

**DRAFT**  
**BUENA VISTA 2020**  
**TRANSPORTATION PLAN**

**DEVELOPED BY THE  
TRANSPORTATION PLANNING DIVISION  
OF THE  
VIRGINIA DEPARTMENT OF TRANSPORTATION  
IN COOPERATION WITH THE  
U.S. DEPARTMENT OF TRANSPORTATION,  
FEDERAL HIGHWAY ADMINISTRATION  
AND THE  
CITY OF BUENA VISTA**

**September 2002**

**This report does not constitute a standard, specification, regulation, or provide a funding mechanism  
for the included transportation recommendations**

## **INTRODUCTION**

The *Buena Vista 2020 Transportation Plan* was developed as a cooperative effort between the Virginia Department of Transportation (VDOT), the Federal Highway Administration and the City of Buena Vista. The transportation plan is the product of a study that evaluated the transportation system in Buena Vista and recommended a set of transportation improvements to best satisfy existing and future transportation needs. The study identified needs based on the engineering analysis, capacity, and safety of the transportation system.

Effective transportation systems are essential to continued economic growth and development in the Buena Vista region as well as the Commonwealth of Virginia as a whole. Providing for the safe, effective and efficient movement of people and goods is a basic goal of all transportation programs in Virginia. It is with this basic goal in mind, and with further consideration of environmental issues and local government transportation objectives, that this transportation plan was developed.

VDOT will use this plan when evaluating requests from the Buena Vista local government for specific transportation projects, and when implementing projects on the VDOT-maintained roadway system. The recommendations in this *Buena Vista 2020 Transportation Plan* will also be used as part of the VDOT statewide transportation planning process to ensure that local transportation projects are compatible with and support transportation improvements both statewide and in neighboring localities.

## **STUDY AREA AND THOROUGHFARE SYSTEM**

Buena Vista is a small city located on the western slopes of the Blue Ridge Mountains in Rockbridge County, at the southern tip of the Shenandoah Valley. The City is located along the Maury River, which also flows through neighboring Lexington. Settlement in the area dates back to 1880, when two railroads were completed and formed a junction at what is now Buena Vista. Industrial development followed quickly, with manufacturing interests attracted by the combination of the railroad and the water power of the Maury River. When the area incorporated as a city in 1892, its population was 5,240. This is close to the size of the City today. Buena Vista still supports an active manufacturing base today.

A subset of the City's roadway network is designated as the urban thoroughfare system. The thoroughfare system includes roads that are functionally classified as collectors or arterials. Arterial roads serve as the major traffic-carrying facilities in the area. Collector roads carry a lesser volume of traffic and feed traffic to these arterial roadways. The focus of the *Buena Vista 2020 Transportation Plan* is the thoroughfare system, but local streets were analyzed as well. Also, in addition to roadways, improvements to the following other modes of transportation have been evaluated as part of this study: parking; bicycle and pedestrian facilities; intercity rail, bus, and air travel; transit and paratransit; taxi; and the movement of goods.

## **DEMOGRAPHIC OVERVIEW**

In the last U.S. Census conducted in 2000, the population of the City of Buena Vista was recorded as 6,349. This represents a slight drop from the City's 1990 population of 6,406. Based on input from local officials, the City's population is expected to decrease slightly through the 20-year horizon of this study.

The primary industries in the Buena Vista area relate to manufacturing. Companies include Dana Corporation (truck axles), Modine Corporation (heating units), Fitzgerald Log and Lumber, Everbrite Corporation

(illuminated outdoor signs), Lee's Carpets, and Bontex Corporation (paperboard). The City is also home to Southern Virginia College. Employment in Buena Vista is expected to remain constant or increase only very slightly over the 20-year horizon of the study, according to interviews with representatives of companies in Buena Vista.

## **SUMMARY OF APPROACH AND ANALYSIS METHODS**

This transportation plan was developed using a process that included:

- Collection of traffic data
- Collection of information on the condition of roadway and other transportation infrastructure (rail crossings, bridges, airports, train stations, etc.)
- Interviews with representatives of government, industry, and major tourist attractions
- Analysis of traffic operations and roadway safety
- Meetings and other coordination with local government and the general public

Recommendations for the Buena Vista 2020 Transportation Plan are based on a comprehensive review of the capacity, safety, and geometry of the existing roadway system. The report also takes into account other issues that affect the area's transportation system, such as parking, other modes of transportation, and goods movement.

The recommendations were divided into three phases. Phase One recommendations address existing deficiencies and the most immediate transportation needs of the area. Phase Two recommendations apply to an interim year of 2010, and Phase Three recommendations are long-term projects (year 2020). Projects in all three phases are intended to accommodate travel demands to the horizon year of 2020.

## **PHASE ONE: BASE YEAR (2001) RECOMMENDATIONS**

This study identified current deficiencies in the Buena Vista transportation system. Aspects of potential deficiencies in the existing transportation system included traffic flow and safety concerns, parking, and goods movement by truck. Five projects were identified as short-term, immediate improvements and are described below.

### **Route 60 (Lexington Avenue) at Brook Street**

A number of accidents have happened at this intersection as the result of drivers not being able to see adequately. This recommendation is to close Brook Street and re-route the traffic to Orchard Street, where the sight distance is better.

### **Route 60 (29<sup>th</sup> Street) at Alleghany Avenue**

This intersection has a deficient level of service rating for existing conditions. This recommendation is to install a signal at this intersection to improve intersection capacity.

### **Route 60 at Route 501 (Beech Avenue) / Rockbridge Street**

More accidents happened at this intersection during the period 1996-1998 than any other in the city. This recommendation is to reconfigure signal phasing to allow eastbound and westbound left turns as protected only (turns only on a green arrow). This is designed to improve safety and reduce the number of accidents that occur.

**Route 501 (Magnolia Avenue) at 10<sup>th</sup> Street**

This intersection is anticipated to have a deficient level of service rating by 2010. This recommendation is to improve this intersection to improve intersection capacity.

**Route 501 (Sycamore Avenue) at 20<sup>th</sup> Street**

This intersection is the second-most common location for accidents in Buena Vista. This recommendation is to improve this intersection to enhance safety.

**PHASE TWO: INTERIM YEAR (2010) RECOMMENDATIONS**

The interim year recommendations for the *Buena Vista 2020 Transportation Plan* include projects that are intended to address existing deficiencies but, based on projected costs and potential impacts, would require a number of years to plan and fund. One project was identified as an interim improvement for Buena Vista.

**Route 60 (29<sup>th</sup> Street) at Catalpa Avenue**

This intersection is anticipated to have a deficient level of service rating by 2010. This recommendation is to install a signal at this intersection to improve intersection capacity.

**PHASE THREE: FUTURE YEAR (2020) RECOMMENDATIONS**

The Phase Three 2020 recommendations in the *Buena Vista 2020 Transportation Plan* are intended to support the economic and business needs of the community while enhancing both the appeal and traffic operations of the Buena Vista downtown area. Two projects fit in this category for Buena Vista.

**Alleghany Avenue/Factory Street from Route 60 (Lexington Avenue) to Beech Avenue**

This recommendation is to reconstruct these roadways to current VDOT standards. This recommendation also includes the realignment of Factory Street with Park Avenue.

**Catalpa Avenue at 34<sup>th</sup> Street**

This intersection is anticipated to have a deficient level of service rating by 2020. This recommendation is to convert this intersection to all-way stop control, and add advance warning signs on Catalpa Avenue.

**OTHER MODES AND GOODS MOVEMENT**

In developing the *Buena Vista 2020 Transportation Plan*, all modes of travel were considered. This included an assessment of the availability of modes of transportation other than private automobiles.

Buena Vista has a fairly wide variety of other modes of travel available for a city of its small size. Paratransit service, taxi service, and intercity bus service are all directly available in Buena Vista itself. Also, within a short drive of Buena Vista there are a number of other modes options. Intercity passenger rail service is available in Staunton, about 35 miles to the north, and commercial air service is available out the Lynchburg area, about 35 miles to the southeast. The City also has a variety of walking trails. This report makes no recommendations regarding other modes of travel.

Most goods movement in and through Buena Vista is accomplished by truck, though a rail line does cross through the City and is used to a small degree. While truck flow through the City is generally adequate,

several of the proposed roadway recommendations will assist truck access to shippers by reducing congestion and making turning movements easier.

## **LOCAL PROJECTS**

The City of Buena Vista identifies, plans, and implements transportation projects as part of its capital improvement process. Three local projects were identified by the City for inclusion in this transportation plan.

### **Route 501 (Magnolia Avenue) and Third Street**

This recommendation is to install a traffic signal at this location. The City requested this recommendation to provide for safer vehicular ingress and egress for the high school.

### **21<sup>st</sup> Street Extended from 21<sup>st</sup> Street to 0.1 mile west of Sycamore Street**

This recommendation is to construct a two-lane roadway on new alignment. This project would include sidewalks and bicycle lanes. This project would improve the general circulation of traffic in the city.

### **West Side Connector from Paxton House Drive to 0.1 mile east of the West Corporate Limits**

This recommendation is to construct a two-lane roadway on new alignment. This project would include sidewalks and bicycle lanes. This project would improve the general circulation of traffic in the city.

## **ENVIRONMENTAL OVERVIEW**

An environmental overview was conducted for the projects in the *Buena Vista 2020 Transportation Plan*. There were no environmental features identified in Buena Vista that would preclude the implementation of any of the included recommendations.

## **LOCAL COORDINATION AND CITIZEN PARTICIPATION**

The development of the *Buena Vista 2020 Transportation Plan* included coordination meetings with local City officials and VDOT representatives. A public meeting will also be held to allow citizens and other interested parties the opportunity to express their thoughts and opinions on the project and to comment on the proposed transportation improvements.

The three coordination meetings held for this study were as follows: 1) a kick-off meeting, (2) an existing conditions meeting, and (3) a draft recommendations meeting. The kick-off meeting, held in November 1999, enabled the project team to discuss the purpose and scope of the study, the schedule for data collection and plan preparation, and the coordination process. At the second meeting, held in July 2001, the project team presented the results of the base year and horizon year traffic analysis and discussed potential projects to address projected transportation needs. During a third meeting, held in March 2002, a draft set of transportation improvements was discussed among the project team, City officials, and VDOT representatives.

The next step in the study is a public meeting that will be held November 7, 2002 from 5:00 to 7:00 PM to present the draft transportation plan to City officials, citizens and other interested parties. Meeting participants are invited to provide comments on the transportation plan and will be considered in the development of the final *Buena Vista 2020 Transportation Plan*.

## **PLAN ADOPTION**

The Buena Vista City Council will vote on adoption of the *Buena Vista 2020 Transportation Plan* once comments from the public meeting have been considered in the plan development.

## **ADDITIONAL INFORMATION**

Detailed information on the development of the *Buena Vista 2020 Transportation Plan* and the study recommendations will be included in the *Buena Vista 2020 Transportation Plan Technical Report*. This document will be available for review at the Buena Vista City Hall and the local library. The technical report will also be available in Richmond at the central office of VDOT's Transportation Planning Division, the VDOT District office in Staunton, and the VDOT Residency office in Lexington.

Projects included in the Virginia Transportation Six-Year Program (FY 2003-2008) are not part of the *Buena Vista 2020 Transportation Plan*. The Six-Year Program can be reviewed online at [www.VirginiaDOT.org](http://www.VirginiaDOT.org).

Information on Six-Year Program projects for the City of Buena Vista can also be found by contacting the VDOT Resident Engineer at the Lexington Residency Office (540-463-3108).

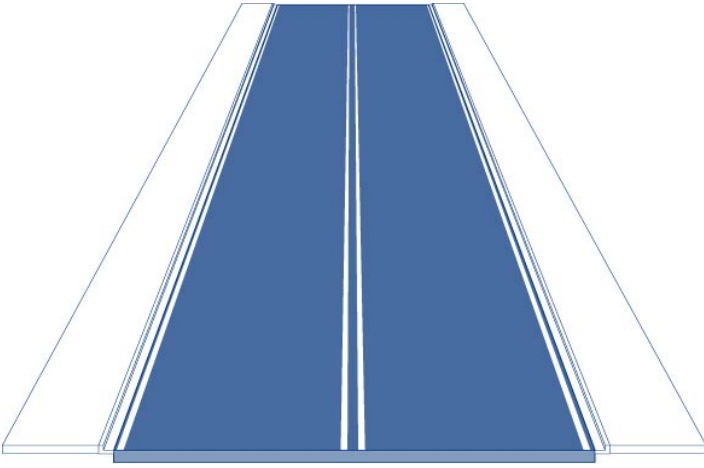
### Buena Vista 2020 Transportation Recommendations

| Facility Name                                   | From / At  | To           | Road Segm't Length (miles) | Recommendation  | Estimated Cost [1]                   | Existing Typical Section | Recommended Typical Section | Average Daily Traffic |           |           |
|---|--|--------------|----------------------------|---|--------------------------------------|--------------------------|-----------------------------|-----------------------|-----------|-----------|
|   |  |              |                            |   |                                      |                          |                             | Year 2001             | Year 2010 | Year 2020 |
| U.S. 60 (Lexington Avenue)                      | Brook Street   | N/A          | N/A                        | Close Brook Street; reroute traffic to Orchard Street.  | \$150,000 [2]                        | N/A                      | N/A                         | N/A                   | N/A       | N/A       |
| U.S. 60 (29th Street)                           | Allegheny Avenue   | N/A          | N/A                        | Install signal.   | \$180,000 [3]                        | N/A                      | N/A                         | N/A                   | N/A       | N/A       |
| U.S. 60   | U.S. 501 (Beech Avenue) / Rockbridge Avenue              | N/A          | N/A                        | Reconfigure signal phasing to allow eastbound and westbound left turns as protected only (turns only on a green arrow). | \$90,000                             | N/A                      | N/A                         | N/A                   | N/A       | N/A       |
| U.S. 60 (29th Street)                           | Catalpa Avenue   | N/A          | N/A                        | Install signal.   | \$180,000 [3]                        | N/A                      | N/A                         | N/A                   | N/A       | N/A       |
| U.S. 501 (Magnolia Avenue)                      | 10th Street  | N/A          | N/A                        | Install signal.   | \$180,000 [3]                        | N/A                      | N/A                         | N/A                   | N/A       | N/A       |
| U.S. 501 (Sycamore Avenue)                      | 20th Street  | N/A          | N/A                        | Install signal.   | \$180,000 [3]                        | N/A                      | N/A                         | N/A                   | N/A       | N/A       |
| Allegheny Avenue / Factory Street               | U.S. 60 (Lexington Avenue)                               | Beech Avenue | 0.20                       | Reconstruct roadways to current VDOT standards; includes  | \$630,000 [5]                        | U2                       | U2                          | N/A                   | N/A       | N/A       |
| Catalpa Avenue                                  | 34th Street  | N/A          | N/A                        | Modify intersection to all-way stop control, add advance warning signs  | \$12,000 [6]                         | N/A                      | N/A                         | N/A                   | N/A       | N/A       |
| U.S. 501 (Magnolia Avenue)                      | 3rd Street   | N/A          | N/A                        | Install signal. Construct southbound left-turn and northbound right-turn  | \$803,000 [3]<br>[9]                 | N/A                      | N/A                         | N/A                   | N/A       | N/A       |
| 21st Street Extended                            | 21st Street 0.1 mile west of Sycamore Avenue             | Route 608    | 1.40                       | Construct roadway on new alignment. Includes sidewalks and bicycle lanes.   | \$4,544,000 [5]<br>[7]<br>[9]        | N/A                      | U2                          | N/A                   | N/A       | N/A       |
| West Side Connector                             | Paxton House Drive, 0.10 mile east of corporate boundary | 10th Street  | 1.40                       | Construct roadway on new alignment. Includes sidewalks and bicycle lanes.   | \$7,757,000 [5]<br>[7]<br>[8]<br>[9] | N/A                      | U2                          | N/A                   | N/A       | N/A       |
| <b>Estimated Total Thoroughfare System Cost</b> |  |              |                            |   | <b>\$1,602,000</b>                   |                          |                             |                       |           |           |

**Notes:**

- [1] Cost estimates included in this table are planning level costs in year 2000 dollars. These cost estimates are based on statewide unit cost averages and should be used for planning purposes only.
  - [2] Assumes a unit cost of \$100,000 plus 50 percent for right-of-way and utilities.
  - [3] Assumes a unit cost of \$180,000 for signal installation.
  - [4] Assumes a unit cost of \$164,000 for one left-turn lane and one right-turn lane.
  - [5] Assumes a unit cost of \$2,100,000 per mile plus 50 percent for right-of-way and utilities for construction of U2 roadway.
  - [6] Assumes a unit cost of \$3,000 per sign.
  - [7] Assumes a unit cost of \$64,000 per mile plus 50 percent for right-of-way and utilities for sidewalks and bicycle lanes.
  - [8] New bridges over Maury River and railroad track: 700' and 150' long respectively with 36' wide decks at \$105 per square foot.
  - [9] Local project. Not included in estimated total thoroughfare system cost.
- N/A= Not Applicable

Typical Sections.



**U2**