**CHAPTER 3 – TRANSPORTATION**

**Introduction**

This Chapter serves to focus not only on the existing transportation system as it pertains to roads, but also the network of alternative means of travel, which include pedestrian, rail, air, water and mass transit. Identifying all modes of transportation in a comprehensive manner allows for the local governing body to develop plans for improvements to this system that will provide for the efficient movement of people and goods throughout the County. This approach ensures that all governing bodies with jurisdiction over this network will work together for the benefit of this County in a regional context as well.

**Roads**

There are several governing jurisdictions within Morgan County that oversee the road system. This includes the State routes under the West Virginia Department of Transportation Division of Highways (DOH), the municipal roads within the towns of Paw Paw and Bath, and to a lesser degree the private road systems that are approved primarily as part of developments in the county. This order of ownership and maintenance is part of the reason for current limitations on the County’s ability to improve the overall road network.

First, the West Virginia Department of Transportation DOH owns and maintains most of the roads in Morgan County. This means that improvements must be programmed, funded and implemented at the State level through an established process. Second, there are no specific requirements within the county’s regulations to assess and mitigate the traffic impacts of new development. Third, the county is wedged between several other counties that cross over four separate states with their own established transportation improvement process and funding priorities. Lastly, the county includes numerous historically significant sites and sensitive areas which create difficulties in constructing necessary improvements in a timely manner.

The West Virginia DOH uses a functional system which classifies each public roadway. In Morgan County two functional classifications are represented. This includes feeders, which serve communities and collect and feed traffic to the higher systems, and state-local service roads, which serve local traffic movement in and around the county. U.S. Rt. 522 and WV Rt. 9 are considered feeders, and all other roadways are classified as state-local service.

The functional classification system is as follows:

* Expressway- connects metropolitan areas and provide service to major interstate or interstate travel
* Trunk-line- is the intrastate network intended to serve smaller cities
* Feeder- serves smaller towns and industrial and recreational areas not served by the higher systems
* State-local Service- roads are localized arterial and spur roads which provide access and socio-economic benefits abutting properties and are further sub-classified as Essential Arterials, Collectors, and Land Access
* Occasional use- is the lowest classification of the local road, providing access to rural areas on a low-volume basis

## Level of Service

Transportation studies conducted by the West Virginia Department of Highways consider the ability of roadways to provide adequate service for the existing volume of traffic in terms of Level of Service (LOS). Level of service is a comparison of traffic volume and the capacity of the roadway, which are measured in a range from “A” to “F” with “A” being the highest condition and “F” the worst. Level of Service “C” represents stable flow and is generally considered as the goal for service.

# Table 3-1 Traffic Volume Level of Service

## Level Description

A Zone of condition of free flow, with low volumes and high speeds.

B Zone of stable flow, with operating speeds beginning to be restricted
somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation.

C Zone of mostly stable flow, but speeds and maneuverability are more closely constricted by the higher volumes.

D Zone that approaches unstable flow, with tolerable operating speeds, however driving speed is considerably affected by changes in operating conditions.

E Zone that cannot be described by speed alone. Operating speeds are lower than in Level D, with volume at or near the capacity of the highway.

F Zone in which the operating speeds are controlled by stop-and-go mechanisms, causing forced flow. The stoppages disrupt the traffic flow so that the volume carried by the roadway falls below its capacity; without the stoppages, the volume of traffic on the roadway would be higher, or in other words, it would reach capacity.

Source: West Virginia Department of Transportation

## Major Roads

Historically, the highest traffic volumes in Morgan County have been experienced on US Rt. 522, particularly in the Berkeley Springs area. Traffic volumes in this location decreased from approximately 18,200 vehicles per day in 2008 to 14,120 in 2016. Other areas along this route include the Timber Ridge District, which experienced 6,540 vehicles per day in 2016. This route has also seen a significant and continued increase in heavy truck traffic, which is used as an alternate route between I-81 at Winchester, Virginia and I-70 at Hancock, Maryland. Based on standard Level of Service (LOS) measurements for average daily traffic flow, US Rt. 522 operates at level E for its entire length through West Virginia.

The second most heavily traveled roadway in Morgan County is West Virginia Route 9. This route enters the County at Paw Paw, running north along the west side of Cacapon Mountain and crossing U.S. Rt. 522 in Berkeley Springs, then turning east toward Martinsburg in Berkeley County. Since 2008, traffic volume has not fluctuated much from 4,900 vehicles per day at the Berkeley County line and 4,896 in Berkeley Springs to 4,480 and 3,930 respectively in 2016.

Traffic on WV Rt. 9 from Berkeley Springs to Great Cacapon ranged from 1,700 to 4,200 vehicles per day in 2008 to 1,960 to 3,160 in 2016. Traffic volumes near the Paw Paw area remained basically the same ranging from 2,100 vehicles per day in 2008 to 1,960 in 2016. Depending on location, alignment and other factors, WV Rt. 9 operates at various LOS throughout the County, with the worst being a level E at its intersection with US Rt. 522 in Berkeley Springs.

Local Roads

Aside from the major road improvements to US Rt. 522 and WV Rt. 9, there are ten projects from previous studies outlined in the 1985 Comprehensive Plan that were identified for improvements by the State. Since that time four of the projects have been completed. The remaining projects have either been removed from the State priority list or folded into the major ongoing projects relating to the US Rt. 522 bypass and WV Rt. 9 alignment study.

Except for several minor routes that traverse the county, which are also maintained by WVDOT, all other roads outside of the municipal systems are private and/or part of the various subdivisions. However, simply because these types of roads within the transportation network are not owned and maintained by any governing entity does not mean that there are not needs for improvements to segments of these types of roads throughout the county.

The Town of Paw Paw includes several miles of local roads, which function primarily as local neighborhood roads connecting to WV Rt. 9. This State route runs east-west through Town, serving as Main Street before crossing the river on the west side of Town, into Maryland.

The Town of Bath, which is surrounded by the Berkeley Springs area, includes several miles of roads within the corporate limits. These roads are owned and maintained by the town government, and serve as local connections to US Rt. 522 running north south through the Town. This road, which serves as Main Street through Town is also used as the connection for WV Rt. 9 which enters the north end of Town from the west and heads east out of Town to the south.

**Bridges**

Due to the terrain, elevation, and number of waterways, bridges play a key role in improvements and expansions to the road network in Morgan County. According to the 2011 – 2016 Statewide Transportation Improvement Program (SSTIP) two bring replacement projects are listed for the county. Replacement of the Sleepy Creek arch bridge at a cost of $3,250,000.00 and the Duckwall Bridge at $2,700,000.00. Neither of these bridge projects has been completed. All other projects within the following lists have been completed.

**Table 3-2 WVDOT Highway State Funded Projects Listed in SSTIP 2011-2016**

Route Location Improvement Cost Year

CO-001 River Road Bridge Repl 3,250,000 2012

CO-015 New Hope Rd Gabions 150,000 2011

CO-008 Virginia Line Rd Resurfacing 89,000 2011

CO-018 Detour Road Resurfacing 102,000 2011

CO-010 Householder Rd RipRap 50,000 2012

CO-01/07 Collier Rd Relocate portion 225,000 2012

National Gateway Freight Ren CSX RR Tunnels 35,000,000 2015

# Total 38.866 million

Source: West Virginia Department of Transportation

# Table 3-3 Federal Aid Projects Listed in the SSTI{ 2011-2016

## Route Location Improvement Projected Cost

US 522 Route 522 Resurface 300,000

National Gateway Freight-CSX RR Tunnels Renovation 35,000,000

Bath Community Center-Green Street Sidewalks/steps/culverts 207,500

Cacapon State Park Inn Exterior Restoration 100,000 .

# Total $35,607,500

Source: West Virginia Department of Transportation.

# Other Road System Deficiencies

In addition to the major roads and bridges, which receive much of the State government’s attention, there are a number of secondary roads and minor bridges in the county that need to be addressed. With the continued growth in the county and surrounding area, these roads are becoming increasingly congested while bridges are receiving a greater number of passes. To address this issue in a proactive manner, the county must increase the level of communication with the State. This includes regular review of traffic volume and its relationship to new development as well as an exchange of information on deficiencies in alignment, capacities and structural integrity of roads and bridges.

To ensure that the road system standards are consistent with pressure from additional growth, the county should consider development of a county-wide Master Transportation Plan to develop joint solutions with the State. This Plan could be coupled with projects already identified by the State for improvement that have not received approval to be included in the State transportation improvement plan. This would provide the county the opportunity to assist in prioritization of such projects based on projected growth, emergency services, and other factors important to consider.

**Major Improvements**

Unlike the more routine projects listed above, there are two major projects that have been long planned to improve the major transportation network within the county. This includes the US Rt. 522 Bypass and relocation and upgrade of parts of WV Rt. 9. Both projects require millions of dollars in funding, have included numerous comprehensive studies for impacts and alignments, and have received increased attention due to both increased growth within the region and effects of increased traffic volume and decreased safety along both routes.

US Route 522

US Rt. 522 has been included in numerous studies, the most recent of which are the 2001 North South Appalachia Feasibility Study and the 2000 US Rt. 522 Upgrade from the Virginia to the Maryland state lines. The Feasibility Study focused on the economic benefits of upgrades to several major routes connecting the eastern panhandle of West Virginia with Virginia, Maryland, and Pennsylvania. Although it did not find that US Rt. 522 upgrades would serve the same level of economic benefits as some of the comparative routes within the report, it did provide some key traffic volume and safety information confirming the need for improvements to US Rt.522 through West Virginia to address both increased through traffic and growing unsafe traffic conditions.

The US Rt. 522 Upgrade around Berkeley Springs includes several reports in the ongoing State and Federal review of developing a bypass to address both increased through traffic and unsafe traffic conditions. This includes reports that deal with traffic volume, accident data, environmental assessments, and economic impacts. All of these reports are required in the evaluation and recommendation of improvements to this corridor by the West Virginia Division of Highways. The goal of this assessment is to develop a plan that will improve the corridor through Morgan County from the Maryland to the Virginia line.

The purpose and need as outlined in the report are to improve the unacceptable levels of service, especially in the Berkeley Springs area, as traffic volume is expected to double over the next 20 years. It is also to decrease the level of traffic incidents, as the reports show that in 1999 accidents in the Berkeley Springs area, were nearly double the State rate for similar road systems. Indirect benefits for more rural sections of the road include improvements to unsafe access points, site distance, turn lanes, shoulder widths and pedestrian travel.

During the evaluation and review process there were four alternatives studied with Alternative One being the chosen option. This alternative is divided into two sections, north and south, for future improvements, and an Environmental Impact Study has been completed for the entire corridor. As development continues to occur within the county, it is important to consider the expectations of this ongoing State project with the various elements of growth that will have an impact on this improved transportation network both before and after the improvements are complete.

WV Route 9

WV Rt. 9 has been included in more recent studies, the latest of which is the Corridor Selection Report drafted by the WV Division of Highways in 1998. This report was the culmination of nearly four years of evaluation and public review during the period between 1992 and 1996. From this report was developed a State project to identify the most appropriate corridor in which to relocate and improve parts of WV Rt. 9 from Berkeley Springs in Morgan County to Martinsburg at I-81 in Berkeley County. The report further separated out the Martinsburg area for more immediate improvements around the I-81 interchange.

From the review and evaluation conclusions, the WVDOH selected Corridor IIBc, which is further defined in the report as one of numerous routes considered. This corridor was chosen for best meeting the transportation services, public improvements, and environmental objectives outlined in the report. In meeting transportation services it was determined that this route, which would remain south of Hedgesville would receive both WV Rt. 9 and Rt. 7 traffic flows. This corridor satisfies the preferences of the majority of the public surveyed. It also compares most favorably in avoiding the displacement of environmentally and culturally significant locations.

As the report is part of an ongoing State project, there were no costs included in the evaluation. However, it is clear that cost as it is related to the primary factors outlined will play a role in the ultimate development costs of the project. As it relates to the long term planning efforts of this Comprehensive Plan it is important to ensure that implementation of the elements of this plan take this necessary improvement into account as growth will continue to impede upon this selected route.

### Regional Transportation Authorities

There are several specific authorities that carry regional system-wide multimodal transportation planning for the Eastern Panhandle. These authorities provide a direct link to State and Federal funding programs that link Morgan County to larger transportation projects requiring joint cooperation.

### Hagerstown Eastern Panhandle- Metropolitan Planning Organization (HEP-MPO)

In addition to the projects identified in the State Highway Improvement Program there is a larger regional plan that addresses the long-term needs of the entire Eastern Panhandle and neighboring counties. The HEP-MPO is a long-range multi-modal plan that identifies regional issues of the entire transportation network. This Plan, which includes Morgan County, identifies road projects that impact the County as part of the Eastern Panhandle, such as improvements to WV Rt. 9. The Organization regularly reviews and updates the needs of this Plan which is shared by West Virginia, Maryland, and Pennsylvania, and identifies projects in an effort to receive federal funds to improvements to areas based on population projections and employment opportunities.

According to the plan’s projections it is anticipated that population growth will create demand for highway capacity that outpaces the planned system of improvements, resulting in a deteriorating system performance. If enhancements to the roadway system are limited to projects currently underway and those programmed, it is likely that WV Rt. 9 will experience unacceptable levels of service by the year 2030. This project is included in the long-range plan, but not in the current funding scenarios.

## Region 9 Eastern Panhandle Regional Planning and Development Council

This council is the official group that represents the Eastern Panhandle counties through the HEP-MPO process. It is the coordinating body linking the MPO with the West Virginia Department of Transportation.

West Virginia Eastern Panhandle Transportation Authority (WVEPTA)

The WVEPTA is a newly created authority that acts in an advisory capacity to promote mobility, economic development and tourism investment in the Eastern Panhandle. It supports the activities of the HEP-MPO and the Region 9 Council. It was created by an act of the West Virginia Legislature in 2004 to coordinate transportation-planning decisions among the Eastern Panhandle counties. The newly created authority is expected to promote and advance highway construction projects in conjunction with the counties and municipalities as well as advocate for economic development and tourism investment. A specific focus of the authority is to organize local input on improvements proposed for WV Rt. 9 and other highways that serve the area.

Eastern Panhandle Transit Authority (PanTran)

This is a non-profit public transit provider for all three counties within the Eastern Panhandle. It operates 73 fixed-route bus services Monday through Saturday. At the present time the service is not extended into Morgan County.

**Scenic Byways**

There are several scenic byways that are located within or traverse Morgan County. These include trails and tours that follow roads, waterways and walking routes, many of which are centered on The Washington Heritage Trail and historic Berkeley Springs area.

The Washington Heritage Trail was developed in 1998, and includes a self-guided tour of the many locations throughout Morgan County which are associated with the rich historical link it shares with George Washington. The tour covers at least 15 points of interest within the County, from the Town of Paw Paw to a small park in the Sleepy Creek region. The tour is defined as “following his footsteps on the Washington Heritage Trail National Scenic Byway takes you on a tour of the county’s most historic locations” associated with George Washington, who “from the time he was sixteen through the reading of his will in 1799, ate, slept, owned land, and bathed in and around Berkeley Springs”. The tour follows closely along WV Rt. 9 and includes some locations along the southern portion of US Rt. 522.

Also associated with the George Washington Heritage Trail are both a self-guided boating and driving tour of the Cacapon River. The boating tour extends from the small hamlet of Largent, located off of WV Rt. 9, east of Paw Paw, and ends at Great Cacapon, where the Cacapon joins the Potomac River. This tour passes many natural and man-made features including historic bridges and unique rock outcrops. The self-guided driving tour follows much the same route, traveling in either direction along WV Rt. 9, which hugs and crosses the river for its entirety through the County. Both tours are administered by the Friends of Cacapon River, which is a local nonprofit group that works to preserve, protect, and promote the Cacapon River watershed.

One other scenic Byway that is in the early stages of development is the Grand Highlands Scenic Byway and Trail System. This byway would be the first to traverse the entirety of the State extending from the eastern panhandle to the southwest tip, and encompassing numerous highways, which traverse countless towns, parks, waterways, and tourist destinations. This proposed byway would run through Berkeley Springs, providing access to numerous existing scenic systems.

Berkeley Springs includes two pedestrian scenic byways for those who choose to walk to see the sites of this historic area. These walking tours include; the Treasure Tour of Berkeley Springs State Park, which features 16 points of interest centered around the nearly five acre park that houses the original Berkeley springs, and the Walking Tour of Berkeley Springs, which includes the sites and structures of 28 local historic landmarks, most within several blocks of downtown Bath.

**Hiking and Biking Trails**

The Western MD Rail Trail is a continuing joint effort between County, State and Federal government agencies to convert the length of the abandoned railroad along the Potomac and C & O Canal into a hiker/biker trail for recreational use. Parts of the proposed trail in Washington and Alleghany counties have been converted by the National Park Service, while efforts further west, along the Morgan and Alleghany sections, especially near Paw Paw, have yet to be completed. This includes 6 areas where the trail crosses several bridges and includes 3 tunnels where the trail would cross into and out of Morgan County. The possibilities in completing this trail would support the economic and recreational goals of the County simply by opening up an opportunity for the public to enjoy some of the most natural and scenic views in the Appalachian region.

The Cacapon State Park Trails include nine different trail systems making up more than 20 miles of hiking and riding access that spread throughout the 6,000 acre park. These trails are primarily used by the many visitors to the park, enjoying a stay at camping cottages, the Lodge or Old Inn, or simply visiting the many other attractions such as beach swimming, boating or fishing. The trail also follows a road that climbs nearly 1,400 feet to the Cacapon Mountain summit.

The Tuscarora Trail extends south from Pennsylvania through West Virginia and into Virginia and is used for hiking purposes. It cuts through the eastern part of Morgan County following a north south route, exiting into the Sleepy Creek Wildlife Management Area. It is considered a side trail to the Appalachian Trail.

Although not considered a greenway trail system in the sense of connectivity of specific destinations, the Sleepy Creek Wildlife Management Area, which is the largest single recreational tract of land owned by the State, includes nearly 35 miles of trails for both pedestrian and vehicular access primarily for hunting activities. Vehicular access in limited to fall and winter seasonal activities, and ATV use is prohibited.

Given the length and location of existing trail systems located throughout Morgan County there is an excellent opportunity to integrate biking and pedestrian paths with new development and the County’s stream system to create a regional trail network. This “greenway” network would provide an alternative means of travel connectivity among the County’s towns and village centers as well as its historically significant and recreational sites.

This process would require strong public and private partnerships as many of the corridors are adjacent to private properties, are maintained by park services and civic organizations, or located in remote areas where safe accessibility would need to be established. However with careful planning and community involvement this network could increase neighborhood interaction, and attractiveness to draw visitors to the area.

**Railroads**

The main line of the Baltimore and Ohio Railroad parallels the entire length of Morgan County's boundary with Maryland and the Potomac River. This is part of the category A mainline owned by CSX, which crosses the northern portion of West Virginia from Parkersburg to Harpers Ferry. The segment within Morgan County has two or more parallel tracks.

The B & O line segment is listed in the State Rail Plan (West Virginia Railroad Maintenance Authority) as an active freight carrier of coal and other commodities. Traffic density is listed as carrying in the millions for gross ton per miles in both the eastward and westward directions. These are among the largest listed for any rail line in the region. A major rail siding location north of Berkeley Springs serves the US Silica Glass Corporation. The B & O line also carries the Amtrak Capital Limited, which provides daily passenger service from Cumberland, Maryland to Washington D.C. A train station is located at Hancock, but is no longer used. The closest passenger train service for Morgan County residents is located in Martinsburg, West Virginia.

Concern over the capability of the nation’s railroads to transport essential Department of Defense supplies and equipment during both peacetime and wartime led to the identification of a national strategic rail corridor network (STRACNET). Based on extensive analysis of defense peacetime rail carload traffic, clearance requirements and contingency plans, several rail corridors are determined strategically important to national defense. The B & O line that passes through Morgan County is one of three STRACNET corridors that cross the State of West Virginia. The significance of STRACNET designation to Morgan County is that the B & O line is likely to remain an active rail line well into the future.

The Western Maryland Railroad also parallels the Potomac River on the Maryland side, with crossings into Morgan County at three locations. The segment from a point 8 miles west of Hancock, Maryland to Cumberland including stretches in Morgan County has been abandoned and the right-of-way purchased by the National Park Service for the development of a pedestrian friendly hiker/biker trail. There is a short spur of the Western Maryland Railroad that connects the B & O system at Cherry Run to Hagerstown, Maryland and points east.

 **Air Facilities**

The only airport in Morgan County is Potomac Airpark, which is privately owned and operated by Riverside Airpark, LLC. Commercially approved by the Federal Aviation Administration, the Airpark includes a 5,000’ paved airstrip located just east of the bridge to Hancock, Maryland. The Airpark is currently available for emergency medical and rescue operations.

Within the region, commercial airports are located at Cumberland, Hagerstown, and Martinsburg. National airports are located further east and north in the Baltimore and Pittsburg metropolitan areas.

**Public Transportation**

Morgan County is currently not served by public transportation. However, with the increase in commuter traffic to the metro areas east, the Tri-State Rail Effort Committee, through a grant from the Appalachian Regional Commission, explored expansion of the MARC train system in 1997.

Findings from the report released in 2000 showed support from CSX to extend the MARC commuter service from its closest existing station in Martinsburg West Virginia to Hancock, West Virginia. A plan for extension included both a Service and Station Concept plan, with estimated capital costs. A market analysis was developed to project how operating impacts would be offset by ridership potential.

The study found that extension of the MARC commuter rail service from Martinsburg to Hancock would be economically feasible with the support of CSX. Improvements would include a weatherized passenger platform, lighted parking facilities, security fencing, and a new switching spur. Given the location of the station in close proximity to adjoining states, it was concluded that funding might be achieved through federal programs and participation by other states.

Since that study was completed in 2000, additional review of the logistics has returned less positive results. This includes factors which make the prospect much less feasible given the increased capital and operational costs of adding stations and manpower, ongoing difficulties and passenger delay from sharing of lines with the freight carriers, and more pointedly the actual costs per passenger projected to be well beyond initial expectations. Such difficulties have led a majority of the support for this expansion to conclude that it is not probable to proceed at this time.

Two public transportation services in the region include; the Eastern Panhandle Transit Authority, which provides bus service within Berkeley and Jefferson counties but discontinued service to Berkeley Springs in the 1990’s due to lack of riders, and also the Amtrak Capitol Limited, which provides daily passenger rail service between Cumberland and Washington D.C.

**Goals and Objectives**

Goals

Transportation issues, too, are heavily influenced by regional conditions as well as the area’s desirability as a tourist destination. Goals must address and try to reconcile the coexistence of through and local vehicular traffic while accommodating pedestrian and other non-motorized or recreational movement. Goals that will tend to improve transportation in Morgan County and address the major issues about which the community has expressed concern include:

* Relieving congestion on major thoroughfares such as WV Rt. 9 and US Rt. 522 and improving local roads so they become a more efficient intra-county network;
* Enhancing the quality and safety of local roads by ensuring that initial local road and related infrastructure construction meets standards, and supporting state efforts to identify and repair deficiencies in existing local roads and bridges;
* Expanding transportation options by promoting public transportation, alternate forms of transportation, public transit-oriented communities, and pedestrian-friendly walking and biking trails;
* Promoting tourist-friendly travel; and
* Facilitating commuter travel.

# Objectives

Objectives that will facilitate the achievement of these goals include:

* Developing, evaluating and coordinating with the state priorities for road improvements, particularly those that will help relieve traffic on WV Rt. 9 and US Rt. 522 and provide alternate intra-county routes;
* Assessing the need for traffic calming devices in heavy pedestrian areas;
* Exploring the designation of additional main streets and historic byways for inclusion in state and federal funding programs and linking the Eastern Panhandle with the rest of the state;
* Exploring creative and interactive ways to get tourists to and from local attractions;
* Developing sign regulations to keep the locations and features of signs appropriate to their setting;
* Continue to work with the West Virginia Division of Highways regarding future development projects and permitting requirements;
* Reducing reliance on cars and accommodating the needs of a growing commuter population, assessing the need and developing the concept for a public transportation system, including as components of this system, expanded rail service to metropolitan areas and ‘park and ride’ lots; and
* Cooperate with the West Virginia Transportation Authority.