

## TRANSPORTATION

### INTRODUCTION

Transportation in and through Shenandoah County consists of five components: 1) roads and highways, 2) taxi service and bus service, and 3) transportation provided by local human service agencies and organizations, 4) airports, and 5) rail transportation. (See Figure 8-A, Transportation Map, on the following page.)

### ROAD NETWORK

The most visible mode of transportation is the road network and the vehicles which travel on it. As of December 31, 2001 (latest figures available) Shenandoah County contained 767.99 miles of roads, as follow:

TABLE 8-A  
SHENANDOAH COUNTY ROAD MILEAGES, 2001

Interstate Highway	34.68
Primary Highways	94.04
Secondary Roads:	
Hard Surface	384.26
All-Weather Surface	242.54
Light Surface*	12.47
Unsurfaced	<u>0.00</u>
Total Secondary	639.27
TOTAL ROAD MILEAGE	767.99

\*(Light surface is at least graded and drained)

Source: Virginia Department of Transportation: Milage Tables, 2001

INSERT FIGURE 8-A TRANSPORTATION MAP HERE

The total mileage of secondary roads in the County has grown by about 23 percent in the last fifty plus years, from 621.35 miles in 1950 to the current 763.62 miles, and there has been a gradual and steady upgrading of the surfaces throughout the secondary road network. As of December 1950, only 180.67 miles of secondary roads were hard-surfaced, or 29 percent. This increased to over 240 miles in 1960, over 300 miles in 1970, and over 350 miles by 1980, to the 1995 figure of 374.23, which represents approximately 59 percent of the secondary road mileage.

There are over 350 bridge structures in Shenandoah County. This extensive system of bridges included in the County's road system pose a significant problem in maintaining and upgrading it. Bridges are far costlier to construct and maintain than a regular road segment; therefore a far greater proportion of the County's highway allocations goes to bridge maintenance and replacement than in the average county in Virginia and, consequently, less money remains for normal road maintenance.

In addition, while gradual progress has been made over the years to upgrade un-surfaced or gravel roads to hard surfaced roads, there are still a great many existing roads that need to be upgraded. As of December 2001, 255 miles (40 percent of the secondary road system) were not hard surfaced. There is a new "Rural Rustic Road" program that may help get more roads paved for the money allocated. Under that program there would be no additional right-of-way obtained or road widening; just paving the roadway in place.

### Scenic Byways

In April 2000, Shenandoah County proposed several roadways that travel through scenic, historic and tourism-related areas in the County to be designated as Scenic Byways by the Commonwealth Transportation Board. After review by both VDOT and the Department of Conservation and Recreation, who jointly administer this program, 10 roads were designated Scenic Byways.

The roads include four primary routes: Route 11, from Route 55 in Strasburg through the County to New Market; a portion of Route 42 between Routes 675 and 767; Route 55 through the County; and Route 263 from Mt. Jackson to Orkney Springs. In addition, six secondary roads (or portions of these roads) were so designated: Routes 600 from Route 11 north through the County; Route 614 from Route 11 to Forestville; Route 623 from Route 55 to Route 675; Route 675 from Route 42 south through the County to Page County; Route 717 from Route 675 to Basye; and Route 767 from Forestville east to Route 11.

Together, these routes form a couple of scenic parallel routes to I-81, and also several loop routes so that someone could get off the main highways and see one or more scenic and historic areas of the County easily. All the Scenic Byways are shown on Figure 8-A on the previous page.

### Traffic Volumes

Traffic volumes for the County's interstate and primary highways increased significantly during the period of 1980-2000, with traffic on I-81 averaging a 215 percent increase. Other segments of primary highways increased from a low of 17 percent to a high of 333 percent.

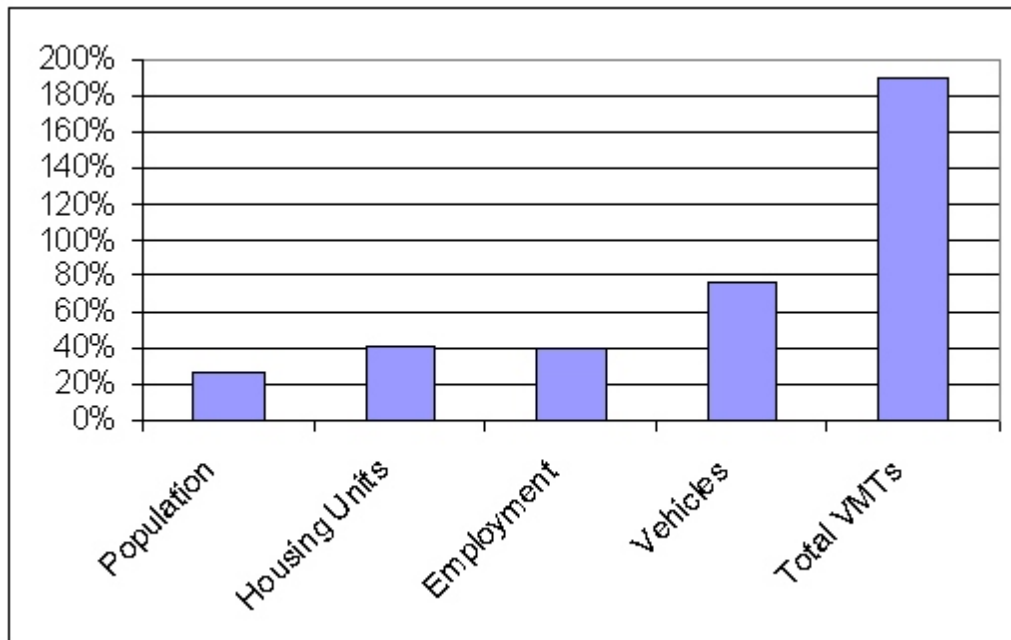
As in many other communities, traffic volumes and total vehicle miles traveled are increasing at a much more rapid pace than are the increases in population, jobs, housing units, or the total number of passenger vehicles registered. See Table 8-B, Major Change Indicators 1980-2000, and Figure 8-B on page 8-4.

TABLE 8-B  
MAJOR CHANGE INDICATORS 1980-2000

Category	1980	1990	2000	Percent Change '80-'00
Population	27,559	31,636	35,075	27.3%
Total Housing Units	11,770	15,160	16,709	42.0%
Employment	12,575	15,633	17,710	40.8%
Tl. Passenger Vehicles Registered	18,966	27,600	33,545	76.9%
Total Vehicle Miles Traveled (VMT's) on Interstate, Arterial, & Primary Highways	649,159	988,688	1,875,284	188.9%

Sources: U.S. Bureau of the Census, Virginia Employment Commission, Virginia Department of Motor Vehicles, Virginia Department of Transportation.

FIGURE 8-B  
MAJOR CHANGE INDICATORS 1980-2000



Another factor that is important in the road system in addition to the total volume of traffic is its composition: whether the traffic is mostly passenger cars, the number and size of trucks, amount of buses, and so forth.

In 1980 there were a daily average of 1,626 single-unit trucks and 3,144 trailer trucks on the segments of I-81 that run through Shenandoah County, with no twin trailer trucks. By 1990, these figures were 918 single-unit trucks, 5,673 trailer trucks, and 527 twin trailer trucks.

Between 1990 and 2000 VDOT installed automatic traffic counting devices on I-81, and the counts for 2000 estimated trucks to be: 1,127 single-unit trucks, 10,144 trailer trucks, and 751 dual trailer trucks. Both the total number of trucks and their size has increased substantially on I-81 during these time periods.

The total number of trucks decreased on Route 11, from an average of 1,286 in 1980 to 390 in 1990 and an average of 500 in 2000. This indicates that the growth seen in overall truck traffic is primarily for through traffic, not that destined for the County.

Average Annual Daily Traffic (AADT) volumes on the primary and interstate highway systems in Shenandoah County are shown in Table 8-C on the next two pages.

TABLE 8-C  
PRIMARY & INTERSTATE TRAFFIC VOLUMES  
1990 AND 2002

Route	From:	To:	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>% Chg.</u>
11	Rte. 81 N. of Strasburg	Strasburg	4,720	7,165	10,000	111.9%
11	Strasburg	Woodstock	5,650	6,970	7,600	34.5%
11	Woodstock	Mount Jackson	4,595	5,670	7,300	58.9%
11	Mount Jackson	Rte. 767 N. of New Market	2,575	3,590	5,300	105.8%
11	Rte. 767 N. of New Market	Rte. 211 N. New Market	2,780	3,740	4,600	65.5%
11	Rte. 211 N. New Market	Rte. 211 S. New Market	6,150	7,115	7,900	28.5%
42	Rte. 11 Woodstock	Rte. I-81	6,620	9,565	14,000	111.5%
42	Rte. I-81	Rte. 605 Calvary	4,230	5,390	8,100	91.5%
42	Rte. 605 Calvary	Rte. 675 Columbia Furnace	3,600	4,800	4,700	30.6%
42	Rte. 675 Columbia Furnace	Rte. 263	300	475	1,300	333.3%
42	Rte. 263	Rte. 767 Forestville	405	620	600	48.1%
42	Rte. 767 Forestville	Rockingham County Line	975	1,280	1,300	33.3%
55	NWCL Front Royal	Strasburg	2,755	3,390	3,500	27.0%
55	Strasburg	Rte. I-81	2,075	3,410	4,300	107.2%
55	Rte. I-81	Rte. 628 Lebanon Church	1,410	2,095	3,600	155.3%
55	Rte. 628 Lebanon Church	Frederick County Line	960	1,605	3,300	105.6%
211	Page County Line	Rte. 11 New Market N. Int.	3,825	5,370	6,000	56.8%
211	Rte. 11 New Market N. Int.	Rte. 11 New Market S. Int.	6,550	7,115	7,900	20.6%
211	Rte. 11 New Market S. Int.	Rte. I-81 W. of New Market	7,335	8,190	12,000	63.6%
211	Rte. I-81 W. of New Market	Rte. 42 S. of Timberville	4,430	5,650	5,200	17.4%

TABLE 8-C (Continued)  
PRIMARY & INTERSTATE TRAFFIC VOLUMES  
1980, 1990 AND 2000

<u>Route</u>	<u>From:</u>	<u>To:</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>% Chg.</u>
263	Route 11, Mt. Jackson	Route 42	1,305	1,820	4,000	206.5%
263	Route 42	Route 717, Basye	1,160	1,675	1,800	55.2%
263	Route 717	Orkney Springs	805	1,285	640	-20.5%
I-81	Rte. Mauzy	Rte. 211 New Market	11,655	20,465	38,000	226.0%
I-81	Rte. 211 New Market	Rte. 703 N. of Mt. Jackson	11,340	19,145	35,000	208.6%
I-81	Rte. 703 N. of Mt. Jackson	Rte. 185 Edinburg	11,640	20,275	36,000	209.3%
I-81	Rte. 185 Edinburg	Rte. 42 Woodstock	11,950	20,620	36,000	201.3%
I-81	Rte. 42 Woodstock	Rte. 55 W. of Strasburg	12,220	21,520	38,000	211.0%
I-81	Rte. 55 W. of Strasburg	Rte. 11 N. of Strasburg	12,390	20,400	39,000	214.8%
I-81	Rte. 11 N. of Strasburg	Rte. I-66 N. of Strasburg	12,365	20,900	41,000	231.6%
I-81	[Average of I-81 through Shenandoah County]		[11,937]	[20,475]	[37,571]	[214.7%]

Traffic counts for secondary roads are now only made infrequently under a “ reduced count program,” and the locations of the

Traffic counts for secondary roads are now only made infrequently under a “ reduced count program,” and the locations of the counts along a particular route may vary, so it is hard to compare figures from year to year for any particular road segment. The traffic volumes were therefore examined only for certain selected secondary roadways in the County, and were matched as closely as possible for the same road segment.

The latest detailed information available is for the counts which were taken from 1999 through 2002. These volumes are compared with the volumes from counts taken in 1991 in Table 8-D on the following two pages.

Volumes on the secondary roads are much smaller than those of the primary and interstate roads, so a small change in the amount of traffic can yield a large percentage for a particular route. The percentage changes from 1991 to 2002 range from a 36 percent reduction to a 206 percent increase in traffic (from 85 to 206 vehicles).

The five most heavily-traveled secondary roads (outside of incorporated towns) as of 2002 were Route 614 between 263 and Route 703 (1,900 vehicles), Route 604 near Woodstock (1,400 vehicles), Route 675 between Route 608 and Route 42 (1,100 vehicles), Route 623 between Route 604 and Route 600 (1,000 vehicles), and Route 678 in Fort Valley between Route 675 and Route 775 (740 vehicles). Along with the primary highways, these roads serve as the major travel routes throughout the County.

TABLE 8-D  
SELECTED SECONDARY TRAFFIC VOLUMES  
1991 AND 2002

Route	From:	To:	1991 *	2002 **	% Chg.
600	G. W. National Forest	Rte. 746, S. Intersection	124	180	45%
600	Rte. 623	Rte. 652, N. Intersection	231	230	0%
600	Rte. 11ck	Rte. 661	212	240	13%
600	Rte. 654	Dead End	14	30	114%
604	Rte. 676, S. Intersection	Rte. 676, N. Intersection	1,552	1,400	-10%
604	Rte. 652	Rte. 623, W. Intersection	1,336	850	-36%
611	Rte. 726	Rte. 263, W. Intersection	110	180	64%
611	.75 Mi. N. of Rte. 263	Rte. 720	186	520	180%
611	Rte. 835	Rte. 711	85	260	206%
611	Rte. 703	Rte. 701	38	50	32%
614	Rte. 738	Rte. 728, N. Intersection	100	170	70%
614	Rte. 42, N. Intersection	Rte. 627	862	1,000	16%
614	Rte. 263	Rte. 703, S. Intersection	1,298	1,900	46%
614	Rte. 708, N. Intersection	Rte. 693	914	940	3%
614	Rte. 1604	Rte. 11	857	1,300	52%
623	Rte. 675	Rte. 768	1,015	1,000	-2%
623	Rte. 681	Rte. 605	567	670	18%
623	Rte. 605	Rte. 604	618	750	21%
623	Rte. 604	Rte. 600	784	1,000	28%
623	Rte. 600	Rte. 653	647	840	30%
623	Rte. 653	Rte. 806	598	620	4%
623	Rte. 806	Rte. 55, S. Intersection	279	600	115%
623	Rte. 741	Rte. 55, Mid. Intersection	33	45	36%
623	Rte. 55, N. Intersection	Frederick County Line	289	325	12%
648	SCL Strasburg	Rte. 9090	1,907	2,300	21%
648	Rte. 9090	Rte. 788	262	1,200	358%

TABLE 8-D (Continued)  
 SELECTED SECONDARY TRAFFIC VOLUME ESTIMATES  
 1991 AND 2002

Route	From:	To:	1991 *	2002 **	% Chg.
675	WV State Line	Rte. 789	116	190	64%
675	Rte. 789	Rte. 717	142	220	55%
675	Rte. 717	Rte. 749	714	830	16%
675	Rte. 749	Rte. 608	891	970	9%
675	Rte. 608	Rte. 42	1,048	1,100	5%
675	Rte. 42	Rte. 682	595	570	-4%
675	Rte. 682	Rte. 185	899	956	6%
675	Rte. ECL Edinburg	Rte. 1430	834	969	16%
675	Rte. 1430	Rte. 678	757	1,010	33%
675	Rte. 730	Page County Line	190	207	9%
678	Rte 675 South	Rte. 830	53	50	-6%
678	Rte. 830	Rte. 675 E. Intersection	157	200	27%
678	Rte. 675, W. Intersection	Rte. 775	842	740	-12%
678	Rte. 775	Rte. 758, N. Intersection	585	640	9%
678	Rte. 758, N. Intersection	Rte. 774	585	660	13%
678	Rte. 774	Rte. 772	556	580	4%
678	Rte. 772	Warren County Line	625	720	15%
717	Rte. 263	Rte. 703	220	460	109%
717	Rte. 703	Rte. 691	289	350	21%
717	Rte. 691	Rte. 675	548	460	-16%
730	I-81	Rte. 833 - school complex	2,375	3,000	26%
758	Rte. 665	Rte. 845	577	700	21%

Notes: \* Traffic volume counts taken between 1985 and 1991.  
 \*\* Presented as "Traffic Volume Estimates" with counts taken between 1999 and 2002.

### Functional Classification

Based on the National Highway Functional Classification Study, the Virginia Department of Transportation (VDOT), in cooperation with the Federal Highway Administration, has classified all of the public roads and highways in Shenandoah County into six categories: interstate, principal arterial, minor arterial, major collector, minor collector, and local access road. They are shown on Figure 8-C on the following page and discussed below:

Interstate highways are designed to carry a large volume of through traffic between large cities. They form a national network of multi-lane, limited-access highways which carry traffic at relatively high speeds. I-81 runs through the entire length of the County and links it to the Middle Atlantic states.

Principal arterials serve substantial traffic of moderate trip length. These routes are generally four lanes in width. Route 211 is the only principal arterial in Shenandoah County.

Minor arterials form a highway network that forms links between towns and other traffic generators. They also connect to principal arterials and/or the interstate system. Route 11 from I-81 to Strasburg, and Route 55 from Strasburg west to the West Virginia line are the only minor arterials in the County.

Major collectors provide service to towns not directly linked to an arterial or interstate highway, to other traffic generators, and serve the important intra-county travel corridors. Several major collectors are shown on the Functional Classification Map.

Minor collectors collect traffic from local access roads, rural villages, and locally important traffic generators, and bring all developed areas within a short distance of a major collector.

Local access roads provide direct access to adjacent land uses, and facilitate short distance travel.

VDOT provides design standards which must be met when developing any public roadway, depending upon the proposed road's classification and use.

FIGURE 8-C  
FUNCTIONAL CLASSIFICATION

### Private Roads

In addition to the public road system, there are many private roads serving subdivisions in Shenandoah County. Usually the biggest problems associated with them is that they were not constructed to recommended geometric standards (widths, grades, curvatures, roadbeds and paving, etc.), and the lack of provisions for their long-term maintenance. A few subdivisions did make adequate provisions for the long term, and their roads are maintained at no cost to the public.

The County changed its development regulations regarding roads in the late 1990s to prevent the problems mentioned above, and now private rights-of-way are only allowed to serve two subdivision lots. If a parcel is located on a private right-of-way that already serves two or more lots, no more lots can generally be subdivided from it.

### Old Valley Pike (U.S. Route 11) Corridor

Shenandoah County had concerns about the operation and appearance of the Old Valley Pike (US Route 11) Corridor through the County. These concerns involve traffic issues as well as land use development issues. The County and town comprehensive plans did not discuss a vision of how the corridor should look in the future, and that was felt to be detrimental to the future traffic operation, economic development, and tourism.

Through a Rural Transportation Planning Grant from VDOT, administered by the Northern Shenandoah Valley Regional Commission (NSVRC), a consultant was hired to assist the County and localities in examining the current situation along the Old Valley Pike corridor, and proposing coordinated guidelines for both the County and the towns on a future vision of the corridor, which would insure adequate traffic operation, protect the scenic and rural character, and promote tourism and economic development.

The plan studied the 34-mile segment of Old Valley Pike within Shenandoah County. The plan objectives were:

- To determine current and future traffic volumes and capacities, roadway conditions, safety improvement needs, and potential Intelligent Transportation System (ITS) applications;
- To establish a Corridor Overlay District, which would provide guidance for future land development and road improvement projects to minimize impacts on the scenic and rural character of the corridor;
- To examine access management needs as future development occurs;
- To plan for bicycle facilities and land uses along the corridor, as they relate to its gateway function for all the historic districts in the County; and
- To promote quality Economic Development in the Corridor consistent with the scenic and rural character of the Corridor and the economic needs of Shenandoah County.

The Old Valley Pike Corridor Plan, which provides a concept plan for maintaining the traffic capacity of this highway as future growth occurs, and for planning land uses and facilities along the corridor while protecting the historic and scenic assets located there, was adopted by the Board of Supervisors on February 25, 2003, and is hereby incorporated in the Comprehensive Plan by reference. The entire plan can be viewed on the County's web site located at [www.co.shenandoah.va.us](http://www.co.shenandoah.va.us).

The policies incorporated in the plan seek to achieve a consistent vision of the Old Valley Pike Corridor within Shenandoah County. The major recommendation is to create a Corridor Overlay District, including requirements for safe and efficient traffic operations, and at the same time providing guidelines for future economic development opportunities along the corridor. The intent is to preserve the historic and scenic nature of the corridor by providing a policy framework that will promote economic development, while controlling sprawl.

District boundaries would encompass the land area along the Old Valley Pike frontage and extend approximately 500 feet on each side of the centerline of Old Valley Pike. In addition, access management policies will be applied to all parcels that would have direct access to Old Valley Pike.

To manage the future conditions of the Corridor, the Corridor Overlay District establishes guidelines directed towards development design and access, as well as Corridor transportation improvements. Each development application will be subject to the policies and guidelines to ensure compatibility with the surrounding area,

It is recognized that the agricultural industry that exists along the Corridor is important in preserving the County's rural and open-space character. Major residential and commercial development should be focused primarily within the Public Service Areas (PSA) along the Corridor. However, if development does occur along the Corridor outside of the PSA in the agriculture area, the development will reflect the policies contained in this plan.

Major policies of the Old Valley Pike Corridor Plan include:

- Bicycle and Pedestrian Facilities - Creation of a multi-use trail system along the length of the corridor to provide non-motorized links between towns and tourist sites. Such trails would take various forms depending on location in a rural or urban area.
- Land Use and Development - Make sure the pattern and design of development contribute to achieving the goals of preserving the rural character of the County, providing safe and efficient travel, and promote economic development.
- Transportation Improvements - Future transportation improvements should improve the safety and operation the Old Valley Pike corridor, promote pedestrian and bicycle circulation, as well as minimize the impact of any traffic diverted from I-81. The County will also consult with the towns to ensure that planning for distinct "gateways" into each is coordinated and the towns historic and archaeological resources are protected.
- Access Management - Coordinate land use and transportation planning to ensure that capacity and efficiency of the roadway are maintained as future development occurs. Utilize available controls such as medians, shared entrance ways, and service roads where needed. Cluster multi-use activities whenever possible to create fewer, more carefully designed access points and foster pedestrian and other non-vehicular trips.
- Use of Intelligent Transportation Systems (ITS) Technology - Communications infrastructure and closed circuit cameras can be used to collect, analyze and disseminate roadway information to manage traffic flow. In case of major traffic diversions, signalization can be controlled and coordinated at a remote "smart center." Provide traveler information via signs, an interactive web site and phone access.

A Corridor Overlay District still needs to be developed and adopted to put the concepts and design guidelines included in the plan into fruition.

I-81

Shenandoah County is extremely concerned at this point with the effects of implementing the public-private partnership proposal that provides for a total of eight lanes, including separate truck lanes and many new structures needed to provide separate truck interchanges. Such a project would have drastic effects on the scenic, environmental and historical resources along the corridor. In particular, this would include effects on parks (including the new Belle Grove - Cedar Creek National Park); effects on battlefields and the Shenandoah Valley Battlefield Historic District; effects on agricultural operations and the six Agricultural & Forestal Districts located along I-81. This project will have to be carefully planned and coordinated to have as minimal an impact as possible on the scenic, environmental, historic and agricultural resources of the County.

There are other strategic alternatives to widening I-81, such as a regional rail alternative and extensive safety improvements and speed limit enforcement on the existing interstate. The County should petition the Governor and General Assembly to explore all strategic alternatives to widening I-81 and it should encourage other jurisdictions along the I-81 corridor to do likewise.

A new interchange at the north end of Woodstock is needed now and is included in the Town's Comprehensive Plan, and is included as a "locally-desirable" project in the Woodstock Area Plan recently prepared by VDOT. The County concurs with this proposal, and feels that the planning and engineering process should be initiated by VDOT immediately so that construction can subsequently be scheduled. This project should be coordinated with the I-81 upgrade planning process that is now taking place at the State and Federal levels.

Other Road Improvement Needs

As in most Virginia counties today, there are a great many highway and secondary road improvement needs in Shenandoah County. Some of these have been identified locally as a result of the comprehensive planning process, while others have been included in the Virginia Department of Transportation's Statewide Highway Plan that is updated periodically. The major needs that have been so identified are shown on Figure 8-D on the following page.

In the primary highway system, several up-grading needs have been identified. These include construction, reconstruction, or widening projects included in the Statewide Highway Plan for routes 11, 42, 55, 211 and 263. In addition, County officials recommend that the entire Route 42 and Route 263 corridors be planned for major improvements to handle the existing and future traffic flows.

In the areas around Strasburg and Mt. Jackson, new secondary roadways are included in local plans which will connect major existing roads to allow for better access, and also to provide bypasses around the congested central areas. The County and VDOT need to cooperate closely with the town governments in coordinating improvements in the local road systems.

Improvements identified in the VDOT Secondary System Improvement Plan are also shown on Figure 8-D. These consist of a range of projects from major improvements along existing routes; to spot improvements, new bridges or culverts, roadway re-alignments for better sight distance; and rail crossing improvements and signals. Under present funding formulas and the statewide secondary road allocation process, there is never enough money for current road needs in Shenandoah County.

Rights-of-way need to be preserved to allow for future improvements to the major secondary roads throughout the County. The Subdivision Ordinance contains provisions for the dedication of additional right-of-way along secondary roads that do not currently have a 50 foot right-of-way. Additional rights-of-way may also be needed to make improvements in road alignments as well as their surfaces.

FIGURE 8-D  
ROAD IMPROVEMENT NEEDS

### Other Transportation Planning Efforts

The NSVRC, in partnership with the Shenandoah Valley Battlefields Foundation (SVBF), received VDOT Rural Transportation Planning Grant funds to prepare a Shenandoah Valley Battlefields and Greenways Bicycle and Pedestrian Plan for the region to link existing and planned bicycle and pedestrian routes, identify new route options based on needed links with Civil War heritage sites, historic properties, town tours, natural land forms and key tourist attractions and destinations.

Local member jurisdictions of the NSVRC, community organizations and interest groups were involved in the on-going planning process. A consultant with expertise in the design and construction of greenways, trails and pathways was hired to assist with this project. The draft plan is now completed, and it will be published on the Internet for easy access and reference. Subsequent to that publication, the adoption process will take place.

### LOCAL PUBLIC TRANSPORTATION

There is no local transit system in Shenandoah County. If a citizen does not own or have access to a car, there are a few options for getting from one place to another.

There are three taxicab companies currently listed in the Shenandoah County phone book; two in the Woodstock area and one in Strasburg.

Several of the social service agencies and non-profits incorporate transportation into their programs. The Shenandoah Area Agency on Aging (SAAA) sponsors a van that operates in the County four days a week (excluding Mondays). Driven by a Retired Senior Volunteer, the van will pick up persons who are age 60 or older and have a transportation need, and take them to such destinations as shopping areas, health care facilities, or other business places.

The Senior Center in Edinburg (another SAAA program) also provides transportation to and from the center with its van. It picks up people traveling to the center in the morning and returns them home in late afternoon. The area served is north to Woodstock, and south to New Market, and the countryside in between. Trips delivering hot meals to home-bound seniors are also made during the middle of the day.

Additional special-purpose transportation is arranged by health associations or societies, such as the Red Cross, the American Lung Association of Virginia, and a Veterans Association, and private companies that provide medical transport (wheelchair or stretcher), and volunteer drivers for churches and other organizations.

A regional Public Mobility program is being established to serve the Northern Shenandoah Valley Region, including Shenandoah County. The Northern Shenandoah Valley Public Mobility Program is an effort by a group of human service and non-profit organizations to provide improved transportation service to their clients. These clients include people who are mentally and/or physically disabled, elderly, and people who are involved in welfare-to-work programs. Each organization's transportation program is almost completely independent of the other organizations.

Currently, there are 14 agencies participating in the program; six of those agencies own vehicles and the remainder are purely consumers of transportation service. Most of the vehicles are used to pick up clients in the morning, take them to some activity, and then return them to their homes in the afternoon

Dispatching is usually handled informally by a single person within each organization via telephone. Each organization's routes typically follow certain consistent patterns with minor daily deviations from the pattern. In addition, there are frequent special requests for transportation for medical appointments and other similar reasons. The goal of the program is for the agencies to reach more people in need by working together in a cooperative manner to better utilize their transportation resources and utilize a joint dispatching system.

An assessment needs to be made as to the overall transportation needs and the adequacy of existing resources.

#### BUS SERVICE

There is no longer any inter-city bus service in Shenandoah County. Greyhound Bus Lines previously had several stops along Route 11 within the County, but now all buses travel on I-81. The closest bus terminals for local service are located in Winchester and Harrisonburg.

Charter bus service is available through Richards Bus Lines in Luray, Quick-Livick, Inc. based in Staunton, and Schrock Sightseeing Service in Winchester.

#### AIR TRANSPORTATION

There are two general aviation airports located in the County which can serve most small aircraft, one in New Market and one at the Bryce Resort near Basye.

The New Market Airport is a privately-owned public use facility. The runway is 3,000 feet long and 60 feet wide, and has low-intensity lighting that is operated from dusk until 10:00 p.m. (11:00 p.m. summers). Aviation fuel (100 LL) is also available.

Sky Bryce Airport is also a privately-owned public use facility with a 2,240 by 50 foot runway located between mountain ridges. The airport is open from sunrise to sunset. No fuel is available.

The County is a member of the Winchester Regional Airport Authority which operates the Winchester Regional Airport, located 31 miles from Woodstock. The runway is now 5,500 feet long, and can serve business jets. A full instrument landing system (ILS) and high intensity lighting is available to assist pilots during low-visibility operations. Other major improvements were completed in the 1990s that included a new terminal building, additional hangers, and new fueling facilities. Air charter service and flight instruction services are currently available, and it is hoped that the longer runway and ILS system will lead to the establishment of commuter airline service.

The Shenandoah Valley Regional Airport is located between the cities of Harrisonburg and Staunton at Weyers Cave. This regional airport has a 6,000 foot runway, a full instrument landing system, and is served by a commuter airline providing scheduled flights to one or more hub cities.

## RAIL TRANSPORTATION

The Norfolk Southern Railway System and the CSX Corporation both serve the County, and the two railroads connect at Strasburg. All rail services are freight-only; there is no passenger service available. Both of these lines have been identified as being low-volume lines and are subject to threats of abandonment, but they play important roles for economic development in Shenandoah County. Plans for rail transportation in the Commonwealth need to be monitored, and any attempts at abandonment of the lines in the County should be actively opposed.

Although it is an unlikely possibility, a two-track railroad through the Valley would help alleviate some of the heavy truck traffic on I-81. Norfolk Southern has shown little interest in making the improvements and additions necessary to provide such a service however, and it is unclear how much truck traffic it would displace.

The Virginia Inland Port is located north of Front Royal approximately 15 miles from Shenandoah County. This facility provides daily rail service direct to the international shipping port of Hampton Roads, Virginia. This is a deepwater port with a 45 foot channel. Containers can be transported to the Inland Port where they are loaded onto a special Port Authority train which travels to Hampton Roads daily. The Inland Port offers excellent service to any businesses that wish to import or export materials and products.

## SUMMARY

The activity seen in the Shenandoah County transportation system is directly related to the adjoining region, the state, and the eastern United States. Both internal factors (the multitude of bridges, increasing traffic) and external factors (interstate travel and truck traffic, commuting patterns) have large influences on the County's transportation needs.

The facts and needs outlined above form the basis of a general transportation policy for the County. However, an expanded and improved transportation system will be needed over the 20 year time frame of this Comprehensive Plan. To accomplish this, an in-depth transportation planning effort should be made which will include the identification of key existing roadways, an analysis of highway capacities, the projection of demands, and recommendations for transportation improvements needed to safely accommodate the projected needs. To this end, the County should commission an outside planning consulting agency to conduct the study as a matter of priority.

Certain steps should be undertaken now to ensure an adequate transportation system in the future: the County should support appropriate improvements to the interstate and primary highways and access to I-81; the County must work closely with the local town governments in planning for new and improved roads as well as land uses within the urbanized areas; adoption of a Corridor Overlay District for the Route 11 Corridor is imperative; coordination with VDOT is essential in forming the priorities for roadway improvements; development standards for all types of development need to be reviewed to ensure adequate provision of needed transportation facilities while protecting the environmental, scenic and historic resources of the County.