- Hilltop, greenwood, Stuyvesant
- Buzbee, Forest, Park, Chauncey Circle, Niagara, Valley Springs
- Forest, Vanderbilt, cedar cliff
- Browntown, Stuyvesant, Amherst
- Chauncey Circle
- Forest, Cedarcliff, Busbee, Buena Vista, White Oak.
- Valley Springs Rd., Chauncey Circle
- Chauncey Circle and Niagra
- Busbee, Browtown, Stuyvesant, White Oak, Buena Vista, Lone Pine
- Valley Springs Road
- Forest, Lone Pine, Browntown, White Oak, Buena Vista, Busbee, Cedarcliff, East Forest, Park and Stuyvesant (not all on the same day!)
- Busbee, Forest, Cedarcliff
- Chauncey Circle, Valley Springs Road, Ramble Way, Mirehouse Run, Brookline Drive, Fairst-ed Drive, Nethermead Drive, Racquet Club rd,
- Chauncey Circle
- White Oak, Buena Vista, Busbee
- Busbee/Vanderbilt area.
- Chuancey circle
- Hilltop Road

- Forest Vanderbilt Stuyvesant
- Vanderbilt Rd
- 5 Fairway Place
- Cedar Chine, Cedar Hill, Brookside, Westwood, Greenwood Pl, Greenwood, Hilltop, Brooklawn Chase, Hemlock
- Cedar Hill Dr. Brookside Westwood Southwood Vanderbilt
- Forest Road, Park, Cedarcliff, in front of Town Hall. Vanderbilt has too much traffic and fast traffic.
- Cedar Chine, Hemlock, and Fir Tree, Southwood
- Hilltop
- Hilltop, Brookside/Westwood, Greenwood, Eastwood, Southwood.
- Chauncey Circle
- Chauncey Circle
- Various routes
- Forest, Vanderbilt
- Cedarcliff, Forest, Busbee
- Deerfield Road, Amherst Road. Browntown Road, Fairway
- Vanderbilt Forest
- Hilltop, Stuyvesant, Eastwood
- Vanderbilt and Park (2 miles)
- Browntown, Vanderbilt, Cedarcliff, Stuyvesant, Lone Pine, Forest, East Forest, White Oak and Buena Vista, Southwood, Cedar Hill, Hemlock, Brookside.
- Used to be white oak... little boys were monsters on bikes and scared my dogs too much to bother... not relaxing anymore. mostly small block of Deerfield and Amhurst
- Vanderbilt. Brook side. The new section hilltop Stuyvesant eastwood
- Park Road, Vanderbilt, Forest Road
- Vanderbilt, lone pine, Stuyvesant, park road, Busbee, Forest road
- Vanderbilt Rd, CedarCliff Rd, Forest Rd and Busbee Rd
- Vanderbilt Stuyvesant brown town park roac
- Vanderbilt, Forest, Busbee, Cedarcliff, Park, Browntown, Buena Vista
- Westwood Southwood Vanderbilt Greenwood
- Greenwood, Southwood, Stuyvesant, Brookside, Hill Top, and Westwood.
- Ridgefield, Hilltop, Greenwood, Greenwood Place, Brookside, Southwood, Stuyvesant. More occasionally Cedar Hill, Cedar Chine, Holly Hill area.
- Browntown Road Busbee Road Vanderbilt Road Park Road
- Forest Rd
- Hilltop, Westwood, Greenwood, Stuyvesant, southwood
- Eastwood, Hilltop
- Eastwood Rd, Hilltop
- Chauncey Circle.
- park, forest, busbee Vanderbilt cedar cliff
- East Forest, Forest, Busbee, Cedarcliff
- Valley Springs Road and Chauncey Circle
- 1. Chauncey Circle, Niagara, Valley Springs 2. Busbee, Cedar Cliff, Forest, Park
- Hemlock Cedar Hill Cedar Chine Brooklawn Chase Brookside Southwood Stuyvesant
- Hilltop, Greenwood Place, Greenwood, Westwood, Brookside, Cedar Chine, Cedar Hill
- Vanderbilt Rd, Forest, Lone Pine, Stuyvesant, Busbee, Cedarcliff
- Vanderbilt, Busbee, Forest, park...all south of the club
- Forest and Cedarcliff,
- Stuyvesant Road Vanderbilt Road Brookside Hilltop

- Cedar hill, Brookside,
- Forest and East Forest
- Paths in the Ramble- via Niagara Drive
- Cedar Chine
- Cedar chine, Hemlock, & Fir Tree
- Brookside, Brooklawn Chase, Cedar Chine, Cedar Hill, Fir Tree, and Hemlock.
- Stuyvesant, Frith, Holly Hill, Greenwood Road, Greenwood Place, Westwood, and Hilltop.
- Cedarcliff, Forest, Busbee and Vanderbilt
- Stuyvesant Browntown Buena Vista White oak
- Vanderbilt, Southwood, Brookside Park
- Greenwood road and place, hilltop, westwood brookside
- Styvecent. Spelling. Holy Hill rd. Frith.
- Westwood hilltop Brookside Cedar Hill Southwood Greenwood Stuyvesant Hemlock basically most of the south side of town
- Vanderbilt. I used to get off Vandy ASAP, because of constant traffic, but now my mobility is more limited so I need the longer sight lines of straight Vandy to have time to get out of the way of cars. Side roads are too short-sight lined via overgrowth and/or curves for slower people to get off the road.
- Forest, Cedarcliff, Park, Vanderbilt, Lone Pine, Browntown, Buena Vista and Busbee.
- Forest, Park, Vanderbilt, Busbee, Stuyvesant. Sidewalk on Vanderbilt would be great.
- Niagara Drive, Fish Pond Road, Ramble Way
- 75 Chauncey Circle Ramble way
- Vanderbilt, Stuyvesant, Eastwood, Hemlock, Forest, Brookside, Hilltop
- Brown town and surrounding areas
- Always start and end on Vanderbilt Road for some period -divert to sidestreet when one is reached.
- Stuyvesant crescent, greenwood, greenwood place, brookside, brooklawn chase, hemlock, Stuyvesant.
- Cedar Hill Drive
- Vanderbilt, Park, forest and East Forest, cedarcliff, Busbee, Buena Vista, White Oak.
- Hilltop, Brookside, Vanderbilt, Styvustant
- Forest, lone pine, busbee
- Stuyvesant Hilltop Eastwood
- Hilltop Greenwood Rd/Place Southwood Brookside Ridgefield Stuyvesant
- Cedarhill, Brookside, Brooklawn, Chase, Southwood, Hemlock, Firtree, Cedar Chine
- Park to Hilltop on Stuyvesant--back/forth
- Vanderbilt Rd
- Busbee, buena vista, cedarcliff, white oak, Amherst, browntown
- Usually Stuyvesant to Hilltop road to Brookside to Brooklawn Chase to Hemlock and back to Stuyvesant Road.
- Park, Forest, Buena Vista, White Oak, Vanderbilt
- Park Forest Vanderbilt
- Buena Vista Vanderbilt Busbee
- Brookside Southwood
- White Oak Cedarcliff Buena Vista Lone Pine
- Forest, Park
- South of golf course - all over.
- NA
- Park Rd, Forest and E Forest, Busbee, Cedarcliff
- Buena Vista, White Oak, Lone Pine, Browntown

- Park Road, Southwood, Brookside, Cedar Hill Drive, Hemlock Hill
- Amherst , browntown, Vanderbilt, Buena vista, white oak
- White Oak, Buena Vista, Lone Pine, Busbee, Forest
- Hilltop, Eastwood, Southwood, Vanderbilt, Park Road, Stuyvesant, Forest, East Forest
- Greenwood, Westwood, and Chauncey circle.
- Stuyvesant, holly hill, frith
- Hilltop, Eastwood
- Westwood, Brookside, Hilltop, Hemlock, Cedar Hill, Greenwood Road, Stuyvesant
- Stuyvesant
- Cedarcliff, Forest, busbee, Vanderbilt road, park road, south wood, burna vista, white oak, and more
- White oak, buena vista, Amherst, Deerfield
- Brook side, Westwood, Greenwood and Hilltop
- Browntown, Buena Vista, White Oak, Vanderbilt, Busbee, Lone Pine
- Back toward the newer section: Cedar Chine, cedar Hill, brooklawn chase, Westwood, south wood.
- Still exploring... Vanderbilt, Stuyvesant, Eastwood, Southwood
- Park, Vanderbilt, Forest
- Buena Vista, Browntown, Forest, Amherst, Lone Pine, Stuyvesant, Deerfield
- Hemlock, Brookside
- Vanderbilt, Cedarcliff, Forest, Busbee.
- Westwood, Brookwood, Cedar Chime, Fig Tree, Vanderbilt, Park Road, East Forest,
- Park Rd
- I try to stay in the new section but occasionally walk down Stuyvessant with regrets every time
- Ridgefield, hilltop, greenwood, greenwood pl
- 5 Fairway Place
- White Oak
- Hilltop, Greenwood & Stuyvesant
- White oak, brown town, busbee , Amherst
- Brooklawn Chase, Cedar Chine, Cedar Hill, Hemlock, Fir Tree Lane, Brookside
- Stuyvesant, Hilltop, Greenwood, Southwood, Brookside, Westwood
- Hilltop, Westwood
- White Oak Rd
- Stuyvesant Crescent Greenwood Brookside Brooklawn Chase Hemlock
- Vanderbilt Rd
- Vanderbilt, Forest, Buena Vista, White Oak, Deerfield, Amherst
- Cedarcliff, Forest
- Cedarcliff, Forest, and Busbee.
- Stuyvesant Forest Vanderbilt
- All
- Amherst, Deerfield and Browntown
- Hilltop, Westwood, Greenwood and Stuyvesant Crescent
- White Oak, Busbee, Forest, Cedar Cliff, Park, Vanderbilt, Lone Pine, Buena Vista, Browntown,
- Southwood Hilltop Stuyvesant Eastwood Side streets to those streets
- Vanderbilt, Busbee, park, Stuyvesant
- Vanderbilt, Ceadercliff, Busbee, Forest
- Hilltop around the new section.
- Forest, Cedarcliff, Park, Stuyvesant, Eastwood, Hilltop
- Forest Road, Southwood, Brooklawn, Cedar Chine, Hilltop
- Holly Hill, Stuyvesant, Frith

- Vanderbilt. Forest. Park
- Greenwood Road Greenwood Place Hilltop Westwood Loop around pond & dam
- Stuyvesant, Southwood, Vanderbilt, Eastwood, Park, Forest....really all over.
- Amherst, Deerfield, Browntown, Buena Vista, Lone Pine, Forest
- Vanderbilt, Forest, Cedarcliff, Busbee, Park
- Amherst, Browntown, Buena Vista, White Oak, Forest
- Busbee, White Oak, Vanderbilt, Forest, Browntown and Stuyvesant
- Stuyvesant Hilltop Southwood Brookside Additional side streets
- Vanderbilt, Southwood, Park, Brookside, Hilltop, Stuyvesant
- Vanderbilt Cedarcliff
- Vanderbilt Road
- Vanderbilt, Southwood, Brookside, Brooklawn Chase, Park
- Stuyvesant Crescent
- Eastwood Vanderbilt Stuyvesant
- Vanderbilt

10.) What does it mean to feel safe when walking?

- Walking when residents go to and from work is difficult because many speed (a lot). They are NEVER stopped or ticketed. I'm thinking of Greg Goosemann and McCann's, in particular.
- Because there are no sidewalks, passing cars are my greatest concern.
- I don't think I am going to be hit by a car.
- For me to feel safe means not to walk on Stuyvesant
- Cars are driving slowly and with high awareness of pedestrians.
- That I'm not going to get hit by a car
- Cautious drivers
- Speed bumps on Eastwood Rd and other busy streets
- no car threat
- I feel safe most of the time...not always or often. Around 95% of the time...except when there are unsafe drivers.
- Not at risk from other pedestrians..bikers or cars/trucks
- That the traffic coming in and out of the town is somewhat controlled.
- Not worrying about getting hit by a car
- Not worried that a car is flying down the road which might hit my children or pet.
- Cars are obeying speed limit, are attentive and aware of pedestrians, and give pedestrians adequate space. Most safe feeling is having a dedicated lane.
- Walking safely means not feeling threatened by vehicles
- You don't have to worry about an inattentive or speedy driver running you over! And
- I consider my safety to be a) physical safety due to traffic, road layout, etc.; and b) personal safety related to my ability to walk alone without worrying about being bothered or harmed.
- No traffic, cars follow speed limit.
- Avoid being hit by a vehicle
- Making sure drivers are paying attention
- No speeding vehicles. No heavy equipment. No non-resident traffic.
- Have protection from vehicles
- Seeing the Police Patrols. No Homeless, or transients. Low Crime rate. Friendly Neighbors. Only issue is concern over bears.

- Safe from cars and trucks traveling and respecting your presence.
- Pedestrian paths, improved right of ways, wider roads to allow large suvs and trucks to pass, speed limits observed, lighting improved at night
- Driver awareness; observance of speed limits
- Not having to “dive” for the grass to avoid approaching vehicles.
- avoiding cars
- No threats from aggressive humans or bears
- That vehicles are traveling at the posted speed limit. Knowing people from my neighborhood. Sometimes I am concerned that people from outside of the neighborhood park at the intersection of Vanderbilt and Cedarcliff. Either to walk or bicycle. I have had to ask people to not park on my property for this reason in the past (on Cedarcliff).
- Not being hit by cars or bikes.
- Vehicular traffic that is aware of walkers - follow speed limits and move over for walkers that are in the road or on the shoulder. Police can help.
- Cars tend to move over even when I have stepped off the road and often slow down.
- Traffic is calm
- To know others in cars and on bikes will give you the right of way
- That there is space for pedestrians AND cars.
- I do not worry about crime.
- I don't worry too much about getting run over. But I do often worry about my child riding their bike in the neighborhood.
- no history of neighborhood crime no history of issues with bears
- I feel physically safe from being assaulted. I wish we had sidewalks or designated walking lanes on the road. Shoulders of the roadway should be filled periodically to prevent drop-offs.
- I am never fearful of speeding or reckless drivers.
- Not having to worry about cars crowding you or driving too fast
- at night it is very dark and with time change that is happening earlier and earlier
- That motorists are obeying traffic laws.
- I need to walk facing traffic. I also feel it's my responsibility to watch and listen for traffic and to be visible. But, I feel it is the responsibility of the drivers to watch out for me and to move over when able.
- Not feeling at risk of being hit by a vehicle.
- Drivers see me and go at appropriate speeds.
- Good visibility and slow traffic
- To not worry about being hit by a car.
- Traffic going the speed limit & traffic coming at you moves over if no traffic is coming in the opposite direction.
- Avoid injury
- I can be seen by cars which are traveling at a reasonable speed.
- It means that drivers are paying attention and not exceeding the speed limit. You don't feel like you have to dive onto the verge.
- I'm not going to get by a speeding vehicle while crossing a road
- I can say I always feel safe walking in BF because I avoid the high traffic areas. It's a lovely place to live and walk.
- Safety means everything to me when I am walking. When I walk, I am taking in the beautiful wooded surroundings of Biltmore Forest. A lack of safety would keep me from walking.
- Motorists obey traffic laws.
- That cars and pedestrians abide by the traffic signs and signals.
- Traffic speed.
- The ability to walk without feeling threatened by excessive amount of vehicular traffic and

those vehicles passing at a low speed, along with a sense of police presence.

- Absence of risk of injury
- Trusting that drivers see me and pay attention to the rules of the road
- To feel comfortable that I am not at risk - and our dogs are not at risk - of being hit and killed by a speeding, distracted driver. That I do not have to fear that I will need to leap from the roadside/drag our dogs into someone's yard to avoid approaching traffic (happens way too frequently) who is simply ignoring the fact that pedestrians use BF roads and should be respected - not considered an annoyance worthy of only a dismissive wave of the hand. In addition, I am fearful of a dead limb falling from a tree and killing me or my dogs because BF has no policy - and/or no enforcement - requiring homeowners to maintain their trees in a safe and reasonable manner, consistent with good forestry practices. Too much reliance is placed on Duke Power to trim the trees along their roadway power lines. While saving trees is a noble goal, it should not take precedence over public safety. The potential legal liability for homeowners - and the town - is enormous
- Safe from vehicles.
- Cars slow down when they approach us (particularly if I have the children). Too many people speeding and not looking for walkers
- Not getting hit by car or bike.
- Not feeling like I will run into a threatening situation/person, run over by a car/bike/bear (lol) or chased by a random dog-
- Many folks entering Browntown aren't neighbors and have no respect for the neighborly etiquette,,, speed, distance from people and dogs walking when street is empty.
- Knowing a car will not hit you.
- Not worrying about getting hit by car or mugged
- Low volume of traffic, and driving at speed limit
- I'm never worried about getting assaulted
- Not getting run over by traffic
- I feel I am taking my life, my pets life and child in a stroller in fates hands due to the speeding
- Avoiding breaking a leg on a chance off-road-onto-shoulder encounter. This actually happened my wife once several years ago. Avoiding being run over by speeding vehicles not pay a bit of attention to pedestrians.
- Most of the time I can make eye contact and wave with drivers coming towards me. I can also step off the roadway in most - but not all - places if I feel a driver isn't paying attention. What it means is that I can relax and enjoy my walk and the natural beauty of our neighborhood.
- That I can easily be seen by drivers
- It means that there is little vehicle traffic and if there is the vehicles are following the speed limits
- Cars go slowly, especially around curves and coming directly off main roads.
- Cars obeying speed limit, feeling safe around curves, cars move over to give pedestrians space
- avoiding speeding neighbors and those driving and playing with their phones.
- Room or sidewalks such that one doesn't have to walk in traffic lanes. High speed bicycles are a major problem.
- low speed limit for vehicles, low traffic count, few through vehicles using BF as a shortcut/traffic avoidance, sidewalks or walking lanes (hint, hint)
- We feel very comfortable that the overall majority of drivers maintain the posted speed limits which we feel are appropriate for the roadways. We are also thankful for the constant police patrols throughout the Town.
- Roads well maintained. Drivers paying attention/not speeding. Space to step off of the road when a car approaches.

- Drivers obeying speed limit, using turn signals ...leashed dogs, avoid building sites..
- no speeding cars road not blocked by shrubbery
- Being able to get safely off the road with oncoming traffic. Vehicles driving safely in the conditions. Vehicles obeying the speed limits. Pedestrians being seen by drivers in curves and dappled light.
- Being out of the path of cars
- Being seen, given wide berth when able and not fearing being hit
- Not in danger by cars
- No fear of automotive speeding or reckless driving.
- Low crime. Biggest worry is encountering a bear. I walk facing traffic and single file if walking with a friend.
- To feel that drivers are behaving responsibly.
- Alert and courteous drivers who move over. This generally the case especially with long time residents.
- See earlier comment
- Small number of vehicles
- Alert drivers, shoulders to retreat to, good safety police presence. Do worry that walkers are not adequately dressed for safety. Dappled sunlight and vegetation often make walkers invisible. Need to wear something reflective, even in daylight
- no high speed traffic, light traffic
- Not getting hit by a car or robbed.
- I don't worry about being mugged. There is some concern about being hit by a vehicle because many of the curves when you're walking against traffic are blind. Also certain times of the year worry about bear safety. But overall I do not think any of these are very concerning
- Smooth predictable (not sinkholes or frequent changes from construction) roads. Relatively smooth grass/gravel/dirt on property edges beside roads are nice, albeit no homeowner owes me that. Trimmed vegetation back some distance, maybe 3 feet, from all road edges, is tremendously important to the sense of safe walking. Its absence creates a sense of stress and unsafe walking. That's a problem in many areas throughout Town.
- I feel safe when drivers see me and don't speed. I feel safe when I don't see strangers acting suspiciously. I feel safe when trees are maintained and not in danger of falling in heavy wind.
- I think the safety concern is getting hit by a car. Otherwise I feel safe
- Knowing vehicles are yielding to Crossing roads while walking
- Considerate drivers and pet owners
- Clear areas to walk; drivers drive cautiously
- To not feel or experience danger when walking
- Feeling safe means that there is good control of the cars coming into and out of the forest, that those who are coming into the forest are known (id's recorded), that there is good patrol of the streets, and that vehicles are held accountable for abiding by the posted limits. I feel most unsafe when walking alone on the streets because the vast amount of forest and land creates a situation where someone could become a victim. I won't let my children walk alone in the neighborhood.
- Not getting run over.
- I won't get hit by a car. Crime doesn't happen.
- The amount of traffic is manageable and dogs are not running loose.
- Most drivers are courteous and leave plenty of room. Vanderbilt road is very busy and I don't walk on it too much
- Wearing protective, reflective clothing
- Lack of danger from traffic, bears

- To always wear bright or reflective clothing --NEVER BLACK
- Very important; bright clothing; never at dusk/night; always face oncoming traffic
- Won't be hit by an oncoming vehicle
- Not having to worry about getting run over
- Being alert and watching oncoming traffic; Walking facing traffic
- That cars will not come flying around carelessly
- That drivers are careful
- The area is very secure
- Cars move over when walking
- #13 should have "Most of the time" vs "Often"? I feel safe because I pay attention to oncoming traffic, and I feel I am responsible for my safety before anyone else or traffic regulations..
- Not being concerned about being hit by a vehicle
- That cars pay attention to me, as well as obeying the posted speed limit.
- To make it to my destination and back without incident.
- not getting hit by a car and not getting mugged
- Good neighborhood with people that you know
- Few vehicles, little traffic, drivers following road rules
- Do not feel threatened by automobiles driving by and not by other pedestrians.
- Slow traffic
- Not going to get run over
- Not getting hit by a car
- Car speed is appropriate, dogs are on a leash, bikes are not speeding, and I know that the police are nearby patrolling
- Not going to be hit by car; always feel safe crime-wise
- The only issue I have is sometimes with folks going well over speed limit, including residents.
- Drivers obey speed limit and pass walkers with wide girth when possible.
- I feel I have to carefully observe my surroundings with traffic. I think as a walker I should wear clothing that stands out. Not confident that drivers are focused.
- Clean clear roadways, space to share the road with cars and recreational vehicles
- You are confident that drivers are aware of and considerate of walkers. Busbee and Stuyvesant and Lone Pine and Stuyvesant intersections are less comfortable as folks can take the corners too quickly or cut the corners putting walkers in danger.
- Speed limits, road shoulders.
- Safety from traffic
- It means I'm not fearful of being struck by a reckless or inattentive driver, or bicyclist, and dog walkers have their dogs on leash and under control.
- That I won't be run over by a car. And that there are no persons who might harm me.
- To not worry about getting hit by speeding cars or large trucks, (semi, dump trucks, Griffin waste trucks, etc).
- Slow auto speeds
- When walking, biggest concerns is whether automobiles see me since there are no sidewalks.
- Traffic follows speed limits, slows for walkers
- Not getting run over by a car. Not having a car too close to walkers- I feel safe when cars slow down and maintain a 3 foot separation.
- Feeling safe when walking means not having to worry about being in harms way. Not having to dodge cars that might not see you.
- Not being hit by a car or confronted with wildlife
- Cars can see you.
- I always step off of the roadway when approaching.
- That you aren't going to get run over.

- Not having cars fly down the road particularly Cedarcliff and Busbee when walking
- Drivers are attentive and courteous.
- No one driving like a bat out of hell and hitting me with their rear view mirror.
- Cars abiding by rules and safety around people in the neighborhood
- Physical and emotional safety - I feel safe from any sort of harassment or violence etc when I stay on well traveled streets and always feel reassured when I see police actively driving about during my walks but I do worry about physical safety from vehicles while on narrow streets such as busbee or blind curves or odd intersections (such as walking towards White Oak on Busbee - it involves many bizarre crossings to do this while facing traffic in the correct direction.
- Safe place to walk without having to avoid being hit by a car Good lighting
- No unknown or obvious people up to no good. Cars driving correctly for the area.
- To be safe walking means that cars give plenty of space when no other car is driving the opposite way, bike traffic doesn't get too close to "buzz" me or my dogs, that walkers and cars can be on the road together safely.
- To walk and feel like I won't be hit by a car.
- I won't encounter a dangerous vehicle or person.
- Feel as though you are not in danger of being hit by a motor vehicle
- Traffic is light
- Cars construction traffic slows and gives wide right of way.
- My biggest concerns are speeders, peoples dogs and bears.
- That there is a mutual respect between the pedestrian and the driver. I believe for the most part, BF residents are very conscientious and usually courteous. Drivers when able, allow space to the walker so they are not forced off the road. What is frustrating is when walkers expect traffic to travel around them and make no effort to cooperate. We all appreciate walking through the neighborhood, but it needs to be reenforced the roads are primarily for cars. If people want to stay in the roads, they should get off Vanderbilt and Stuyvesant and travel the less traveled roads. Also, as a resident, we should be able to be safe in our own yards without fear of passing traffic. This occurs most often when doing tasks in our yard. If we are placing leaves or debris by the road for pick up, many times drivers are not respectful that this is a residential area and make no attempts to show awareness and keep the homeowners safe.
- Knowing that neighbors are friendly and that the Biltmore Police are always nearby
- Drivers are travelling at appropriate and safe speeds, give proper clearance and wait for traffic to clear before passing.
- It means that I feel like drivers are paying attention and usually following safe traffic practices, that there is not a lot of traffic, and that the people we see out driving and walking seem to be good neighbors without ill intent.
- That I won't get picked off by a careless driver or attacked by a bear.
- Having a place to walk without fear of being run over by a vehicle. Knowing that BF is a safe community with an excellent police department. Access to well lit streets.
- Knowing that oncoming cars are adhering to the speed limit and most walkers face oncoming traffic
- Step off road when a car or truck is coming on my side
- I have never been hit by a car or have a close call.
- no speeding vehicles
- Being alert to oncoming cars. Walking facing traffic Walking on less crowded roads
- Cars stay in lane Speed law Cellphone use by driver eliminated
- No worry about getting hit by a car. By the way, I feel least safe at night when walking in the dark
- Safe from traffic

20.) Is there something you'd like to fix about transportation/traffic in Biltmore Forest that wasn't covered in previous questions?

- Either owners cut back bushes that block line of site at intersection, or have the Town do it. Specifically: bushes are IN THE ROADWAY (especially dangerous), Bushes at North West Corner of Busbee/Forest actually block the Stop Sign! I can go on for days, if you want me to!
- Overall I wouldn't change too much. I wish there were sidewalks along a couple of busy sections of streets with poor visibility, and I'd wish the traffic lights at Busbee and at All Souls Crescent were slightly more favorable to outbound traffic... but I understand why neither is likely, so I'm not very bothered by them.
- Easy access to Hendersonville road equates to easy access into Biltmore Forest and that would increase traffic and not decrease it
- Data on traffic patterns would be helpful to know. Also, on traffic arrests and citations.
- Designated walking paths would be amazing!
- Safety would be improved with roads having a painted center line and, in some instances, painted lines on the roads edge
- 1.No to speed bumps--I'd rather you put up stop signs at strategic intersections. 2.Actually follow-through and make residents cut their bushes and keep their piles of leaves off the streets. 3. It seems we have a lot of town-owned land that could be used for a looping trail system, but like everything else, this just gets TALKED ABOUT and nothing is ever done. It took over a year and a professional "traffic study" to get a 4-way stop at Cedarcliff & Vanderbilt. 4. More police visibility on the streets. 5. This is the 2nd survey of this type that I've completed in the past few years and we're STILL talking about the same issues.
- None
- Foot traffic on Vanderbilt is quite heavy. A sidewalk is desperately needed. You might find that residents will gladly donate an easement adjacent to the road for constructing and maintaining a sidewalk.
- Make BF a gated community.
- Traffic in Biltmore is successfully managed, in my opinion.
- Close Hendersonville road accesses to Biltmore Forest.
- Make it less attractive,more time consuming for commuters to leave Hendersonville Rt and cut through neighborhood
- Improved stairways leading to parks on the sloping sides of parks. Older folks find the wooden stairways worn and unsafe, causing stumbling.
- N/A
- More police presence keeps traffic slower. Especially at intersections like Vanderbilt and Cedarcliff in the evenings when people are leaving the neighborhood.
- No
- We are lucky to have a Police force that are ready, willing and able to keep our Town and its residents safe!
- No
- There are too many people that attempt to turn left off Browntown onto Hendersonville Rd during hours where that turn is dangerous and/or impossible. Guideposts that would direct those unfamiliar down Vanderbilt to Busbee and the stoplight might be helpful. Not in favor or any more stoplights on Hendersonville Rd. Changing the Busbee intersection to be more of a right angle would improve safety but would also be difficult. Roundabout at Vanderbilt/Busbee intersection and Vanderbilt/Cedarcliff intersection would make sense (instead of 4 way stop)
- someway to prevent non residents driving thru especially at rush times and driving over

posted speed. Feel like Biltmore Forest is held captive every day between 3:30 till 6:30 when trying to access Hendersonville Rd

- The light at Valley Springs Rd and Hendersonville Rd has a 2.5 minute wait which is irritating but not a huge problem. What is a problem is that once the light turns green, if any car hesitates to move forward for the slightest moment the light immediately turns red and then the wait to get onto Hendersonville Rd from Valley Springs is 5 minutes ((2.5 minutes 2.5 minutes) I am hoping that the town could influence whoever maintains the lights on Hendersonville Rd to fine tune this one to give just a bit more time before turning red.
- It would be nice to have a pedestrian bridge from Browntown or Busbee crossing over Hendersonville Rd. Given the rise in crime in our neighborhood, it would also make us feel much safer to have the option of installing gates at the driveways to our properties and having a gated entrance with a guard at the entrance/exit points of our neighborhood.
- The traffic light at Valley Springs needs to change more frequently and have a longer duration
- Please, Please, Please lengthen the light for access to Hendersonville Rd. from Valley Springs Rd. It is red for almost 3 minutes and when it turns green only about 4 or 5 cars can cross before it goes red again.
- Access from Biltmore Forest/Ramble to the rest of Biltmore Forest via car without having to leave Biltmore Forest and go on to Hendersonville road would be fantastic. It would reduce the need for better light management at Valley Springs/Hendersonville Road and make the Ramble/Biltmore Forest section feel more part of Biltmore Forest.
- parking on both sides of the street, parking in front of fire hydrants, across the street from driveways making it nearly impossible to back out of a driveway
- More stop signs.
- reduce Biltmore company traffic continually monitor Estate tourist traffic
- Trying to get into/out of the Ramble with Hendersonville Road traffic is AWFUL most days after 10-11am, especially after the lunch hour and then with evening commuters. The traffic light doesn't come on very frequently or stay green for very long, and the turning arrow when driving north from South Asheville and turning back into the Ramble RARELY turns or stays green. It is most often set to stay at "yellow", and depending on the drivers going south and their kindness or lack of consideration to not block the entry into the neighborhood.
- need a right turn lane before the Eastwood light need a shorter duration red light and a longer green light exiting Valley Springs Road
- To the extent I don't feel safe as a driver, it has to do with poor street lighting and a concern about striking a pedestrian.
- No
- No
- I feel like it is more safe than most neighborhoods to walk and drive in. Do not see need for change or any more traffic calming.
- Reduce or eliminate non resident bike traffic.
- No
- Speeding "Horse People" turning onto Chauncey Circle on their way to the Equestrian Center
- The visitors who bicycle generally go too fast. I don't think they realize how hard it is to see a small moving object against the dark green forest and shadow. 25mph is too fast and they always go faster coming down hill. Neon Green shirts just blend into the scenery. Slow down and wear Neon Orange or Neon Yellow!
- No-all covered.
- PLEASE PUT A STOP SIGN AT VALLEY SPRINGS ROAD AND CHAUNCEY CIRCLE!
- Stop sign on Valley Springs Rd. at the corner of Chauncey Circle and Valley Springs Rd. Just outside the gate to The Ramble. This is a VERY dangerous corner. Vehicles approach the gate too quickly.

- I feel that the gating of Biltmore Forest and limiting the access points to 3 - 4 (manned or combination of manned & electric) from the current 7 would not only help with traffic volumes in the Town (especially from cut-through traffic avoiding Hendersonville Road backups), it would greatly increase the safety of the Town's residents and increase property values.
- Bicyclists can often be a hazard. They often ride side by side rather than in tandem, ride too fast or erratically, and also can take up whole lanes, making it difficult to pass them safely.
- Enforce speed limits on more roads. Remind residents that the 25MPH speed limit is a maximum, not a minimum, and that the true safe speed at any time is dependent on many factors - road conditions, visibility, pedestrian traffic, etc. And that if one is driving at 25MPH, doing so is no indication whatsoever that one is driving reasonably or safely. Issue warnings first, then fines. Consider speed cameras if police enforcement is not practical or possible.
- Need center and shoulder lines on all roads, especially Eastwood.
- Honestly I have been almost hit as a pedestrian many times by cyclists that (you cannot hear approaching) coming around a blind turn both head on and from behind (mostly on Stuyvesant) way faster than any car goes and they do not apologize or care that they almost hit me or my dog- they are going super fast, I cannot hear them or see them coming around a blind turn and it is more terrifying than a car because of the lack of sound (I do not walk using ear pods or listening to my phone) I truly wish they were not allowed to cycle in our neighborhood-
- Walking up lone pine to go left on Forest Road traffic comes too fast around the corner no real shoulder to walk on and traffic can not see pedestrians or dog walkers due to high plantings at road edge. Almost hit me a couple of times.
- I think everything is fine. I DO NOT want increased access to Hendersonville Road. I'd like less access to be honest
- Yes. Many damaged and dying trees along roads that I feel could fall down
- See above.
- Perhaps lower speed limits even more on challenging streets where traffic enters and exits the Town. I would like to see more bus shelters along Hendersonville Rd., as well as a lower speed limit (35) and crosswalks so people can either walk or ride the bus more often.
- Make Greenwood a dead end at Greenwood place so traffic is limited to people coming and going to their homes...
- don't think speed bumps work don't think we need any more of that. prefer pedestrian traffic on streets as opposed to cutting up forest for foot trails. Also would question if cut through foot trails actually lessen security. Would seem to add to the police department's troubles.
- Too many trees, many old, diseased or leaning, too close to the roads. Hedges blocking visibility at intersections.
- Try to reduce the 2min15sec red light wait time at Valley Springs Road/hendersonville Road. Enforce speed limit on Valley Springs Road, especially in vicinity of Chauncey Circle intersections
- The amount of large truck traffic on Busbee/ Vanderbilt Road is excessive at the moment...I guess because of the club project...we will all be glad to see the trucks go..or use other points of entry.
- A four-way stop, or a round about, at Vanderbilt and Busbee. Improve shoulders.
- I think bicycles are a big problem and their use should be discouraged and managed.
- Would like to see traffic calming on Niagara Drive. I've raised this concern since my family and I moved here five years ago as I have two young daughters. The traffic going to and from the Equestrian Center does not, for the most part, respect the 25 miles per hour speed limit. If a truck pulling a horse trailer comes down the small hill from the entrance/exit to the Equestrian Center and is moving faster than the speed limit, I have very little confidence that they would be able to stop if they saw my girls in the street on their bikes. I've asked The Ramble for speed limit signs (now installed); police monitoring of speeds (occasional monitor-

ing without humans has occurred); and speed humps. They say Biltmore Forest would need to approve the installation of the speed humps. Thank you for considering.

- Please put up more real time speed limit signs. We certainly need more of them.
- When traffic is seriously backed up on Hendersonville Road our police should be out and visible. Many drivers obey the speed limit but many do not.
- Nothing. Don't meddle with "improvements" and disturb the environment.
- Would never want any speed bumps except by club
- We think a 4 way stop □ sign at Vanderbilt and Busbee would be appropriate. We are already primed for it after Vanderbilt and Cedarcliff!
- Considering sidewalks but I don't feel that strongly about it; consider a centerline on streets that don't have them
- I think the Cedarcliff/Hendersonville Road intersection should be closed. Or only allow incoming traffic there.
- Nonresidents using Biltmore Forest roads to park to access National Park, MTS trail and GPS guiding for access to French Broad River or Biltmore Estate.
- Drivers when exiting the gate at the Ramble travel down the steep hill extremely fast on Valley Spring Rd. Suggest a Stop sign at the intersection with Chauncey Circle. Also, a sign is posted before the gate that says no construction vehicles, but this not enforced.
- Possibly redundant,,, a designated off pavement walking surface on at least one side of Vanderbilt and Stuyvesant.
- I believe we should consider gating the neighborhood.
- We need 4 way stop signs at Vanderbilt and Stuyvesant.
- I don't have an issue with things as they are.
- Yes--have had 2 close calls recently--one a walker in all dark clothing in dappled light--The other a man in black pushing a black stroller. Would like new ordinance: All walkers and bikers must wear light colors or use reflective materials. Violators may be fined.
- Better speed enforcement. Maybe cameras with automatic speeding tickets.
- Yes--have had 2 close calls recently--one a walker in all dark clothing in dappled light--the other a man in black pushing a black stroller. Would like new ordinance: All walkers and bikers must wear light colors or use reflective materials. Violators may be fined
- Reflective clothing!
- More speed bumps on Cedar Hill, Stuyvesant, Brown Town, Ridgefield, Hilltop west side, Eastwood. White lines on all streets which are reflective
- Enforce speeding, especially from/to Hilltop on Stuyvesant from Carolina Day School out of road to school; Place a 'substantial speed bump" between 105 and 107 Stuyvesant Road. That stretch of road is like a Nascar Speedway. Ask the people that live along that stretch of Stuyvesant.
- There is no need for the 4 way stop at Vanderbilt and Cedarcliff. The speed limit of 25 mph is enough.
- Yes! Speed limit enforced! Nobody obeys it even when they see walkers-- B.J. used to be known for its fastidious care of its roads--They are in awful shape now
- Consider closing the exit/entrance to Cedarcliff Rd. and Hendersonville, Rd.
- I have long thought that bike/walking areas along Vanderbilt, Busbee and Stuyvesant roads would be wise
- Speed bump between Buena Vista and White Oak on short Busbee
- More speed control at Town Hall
- Question #15 assumes we are ALL discouraged from walking - it should have had a clear choice to state the "I am not discouraged from walking" Also - I am a fan of closing Ridgefield completely from Hendersonville Rd. Too many speeders along this short and narrow roadway. I will likely organize a proper survey of Ridgefield residences, as this issue has come up

multiple times in TC meetings, and did not show up as a significant issue in this survey... I will show up to ask questions about the goals of this survey, and how the survey can meet them... I experienced the survey as very high-level, and taking certain action based on participation and results seems like a longshot. Thanks for the effort.

- Yes. The second intersection of Valley Springs Road and Chauncey Circle can be dangerous when turning onto Valley Springs Road from Chauncey Circle. Visibility is poor, and vehicles traveling up to the Ramble Gate often come at a pretty high speed. To remedy this problem, I would suggest either a stop sign at that intersection, a speed bump, or removal of trees on the West side of Valley Springs Road, just north of Chauncey Circle, to improve visibility of oncoming traffic.
- No
- roundabouts sound nice. maybe better system at Busbee and Vanderbilt, most likely it seems to have traffic accidents/problems there
- None. There is no traffic here and current speeds , stop signs are great.
- Bike lanes going down Vanderbilt and Stuyvesant would be really helpful
- No
- No, good survey
- Even up or fill in shoulders that have large dropoff
- I wish there were far more traffic circles in town. They really help with slowing speed, necessary driver attention, and have been proven in helping reduce accidents. I also desperately wish there were sidewalk.
- Some Stop signs should be Yield signs AND some Yield signs should be Stop signs.
- No
- I am very much opposed to the idea of sidewalks in Biltmore Forest. Yard waste piles are often along roadway outside the p/u window. Yard waste piles often are too close to the edge of the roadway. Sometimes yard waste piles actually extend onto roadway.
- We MUST work on the construction traffic and young drivers who speed. I have been almost hit a number of times. I realize how challenging it is to see pedestrians but none-the-less the speeder are out of control
- Just to make ridgefield a safe street. There are 2 90' curves that tractor trailers Etc come down.
- Bike lane for Vanderbilt to Biltmore Village
- Designated bike paths
- I prefer paths to concrete sidewalks, the roundabout concept instead of stop signs. Not the biggest fan of speed bumps but they do slow me down so I would support them.
- Light at Eastwood/ Hendersonville Road takes a long time if you hit red
- No
- 19.1 make sure foliage does not block sight- lines at intersections 19.4 traffic lights are necessary given the increased traffic on Hendersonville road and help relieve the congestion at the Parkway egress by providing other controlled egress intersections. Excellent idea.
- No more speed bumps.
- The margin on Vanderbilt coming up from Biltmore should be improved (not paved!!!!), so that it would be usable by bikers. It is now too rough...
- No
- The back entrance to Carolina Day has some bushes/trees that could be trimmed back (they currently scratch cars when there are people in both direction) and the road could be widened slightly and holes fixed. Not sure if this is the town or the school who is supposed to be maintaining that area - so mentioning it just in case. :)
- The trails in Biltmore Park are used for teens to go use drugs and have sex. I would not want that for us. I strongly feel that there is a way for walkers, bikers and cars to be able to use the

existing infrastructure.

- I grew up in Biltmore Forest and love its history, beauty, and tranquility. Don't ruin it with traffic circles and trails like it is a brand new gated community that must meet residents' demands for amenities.
- enforcing pedestrians to walk on the left facing traffic AND wear lights/lighted clothes at night
- Bike lanes
- No. The four way stop on Vanderbilt has been a big help.
- Turning down Greenwood Road from Hilltop, many drivers don't stay on their side of the road and have almost hit head on. Road may need to be marked so drivers will stay in their lane.
- I personally do not like all the outside traffic. We are first and foremost a neighborhood. I do not like the fact the Estate uses the back entrance by accessing it through our neighborhood....way too many service trucks and the four way stop is primarily, in my opinion, because of the traffic they created coming off Hendersonville Road. I would love to see BF gated. There are way too many outsiders riding bikes and parking at parks and BFCC, getting out of their cars and walking around. I also do not believe the Day school needs a back entrance to BF. It's an eye sore and not utilized by the majority of BFCC residents, nor do the majority of those using it, live in BFCC, which again increases our traffic and the need for more speed bumps. And last, but certainly not least, we must stop allowing left turns off Browntown, or any other non-stop lighted side road out of BF!
- I would like to see more attention paid to bicycle safety, bike lanes, share the road signs and shoulders/road edges maintained.
- Not at this time
- I realize this was covered in the survey, but it would be really nice if there were sidewalks and walking trails within the community. Thank you.
- The public right of ways should be tidied up and the trees better maintained
- Please get residents to cut back foliage hanging over the road--line of sight needs to be clear. The best improvement has been the lowering of the speed limits--that has made all of us safer
- Can't think of anything
- Have more attention given to stop speeders
- Better marked speed bumps Police alert people to walk facing traffic and not walk in the middle of road
- A single lane sidewalk would be ideal



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