



VI. Transportation

Goal:

To develop and maintain a growing transportation system that allows people and goods to pass throughout the community in the most efficient and safest way possible in order to enhance community life and promote economic growth in the region.

Objective:

- To identify and make necessary street improvements as needed to current and future traffic issues.
- To repair or replace all bridges that fail to meet current VDOT Safety Standards.
- To implement the projects outlined in the 2020 Transportation Plan.
- To continue to maintain the quality of the streets in town.



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Strategies

Objective 1

1. Secure funding from VDOT, the General Assembly, or other source to reroute North College Avenue.

Objective 2

1. Repair or replace the bridge over Beaver Pond Creek on Stockton Street.

Objective 3

1. Secure funding from VDOT, the General Assembly or other source to reroute High St.

Objective 4

1. Secure Funding from VDOT, the General Assembly or other source to alleviate traffic congestion on Leatherwood Lane

Objective 5

1. Annually identify those projects to be incorporated in a work program for the Street Department.
2. Prioritize those projects that can not be addressed within the framework of the annual budget, and incorporate them in the 6 year plan.



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Objective 6

1. To continue the program of paving streets on a regular cycle.
2. To increase funding for street maintenance by working with VDOT to increase the number of lane miles eligible for maintenance reimbursement.
3. To aggressively work to replace inadequate curb and guttering and to construct new in areas where needed.
4. To continue to require developers to build new streets within subdivisions to the highest standards.



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Summary of the projects:

PHASE ONE: BASE YEAR ROADWAY RECOMMENDATIONS

Virginia Avenue (Depot Street to East Corporate Limits of Bluefield)

Provide access management on Virginia Avenue by constructing sections of missing curb and providing parking on one side of the roadway. A number of businesses currently exist in close proximity to the roadway along this section of Virginia Avenue. The current pavement width varies from approximately 28 feet to 30 feet. The estimated cost of construction is \$156,400. No additional right-of-way is projected to be required.

College Avenue (Thayer Street to North Corporate Limits of Bluefield)

The recommendation at this location is to widen to a standard two-lane urban cross-section to improve the geometric deficiencies. The length of this recommended improvement is approximately 0.37 miles. This project is included in the current Virginia Transportation Development Plan. The projected cost for this improvement is \$1,387,000.

College Avenue (Valley Dale Street to Rollins Street)

Provide access management by consolidating business entrances and providing a traffic signal. The purpose of this recommendation is to address the conflicting traffic movements that exist in the area, which can result in a safety hazard. Upon installation of the traffic signal, additional warning signs should be located on the approaches, particularly for vehicles traveling northbound down a significant grade. The estimated cost of this recommendation is \$500,000.



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Intersection of College Avenue & Valley Dale Street

Extend the left-turn storage lane on College Avenue southbound. Currently vehicles queue past the designated storage area during particular time periods. A grass median exists where the storage lane could be extended. The estimated construction cost of this recommendation is \$45,000.

Intersection of US 460 Bypass & Leatherwood Lane

Extend the left-turn storage lane on US 460 eastbound to provide more storage capacity for this movement. Modify the southbound Leatherwood Lane right-turn movement from a yield to a stop-controlled movement with a right arrow. The improvements would address safety concerns at this intersection and are estimated to cost \$69,000.

Stadium Drive (College Avenue to East Corporate Limits of Bluefield)

Widen to a standard two-lane urban cross-section with a minimum pavement width of 30 feet and provide left-turn lanes to Bowen field and Bluefield College. The current pavement width of this roadway is approximately 22 feet. This recommendation is projected to cost approximately \$726,000 for construction and \$327,600 for right-of-way, for a total cost of \$1,053,600.



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PHASE TWO: INTERIM YEAR (2010) ROADWAY RECOMMENDATIONS

College Avenue (Valley Dale Street to Tazewell Avenue)

Widen this section of College Avenue to four lanes to address substandard geometry and a projected capacity issue. Displacements in this area are consistent with the need for removal of dwellings in flood-prone areas. The projected cost of this recommendation is \$7,944,000 (\$5,280,000 for construction and \$2,664,000 for right-of-way).

PHASE THREE: STUDY YEAR (2020) ROADWAY RECOMMENDATIONS

Tazewell Avenue (Montrose Street to Shenley Avenue)

The recommendation at this location is to widen the roadway to a standard two-lane urban cross-section with a minimum pavement width of 30 feet. The approximate length of this roadway is 0.66 miles. A geometric deficiency exists due to the fact that the current pavement width of this roadway is approximately 18 feet. The estimated cost of this improvement is \$1,732,500 including \$1,386,000 for construction and \$346,500 for right-of-way.

Valley Dale Street (US 460 western interchange to Fincastle Lane)

Widen to a standard two-lane urban cross-section with a minimum pavement width of 30 feet. The current pavement width at this location is approximately 20 feet. This improvement is recommended to extend to the point where Valley Dale Street widens to a four-lane cross-section. The estimated total cost of this recommendation is \$3,780,000 (\$2,520,000 construction costs, and \$1,260,000 right-of-way costs).



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Intersection of US 460 Bypass & Leatherwood Lane

Replace existing signalized intersection with a grade-separated interchange. Leatherwood Lane north of the US 460 Bypass is currently well-traveled and development is projected to occur south of the US 460 Bypass. The projected total cost of this improvement is \$54,000,000 (\$36,000,000 construction costs, and \$18,000,000 right-of-way costs).

LOCAL ROADWAY PROJECTS

There is a project of interest to the Town of Bluefield involving roadways that are not part of the VDOT thoroughfare system.

Edgewood Road (Hillcrest Drive to Ridgeway Drive)

Reconstruct Edgewood Road between Hillcrest Drive and Ridgeway Drive to improve inadequate vertical sight distance. Edgewood Drive is used as an alternative to Hockman Pike. The construction cost of this Phase I recommendation is estimated at \$105,000.



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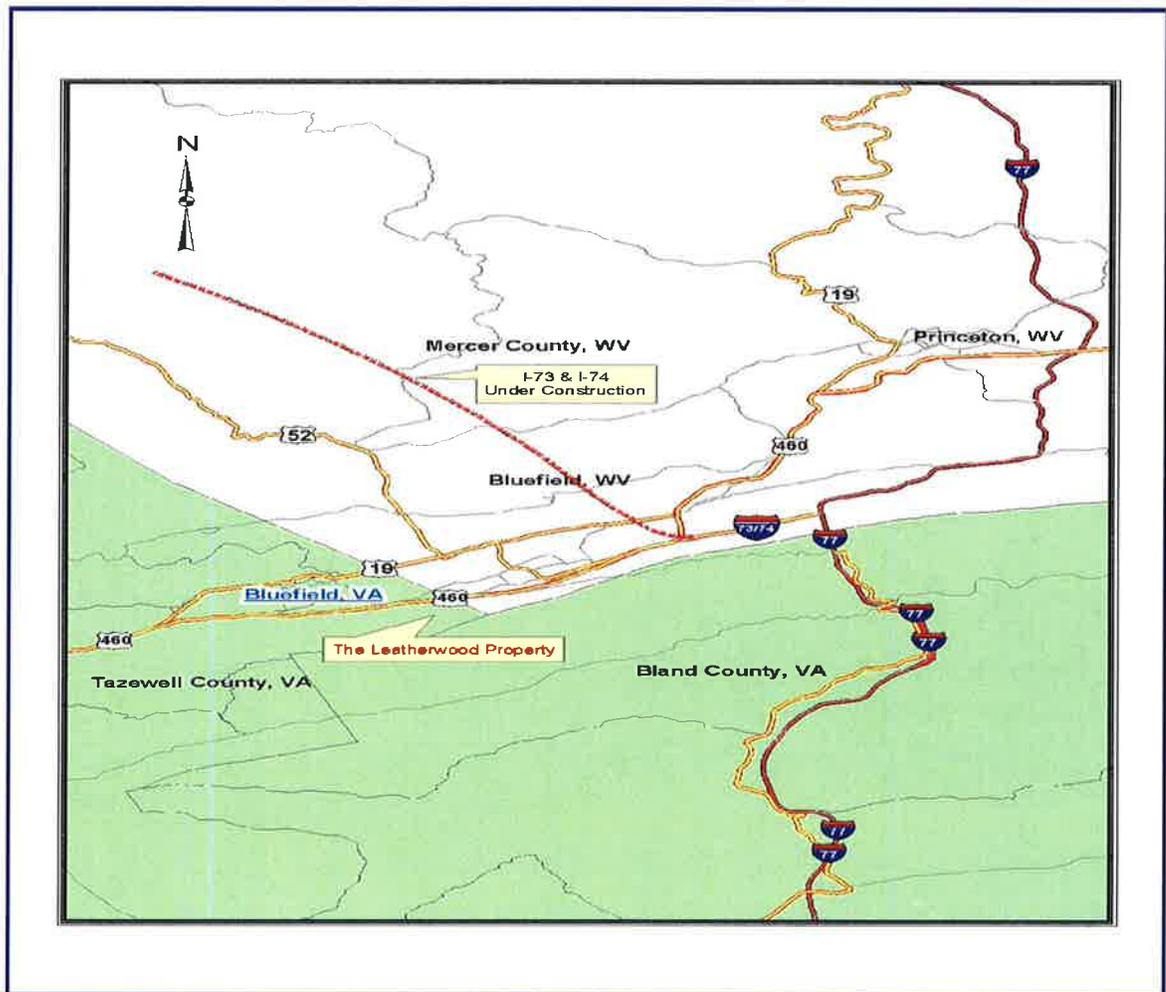
Route	Facility Name	From	To	Road Segment Length (Miles)	Recommendation	Cost (\$2000)	Existing Typical Section (Width)	Recom. Typical Section (Width)	Average Daily Traffic (ADT)	
									Year 2000	Year 2022
US 19	Virginia Avenue	Dixon Street	Hicks Street	0.26	Provide access management by constructing missing curbs and providing parking on one side of roadway (Phase I)	84,400	U2 (30')	U2 (30')	7,600	9,120
US 19	Virginia Avenue	Hicks Street	WV State Line	0.49	Provide access management by constructing missing curbs and providing parking on one side of roadway (Phase II)	32,000	U2 (26')	U2 (26')	5,250	9,000
VA 102	College Avenue	Thayer Street	NCL Bleakfield	0.37	Reconstruct to a standard two-lane urban roadway (VDTP project)	1,167,000	R2 (22')	U2 (30')	6,590	9,730
VA 102	College Avenue	Valley Dale Street	Rains Street	0.80	Provide access management by consolidating business entrances and providing a traffic signal (Phase I), widen to a four-lane roadway (Phase II)	6,644,000	U2 (22')	U4 (48')	11,570	16,200
	Intersection Improvement	College Avenue	Valley Dale Street	N/A	Reconstruct left-turn storage lane on southbound College Avenue to provide more storage (Phase II)	45,000	N/A	N/A	N/A	N/A
	Intersection Improvement	Busfield Branch	Leahurst Lane	N/A	Reconstruct left-turn storage lane on eastbound Busfield Bypass to provide more storage and convert right-turn on southbound Leahurst Lane from a yield to stop-controlled (Phase I) construction diamond interchange in place of signalized intersection (Phase III)	54,000,000	N/A	N/A	N/A	N/A
	Stadium Drive	College Avenue	ECL Bleakfield	0.26	Reconstruct to a standard two-lane urban roadway and provide two left-turn lanes (Phase I)	1,053,800	R2 (22')	U2 (20')	7,590	10,530
VA 102	College Avenue	Tazewell Avenue	Route 19 (Virginia Avenue)	0.03	Convert from two-way to one-way roadway (Phase II)	1,400	U2 (32')	U2 (32')	9,910	13,870
VA 102	College Avenue	Route 19 (Virginia Avenue)	Graham Avenue	0.05	Convert from two-way to one-way roadway (Phase II)	900	U2 (30')	U2 (32')	5,690	7,810
VA 102	College Avenue	Rollins Street	Tazewell Avenue	0.30	Widen to a four-lane roadway (Phase III)	1,600,000	U2 (32')	U4 (48')	9,610	13,450
	Tazewell Avenue	Montrose Street	Shankley Avenue	0.66	Reconstruct to a standard two-lane urban roadway (Phase II)	1,722,500	R2 (18')	U2 (30')	1,660	2,230
Local Roadway	Edgewood Road	Hillcrest Drive	Redway Drive	0.05	Improve sight distance (Phase I)	105,000	R2 (26')	R2 (26')	N/A	N/A
Total Cost*						\$7,443,500				



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Streets and Highways

The following map shows all of the major roads and interstates surrounding the Town of Bluefield. This map also indicates where the proposed I-73 and I-74 interstates will be located once construction is complete.





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Maintenance

The Town of Bluefield is responsible for maintaining all of the public streets within the corporate limits. The Virginia Department of Transportation (VDOT) allocates funds to the Town each quarter based on the number of lane miles of highways and streets within the Town.

The Town presently has two full-time crews assigned to street maintenance. One crew provides maintenance of the paved surfaces, shoulders, ditches, as well as cleaning of the streets and drainage structures, and snow removal. The second crew performs all necessary concrete work. During periods of snow or under other extreme conditions, the Town uses laborers from other departments to supplement the street maintenance crews. The Town also hires temporary help during the summer to assist on grass cutting and special projects. The Town annually budgets funds to resurface streets and to construct and repair side walks.



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Improvements

In the last few years, the Town has spent on average of \$320,000 per year on street improvements. In many cases, the pavement has been milled in order to lower it to the height of the surrounding curbing and gutter. Milling adds dramatically to the cost of street improvements. In an effort to maximize the amount of paving that can be done in a given year, effort is made to pave streets that are in critical need, and those nearby streets that will need attention in the next few years. Street paving is prioritized on a 3-year plan, however the streets are inspected annually.

There are streets that the Town does not receive maintenance funds for because they do not meet current VDOT standards. These streets adversely affect the budget because they are maintained in the same way as other streets, but no revenue is received from VDOT. Based on a 2001 estimate prepared by Anderson and Associates, the cost to upgrade these streets to the current Virginia Department of Transportation Standards is \$1,000,000 per mile. Since the cost is more than double what the Town of Bluefield receives annually in maintenance reimbursement, it is difficult to justify the cost. VDOT street maintenance funds received by the town do not cover the costs incurred annually for street maintenance and is subsidized by the general budget.



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There are many houses in town that access their driveway by a private drive. The Town needs to integrate these private drives into the Town Street Network and apply for funding from VDOT to widen and maintain these roads. In all future projects where two or more houses are using a private drive to access a town maintained road, the road must be brought up to current town standards or permits can not be issued. This will allow the town to fix current problems and alleviate future unforeseen situations.

Since the Town of Bluefield maintains all of the streets within the corporate limits, it is required that any new streets constructed be constructed to meet or exceed Town standards. These standards insure that the streets are well built, and the Town receives future funding from VDOT for maintenance. Current standards are published in the Town Code of Ordinances.

In 2005, VDOT started developing new subdivision street standards, which were completed and put in place in 2009. This is in recognition of the fact that much of the residential street development is occurring in suburban counties, and is being done to a different set of standards than apply to towns, cities, and urban counties. VDOT is allowing the Town to apply to have streets that are not receiving reimbursement placed in the Town's street maintenance network. If this effort is successful it should result in a new stream of revenue to address ongoing maintenance.



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Planning

Projects must be initiated locally to get on the Six-Year Plan. The biggest hindrance to proper planning of road improvements is their high cost and the long time frame required for their completion. These projects are prioritized by Town Council.

The Six-Year Improvement Program (SYIP) is a document that outlines planned spending for transportation projects proposed for construction development or study for the next six years. The SYIP is updated annually and is the means by which the Commonwealth Transportation Board (CTB) meets its statutory obligation under the Code of Virginia to allocate funds to interstate, primary, secondary and urban highway systems, public transit, ports and airports and other programs for the immediate fiscal years. The CTB allocates funds for the first fiscal year of the SYIP but the remaining five years are estimates of future allocations. Fiscal years start on July 1 and end on June 30. The CTB updates the SYIP each year as revenue estimates are updated, priorities are revised, project schedules and costs change, and study results are known. Projects can include highway, road, bridge, rail, transit, bicycle/ pedestrian paths and other transportation improvements across the state.

VDOT does most of the planning, design, and construction of major projects on the highway system. The Town must take the initiative to see that new projects are always being added to the Six-Year Plan. The process for getting new projects into the plan is:



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- a. The Town Manager and staff review street improvement needs with the Town Council.
- b. Town Council, after a public hearing, authorizes the Town Manager to submit a proposal for a specific project. The proposal should be in writing and should contain as much information as possible about the proposed projects.
- c. Town Manager contacts:
State Construction Engineer
VDOT– Construction Division
1401 East Broad St.
Richmond, VA 23219
- d. VDOT reviews the project and notifies the Town Manager on how to proceed from that point. If projects are eventually constructed VDOT will handle the entire project, with the Town contributing a percentage of the eligible project cost.

Improvements

The Town regularly works to increase VDOT maintenance funds in order to be better able to address current and future improvements. Whether this is done by qualifying additional streets, or some other method, it is a priority for the Town.

The Town looks for innovative methods to secure funds for necessary street improvements such as revenue sharing options. These could be public/private partnerships or funding through various federal grant programs.



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Street Classifications

**Table 3-1: Functional Classification System Definitions
Characteristics of Urban and Rural Arterials**

RURAL
Serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel
Connect all or nearly all Urbanized Areas and a large majority of Urbanized Areas and a large majority of Urban Clusters with 25,000 and over population
Provide an integrated network of continuous routes without stub connection (dead ends)
URBAN
Serve major activity centers, highest traffic volume corridors and longest trip demands
Carry high proportion of total urban travel on minimum of mileage
Interconnect and provide continuity for major rural corridors to accommodate trips entering and leaving urban area and movements through the urban area
Serve demand for intra-area travel between the central business district and outlying residential areas.



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Street Classifications

**Table 3-2: Functional Classification System Definitions
Characteristics of Urban and Rural Minor Arterials**

RURAL
Link cities and larger towns (and other major destinations such as resorts capable of attracting travel over long distance) and form an integrated network providing interstate and inter-county service
Be spaced at intervals, consistent with population density, so that all developed areas within the State are within a reasonable distance of an Arterial roadway
Provide service to corridors with trip lengths and travel density greater than those served by Rural Collectors and Local Roads and with relatively high travel speeds and minimum interference to through movement
URBAN
Interconnect and augment the higher level Arterials
Serve trips of moderate length at a somewhat lower level of travel mobility than Principal Arterials
Distribute traffic to smaller geographic areas than those served by higher- level Arterials
Provide more land access than Principal Arterials without penetrating identifiable neighborhoods
Provide urban connections for Rural Collectors



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Street Classifications

**Table 3-3: Functional Classification System Definitions
Characteristics of Major & Minor Collectors (Urban & Rural)**

Major Collectors

RURAL
Provide service to any county seat not on an Arterial route, to the larger towns not directly served by the higher systems and to other traffic generators of equivalent intra-county importance such as consolidated schools, shipping points, county parks and important mining and agricultural areas
Link these places with nearby larger towns and cities or with Arterial routes
Serve the most important intra-county travel corridors
URBAN
Serve both land access and traffic circulation in <u>higher</u> density residential, and commercial/ industrial areas
Penetrate residential neighborhoods, often for <u>significant</u> distances
Distribute and channel trips between Local Roads and Arterials, usually over a distance of <u>greater than three-quarters</u> of a mile
Operating characteristics include higher speeds and more signalized intersections



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Street Classifications

**Table 3-3: Functional Classification System Definitions
Characteristics of Major & Minor Collectors (Urban & Rural)**

Minor Collectors

RURAL
Be spaced at intervals, consistent with population density, to collect traffic from Local Roads and bring all developed areas within reasonable distance of a Collector
Provide service to smaller communities not served by a higher class facility
Link locally important traffic generators with their rural hinterlands
URBAN
Serve both land access and traffic circulation in lower density residential and commercial/ industrial areas
Penetrate residential neighborhoods, often for short distances
Distribute and channel trips between Local Roads and Arterials, usually over a distance of less than three-quarters of a mile
Operating characteristics include lower speeds and fewer signalized intersections



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Street Classifications

Table 3-4: Functional Classification System Definitions
Characteristics of Urban & Rural Local Roads

RURAL
Serve primarily to provide access to adjacent land
Provide service to travel over short distances as compared to higher classification categories
Constitute the mileage not classified as part of the Arterial and Collector systems
URBAN
Provide direct access to adjacent land
Provide access to higher systems
Carry no through traffic movement
Constitute the mileage not classified as part of the Arterial and Collector systems



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Roadway Name	From	To	Road Length (Miles)	Functional Classifications
Academic Cir.	Huffard Drive	Huffard Drive	0.26	LOC
Aden St.	Academy St.	Academy St.	0.09	LOC
Alexander Circ.	Ashley Way	Dead End	0.08	LOC
Ashley Way	Sedgewren St.	Sedgewren St.	0.11	LOC
Bluestone Dr.	Mountain View Ave.	Fincastle Tpk	0.21	LOC
Doak St.	Tazewell Ave.	Kimball Ave.	0.06	LOC
East St.	Greever Ave.	Virginia Ave.	0.14	LOC
Fincastle Ave.	Bluestone Dr.	Mountain View Ave.	0.12	LOC
Graham Ave.	Virginia Ave.	Virginia Ave.	0.15	COL
High School RD	Valley Dale St.	Mountain Lane	0.10	LOC
Kimball Ave.	Doak St.	Doak St.	0.16	LOC
Maury St.	Virginia Ave.	Jefferson St.	0.06	LOC
North Lane	East Lane	Mountain Lane Ave.	0.14	LOC
Reynolds	Dudley St.	Montrose St.	0.06	LOC
Reynolds	Montrose St.	Montrose St.	0.17	LOC
Shenley Ave.	Virginia Ave.	Logan St.	0.19	LOC
Shenley Ave.	Logan St.	Tazewell Ave.	0.21	LOC
Spring St.	College Ave.S	Spruce St.	0.10	LOC
Thayer Street	College Ave.	Wilson St.	0.17	LOC
Vincil St.	Wilson St.	Neel Rd	0.17	LOC
Walton St.	Tazewell Ave.	Virginia Ave.	0.04	LOC
Walton St.	Virginia Ave.	Virginia Ave.	0.03	LOC



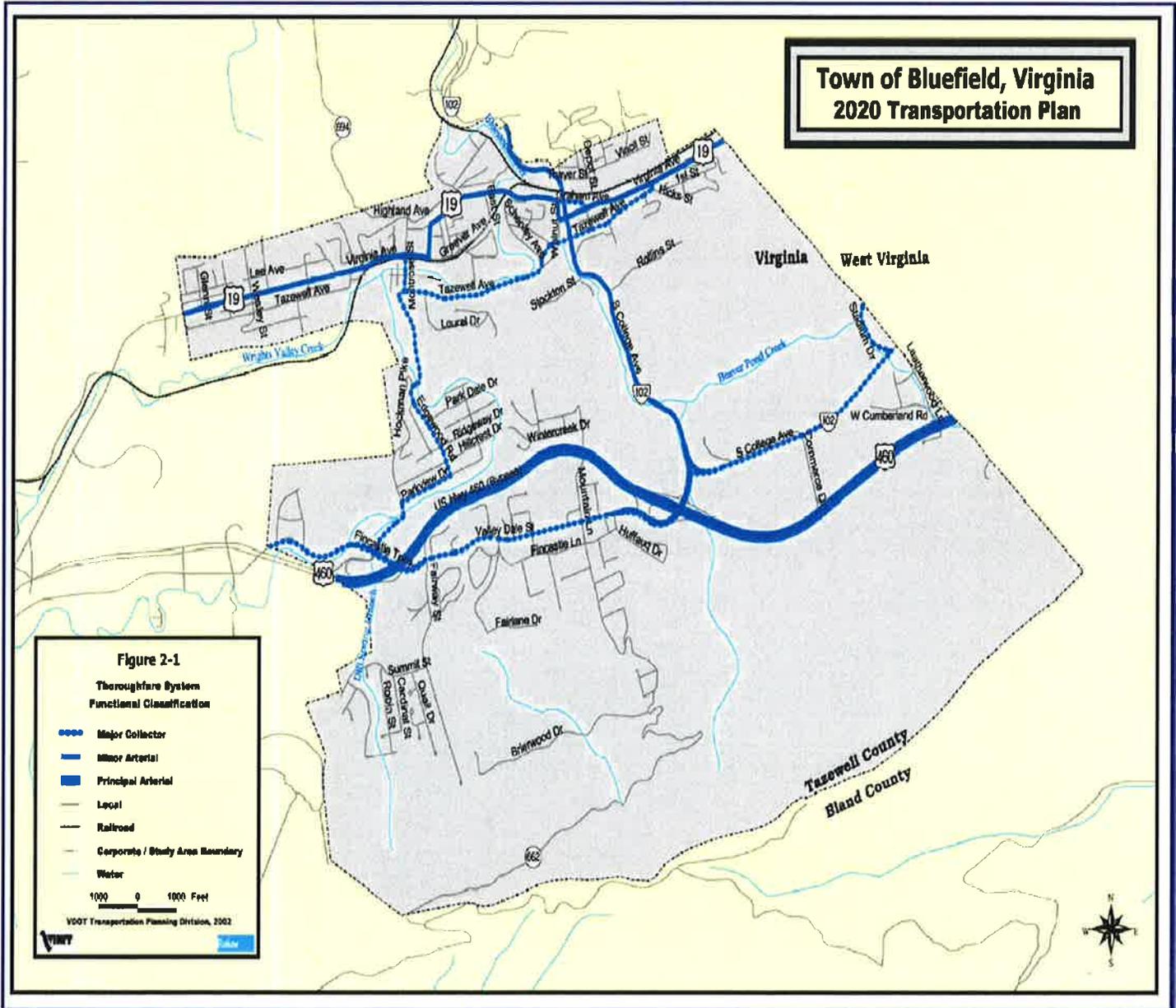
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Town of Bluefield Thoroughfare System

Roadway Name	From	To	Road Length (Miles)	Functional Classification
College Ave.	NCL	Graham Ave.	0.46	UMA
College Ave.	Graham Ave.	Virginia Ave.	0.06	UMA
College Ave.	Virginia Ave.	Tazewell Ave.	0.08	UMA
College Ave.	Tazewell Ave.	Tazewell Ave.	0.26	UMA
College Ave.	Tazewell Ave.	Tazewell Ave.	0.52	UMA
College Ave.	Tazewell Ave.	Tazewell Ave.	0.10	UMA
College Ave. N	Thayer St.	Town Limits	0.39	UMA
College Ave. S	Tazewell Ave.	Tazewell Ave.	0.15	UMA
College Ave. S	Tazewell Ave.	Valleydale St.	0.17	UMA
Valley Dale St.	College Ave.	College Ave.	0.10	UMA
Virginia Ave.	WCL	WCL	1.33	UMA
Virginia Ave.	WCL	WCL	0.18	UMA
Virginia Ave.	WCL	WCL	0.17	UMA
Virginia Ave.	WCL	WCL	0.20	UMA
Virginia Ave.	WCL	Graham Ave.	0.10	UMA
Virginia Ave.	Graham Ave.	Graham Ave.	0.07	UMA
Virginia Ave.	Graham Ave.	College Ave.	0.04	UMA
Virginia Ave.	College Ave.	Graham Ave.	0.10	UMA
Virginia Ave.	Graham Ave.	Hicks St.	0.33	UMA
Virginia Ave.	Hicks St.	ECL	0.38	UMA
Walnut St.	Virginia Ave.	Tazewell Ave.	0.07	UMA
Walnut St.	Tazewell Ave.	Tazewell Ave.	0.09	UMA



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Mass Transit



The Town of Bluefield operates Graham Transit. Graham Transit runs three deviated fixed routes throughout the area each day. Funding for the system is through Federal and State Mass Transit Grant programs, and is subsidized by the Town. The system interconnects with Bluefield, WV Transit allowing riders to travel to most any destination in the area. The fare for Graham Transit is twenty-five cents. Cimarron Coach of Virginia also offers transportation services to all area residents, for a small fee, along with the Bluefield Transit Authority, Four County Transit, Greyhound and several other charter services.



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Bike-Walkways

Currently there is a Walkway/Nature Trail located in Graham Recreation Park. The trail is $\frac{3}{4}$ of a mile loop which was extended as an Eagle Scout Project in 2007. Future plans are for a hiking/biking trail to be located through the town for citizens to enjoy.

Sidewalks

As the Town moves forward, attention needs to be paid to the existing sidewalk infrastructure and work on adding additional sidewalks in neighborhoods to make them more pedestrian friendly. Some areas of interest should include South College, Valley Dale, Pinehill Park, Parkview, and Double Gates. New sidewalks have been added to Mountain Lane and College Ave.

Parking

Parking in downtown areas is a problem for many municipalities. This is particularly the case in Bluefield, Virginia where there is a variety of uses. Retail stores that depend on foot traffic compete for parking space with businesses that only require parking for their employees, and apartment tenants who want to park as close to their door as possible. The shortage of spaces combined with the mixture of uses makes this a continuously volatile issue. These areas were built in an era when the automobile did not dominate the transportation scene, however public transportation is becoming better utilized in the Town.



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The removal of several buildings downtown has resulted in more spaces available for parking in the downtown area. The Town along with area businesses are utilizing these areas for parking. The former Rasi's Supermarket was demolished as part of a FEMA project. Once this was completed, the creek channel has been widened, with the remainder of the property to be used as parking for all the downtown businesses. Even with this added parking there is still a need for additional parking.

Rail Transportation

Bluefield is adjacent to the main Norfolk Southern line that connects the ports at Hampton Roads to the rest of the nation. As a result, it is possible to ship goods and materials via rail to most anywhere in the world with little difficulty. Another form of rail transportation that can be utilized is the Amtrak Rail Service, which is offered within 40 miles of Bluefield, in Hinton, West Virginia.

Air Transportation

Tazewell County Airport is located near Richlands, Virginia and the Mercer County Airport is located 15 minutes away in Mercer County, West Virginia. Larger airports are located in Roanoke, VA, Tri-Cities, TN, and Charleston, WV. Each of these airports is within an hour and forty-five minute drive. International flight connections can be made through Charlotte, NC which is 2.5 hours away.



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Transportation Proposals

The key areas that the Town needs to begin to address are those projects that are listed in the 2020 Transportation Plan. Many of these projects can be completed by current town crews and would add to the aesthetics of the Town.

Of course when you look at the total cost for projects in the plan exceeding \$77,000,000 it is very clear that much of the needed improvements can not happen within the confines of the Town's budget or the funds allocated by the State each year for Six-Year Plan improvements.