

## CHAPTER 12

# Transportation Plan

*Cumberland County's transportation network has had a large impact on the cultural, economic, and social characteristics of the County in the past, and will continue to do so in the future. As a result, it is important that the transportation network supports the existing community infrastructure and facilitates the kind of development that enhances, rather than detracts from, the county's character. Cumberland County has a wide variety of development patterns, ranging from relatively high-density urban and suburban development in the eastern portion of the County to agricultural, rural development in the western half of the County. Overall, Cumberland County's existing transportation network generally supports and enhances the character of the County, but planning must be done to ensure this is still the case in the future.*

### Introduction

Cumberland County contains a number of different transportation modes that serve its residents, workers, and visitors in a variety of different ways. The County's well-developed highway network supports extensive private car and tractor-trailer traffic, the most significant transportation modes in the county. This highway network connects the County to major regional destinations such as Philadelphia, Baltimore, Washington, Pittsburgh, and New York. Major highways, such as Interstates 81 and 83, US Routes 11 and 15, PA State Routes 34 and 581, and the Pennsylvania Turnpike (Interstate 76), have helped make Cumberland County a major transportation hub in the northeastern United States. These roads though, comprise only a small percentage of the overall highway network in the County. Other state and municipal roads play an important role for regional and local traffic. Public transit, mainly in the form of buses, plays an important role in the County's system, providing both local bus service by Capital Area Transit (CAT) and regional bus service (Capitol Trailways and Greyhound).

Non-highway modes also play a major role in the County's transportation system. Freight rail services, provided by Norfolk Southern, make the County and Harrisburg area a significant rail and intermodal freight hub. Passenger-rail services, currently provided by Amtrak in Harrisburg, provide greater modal flexibility for people taking regional trips. The proposed CORRIDORone commuter-rail service will provide even greater transportation options. Aviation services, provided at four airports located in and near the County, allow people to travel for business and general purposes more easily. Finally, bicycle/pedestrian transportation plays an important role for non-motorized transportation and recreational purposes.

It is critical that the county's existing transportation infrastructure be sufficiently maintained and augmented as necessary in order to allow the County to maintain an important role in the United States' transportation network. Efforts should be made to allow Cumberland County to participate in discussions impacting the transportation modes in the county, especially highway and rail goods movement and distribution. Care should be taken to ensure a proper balance is met between national and regional transportation needs and local community interests. Only if

the proper balance is met will Cumberland County continue to serve as a vital transportation center while also remaining a desirable and attractive community for its residents and workers.

All the modes mentioned above will be examined in this chapter. The discussion and recommendations provided for each mode identifies the transportation-related challenges the County faces and the opportunities it has to improve the existing transportation system.

## **Highway (Car/Truck)**

### *Introduction*

Highway transportation is the most important mode of transportation in Cumberland County. Most people living within or traveling through the county use the county's extensive highway network. The county also occupies an important place in the region's highway network for a variety of reasons. At a local and regional level, Cumberland County's highways function as a western gateway into the city of Harrisburg, a center of government, business, and industry in south-central Pennsylvania. At a national level, the County functions as a crossroads between major north/south routes (especially Interstate 81, Interstate 83, and US Routes 11 & 15) and major east/west routes (especially Interstate 76, also known as the Pennsylvania Turnpike). These routes provide direct connections from the County to many of the population centers in the eastern United States. The County's crossroads position has made it a prime location for a variety of transportation-related activities, especially as center for the distribution of goods via tractor-trailers.

Highway transportation planning also represents the most significant mode of transportation falling under the jurisdiction of the Harrisburg Area Transportation Study (HATS). Essentially all major highway projects in the Harrisburg area are funded through the HATS Transportation Improvement Program (TIP). The TIP is a four-year program in which federal and state funds are used to implement various improvements to the highway and transit-based transportation systems. Good planning is critical from the start because there is a large number of necessary transportation improvement projects and a limited amount of funds. HATS ranks projects based on a variety of federal regulations and planning factors, as well as regional and local planning factors, to ensure the most important and viable projects are receiving funding. Cumberland County is represented on HATS, and therefore has a voice in addressing the County and the region's transportation needs and issues through voting to fund specific projects.

### *Highway Issues/Needs*

The County's highway network has a variety of needs and issues to be addressed in order to continue to work in an efficient manner. They include sprawl/dispersed land use, lack of mixed-use development, extensive distribution/warehouse development, increased special event traffic, poor access management, and poor road design.

Like many other places,  *sprawl/dispersed land use*  continues to have a significant impact on the efficiency of the highway network in Cumberland County. The county continues to experience extensive growth in rural, less-developed portions of the county. This kind of growth puts a

strain on the County's road network, as more travelers are driving by car farther distances, requiring new or expanded roads be constructed. The longer trip lengths also lead to more traffic congestion on a larger portion of the transportation network. Funding to construct new or expanded roads is usually limited, so congestion issues often cannot be adequately addressed. Other transportation options, such as public-transit and bicycle/pedestrian uses, are also discouraged by dispersed land uses.

*A lack of mixed-use development* has also played a role in highway congestion in Cumberland County. Much of the development that has occurred in recent years in the county has been segmented, separating residential development from commercial development from industrial development. Traditional town or village-like development has often been discouraged in growing suburban and rural municipalities. Although single-use development protects incompatible uses from one another, it also forces people to use their cars for a higher percentage of their trips and discourages other forms of transportation.

The County's *extensive distribution and warehouse development* have become a significant highway congestion and safety issue. While this type of development brings jobs to the area and helps the region's economy, it also increases the number of trucks using the area's roads, including some of its local or unlimited-access roads. The higher number of trucks and cars on the road creates significant car/truck conflicts regarding safety and congestion. This issue is most significant between Harrisburg and Carlisle, especially on Interstate 81, but occurs throughout the county.

*Increased special-event traffic* has become a major issue in recent years within Cumberland County. The County hosts many special events that attract a large number of attendees from within and outside of the County. These events often generate significant traffic congestion. Many of the major events, such as car shows, occur at the Carlisle Fairgrounds, east of the Borough of Carlisle. The events contribute to traffic congestion on local roads near the fairgrounds, as well as on important regional roads, such as Interstate 81, the Pennsylvania Turnpike (Interstate 76), and US 11. Some of the design and traffic characteristics of the roads mentioned, such as the lack of a direct connection between I-81 and the Turnpike, the antiquated design of the Turnpike's tollbooths at the US 11 exit, and the extensive truck-related development located near I-81, I-76, and US 11, contribute to the event-related congestion.

*Poor access management* has also become a major congestion and safety-related highway issue in the county in recent years. In some portions of Cumberland County, such as along portions of US 11/Carlisle Pike, there is extensive development, often commercial in nature, that generates high traffic volumes. In many cases, these developments have multiple access points along only one road. By not providing multiple highway choices for drivers to get to and from a development, traffic is often forced onto a small number of already heavily traveled roads. This increases traffic and congestion on portions of the County's highway network. Multiple access points also create more locations for potential traffic conflict, increasing the likelihood of accidents.

Finally, *poor road design* is a major factor contributing to safety hazards and congestion on Cumberland County roads. Many of the County's roads have design aspects that are

substandard. Many low-volume and/or rural roads in the County have narrow or non-existent shoulders, or poor horizontal or vertical sight distance, reducing road safety. Some high-volume and urban roads have substandard turning lanes or on/off ramp lengths. Examples of such highways include Exit 44 of Interstate 81 and multiple US 15 interchanges at and south of PA 581. Some high-volume roads have been designed so that traffic becomes “bottlenecked,” or congested, such as occurs at the I-83/PA 581 interchange. In some cases, connections between roads are poor, which can also result in traffic congestion. An example is the Pennsylvania Turnpike interchange near Carlisle, where Interstate 81 and the Turnpike are not directly connected.

## **Transit**

### *Introduction*

Public transit is a significant transportation mode in Cumberland County. Capital Area Transit (CAT) provides most of the transit service within the county, operating 13 routes in the County’s eastern half. The routes provide service between residential areas and various employment areas, such as downtown Harrisburg, and shopping areas, such as the Capital City Mall and Carlisle Pike shopping centers. CAT’s service gives captive riders (riders who do not own or have access to a private automobile) an opportunity to travel for work and recreational-related purposes, while also providing non-captive riders with an alternative to using personal vehicles.

As with highway-transportation planning, public transit planning largely falls under HATS’ jurisdiction. Almost all CAT projects are funded through the HATS Transportation Improvement Program. Since transit funds are limited, it is important that a thorough planning process is followed in order to guarantee that CAT receives maximum improvements. As with highway projects, a variety of federal regulations and federal, regional, and local planning factors are used by HATS to objectively rank a project’s regional importance. Cumberland County’s representation on HATS better ensures the County’s transit needs will be met.

### *Transit Issues/Needs*

The County’s transit service has a number of issues that need to be addressed in order to ensure it can continue to operate in an efficient manner. Issues include sprawl/dispersed land use, lack of mixed-use development, declining ridership, and the implementation of CORRIDORone commuter rail service.

*Sprawl/dispersed land uses* impede efficient transit-system operations. With sprawl, buses are forced to expand their services along longer routes, in order to pick up the same number of passengers that could otherwise be picked up in a more densely developed area. Dispersed land uses also increases distances between potential riders and a bus stop. Lengthy bus rides and decreased access to bus stops are factors that can discourage many potential transit users.

*Lack of mixed-use development* also inhibits the effectiveness of a transit system. Segregating different types of land uses (residential, commercial, industrial, etc.) from one another limits transportation options and increases people’s reliance on the personal vehicle. A related issue,

suburb based jobs, also inhibits CAT's effectiveness. The hub-and-spoke transportation system that CAT operates cannot meet the needs of people whose jobs are not located in a downtown area.

Another significant issue CAT faces is *declining ridership*. Over the last 15 years CAT's overall ridership has declined by about 50% from approximately four million to two million riders. Additionally, despite having only a slightly smaller service-area population than that of Dauphin County, Cumberland County residents and/or commuters comprise only 20% of CAT's riders. Various factors have contributed to the declining ridership including a low number of captive riders, availability of parking spaces and garages, more commuters working outside Harrisburg, and the increased number of "chained trips" (stops at multiple locations between home and work) made by commuters.

CAT is planning on *implementing CORRIDORone commuter rail service* in the Harrisburg area before 2010. CORRIDORone will be the transit operator's first commuter rail service. The service will operate between Carlisle, Harrisburg, and Lancaster using existing rail lines, serving Cumberland County communities such as Lemoyne, Mechanicsburg, and Carlisle. A number of issues related to operating the service must be addressed in order for CORRIDORone to be successful. Some issues include determining station locations, coordinating bus and rail services, and coordinating passenger and freight rail movements within the same corridor.

## **Freight Rail**

### *Introduction*

The County's location and well-developed transportation network, makes it a hub for the distribution of goods via tractor-trailers and freight rail operations. Norfolk Southern, one of six national Class I freight railroad operators in the country, owns and operates three rail lines in the County. Two of these lines, the Enola Line and the Lurgan Branch, are both regionally and nationally important. In addition, within the County, Norfolk Southern operates the Enola Rail Yard, a major rail yard for shipments between the Harrisburg area and destinations to the north and west. Just outside the county, Norfolk Southern operates two intermodal yards, Rutherford Intermodal Yard and Lucknow Intermodal Yard, which contribute rail traffic within the County. Freight rail traffic is projected to increase significantly in the future, so this transportation mode will remain important in the county.

Unlike highway and transit planning, freight rail planning is the responsibility of the freight rail operators themselves (Norfolk Southern) and does not fall under HATS or County jurisdiction. For that reason the County should provide a supportive/advisory role in addressing freight rail needs and issues.

### *Freight Rail Issues/Needs*

Norfolk Southern's rail network within Cumberland County has a number of needs and issues that should be addressed in order for the network to continue to operate in an efficient manner. The county can help provide support on these needs and issues. They include preserving rail

right-of-ways, upgrading safety at railroad crossings, coordinating CORRIDORone rail line modifications/improvements with Capital Area Transit, and encouraging more businesses to operate rail-based operations.

For many rail operators, including Norfolk Southern, *preserving rail right-of-ways* has become a significant issue as freight rail traffic increases. Cumberland County has experienced extensive land development in recent years. Some of this land development has occurred near or adjacent to freight rail right-of-ways, threatening the viability and safety of rail operations. Some kinds of development, especially residential development, are not appropriate near active freight rail lines. In addition, it is possible that more rail lines will be added to the right-of-way, which would increase rail traffic and bring it closer to the development. These factors increase safety concerns for both Norfolk Southern and nearby residents.

*Safety at railroad crossings* is another significant freight rail issue for Norfolk Southern in Cumberland County. Many existing crossings either are not signalized or have substandard signals in place. This creates a safety hazard at these crossings by not providing drivers sufficient warning of approaching trains. Some at-grade crossings are being eliminated entirely, as highway or railroad overpasses are constructed to eliminate the safety hazard.

For Norfolk Southern, a third critical Cumberland County issue is to *coordinate CORRIDORone rail line modifications/improvements with Capital Area Transit*. CORRIDORone plans to use Norfolk Southern's existing Shippensburg Secondary line in Cumberland County, and Norfolk Southern serves a number of businesses located along the line. It is important that those businesses' operations not be disrupted by the implementation of commuter passenger service. CORRIDORone may also require a number of rail improvements, such as double-tracking and upgrading the rail itself to improve weight and speed limitations. If needed, these improvements should be considered for both commuter rail and freight rail service.

Finally, *encouraging more businesses to operate rail-based operations* will not only benefit the freight rail industry, it will also benefit the County as a whole. Cumberland County has extensive highway and rail networks, making the county a center for goods distribution by both modes, but most distribution is by truck. However, goods movement by all modes is expected to increase by 65% between 1998 and 2020 in the United States.<sup>1</sup> HATS does not have the resources to widen highways to accommodate increased goods movements, so other modes, including rail, will need to be utilized to a greater degree. The existing rail network has the capacity for growth, especially where shipping by rail is competitive with shipping by truck (generally, this break point occurs at a distance between 500 and 800 miles). Not all businesses are able to ship their products directly from their site, either because they are not adjacent to a rail line or because it is not economically feasible. For many companies though, the potential for rail-based shipments exists.

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<sup>1</sup> Federal Highway Administration, Office of Freight Management and Operations. (October 2002) *Freight Analysis Framework*. Accessed on June 27, 2003 at [http://www.ops.fhwa.dot.gov/freight/state\\_profiles](http://www.ops.fhwa.dot.gov/freight/state_profiles).

## Aviation

### *Introduction*

Aviation represents only a small portion of the transportation modal network in Cumberland County, but it has a significant safety and economic benefit for the County and the Harrisburg region. Airports provide a variety of uses, including commercial aviation services (which occur only at a very small percentage of airports), business aviation services, general aviation services, and flight instruction. Airports also facilitate general safety by allowing emergency response personnel to reach accident victims and medical facilities more quickly. Cumberland County contains two public use airports, Carlisle Airport and Shippensburg Airport, and through its representation on the Susquehanna Area Regional Airport Authority (SARAA) it also helps maintain the Harrisburg International Airport (HIA) and Capital City Airport (CCA).

Aviation planning usually falls under the responsibility of the airport owner. Small non-commercial airports are often privately owned by a single individual or a family. Since the County does not have operational authority over airports, it needs to take an advisory/supportive role in addressing aviation issues at the airports serving the county.

### *Aviation Issues/Needs*

The airports serving Cumberland County all have a number of needs and issues that should be addressed in order for the network to continue to operate in an efficient manner. They include preservation of the Carlisle Airport, the continued viability of Harrisburg International Airport, and enhancing western Cumberland County aviation services.

The *preservation of Carlisle Airport* is a significant aviation issue within the county. Carlisle Airport is a business class airport that serves central Cumberland County and acts as a reliever airport to HIA and CCA. Despite its importance, encroaching land uses and incompatible zoning threaten the airport. A residential development is located immediately south of the airport property within a few hundred feet of the runway, and roadways border each end of the runway. The airport has little room to expand, and this inhibits the airport's ability to handle larger planes for business, reliever, and general aviation services. The airport's limited area also increases safety risks for surrounding land uses.

Another important aviation issue in Cumberland County is the *continued viability of Harrisburg International Airport*. Even though HIA is located in Dauphin County, it serves as a major gateway for businesses, tourists, and residents in the entire Harrisburg region, including Cumberland County. Although trends began changing after the September 11, 2001 terrorist attacks, historically HIA has drawn a lower percentage of passengers relative to its market area population than other airports in similar-sized markets. This is because of higher fares compared to other nearby airports (BWI – Baltimore/Washington International Airport and PHL – Philadelphia International Airport) and fewer direct flights compared to BWI and PHL.

*Enhancing western Cumberland County aviation services* also is an aviation issue within the County. Unlike the eastern and central portions of county, which receive business and general aviation services from Capital City Airport and Carlisle Airport respectively, western Cumberland County has only one small public use airport near Shippensburg. The Shippensburg Airport has an unpaved, grass runway and very limited on-site services. Many western Cumberland County general aviation users utilize Carlisle Airport or Chambersburg Airport in Franklin County to meet their aviation needs. This places further stress on Carlisle Airport's limitations. The Statewide Airport System Plan identifies western Cumberland County as one of four areas in the state that may need better aviation coverage in the future.<sup>2</sup>

## **Bicycle/Pedestrian**

### *Introduction*

Bicycle/pedestrian transportation (bike/ped) is an important but sometimes-overlooked transportation mode in Cumberland County. Within Cumberland County there are essentially two different types of bike/ped routes, those located along highway shoulders and sidewalks, and dedicated bike/ped trails, which are often located along waterways, mountains, and other naturally preserved areas.

Unlike the other transportation modes discussed in this chapter, relatively little dedicated planning has been done for bike/ped transportation uses. Instead, bike/ped improvements have either been included within highway improvements or have been included as part of public or private recreational improvements. In many cases highway-based bike/ped improvements have been overlooked or poorly addressed as part of highway projects, making it difficult for bicyclists and pedestrians to optimally use roadways for their transportation needs. The HATS Transportation Enhancements (TE) Program, a component of the Transportation Improvement Program (TIP), is a program dedicated to funding non-traditional transportation projects, including bike/ped projects. The program has enabled more recreationally oriented bike/ped projects to receive funding and improve the County's bike/ped network.

### *Bicycle and Pedestrian Issues/Needs*

The County's bicycle/pedestrian network has a number of needs and issues that should be addressed in order for it to continue to operate in an efficient manner. They include narrow highway shoulders, a lack of dedicated bike lanes and/or sidewalks in some locations, and sprawl/dispersed land use.

*Narrow highway shoulders* is a major concern for bicyclists and pedestrians in many places of Cumberland County. Bicyclists and pedestrians often use roadway shoulders for transportation or recreational purposes. However, many state and township roads in Cumberland County have substandard shoulder widths. Bike/ped users often consider these roads unsafe, due to high motor traffic volumes or speeds and poor vertical or horizontal sight distances. As a result, bike/ped use is discouraged and motorized traffic is increased, which further discourages

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<sup>2</sup> Pennsylvania Department of Transportation, Bureau of Aviation (2002) *Statewide Airport System Plan*.

bike/ped use along these roads. Narrow shoulders can also create a safety hazard for motorists who need to stop along the road. Drivers who cannot pull their vehicles entirely off the road are in closer proximity to passing traffic.

The *lack of dedicated bike lanes and/or sidewalks* is also a major issue for bicyclists and pedestrians in some portions of Cumberland County. Dedicated bike lanes and/or sidewalks facilitate both bicycle and pedestrian transportation, especially in more densely developed urban or suburban areas. However, many urban and suburban areas do not have bike lanes or sidewalks. Furthermore, some of these locations without dedicated bike/ped facilities also have narrow roadway shoulders, further inhibiting bike/ped transportation. The lack of dedicated bicycle (bike lanes) and pedestrian (sidewalks) facilities discourages bike/ped use and encourages a greater volume of motorized transportation.

*Sprawl/dispersed land uses* discourage bike/ped transportation by making it impractical for people to bicycle or walk for their shopping needs because of the greater distance required for travel. Lower density and lack of mixed land use development also hinders bike/ped users by encouraging motorized traffic, which increases the volume and sometimes speed of vehicles.

## **Recommendations**

### *Highway*

Highway transportation issues/concerns can be addressed by various county policies, allowing the county to take a leading role in improving its highway network. In some cases the county can partner with other entities, such as its municipalities, to achieve results that benefit everyone involved. Specific recommendations include:

1. *Encourage in-fill development and discourage sprawl development:* Cumberland County can meet this goal by working with municipalities to ensure there is consistency between the County's planned growth areas and the municipalities' zoning and future land use maps. In cases where there is inconsistency, the County and municipality need to work together to address the inconsistency and understand the consequences of allowing certain kinds of development in various locations. By encouraging in-fill development, the county will also assist Capital Area Transit and other transit providers by allowing their systems to have the ability to reach a higher number of people while serving the same routes, due to higher population density. Discouraging sprawl development will also help preserve the County's open space and farmland areas, an important natural resource for the County.
2. *Encourage mixed-use development:* Cumberland County can achieve this goal through working with municipalities to create zoning areas that facilitate mixed land uses in close proximity to one another. Incompatible uses should not be located next to one another, but many uses such as small-scale commercial developments and residential developments, could be located in close proximity to one another. Allowing mixed-use, non-segmented development will allow people more transportation mode choices, such walking, bicycling, or using public transit, to obtain goods and services.

3. *Promote public transit use and discourage road expansion:* Cumberland County, in coordination with Capital Area Transit, should also try to promote transit use because the high cost of building new or expanding existing roads. In addition, past experience has shown road expansions merely postpone rather than solve congestion problems. Public transit use does not require building new roads, and helps reduce the number of cars on existing roads. Expanding roads to solve congestion problems is appropriate in a small number of cases, especially in situations where a recurring bottleneck due to road design exists (such as northbound I-83 at PA 581), but should be viewed as a last resort in most situations.
4. *Examine highway-based goods movement/distribution transportation patterns:* By achieving this goal, Cumberland County can better plan the location of distribution-based and commercial/residential development and minimize the negative traffic impacts. It should be recognized though, that tractor-trailer and other large truck traffic, so critical to the timely and cost effective delivery of goods, will continue to increase in the future. The traffic itself is validation of a healthy economy. Cumberland County's excellent relative location and highway network will continue to make it a target for distribution-based development.

Distribution centers usually locate in areas that are easily accessible to limited-access highways, are easily accessible to the markets they serve, and have compatible zoning, among other factors. Cumberland County has no control over the first two factors listed, and has limited influence over municipal land use regulations through the review process. The County and municipalities therefore can plan where these centers should and should not be located. They can also promote various kinds of commercial and residential development at locations where car/truck mixing can be minimized. The interchanges in the Interstate 81 corridor should be examined to determine appropriate locations for distribution and commercial/industrial development.

5. *Ensure new, large developments have sufficient and appropriate ingress and egress, especially when located adjacent to other large developments:* Large developments that access a limited number of surrounding highways often experience increased congestion and difficult access going to and from the development. If developments access multiple surrounding highways and other major, adjacent developments, traffic congestion can often be reduced through the use feeder roads. Greater interconnection between developments and the highway network can also improve safety in emergency situations.

In addition, developments that have multiple, closely spaced access points or non-delineated access points onto one road often create safety issues. Safety can be improved if the highway network surrounding a development is accessed only in clearly marked and delineated locations. Improved zoning and subdivision and land development regulations can address the issue of closely spaced access points.

6. *Improve poorly designed highways, intersections, and interchanges:* Through its representation on HATS, Cumberland County can work to ensure these projects are

included on the HATS TIP. Highway projects initiated by PennDOT may impact a road the County or municipality wants to have improved in a way that is not initially included as part of the PennDOT project scope. The County should work with PennDOT through their mutual representation on the HATS Committees to ensure the proposed project addresses all PennDOT and County, and municipal transportation concerns.

Highway improvements also might be implemented through the use of Intelligent Transportation Systems (ITS), which are technologies used to make existing highways operate more efficiently. Variable Message Signs (VMS), Closed-Circuit Television Cameras (CCTV), Highway Advisory Radio (HAR), and truck rollover signs (such as those located at the I-83/PA 581 interchange) are just some types of ITS technologies that have begun to be implemented in Cumberland County. Like other TIP projects, the county can ensure through its representation on HATS that for many highway projects ITS technologies are considered as a way to help alleviate transportation congestion.

7. *Ensure locally initiated projects are considered on the TIP:* Cumberland County should work closely with municipalities to receive input for future projects on the TIP. Local projects that are unable to be included on the current TIP should be considered for inclusion during the next update process. A current list of submitted projects that are not on the TIP is included in this Plan (Appendix B). The County should also provide information to municipalities concerning the TIP application and planning process, HATS' role, and assist in preparing TIP project applications.

### *Transit*

The transit issues/needs can be addressed through various County policies. The County can also work with municipalities and Capital Area Transit to better ensure CAT's system operates in an efficient manner, benefiting those who live and/or work in the county. Specific recommendations include:

1. *Encourage transit-oriented development (including in-fill development and mixed-use development):* Cumberland County can work towards this goal by encouraging municipalities to provide for transit oriented development their zoning regulations, allowing higher density and mixed-use land uses located near existing and proposed public transit routes (including CORRIDORone). Higher density land uses allow more people to access transit facilities. This would enable CAT to operate both shorter and more frequent routes, benefiting both CAT and its riders.
2. *Consider CORRIDORone and other transit alternatives to relieve traffic congestion in the region:* Cumberland County should continue to monitor the most recent information concerning funding, ridership, proposed stations, project phasing, etc. and provide input throughout the planning process, directed toward the eventuality of CORRIDORone as a transit alternative. The County should also encourage the preservation of areas near proposed CORRIDORone stations for future development and be reflected in the County and municipal future land use maps. The County also needs to ensure any

CORRIDORone-related development or land preservation does not infringe on the companies conducting freight rail-oriented business along the rail line.

3. *Work with CAT to create appropriate new “non-traditional” routes:* Although the County’s primary public transit goal should be to encourage transit-oriented development, it must also be acknowledged that much of the existing development cannot be easily accessed by the existing transit system, eliminating many potential riders. In order to reach more riders, major employment centers should be identified that are currently not served by CAT, and methods to modify the bus system should be considered. Suburb to suburb routes, reverse commute peak-hour routes, and downtown circulator routes (possibly in Carlisle, Mechanicsburg and the West Shore boroughs – Camp Hill, Lemoyne, New Cumberland, and Wormleysburg) are all viable options for CAT to reach more potential riders. Implementing these kinds of improvements would help reduce traffic in the County and provide captive transit riders an opportunity to work at a place previously inaccessible to them.
4. *Encourage employers to provide transit subsidies:* Many of the factors that have contributed to the decline in CAT bus use over the last 15 years, such as increased parking in downtown Harrisburg and the relatively low number of captive riders within Cumberland County, cannot be changed by County policies. However, there are means by which the county Can encourage transit use. One way is to encourage employers to provide transit subsidies, which would encourage public transit use. Many employers already sponsor TransitChek, a subsidy program that allows employees to buy CAT multi-ride or monthly passes at reduced rates. The County could also institute its own subsidy program and encourage employers to sponsor the program. Reduced rate or free transit rides will encourage transit ridership, and will also educate people about the benefits of public transit, making them more likely to use public transit in the future.
5. *Work with CAT to initiate Sunday service and expand Saturday service:* CAT’s current Saturday service in Cumberland County is limited, in terms of number of routes, number of buses on those routes, and operating times (no Saturday buses operate after 5:00 PM). In addition, CAT currently does not operate on Sundays. Though Cumberland County has relatively few captive riders, it is possible a large percentage of those captive riders in CAT’s service area would take advantage of expanded Saturday and new Sunday service. Cumberland County and CAT should consider identifying where potential captive riders are located and devise bus schedules that meet their needs.

### *Freight Rail*

Though Norfolk Southern and other freight rail operators have ultimate control over almost all improvements that occur to the rail system, the County can still play an active role in helping the freight rail operators achieve their goal of safer and more efficient operations. Specific recommendations include:

1. *Promote appropriate land uses and zoning along rail corridors:* The County should encourage land uses and zoning along rail corridors that are compatible with freight rail

operations. These could include industrial and commercial uses, conservation uses (as a buffer between the rail line and other uses), and agricultural uses. Residential development should be generally discouraged along freight-rail corridors due to noise and safety concerns. Creating rail-compatible land uses and zoning also encourages businesses that support rail operations to locate along rail lines. This could potentially reduce the number of trucks on the road, improving traffic flow, and spur economic development.

2. *Promote improved safety at rail crossings:* The County should support freight-rail operators by helping to educate the general public about freight-rail safety. For instance, the public should be informed regarding railroad signal malfunctions and locations that lack signals. Educating the public on such matters can reduce the incidence of rail-crossing accidents. The County can also consider financially supporting Norfolk Southern's county safety improvements, either directly or through HATS, as appropriate.
3. *Facilitate CORRIDORone cooperation between Capital Area Transit and Norfolk Southern:* Improvements to the Shippensburg Secondary line, the line proposed for CORRIDORone will primarily benefit four entities: Capital Area Transit, Norfolk Southern, businesses transporting goods along the rail lines, and Cumberland County. The County's transportation systems will benefit from the improvements in two ways: existing freight-rail operations will become more attractive and commuter-rail service will be introduced to the area. An improved transportation system spurs economic development, ultimately benefiting the County's residents. It is important that the County be actively involved in the CAT/Norfolk Southern CORRIDORone discussions, ensuring that proposed improvements benefit all parties.
4. *Support Norfolk Southern efforts to expand rail-corridor capacity as needed:* Norfolk Southern operates on three rail lines within Cumberland County (Enola Line, Lurgan Branch, and Shippensburg Secondary). Two are single-track lines with sidings, restricting the amount of goods that can be moved on those particular lines. One of the lines, the Shippensburg Secondary line between Harrisburg and Carlisle, may be expanded as a result of CORRIDORone.

The Lurgan Branch, a single-tracked line that runs from Harrisburg southwest to Hagerstown, and points beyond, is a major interregional line in the Norfolk Southern system. It is heavily used for inter-modal rail shipments to and from the Rutherford Inter-modal Yard east of Harrisburg. Although, its single-track-with-sidings configuration can sufficiently handle existing rail traffic, future needs may change. If Norfolk Southern does double track the Lurgan Branch, Cumberland County should support its efforts. An expanded rail line will promote greater modal flexibility for goods movement and could allow goods that are currently shipped by truck to be shipped by rail. This improvement will reduce both rail and highway congestion.

## *Aviation*

Though Cumberland County does not have operational control over the public airports that serve the County, it can still play an active role in preserving and improving aviation services. Specific recommendations include:

1. *Cooperate with airport officials to expand Carlisle Airport:* The County should support Carlisle Airport's efforts to expand its land area, as enlarging the airport would improve safety and operational efficiency. The Cumberland County Transportation Authority supports identifying and leveraging public and private funding sources that would facilitate any planned improvements at the Carlisle Airport. The airport experiences significant development pressures from surrounding incompatible land uses and cannot function as efficiently as most other business-class airports. In order to allow Carlisle Airport to operate more efficiently and preserve its future viability, it needs to be able to expand its land area. A 43-acre vacant parcel of land located immediately north of the airport could serve as the site for relocated airport offices and hangars. Relocating these support facilities would create more open space surrounding the runway and reduce safety hazards at the airport. Such changes at the airport would improve aviation services for people in the Carlisle area and may reduce the need to make improvements at Shippensburg Airport.
2. *Create airport-compatible zoning around Carlisle and Shippensburg Airports:* It is important to preserve public-use airports for their important general-aviation, relief, and flight-instruction services. As stated above, Carlisle Airport is threatened by incompatible adjacent land uses and zoning. These uses create safety hazards at the airport and impede efficient operations. Although Shippensburg Airport does not face as many land use issues as Carlisle Airport, it will probably face development issues in the future.

To prevent further incompatible development near the airports, and to preserve them for the future, municipalities should be encouraged to integrate the Bureau of Aviation's Compatible Land Use Guidelines and Model Airport Zoning Ordinance regulations into their appropriate planning documents. County and municipal plans and regulations should identify aviation compatible uses to be located adjacent to the Carlisle and Shippensburg airports.

3. *Promote multimodal links to Harrisburg International Airport:* SARA is in the process of upgrading HIA, which includes a new terminal, new multimodal parking garage, and a passenger-rail station adjacent to the airport property serving both regional (Capital Area Transit's CORRIDORone) and interregional (Amtrak) rail passengers. Cumberland County should promote the use of the airport and encourage its residents to use CORRIDORone to reach the airport.

## *Bicycle/Pedestrian*

Cumberland County, through its representation on HATS and coordination with municipalities, can play an active role in improving and encouraging bike/ped transportation in the County. Specific recommendations include:

1. *Incorporate bike/ped improvements into the transportation planning process:* HATS published a Bicycle and Pedestrian Transportation Plan in 2001, and projects in the plan should be strongly considered for inclusion on the TIP. The County should encourage municipalities to strengthen their subdivision and land development regulations related to bike/ped concerns (primarily roadway width and sidewalk requirements) and ensure bicyclists and pedestrians are properly accommodated on the roadway network.
2. *Encourage mixed-use zoning and “traditional” community development:* Mixed land uses/zoning, similar to that found in “traditional” town or village development, facilitates bike/ped transportation by placing different types of land uses closer together. Traditional village development also discourages high traffic speeds, increasing the safety of bike/ped transportation. Mixed-use zoning not only encourages bike/ped use, it may also decrease motor vehicle traffic, reducing congestion on the area’s roadways. Cumberland County can encourage traditional community development by promoting the planned growth areas concept (described in Chapter 8) and mixed use zoning districts.
3. *Encourage development/preservation of greenways and open space:* Preserving greenways and open space provides a number of benefits to both bike/ped users and the County in general. Greenways, designed as trails, allow bike/ped users to travel without encountering motorized traffic that reduces their safety. They also enable bicyclists and pedestrians to travel in an aesthetically pleasing, naturally preserved area. Also, greenways generally promote non-motorized transportation, which can help reduce traffic congestion. Greenways also provide a number of non-transportation related benefits, including economic benefits (by functioning as a buffer and by creating a tourist attraction), social benefits (by providing access to historical and cultural features in the community), ecological benefits (by preserving open space and wildlife habitats), and recreation benefits (by promoting outdoor recreational activities). The recommendations of the Cumberland Countywide Greenway Study should be implemented in order to preserve these important corridors.
4. *Consider using County Liquid Fuels funds to finance certain bicycle and pedestrian improvement:* Cumberland County receives state liquid fuels tax funding every year to help cover the cost of highway maintenance. The amount received is based on the population and road mileage within a county. These funds are used for a variety of transportation-related purposes, and augment the liquid fuels tax funding received by all Pennsylvania municipalities. The County should investigate whether certain bike/ped improvements meet the liquid fuels tax funding criteria and could be financed using the County liquid fuels allocation. Using this funding source could help the county achieve its bike/ped improvement goals more easily.

