

Chapter 8 – Transportation

Communities are continually challenged with providing access for employees to local businesses and industries, providing efficient through transportation for regional travelers, and providing recreational transportation opportunities. These challenges are further complicated by the need to balance the conflicting needs of pedestrians and automobiles. This plan will provide guidelines for helping Juniata County provide a transportation system that will continue to serve its residents and businesses while also serving others that pass through the community.

A county's transportation system provides one of the greatest influences on the intensity of future growth and development, as the network of roadways in a community determines land use relationships and configurations. Consequently, transportation planning has emerged as one of the most significant aspects of growth management planning over the recent years. However, many comprehensive plans are reactive in nature, typically addressing current transportation issues with regard to travel patterns but falling short of forecasting what should be done to improve the entire transportation system. This forces a county to continue to follow the "land development-transportation improvement cycle":

1. Land development generates vehicle trips
2. Additional trips increase roadway needs
3. Needs dictate roadway improvements
4. Improvements modify access
5. Modified access changes land values
6. Changed land value attracts intensified development
7. Intensified development generates more trips
8. More trips lead back to the second step of the cycle

This chapter will seek to link the future land use plan with an appropriate transportation infrastructure within Juniata County. Initiatives will be based on addressing current concerns along with anticipating future travel demands and promoting land development patterns that are in keeping with the county's vision. By doing so, the county will be able to take a proactive approach to transportation planning and be able to necessitate when, where, and what type of improvements should be made, thereby effectively altering the cycle to ask the following questions:

1. What will be the magnitude of population and economic activities in the future?
2. Where will these activities be located?
3. How many trips will these activities generate?
4. Which mode of travel will the trips use?
5. What alternatives/strategies are available to relieve demands on the transportation system?
6. Which route will be utilized to reach the trip destination?
7. What is the best overall transportation system to handle the future trip desires?

Asking these questions will help to ensure that as the community grows, the county will be able to poise itself to proactively work with developers to ensure the community's vision is achieved.

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Juniata County is part of PennDOT’s Engineering District 2, Maintenance District 2-9. The District office is located in Clearfield County. The Maintenance District 2-9 office is located on Old Route 22 east in Mifflintown.

The county’s road system is an essential public asset that provides mobility within the county and the means to connect to regional highways. U.S. 22/322 is the principal highway in the county and the most heavily traveled road. Other key roads in Juniata County include SR 35, SR 75, SR 850, SR 74, SR 235, and SR 333.

The county’s road network includes more than 735 miles of roadway, of which 354.9 is owned by PennDOT, 8.0 miles are owned by other state and federal agencies, and 372.6 miles are owned by the county’s local municipalities. Locally owned roads include a combination of asphalt and gravel roads. A majority of the gravel roads are seriously substandard with inadequate drainage, poor surface materials, right-of-way clearance issues, and slope problems.

Funding is critical to the upkeep of the county’s secondary roadways. In rural areas the road system is usually the second highest demand for funding after the school system. Land use controls can greatly influence future costs for the roadway system as the location and type of development bear a direct relationship to required maintenance and the need to upgrade roads. The locations chosen for future development, especially higher density or commercial/industrial uses, is best served by the existing major highways unless the municipality is prepared to upgrade a road to meet new demands.

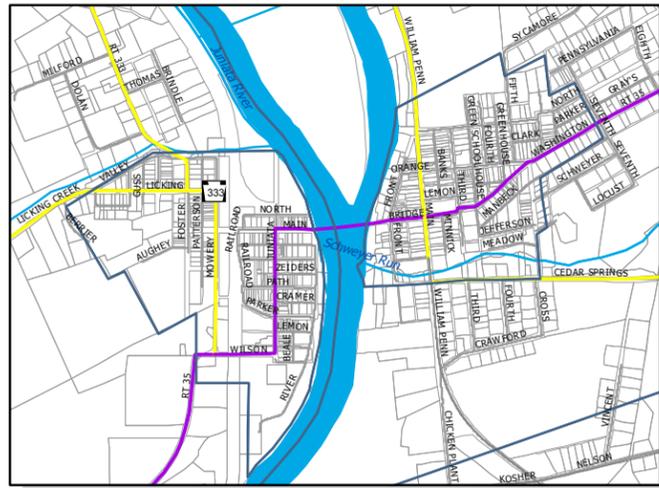
Roadway Functionality Characteristics

Roadways, or sections of a roadway, can be classified according to their capacity, access, and design characteristics. The classifications can consist of arterial roads, collector roads, and local roads, and can be further differentiated as interstates, freeways and expressways, principal arterial highways, minor arterials, urban collector or rural major collector, minor collector, and local roads. Each classification provides a different level of functionality for land access or mobility. Generally, roads that provide more unrestricted land access are designed to handle lower speeds and lower volumes, whereas roads that provide higher levels of mobility are designed to handle higher speeds and volumes and provide less land access. Juniata County follows the Federal Functional Classification System, utilized by PennDOT. The types of classifications are further described in **Table 8-1**.

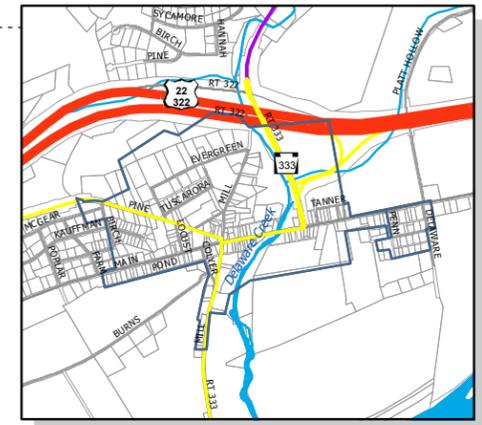
Table 8-1: Functional Classification System Characteristics

Characteristic	Arterial	Collector	Local
Sub-Classifications	<ul style="list-style-type: none"> • Limited Access / Interstate • Other Freeways and Expressways • Other Principal Arterials • Minor Arterials 	<ul style="list-style-type: none"> • Urban or Rural Major • Rural Minor 	None
Mobility vs. Access	Mobility of utmost importance	Mobility and land access of equal importance	Land access of utmost importance
Trip Distance	Typically used for longer trips (inter and intra-state, inter-region & longer intra-region & intra-county trips)	Short to medium distance intra-regional trips & for accessing arterial and local systems	Typically used for short trips and for accessing higher order systems

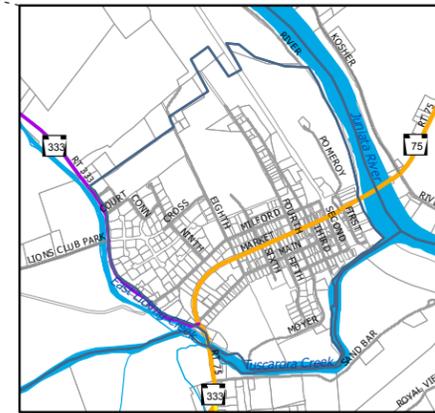
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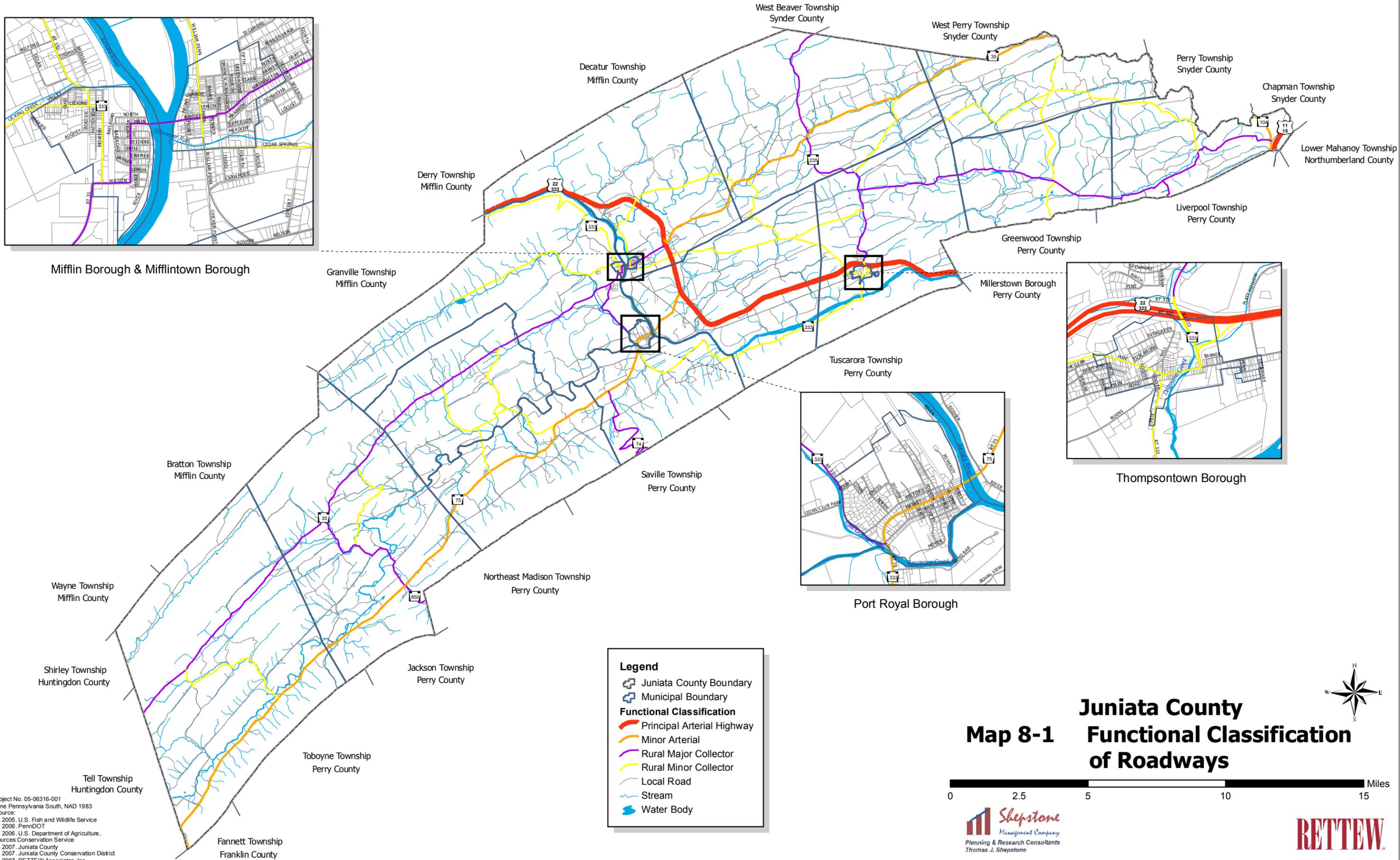
Mifflin Borough & Mifflintown Borough



Thomsontown Borough



Port Royal Borough



Legend

- Juniata County Boundary
- Municipal Boundary
- Functional Classification**
- Principal Arterial Highway
- Minor Arterial
- Rural Major Collector
- Rural Minor Collector
- Local Road
- Stream
- Water Body

Juniata County
Functional Classification
of Roadways

Map 8-1

0 2.5 5 10 15 Miles

Shepstone
Management Company
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Thomas J. Shepstone

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RETTEW Project No. 05-06316-001
PA State Plane Pennsylvania South, NAD 1983
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Characteristic	Arterial	Collector	Local
Traffic Volumes	Highest volume roadways; moderate to high volume on most arterials	Generally moderate volumes	Low volume roadways
Design Features	Limited, partial and unlimited access controls; widest right-of-way, cartway and shoulders; often 3 to 4 lane facilities	No access controls; moderate to minimum right-of-way, cartway and shoulder widths; often 2-lane facilities	No access controls; minimum right-of-way, cartway and shoulder widths; often 2 lane facilities
Speeds	Typically 45-65 mph	Typically 35-45 mph	Typically 25 mph
Through/Local Traffic	Minimal interference to through travel; local travel discouraged, especially on limited access roads	Balanced through and local travel	Through travel discouraged; local travel encouraged
Relation to Other Systems	Most important connections with other arterials and collectors, usually via grade separated interchanges or signalized intersections	Connects with Arterials and Locals. Collector/Arterial intersection often signalized. Collector/Local intersections often stop controlled.	Primarily connects with other locals and collectors. Most intersection of locals with other roadways are stop controlled.

Source: Pennsylvania Department of Transportation

The functional classifications of roadways in Juniata County are listed in **Table 8-2** and graphically shown on **Map 8-1**. PennDOT reports that in total, there are 21.9 miles of state roads classified as other principal arterials, 46.8 miles of state roads classified a minor arterials, 68.7 miles of state roads in the county classified as major collectors, 89.7 miles of state roads classified as minor collectors, and 508.3 miles of state roads classified as local roads.

Flexibility in Design through Context Sensitive Solutions (CSS)

PennDOT intends to plan, design, construct, maintain, and operate transportation improvements and systems that reflect community consensus with respect to identified transportation needs. The intent is to address safety and mobility while preserving community valued resources. Context sensitivity emphasizes the broad nature of solutions to transportation needs by focusing on enhancing the quality of life for transportation users. This initiative recognizes that not every context sensitive solution includes a design component, and therefore focuses on the process for developing all projects. CSS is a proactive approach to transportation planning, design, and implementation that looks at the broad context streets and roads play in enhancing communities and natural environments.

The CSS initiative focuses on applying the flexibility in design standards to meet local community needs, promoting joint use of transportation corridors by pedestrians, cyclists and public transit vehicles, developing a comprehensive transportation program and allowing sufficient flexibility to encourage innovative or unique designs for particular situations. *Flexibility in design is the application of sound engineering judgment to engineering decisions concerning the use of design guidelines and standards.* The CSS philosophy challenges designers to find the flexibility within design guidelines and standards and at times to look beyond the standards. More information on CSS can be found at on PennDOT’s website at http://65.207.30.22/css/www/policy_overview.php

Federal Aid, National Highway System and Facilities

Roadways with a functional classification of major collector or higher are on the Federal Aid System and are thereby eligible to receive federal transportation funds for improvements.

The National Highway System (NHS) is a network of significant highways approved by Congress in the National Highway Designation Act of 1995. The NHS includes:

- The Interstate Highway System
- The Strategic Highway Network (STRAHNET)
- Connectors to the STRAHNET
- Connectors to Intermodal Facilities¹

STRAHNET is a designation given to roads that provide, “defense access, continuity, and emergency capabilities for the movements of personnel and equipment in both peace and war.”² STRAHNET includes all of the interstate highway system and a few additional routes, including U.S. 11/15 in Juniata County.

NHS facilities in the IWS region include U.S. 22/322 and U.S. 11/15.

Table 8-2: Functional Classification of State Roadways, 2004 and 2006 AADT

State Route Number	Name	Functional Classification	2006 AADT
0011	Marine Corps League Memorial Hwy	Principal Arterial	12,000
0022	William Penn Hwy	Principal Arterial	14,000-18,000
0035 west of U.S. 22/322	Anderson Ridge Rd / Washington Ave	Rural Major Collector	500-3,900
0035 east of U.S. 22/322	Anderson Ridge Rd / Washington Ave	Minor Arterial	3,300-4,300
0074	Tuscarora Mountain Rd	Rural Major Collector	850
0075	Church Hill Rd / Turbett Flats Rd	Minor Arterial	650-7,000
0104	SR 104	Minor Arterial	2,900
0235	Beaver St	Rural Major Collector	500-5,200
0333 between SR 235 and U.S. 22/322	Book Rd / Van Dyke Rd	Rural Major Collector	4,300
0333 between U.S. 22/322 and SR 75	Book Rd / Van Dyke Rd	Rural Minor Collector	500-3,400
0333 between SR 75 and SR 35	Book Rd / Van Dyke Rd	Rural Major Collector	1,100-3,900
0333 north of SR 35	Book Rd / Van Dyke Rd	Rural Minor Collector	500
0850	Berry Hill Rd / Smokey Hollow Rd	Rural Major Collector	250-400
1001	Weaver Rd	Local	50
1002	Lost Creek Rd	Rural Minor Collector	450
1003	Saddle Club Rd	Local	350
1004	School St / Shade Rd	Local	950
1005	Leonard Hill Rd	Local	200
1006	Arch Rock Rd	Local	950
1007	Heister St	Local	850
2001	Swamp Rd	Local	1,700-1,900
2002	Miller Hill Rd	Local	200
2003	Helltown Rd	Local	250
2004	Cunningham Rd	Local	100

¹ Pennsylvania Department of Transportation, Bureau of Planning and Research

² United States Department of Defense

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State Route Number	Name	Functional Classification	2006 AADT
2005	Center Rd	Local	200-300
2006	Cedar St	Rural Minor Collector	1,000-1,700
2007 between SR 3002 and SR 2006	Locust Run Rd	Local	100
2007 between SR 2006 and SR 35	Locust Run Rd / Free Spring Church Rd	Rural Minor Collector	750
2008	Dunn Valley Rd	Local	200
2009	Pine St	Rural Minor Collector	400-800
2010	Black Dog Valley Rd / Kellerville Rd	Rural Minor Collector	200
2011	Orchard Rd	Local	50
2012	Leister Valley Rd	Local	150
2013	Cocolamus Rd	Rural Minor Collector	1,300
2014	Neimonds Church Rd	Local	250
2015	Swailles Rd	Rural Minor Collector	250-550
2016	Church Rd	Local	550
2017 north of SR 2010	Black Log Rd	Local	450-1,000
2017 south of SR 2018	Black Log Rd	Local	150
2017 between SR 2018 and 2010	Black Log Rd	Rural Minor Collector	450
2018	Dresslers Ridge Rd / Swartz Valley Rd	Rural Minor Collector	400-950
2019	Richfield Rd	Rural Minor Collector	600-1,000
2020	Dresslers Ridge Rd	Local	300
2021	Ridge Rd	Local	200
2022	Quaker Run Rd	Local	200
2023 north of SR 2018	SR 2023	Local	650
2023 between SR 2018 and SR 2026	SR 2023	Rural Minor Collector	650
2023 between SR 235 and SR 2026	SR 2023	Rural Major Collector	650
2024	Oriental Rd	Local	500
2026	Klinger Hollow Rd	Rural Major Collector	350
2028	Goodville Rd	Local	100
2030	Church Rd	Local	300
2032	Johnstown Rd	Local	350
3002 east of SR 333	Horse Valley Rd / Oriental Rd / Old Rt. 22	Local	450-1,900
3002 between SR 333 and SR 2009	Horse Valley Rd / Oriental Rd / Old Rt. 23	Rural Minor Collector	4900
3002 between SR 2009 and SR 2006	Horse Valley Rd / Oriental Rd / Old Rt. 24	Local	2,600-4,500
3002 between SR 2006 and 1002	Horse Valley Rd / Oriental Rd / Old Rt. 25	Rural Minor Collector	3200
3002 north of SR 1002	Horse Valley Rd / Oriental Rd / Old Rt. 26	Local	3200
3004	Tuscarora Rd	Local	100
3005	Cedar Spring Rd / Nelson Rd / Chicken Plant Rd	Local	750-1,000
3006	Middle Rd / Mountain Rd	Local	100
3007	Stouffer Rd	Local	
3008 between SR 3015 and SR 75	Groninger Valley Rd	Local	250
3008 between SR 35 and SR 3015	Groninger Valley Rd	Rural Minor Collector	150-300
3009	Boyer Rd	Local	350
3010	Groninger Valley Rd	Local	150
3011	McLaughlin Rd	Local	250
3013	Spruce Hill Rd	Rural Minor Collector	200
3014 between SR 850 and SR 3021	McCoysville Rd	Rural Minor Collector	100
3014 between SR 3021 and 3008	McCoysville Rd	Local	100
3015	Academy Rd	Rural Minor Collector	150
3016	Noss Rd	Local	50
3017	Academia Rd	Rural Minor Collector	100
3018	Milddle St / Smokey Hollow Rd	Local	150
3019	Indian Mound Rd	Rural Minor Collector	250

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State Route Number	Name	Functional Classification	2006 AADT
3020	Barton Hollow Rd	Local	100
3021 south of SR 3014	Memminger Hill Rd	Local	200
3021 north of SR 3014	McKinley Rd	Rural Minor Collector	200
3023	Pumping Station Rd	Rural Minor Collector	350
3025 south of SR 3023	Berry Ridge Rd	Local	150
3025 north of SR 3023	Berry Ridge Rd	Rural Minor Collector	150
3027	Brick Church Rd	Local	200
3029	Horse Valley Rd	Local	100
3031	First St	Local	150
4001	Muddy Run Rd	Local	300
4002	Licking Creek Dr	Rural Minor Collector	300-1,000
4003	Stetler Rd	Local	100
4004	Cider Press Rd	Local	200-300
4005	Black Log Rd	Local	50
4006	Beggars Rd	Local	
4008	Butcher Shop Rd	Local	500
8002	Ramp to U.S. 22/322		
8004	Ramp to U.S. 22/322		
8006	Ramp to U.S. 22/322		
8008	Ramp to U.S. 22/322		
8010	Ramp to U.S. 22/322		
9401	Ramp to U.S. 11/15		
9402	Access Rd		

Source: PennDOT; Juniata County GIS; RETTEW Associates, Inc.

Volume of Traffic

The Pennsylvania Department of Transportation collects and maintains traffic counts for state roadways and publishes data on the Average Annual Daily Traffic (AADT) for segments of roadways. AADT is used to describe traffic volume and is considered to be the typical daily amount of traffic, in both directions, on a particular road segment. Monitoring AADT flows on roadways is important because roadways of different functional classifications are designed to handle different volumes of traffic. Data contained in **Table 8-2** is representative of 2006 Pennsylvania Department of Transportation traffic volume data.

Arterials are roads designed to carry larger volumes of traffic, specifically “through” traffic, at higher speeds, and with limited access. The roads with the highest volumes of traffic in Juniata County are U.S. 22/322 and U.S. 11/15, which carry approximately 11,000 to 18,000 vehicles per day. SR 75 carries between 50 vehicles per day in the southwestern part of the county and 7,000 vehicles per day near the interchange with U.S. 22/322. The AADT on the section of SR 104 in Juniata County is 2,900 vehicles per day.

Collector roads are designed to carry less traffic and at lower speeds than arterials. Traffic on collector roads usually represents a mix of local and through traffic and collector roads have a greater number of access points than arterials. AADT on roads classified as rural major collectors in Juniata County ranges from 350 vehicles on SR 2026 to 7,100 vehicles on portions of SR 35. Rural minor collectors carry between 100 vehicles (Academia Rd) and over 1,000 vehicles (SR 2006, Cedar St., and SR 2013, Cocolamus Rd.).

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Local roads are designed to carry the least amounts of traffic, specifically local traffic, have the lowest speeds, and provide direct access. Traffic volume can be used in conjunction with other information such as intersection configuration and signalization to determine the level of service for existing roadways and intersections.

Analyzing AADT volumes on roadways in Juniata County in 1998, 2000, and 2006, indicates that there have not been major changes in the volume of traffic county roadways during this time. Some roads show slight increases in AADT volumes, while other roadways show slight decreases in AADT volumes.

Access Management

Managing access to and from the roadway's abutting properties is a valuable tool because it manages the capacity and safety of the roadway. According to PennDOT's Access Management Model Ordinances for Pennsylvania Municipalities, the Transportation Research Board defines access management as, "the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway. It also utilizes roadway design applications, such as median treatments and auxiliary lanes, and the appropriate spacing of traffic signals. The purpose of access management is to provide vehicular access to land development in a manner that preserves the safety and efficiency of the transportation system." Access management incorporates the delicate balance between constitutional rights, private property rights, and state regulations. The principles of access management seek to limit and consolidate access along major roadways, while promoting a supporting street system and unified access and circulation systems for development.

Access management programs seek to limit and consolidate access points along major roadways, while promoting a supporting street system and unified access and circulation systems for development. The result is a roadway that functions safely and efficiently for its useful life, and a more attractive corridor. The goals of access management are accomplished by applying the following principles:

- Provide a specialized roadway system – it is important to design and manage roadways according to the primary functions they are expected to serve
- Limit direct access to major roadways – roadways that serve higher volumes of regional through traffic need more access control to preserve their traffic function
- Promote intersection hierarchy – an efficient transportation network provides appropriate transitions from one classification of roadway to another
- Locate signals to favor through movements – long, uniform spacing of intersections and signals on major roadways enhances the ability to coordinate signals and ensure continuous movement of traffic at the desired speed
- Preserve the functional area of intersections and interchanges – the functional area is where motorists are responding to the intersection (i.e. decelerating, maneuvering, into the appropriate lane to stop or complete a turn)

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- Limit the number of conflict points – drivers make more mistakes and are more likely to have collisions when they are presented with the complex driving situations created by numerous conflicts. Traffic conflicts occur when the paths of vehicles intersect and may involve merging, diverging, stopping, weaving, or crossing movements
- Separate conflict areas – drivers need sufficient time to address one potential set of conflicts before facing another
- Remove turning vehicles from through-traffic lanes – turning lanes allow drivers to decelerate gradually out of the through lane and wait in a protected area for an opportunity to complete a turn, thereby reducing the severity and duration of conflict between turning vehicles and through traffic
- Use non-traversable medians to manage turn movements – they minimize left turns or reduce driver workload and can be especially effective in improving roadway safety
- Provide a supporting street and circulation system – a supporting network of local and collector streets to accommodate development, and unify property access and circulation systems. Interconnected streets provide alternate routes for pedestrians, bicyclists, and motorists.

Major Roadways

Major roadways in Juniata County are those roadways with a PennDOT functional classification of principal arterial highway or minor arterial. These roadway segments in Juniata County, and their relationship to regional travel, are discussed below.

U.S. 22/322

U.S. 22/322 traverses Juniata County from the northwest to the southeast, through Delaware, Walker, and Fermanagh Townships, and it grazes the very outer limits of Thompsontown Borough. U.S. 22/322 serves as the main corridor that connects Harrisburg with State College, and as such, allows Juniata County residents quick and easy access these two hubs. There are four interchanges located within the county. U.S. 22/322 is classified as a principal arterial highway and is part of the National Highway System. AADT counts in 2006 reported that between 14,000 and 18,000 vehicles travel on U.S. 22/322 through Juniata County.

U.S. 11/15

U.S. 11/15 is a principal arterial highway that crosses through Juniata County in the extreme northeastern portion of the county. U.S. 11/15 splits just north of Juniata County near Shamokin Dam, and U.S. 15 travels north to Williamsport, Mansfield and New York, while U.S. 11 travels northeast to Bloomsburg, Wilkes Barre, and Scranton, before paralleling I-81 and heading north to Binghamton, New York. To the south, U.S. 11/15 splits near Camp Hill, and U.S. 11 travels west towards Chambersburg, and U.S. 15 travels south towards Gettysburg. This route enables county residents to reach various destinations in Pennsylvania, Maryland, and New York. AADT

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traffic counts from 2006 estimated that approximately 12,000 travel this stretch of U.S. 11/15 through Juniata County.

SR 75

SR 75 is classified as a minor arterial in Juniata County. SR 75 travels from the southwest to the northeast through Lack, Tuscarora, Spruce Hill, Turbett, Milford, and Walker Townships, and Port Royal Borough before its eastern terminus at the interchange with U.S. 22/322. To the south, SR 75 connects to the Pennsylvania Turnpike, and travels through Fort Loudon and Mercersburg until it reaches the Maryland line. In 2006, SR 75 carried between 650 and 7,000 vehicles per day.

SR 35

SR 35 traverses Juniata County from the southwest to the northeast. Between the western county line and U.S. 22/322, SR 35 is classified as a rural major collector. East of U.S. 22/322, SR 35 is classified as a minor arterial. SR 35 connects many places in Juniata County to U.S. 22/322 and Mifflin and Mifflintown Boroughs. In the western part of the county, 2006 AADT volumes ranged from 500 vehicles in the more rural areas to 3,900 vehicles near Mifflin Borough, to 7,100 vehicles between Mifflintown Borough and U.S. 22/322. To the east of U.S. 22/322, AADT volumes range from 3,300 to 4,300 vehicles per day. Outside of the county, SR 35 connects to U.S. 11/15 near Selinsgrove, and to the south, SR 35 connects to U.S. 522 at Shade Gap.

SR 104

SR 104 is classified as a minor arterial in Juniata County and travels in a north-south direction through Susquehanna Township, just west of U.S. 11/15. SR 104 connects to U.S. 11/15 just south of Juniata County and travels north to Mifflinburg. AADT in 2006 on this stretch of SR 104 was 2,900 vehicles.

Identified Major Corridors

The steering committee for the comprehensive plan identified several sections of roadways in the county that serve as major corridors, in addition to U.S. 22/322 and U.S. 11/15. Many of these corridors include the major roadways discussed in the previous section. Major corridors in Juniata County are listed below and graphically shown on Map 8-2. Any issues associated with the major corridors are listed below.

- SR 75
 - The entire length of SR 75 is considered a major corridor, but there are issues with truck traffic on the portion of SR 75 west of U.S. 22/322. Mountain Road is used by the timbering industry and there are issues with speed; many of these trucks then use SR 75 to access the Pennsylvania Turnpike.
- SR 850 south of Honey Grove.

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- SR 333
 - The northern part of SR 333 in Juniata County is considered a problem area. This area is used for local logging and is not suited for trucks.
- SR 35 between Mifflin Borough and Richfield
 - Speeding is considered an issue along this corridor, especially in the area of Richfield. There may be a need for additional police enforcement in this area.

The Transportation Improvement Program

Background

The Commonwealth's Twelve Year Transportation Program (TYP) is Pennsylvania's official transportation program. It covers all transportation modes, both passenger and freight; and includes consideration of public and private transportation systems, facilities and operations. The Twelve Year Transportation Program is used to guide the planning and decision-making process toward meeting the Commonwealth's vision of a seamless transportation system. How does a project become part of the Transportation Program? An individual or group wishing to have a project placed on the Program should first contact the regional Metropolitan Planning Organization (MPO), Rural Planning Organization (RPO) or County Planning Agency in their area. These agencies, which maintain a listing of all candidate projects in the region, will consider the candidate project for inclusion on the regional Transportation Improvement Program and the Twelve Year Transportation Program. As a result of ongoing monitoring of transportation facilities' conditions, PennDOT and local government officials may also identify candidate transportation improvement projects. These projects will also be presented to the MPO, RPO, or County Planning Agency for consideration for inclusion in the program. Every two years the planning partners rework the Twelve Year Transportation Program. All the planning partners cooperatively develop the general, procedural, and financial guidance and distribute it to each regional entity to develop their portion of the program. The individual or group may now, through working with the MPO or RPO, prepare to testify on behalf of the project or projects at the biennial State Transportation Commission (STC)/Planning Partner Public Hearings. Hearing locations and logistics are publicized prior to the hearing dates.

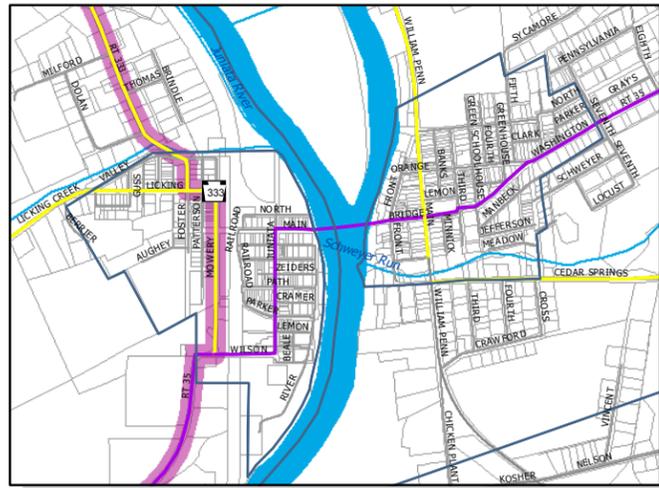
State Requirements

Act 120 of 1970, as amended, requires the Department of Transportation to prepare and submit to the State Transportation Commission every two years, a program of transportation improvements which it recommends be undertaken during the next twelve years. This program is to address all transportation modes and be fiscally constrained; that is, listing only programs and projects that are reasonably expected to be funded over the twelve-year period. The Twelve Year Transportation Program is separated into three four-year program periods. The first four years coincide with the federally required State Transportation Improvement Plan (STIP) and Transportation Improvement Plan (TIP). Decisions regarding how available transportation funds are to be used for a variety of proposed rail, roadway, transit, bicycle, pedestrian, and airport improvement projects are made through the transportation planning and programming process. This process includes regional transportation planning agencies as well as PennDOT. So, what is this Twelve Year Transportation Program? It is a dynamic schedule of agreed upon priority

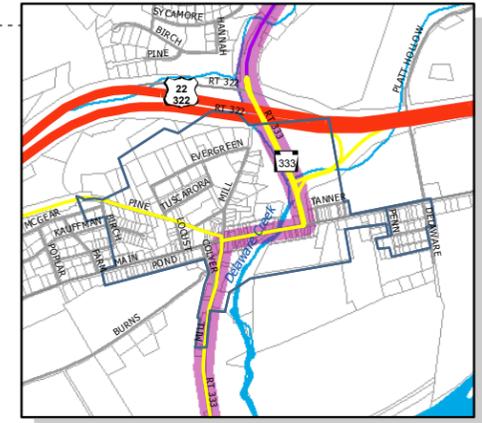
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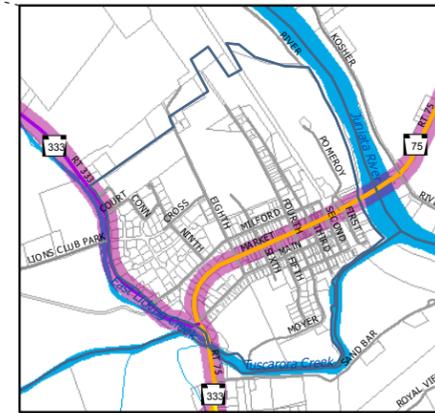
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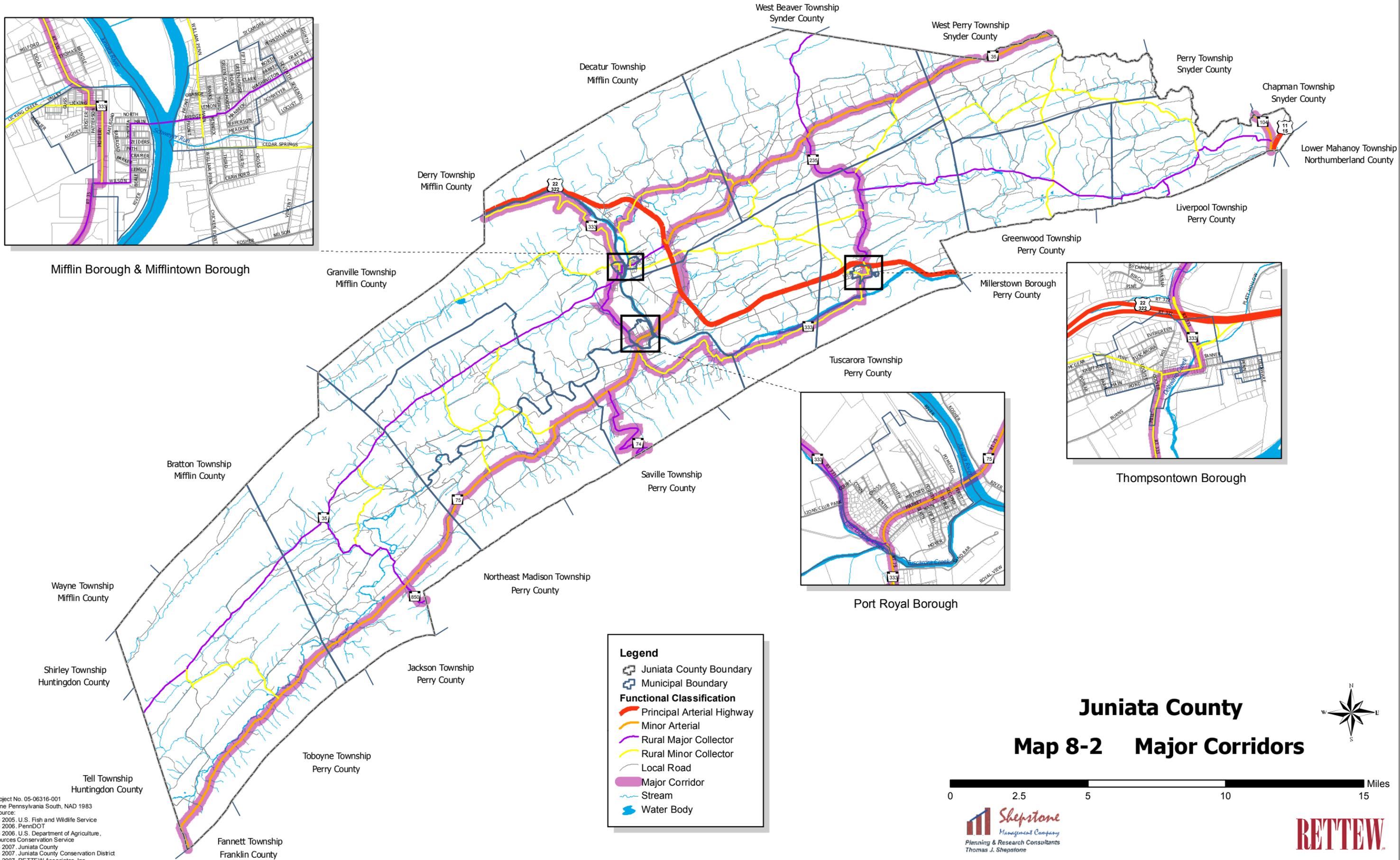
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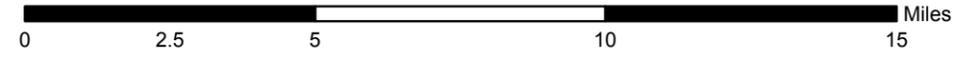
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Map 8-2 Major Corridors



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PA State Plane Pennsylvania South, NAD 1983
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projects that PennDOT, with its various partners, will work to accomplish over a twelve-year period. The program is fiscally constrained to be consistent with expected funding levels and includes highways and bridges, transit, bicycle and pedestrian facilities, rail freight, and aviation projects. The program is reviewed regularly and changes, if necessary, are based on the ability to accomplish projects, the costs for projects, and changing needs. The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) review and approve the changes to the Commonwealth's STIP. FHWA and FTA also play integral roles assisting the department with meeting the requirements to utilize federal funds available to Pennsylvania. The program not only lists specific projects to be undertaken during the first four-year period, but also details the anticipated schedule and costs for each project phase. Major projects also may be detailed in the second or third four-year period—generally, if pre-construction phases are listed within the first four-year period. Otherwise, statewide line items by program category are identified in the second and third program periods. As new projects are later identified, these line items are adjusted to reflect the detailed phases and costs associated with the new project, all within fiscal constraints. The statewide planning process establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions throughout the state and is administered jointly by the Federal Highway Administration, the Federal Transit Administration, and the Pennsylvania Department of Transportation.

There are 7 RPOs in Pennsylvania. Federal law does not require a rural transportation planning and programming process, but in Pennsylvania RPOs and independent counties serve a similar function as MPOs for the rural areas of the state. Federal law requires states to consult and coordinate with local officials in rural areas of the state.

- RPOs members include:
 - County officials
 - Representatives of the major modes of transportation
 - PennDOT
 - Others

RPOs also develop and maintain a Long Range Transportation Plan of at least 20 years and a Transportation Improvement Program that covers four years. RPOs are supported by federal and state planning funds.

RPOs in Pennsylvania are:

- Adams
- North Central PA Regional Planning and Development Commission
- Northeastern PA Alliance
- Northern Tier Regional Planning and Development Commission
- Northwestern PA Regional Planning and Development Commission
- SEDA-Council Of Governments (SEDA-COG)
- Southern Alleghenies Regional Planning and Development Commission

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The following are key aspects and requirements of the Transportation Improvement Program (TIP):

- A TIP is developed in each Metropolitan Planning Organization, Rural Planning Organization, and Independent County.
- The TIP lists all highways, bridge, and public transportation projects for which federal and state capital funds are anticipated.
- The TIP is the agreed upon multi-modal list of specific priority projects.
- The TIP is four years in length in Pennsylvania – based on the federal fiscal year (October 1st to September 30th).
- The TIP must be fiscally constrained by year – based on resources that can reasonably be expected to be available.
- Large projects can be programmed over multiple years, consistent with their cash flow requirements.
- The TIP must be updated every two years.
- The public must be involved in TIP development.
- The TIP may be modified or amended.
- All TIPs are incorporated into the Statewide TIP (STIP).
- The Federal Highway Administration, the Federal Transit Administration and the Environmental Protection Agency approve the STIP.
- The STIP is the first four years of the Twelve Year Program.
- Development of the TIPs and STIP is coordinated with the State Transportation Commission and elected officials.
- The TIP must conform to air quality standards established by the Clean Air Act Amendments of 1990 if an area is designated as not meeting air quality standards.

SEDA-COG Regional Transportation Planning

SEDA-Council of Governments, SEDA-COG, is a regional multi-county development agency which, under the guidance of a public policy board, provides leadership, expertise, and service to communities, businesses, institutions, and residents. SEDA-COG seeks to enhance growth opportunities in an environmentally sensitive manner while retaining the region’s predominantly rural character. The organization is both a direct service provider and a link to other resources that can be applied to a wide range of community and economic needs. SEDA-COG is also an advocate for the interests of its communities at the state and federal levels. The organization is overseen by a board made up of county commissioners, business people, and local elected officials.

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SEDA-COG has been in existence since 1957 and includes the following eleven counties: Centre, Clinton, Columbia, Juniata, Lycoming, Mifflin, Montour, Northumberland, Perry, Snyder, and Union. SEDA-COG’s Rural Planning Organization (RPO) assists the more rural counties, including Clinton, Columbia, Juniata, Mifflin, Montour, Northumberland, Snyder, and Union with transportation planning and serves as a resource for transportation funding, grant management, and best practices. One of SEDA-COG RPO’s responsibilities is the development of a Transportation Improvement Program (TIP). The TIP is the regionally agreed-upon list of priority projects, which consists of the first four years of PennDOT’s Twelve Year Program. The TIP contains multi-modal projects and is updated every two years in Pennsylvania. Projects in Juniata County that are listed on the TIP for 2009-2012 are listed in Table 8-3.

Table 8-3: Projects listed on the FFY 2009-2012 TIP in Juniata County

Project Name	Project Type	Route Number	Municipality	Total FY 2009-1012 Cost
Route 22 Resurfacing II	Concrete rehabilitation	U.S. 22/322	Walker Township, Fermanagh Township	3,300,000
Commuter Parking Study	Park and Ride lot	U.S. 22/322	Fermanagh Township	260,000
Juniata River Bridge	Bridge replacement	SR 35	Mifflintown Borough	15,169,000
Lost Creek Bridge	Bridge replacement	SR 35	Fayette Township	351,000
Bridge Work on 4 Bridges	Bridge preservation activities	SR 35	Various municipalities	1,435,000
SR 35 over NS/Amtrak Bond	Bridge replacement	SR 35	Mifflin Borough	2,337,000
Tuscarora Creek	Bridge replacement	SR 75	Lack Township	1,856,000
SR 0235 over Cocolamus Creek	Bridge replacement	SR 235	Delaware Township	857,000
SR 333 over Tributary to Hunters Creek	Bridge replacement	SR 333	Turbett Township	152,000
SR 333 over Tributary to Hunters Creek II BOX	Bridge replacement	SR 333	Turbett Township	278,000
PA 850 Dougherty Run	Bridge replacement	SR 850	Tuscarora Township	468,000
Laurel Run Bridge	Bridge replacement	SR 850	Tuscarora Township	2,506,000
SR 0850 over Reeds Gap Run	Bridge replacement	SR 850	Tuscarora Township	253,000
Lost Creek Bridge	Bridge replacement	SR 1001	Fermanagh Township	351,000
Trib. Stony Run	Bridge replacement	SR 2010	Monroe Township	351,000
SR 2019/Cranes Run BOX	Bridge replacement	SR 2019	Greenwood Township	351,000
Mahantango Creek Deck Replacement	Bridge deck replacement	SR 2022	Monroe Township	630,000
Dobson Run BOX	Bridge replacement	SR 2023	Susquehanna Townsihp	88,000
Center Turn Lane at Int.	Add turning lane	SR 3002 and SR 3005	Fermanagh Township, Walker Township	915,000
SR 3014 over Willow Run	Bridge replacement	SR 3014	Tuscarora Township	1,522,000
SR 3021 over Tuscarora Creek	Bridge replacement	SR 3021	Spruce Hill Township	410,000
SR 3021 over Tuscarora Creek	Bridge preservation activities	SR 3021	Tuscarora Township	1,251,000

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Project Name	Project Type	Route Number	Municipality	Total FY 2009-1012 Cost
SR 3031 at SR 75 Bridge	Bridge replacement	SR 3031	Port Royal Borough	1,630,000
SR 4003 at Licking Creek	Bridge replacement	SR 4003	Milford Township	2,687,000
T-359 Licking Creek Bridge	Bridge replacement	SR 7207	Milford Township	351,000
T-379 Hammer Hollow Rd.	Bridge replacement	SR 7207	Milford Township	884,000

Source: SEDA-COG TIP

Information provided by the local municipalities, as identified in **Table 8-4** and data pertaining to accident locations and safety concerns as identified in **Table 8-5**, should be reviewed for funding eligibility. An aggressive outreach program should be developed through the County Planning Department to solicit transportation improvement projects from local officials. The Juniata County Planning Commission should prioritize the solicited projects by safety needs, followed by their location in relationship to the future land use plan.

The Long Range Transportation Plan should be noted as part of the planning process, to be correlated with the TIP, STIP, TYP and the comprehensive plan with an agreement in scope for the first four years. County or municipal transportation related projects applying for funding through TIP, STIP, and TYP should follow this plan when ranking projects for submission to SEDA-COG RPO. When applying for funding, the municipality will be asked for a letter from the county stating that the Juniata County Comprehensive Plan was taken into consideration when making decisions for prioritization. **Map 8-3** graphically shows the location of the planned transportation improvements and areas of concern.

2003 Conference of Transportation and Land Use for Economic Development

In May of 2003, the secretaries of PennDOT, DEP, DCNR, and DCED hosted a conference on Transportation and Land Use for Economic Development. Over 230 participants spent the day evaluating where Pennsylvania currently stands on integrating land use, economic development, transportation, and conservation policies and actions. The end result of the evaluation was an action plan with strategic objectives and associated tasks. The plan is organized around the following five major themes:

- Agency Coordination
- Planning, Program, and Project Delivery
- Investment/Leverage
- Intergovernmental Partnerships
- Education

The action plan is the first step of a process to coordinate state agencies that share responsibilities for creating opportunities for and implementing community and economic development projects that enhance the overall quality of life for the state's citizens. The plan is

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intended to be a living, evolving document that will be enhanced through input from state agencies, municipalities, businesses, and interested citizens.

As a result of the 2003 Conference recommendations, SEDA-COG prepared the Valley Vision 2020 A Plan for Pennsylvania's Heartland. Valley Vision is SEDA-COG's plan for the region and was developed through a grass roots approach with community stakeholders in SEDA-COG's eleven counties. The plan looks at how today's land use, transportation, and economic development will affect all municipalities – specifically with creating a competitive economic advantage and provide quality jobs in a way that doesn't adversely impact the region's assets.

Transportation goals include:

1. Prepare a Regional Long-Range Transportation Plan that enhances and protects the region's communities, as well as its natural, cultural and historic resources.
2. Create vibrant, attractive, safe, and walkable communities.
3. Support efficient land use and sustain quality transportation infrastructure.

The recommended strategies developed in the county's comprehensive plan are mutually supportive of the strategies identified in the Valley Vision 2020 Plan. Both plans will complement each other and will support a coordinated approach to transportation improvements in the county.

Bus Service

Greyhound Bus Lines and Fullington Trailways provide passenger service to residents in Juniata County by offering bus stops at Mifflintown and Thompsontown. Greyhound Bus Lines considers these stops to be limited service locations which do not support a full-service terminal or agency. They do not offer ticketing, baggage, or package express services. The closest ticketing facility is in Lewistown, Mifflin County.

Public Transit

Information contained in this section is taken from the SEDA-COG website and the *Coordinated Public Transit-Human Health Services Transportation Plan* prepared by SEDA-COG in February 2008. SEDA-COG RPO has long supported public transportation by offering technical assistance, approving transit funds for needs such as vehicle purchases, adding a transit representative as a voting member of the RPO, participating on study work groups, and more. Recent legislation and guidance issued by the Federal Transit Administration and PennDOT requires that projects selected for public transportation funding be “derived from a locally developed, coordinated public transit-human services transportation plan” and the plan be “developed through a process that includes representatives of public, private, and non-profit transportation and human services providers and participation by members of the public.”

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To develop the region's coordinated public transit-human services transportation plan, SEDA-COG formed a new Public Transit-Human Services Transportation Coordinating Committee. The committee includes representatives from local municipalities, human service agencies, nursing homes, Area Agencies on Aging, senior living facilities, taxi companies, and transit systems. Committee responsibilities include plan development, assessment of transportation needs, identification of strategies to meet such needs and recommendation of projects for funding. An interim coordinated plan was developed in 2007 and a revised plan, compliant with state and federal guidance, was prepared in February 2008. The plan primarily assesses and establishes implementation priorities for meeting the transportation needs of individuals with disabilities, older adults, and low-income residents. However, the plan also considers the needs of the general population and proposes innovative solutions for improved public transportation.

The following transit providers are available in Juniata County:

- **Call A Ride Services** – Is a low cost, door to door transportation service to all areas of Mifflin and Juniata Counties offered through the Mifflin-Juniata Area Agency on Aging, Inc. Vans are equipped with wheelchair lifts. Reservations must be made by 12:00 noon the day before a scheduled appointment.

In preparing the plan, the coordinating committee determined the following regarding transportation needs or service gaps in the SEDA-COG RPO region:

- Transportation providers in the region are achieving better coordination with agencies transporting users to convenient sites where they can be picked up by other transit providers for the remainder of their trip.
- Medical transportation trips are increasing for many regional providers.
- Taxis are normally limited in service area by approved destinations.
- Although some transit providers are seeing stabilized or declining ridership in the 65+ population cohort, the elderly using the system often need a higher level of service due to their frailty or disabilities, resulting in greater demand for handicapped accessible vans and busses.
- Most current service is shared-ride, which is demand responsive and offers residents door to door services, but requires users to make trip requests at least one working day in advance of the trip. This results in an inability to satisfy same-day service for individuals needing transportation immediately.
- The region's nursing homes and personal care homes are confronted with problems getting people from their facilities to hospitals, especially for regular visits.
- It might be worth-while for transportation agencies to request PennDOT approval for third party sponsors to offer shared ride service through grant applications.
- As older adults prefer to maintain independence and people live longer, it is likely that more independent living facilities will be demanded and built in the region, creating additional transportation needs that will go unmet by existing service.

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- Low-income individuals have significant transportation needs that are difficult for existing transportation providers to meet, for example, offering transportation to child care.
- New low-income housing is being constructed outside of established communities in some parts of the region which could increase isolation and produce greater public transit demand.
- A regional transportation needs assessment survey is planned for distribution during 2008 and it is hoped that responses will produce more feedback on public transportation needs for the general population.
- The Amish and Mennonite populations in the region have regular transportation needs that are often inadequately met. This issue requires further analysis and outreach.

Several short term and long term implementation priorities were developed to strategically address the identified gaps between existing services and transportation needs. Short term implementation priorities are thought to be accomplishable in 1-5 years, and long term implementation priorities are thought to be accomplishable beyond 5 years.

Short Term Priorities

- Continued use of Section 5310/CTC and other capital or operating programs to fund needed investments in vehicles, communication equipment, computer equipment, and office/warehouse facilities.
- Ensure that more transit vehicles are wheelchair accessible and deploy more energy efficient vehicles. Continue active role of the coordinating committee in discussing and addressing regional transportation needs.
- Research best practices and public transportation models from other areas.
- Distribute and evaluate survey of community transportation needs.
- Convene series of focus groups across the region to engage more stakeholders and receive greater input for the coordinated plan.
- Interview specific agencies and transportation partners for detailed information gathering.
- Regularly update the coordinated plan and integrate it with regional and statewide plans.
- Promote coordinated transportation and assess ways for providers to further coordinate services.
- Propose demonstration or pilot projects to PennDOT for examining more efficient transportation services in the region.
- Strive to use taxi company service for long distance out-of-county medical transportation trips.

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Long Term Priorities

- Generally expand the level of public transit-human services transportation available to traditional and non-traditional consumers.
- Establish greater partnerships among providers, human service agencies, foundations, charities, etc. to further subsidize transportation (especially for welfare-to-work customers), increase service areas, expand service hours, and improve efficiency.
- Execute strategic public information campaigns (town hall style meetings, workshops, seminars, brochures, website upgrades, etc.) throughout the region to increase awareness, meet customer expectations, boost ridership, and garner more support for effective approaches to meet identified needs.
- Encourage providers to pool resources or support services (supplies, facilities, joint purchasing/leasing of equipment, accounting systems, dispatching, and training).
- Increase same-day and on-call service in the region, particularly for nursing homes, long term care centers, and related facilities.
- Institute van loops to transport users to jobs, day care, shopping, entertainment, etc.
- Create programs using the vehicles of older adults during times they are not needed.
- Have grocery orders of call-in customers collected and delivered to homes by taxi companies or other entities.
- Further use of volunteer groups, charities, and faith based organizations to transport residents to necessary destinations,
- Enhance and legitimize service to Amish and Mennonite populations.
- Implement additional fixed-route or deviated fixed-route service in the region.
- Better integrate public transit-human services transportation needs into local government decision-making and development patterns.

Freight Movement

SEDA-COG has established a Freight Advisory Committee (FAC) as part of its Freight Planning Program. The primary purpose of the FAC is to identify problems and build consensus among public and private sector freight interests for improving the safety and efficiency of freight movement in the SEDA-COG region. Trucking, rail, and air cargo interests are represented on the SEDA-COG FAC, along with shippers, manufacturers, industrial development groups, and state and regional transportation officials.

Rail Transportation

In Juniata County, the Norfolk-Southern Railway Company owns active rail lines in Juniata County that parallel the Juniata River to the east. These lines are used by Amtrak passenger rail services. The line is part of Amtrak's Pennsylvanian route that travels daily between New York

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City and Pittsburgh. The train connects in Pittsburgh with Capitol Limited trains 29 and 30, to and from Cleveland, Toledo, Chicago, and intermediate points.

The rail stations to Juniata County are in Lewistown, Mifflin County, and Harrisburg, Dauphin County. Adding a rail stop in Juniata County could increase the accessibility of passenger rail service for Juniata County residents.

Aviation

The Mifflintown Airport is a general aviation airport located approximately two miles from Mifflintown Borough in Fermanagh Township. This airport has a 2,627 foot lighted asphalt runway that is considered to be in fair condition. The airport is privately owned, and services are provided on-site. Mifflintown Airpark, LLC is located on site and provides aviation fuel, aircraft parking (ramp or tiedown), hangar leasing and sales, passenger terminal and lounge, public telephone, internet access, and restrooms.³

Stottle Memorial Heliport is located outside of the Village of Honey Grove in Tuscarora Township. The heliport is open to the public and is used for medical purposes. The helipad turf is 100 square feet and is considered to be in good condition. The heliport is privately owned.

The closest commercial aviation airports to Juniata County residents are the Harrisburg International Airport in Middletown, Dauphin County, and the University Park Airport near State College in Centre County.

Bridges

Bridges are another important component of the transportation system; in Juniata County, several of the bridges that span the Juniata River, Tuscarora Creek, and other streams in the county provide very important connections between communities and to significant transportation corridors. Maintenance of bridges is an ongoing priority at the local, state, and federal levels because of the diversions in travel created when bridges are posted or closed. Bridge restrictions divert and delay the movement of goods and people, adding to congestion and air quality concerns, and may also increase response time for emergency services providers.

PennDOT is responsible for the management of all bridge structures in the state that are greater than 8 feet in length, regardless of ownership. The bridge management system (BMS) implemented by PennDOT includes a database that contains attributes for the location, dimensions, and physical and administrative characteristics for each bridge in the system.

PennDOT has an aggressive bridge inspection program in place to ensure that all of Pennsylvania's bridges are inspected at least once every two years. Structurally deficient bridges are inspected more frequently if their condition warrants. A structurally deficient bridge is considered to be safe, but is in need of costly repairs or replacement to bring it up to current standards. As of September 2008, there were 77 state owned structures in Juniata County were

³ www.AirNav.com

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considered structurally deficient out of 254. Thirteen bridges on state-owned roads in the county were posted with weight restrictions. Fifteen of 34 bridges in the county on local roads were considered structurally deficient, and thirteen of the 34 bridges were posted. There were no bridges on state or local roads that were reported to be closed. Owners of the bridges represent a mix of public and private entities including state government agencies, county agencies, local government agencies, and railroads, among others.

Seda Cog is conducting a Low Use/Redundant Bridge Removal Pilot Study in for the locally owned bridges in Juniata and Snyder County. The purpose of the study is to collaborate with officials from local Townships, from Juniata and Snyder County, and from PennDOT to identify solutions for some of the maintenance and repair issues surrounding low use and/or redundant local bridges that are considered structurally deficient or functionally obsolete. The recommendations of the study are expected to include proposals for prioritizing local bridge projects, for packaging related repairs on a number of bridges into a single project, identifying potential programs to fund repairs, or developing projects and guidelines to remove unneeded bridges.

Bicycle and Pedestrian Transportation

In planning for transportation needs of the county, it is important that non-motorized transportation be taken into consideration, including bicycle and pedestrian mobility. This involves identification of a system of pathways and trails that provide connectivity for residents in the county to various destinations. In the boroughs of the county, walking or biking to a destination may be a more realistic option for residents than it is in the more rural portions of the county. This is because of the relatively short distance between homes and shopping, employment, parks, civic uses, and educational institutions, and because of the existing sidewalk, crosswalk and other non-motorized transportation infrastructure that is in place.

Walking and bicycling contribute to the health of the people in the community, and the overall health of the environment as they reduce the number of vehicles that are on the road. Bicycle and pedestrian facilities can also facilitate greater public transit ridership if bicycle and pedestrian facilities are coordinated with public transit stops. In many of the more rural areas, bicycling and walking may be viewed as recreational activities, as opposed to strictly a form of transportation from one destination to another. In these areas, greenways and trails can provide connectivity for bicyclists within forested areas and throughout the rural community.

Pedestrian Mobility

Although the personal automobile will most likely never be replaced in Juniata County, the safety of pedestrians needs to remain a concern of utmost importance. Especially in the boroughs, villages, and neighborhoods of the county, pedestrians should be able to safely walk, jog, and/or bike from one destination to another. Where it is feasible, encouraging safe pedestrian mobility may encourage decreased use of the automobile and may allow residents to access public and private recreation centers, schools, residential areas, commercial centers, churches, and other community facilities and destinations. Common pedestrian routes connecting these locations should include sidewalks, trails, and designated walking paths.

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Pedestrian mobility should also be considered in areas of new development. Incorporating sidewalks, trails, and walking paths into new developments provides a safe means for people to walk for exercise or leisure, in addition to walking to other neighborhood or community destinations.

Bicycling

The Commonwealth of Pennsylvania has recognized the importance of pedestrian level mobility and authorized PennDOT to develop a statewide Bicycle and Pedestrian Master Plan. The plan was completed in 1996 and the recommendations form the foundation for guidelines in this plan pertaining to pedestrian and bicyclist safety and mobility.

The plan establishes the following principles:

- Bicycles are considered to be a vehicle in Pennsylvania.
- Roadways should, at a minimum, be bicycle compatible.

Bicyclists are classified in one of the following groups according to their level of ability. The plan provides general guidelines for each group:

- Group A – Advanced Bicyclist
 - These are experienced riders who can operate under most traffic conditions. They comprise the majority of the users of collector and arterial streets and enjoy the ability to operate at maximum speed with minimum delays.
 - Recommendations to meet the needs of this class of bicyclist include:
 - Provide direct access to destinations usually via the existing street and highway network.
 - Provide sufficient operating space on the roadway or on the shoulder to reduce the need for either the bicyclist or the motorist to change position when passing.
- Group B – Base Bicyclist
 - This group consists of casual or new adult and teenage riders who are less confident in their ability to operate in traffic without special provisions for bicycles.
 - Recommendations to meet the needs of this class of bicyclist include:
 - Provide comfortable access to destinations using low speed, low traffic volume, street or designated bike paths.
 - There should be a well-defined separation of bicycles and motor vehicles on arterial and collector streets, or on a separate bike path.
- Group C – Child Cyclist
 - This group of cyclists consists of pre-teen riders whose roadway use is initially monitored by parents.
 - Recommendations to meet the needs of this class of rider include:
 - Provide access to key destinations surrounding residential areas including schools, recreation facilities, and other residential areas.
 - Residential streets with low motor vehicle speed limits and low volumes of traffic.

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- Well defined separation of bicycles and motor vehicles on arterial and collector streets or on separate bike paths.

BicyclePA Corridors – Route J

In addition to serving as a major vehicle transportation corridor in Pennsylvania, U.S. 11/15 is also a key corridor in the state’s BicyclePA proposed long distance touring routes, which combine on-road sections with off-road paths. In total, there are eight long-distance touring routes identified in the state, including two east-west routes, four north-south routes, a route that follows Lake Erie in northwestern Pennsylvania, and a route that follows the southeastern border of the state near Philadelphia. Route J is a north-south route that travels through central Pennsylvania, exiting the state to the south in York County, and to the north in Crawford County. In Juniata County, Route J traverses the eastern part of the county along U.S. 11/15.

Greenway Planning

Rivers and streams can be a significant asset to the township in terms of maintaining open space, sustaining biological and ecological diversity, and attracting tourism. Introducing bicyclist and pedestrian trails along streams helps to protect the waterway and add to the quality of life in the community. The Juniata/Mifflin County Greenway, Open Space, and Rural Recreation Plan further discuss the benefits and locations of greenways in the county.

Transportation Concerns

Understanding local transportation needs helps to focus time, energy, and resources at the county level. Various initiatives throughout this plan sought input from municipalities and other key stakeholders into transportation issues in the county.

Municipal Officials Transportation Survey

As part of this plan, the county’s local municipalities were invited to identify local transportation issues by answering the following seven survey questions. Transportation issues that were identified through this survey are contained in **Table 8-4**.

- Identify any safety related intersections or roadways within your municipality. (Frequent crash sites, sight distance problems, etc.)
- Identify any roadways that are in need of upgrade. (Repaving, pothole repair, etc.)
- Identify any intersections or roadways that have problems with stormwater, snow, or ice.
- Identify any intersections or roadways that need additional signage.
- Identify any intersections or roadways where there is a need for turning lanes, shoulder widening, radii improvements, or signalization.
- Identify areas where there is a need for additional roadways or better linkage of popular destinations.

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- Identify any intersections or roadways that are congested or busy and identify days and hours when busy.

The following municipalities responded to the survey:

- Fermanagh Township
- Mifflintown Borough
- Port Royal Borough
- Susquehanna Township
- Thompsontown Borough

Table 8-4: Local Transportation Issues Identified by Municipalities

Municipality	Location	Description of Problem
Fermanagh Township	Intersection of Cedar St (SR 2006) and Swamp Road (SR 2001/T-392)	Bad intersection
Mifflintown Borough	Intersection of Front St. and Orange St.	Poor sight distance
Mifflintown Borough	Intersection of Third St. and Washington Ave.	Poor sight distance
Mifflintown Borough	Washington Ave. between Third Street and Schoolhouse St.	Storm drain continually damaged by tractor trailers
Mifflintown Borough	Intersection of Orange St. and Washington Ave.	Poor sight distance
Port Royal Borough	Market St. and 8th St.	Frequent crash site
Port Royal Borough	Market St. and 4th St.	Frequent crash site
Port Royal Borough	Market St. and 3rd St.	Frequent crash site
Port Royal Borough	Market St. and 1st St.	Poor sight distance
Port Royal Borough	Market St. and 3rd St.	Poor sight distance
Port Royal Borough	Market St. and 4th St.	Poor sight distance
Port Royal Borough	1st St.	Repaving needed
Port Royal Borough	8th St. between Market St. and Main St.	Repaving needed
Port Royal Borough	8th St. between Market St. and Milford St.	Repaving needed
Port Royal Borough	Parts of Milford St.	Repaving needed
Port Royal Borough	North side of Main St. between 3rd St. and 2nd St.	Repaving needed
Port Royal Borough	Milford St. and 3rd St.	Slush buildup from ice/snow
Port Royal Borough	Milford St. and 8th St.	Water buildup due to poor drain
Port Royal Borough	Milford St. and 6th St.	Poor water drainage
Port Royal Borough	Market St. and 6th St.	Water buildup due to low spot
Port Royal Borough	1st St. and Market St.	Signage - hidden street
Port Royal Borough	8th St. and Market St.	Signage - school crossing
Port Royal Borough	8th St. and Milford St.	Congestion
Port Royal Borough	8th St. and Market St.	Congestion
Port Royal Borough	6th St. and Milford St.	Congestion
Port Royal Borough	6th St. and Market St.	Congestion
Port Royal Borough	4th St. and Milford St.	Congestion
Port Royal Borough	4th St. and Market St.	Congestion
Port Royal Borough	Various	Congestion due to events - Juniata County Fair and races (April through September)

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Municipality	Location	Description of Problem
Susquehanna Township	Various	Congestion during rush hours - 5:00 a.m.-7:00 a.m. and 2:30 p.m.-6:00 p.m. Traffic comes from Harrisburg and Excel Homes.
Susquehanna Township	T-417 and T-423	Not wide enough on east end to pass since school buses are using for bus routes.
Susquehanna Township	T-425, T-534, T-419, T-400, T-435	Traffic
Susquehanna Township	Various	Better maintenance needed on dirt roads. They need to be topped with 2A.
Susquehanna Township	Various	No speed limits on dirt roads
Thompsontown Borough	Pond St. off of Colyer St.	Needs widened
Thompsontown Borough	Pond St. off of Colyer St.	Water problems
Thompsontown Borough	The Square	Safety issue with five point intersection
Thompsontown Borough	The Square	Congestion, especially from 6:00 a.m. through the lunch hour
Thompsontown Borough	Farm Development	Stormwater issues during heavy rains
Thompsontown Borough	Various	The development of the Burns property will have a significant impact on the flow and amount of traffic in the borough.

Source: Municipalities, RETTEW Associates, Inc.

County Road Tour

As part of the comprehensive plan process, a county-wide road tour was conducted in July of 2007. The road tour consisted of stops and discussions relating to various points of interest including historic sites, downtown areas, recreation resources, and transportation issues. The following issues were discussed in preparation for the road tour, or during the road tour.

- The Academia Covered Bridge is used more as a walking/biking facility than for motorized vehicles.
- There are no county owned bridges. All bridges in the county are owned by either the state or by the local municipalities.
- There is a need for a formally designated park and ride lot in the county.
- The intersection of Cedar Spring Road and Cross Street in Mifflintown borough has sight distance issues. It is difficult to see when pulling out onto Cedar Spring Road from Cross Street.
- The road across from Tuscarora Junior High School onto Old Route 22 is an issue.
- SR 35 through Mifflintown and on to Richfield needs to be widened due to increased traffic.
- The intersection of Cedar Spring Road and Industrial Park Road is dangerous.

Accident and Safety Data

PennDOT collects and maintains crash data for municipalities in the state. For the five year period from January 1, 2002 through December 31, 2006, several locations in Juniata County were noted for having a high crash incidence, with a minimum of five crashes per site. Areas of high accident occurrence include the general locations listed below. Information on specific accident locations is not able to be reproduced without the written consent of PennDOT. For more information on specific accident locations, please contact PennDOT.

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- Intersection of SR 75, SR 3029, and SR 3018
- Intersection of SR 75 and SR 850
- Intersection of SR 75 and SR 3013
- Intersection of SR 75 and SR 3008
- Intersection of SR 75 and SR 333 (south of Tuscarora Creek)
- Intersection of SR 75 and SR 333 (north of Tuscarora Creek)
- Intersection of SR 333 and SR 3011
- SR 35 near the bridge over East Licking Creek
- Intersection of SR 333 and River Road
- Intersection of SR 333 and SR 35
- Intersection of SR 35 and SR 3002
- Intersection of SR 3002 and SR 3005
- Intersection of SR 3002 and Smith Road
- Intersection of SR 3002 and SR 75
- Intersection of SR 75 and U.S. 22/322
- Intersection of SR 3002 and U.S. 22/322
- Intersection of SR 35 and U.S. 22/322
- Intersection of SR 2001 and SR 2006
- Intersection of SR 2007 and SR 35
- Intersection of SR 235 and SR 35
- Intersection of SR 235 and SR 333

Following the crash analysis prepared by PennDOT, SEDA-COG field viewed several safety improvements to consider programming. These sites are listed in Table 8-5. The SR 3002 and SR 35/SR 4005 sites are considered high priorities to program in the near term.

Table 8-5: Sites Field Viewed by SEDA-COG for Safety Concerns

Municipality	SR	Location	Project Improvement	Comments
Tuscarora Township	35	210/2278 to 220/0500	Sight Distance	Remove home. Numerous requests/complaints from residents, legislators, PennDOT, etc.
	4005	10/0000 to 10/0500		
Milford Township	333	170/0000 to 180/0000	Alignment	Probably remove obstructions, realign curve; might go less expensive by installing chevrons, other warning signs, painting lines.

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Municipality	SR	Location	Project Improvement	Comments
Fermanagh Township and Walker Township	3002	120/0000 to 130/0000 (Main St.)	Center lane for left turns	Many complaints; commercial strip & high ped corridor; within 1000' of planned new SR 35 bridge to be open fall '08; need to program separately

Source: SEDA-COG, RETTEW Associates, Inc.

Transportation Planning Toolbox

The county may consider the following tools as potential solutions to alleviate some of the identified transportation issues.

Official Map

The official map is also discussed in the future land use plan as an effective tool for a municipality to facilitate the planning, acquisition, and implementation of community facilities and transportation improvements. The official map is a useful but underutilized planning tool. Its purpose is to identify public and private lands for which the public has a current or future need. It can be used to legally establish the location of existing and proposed streets, waterways, parks, bikeways, pedestrian paths, floodplains, stormwater management areas, public facilities, intersections needing improvement, and historic sites. Any or all of these features may be shown on the official map. The land that is shown on the map is not a “taking” from the landowner; the municipality must at all times be prepared to compensate the owner for the fair value of the land. The reservation on the map merely gives the municipality the first opportunity to purchase the identified property.

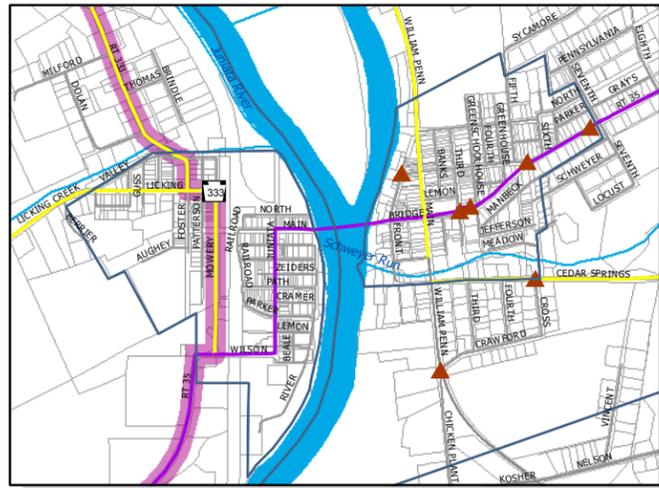
In order to assist with planning, acquisition, and implementation, as well as to inform residents of the township’s future plans and transportation improvements, municipal officials should consider developing an official map. The official map can include existing and proposed publicly owned and operated facilities including the roadway network, water and sewer infrastructure, parks, greenways, and trails.

Transportation Impact Fees

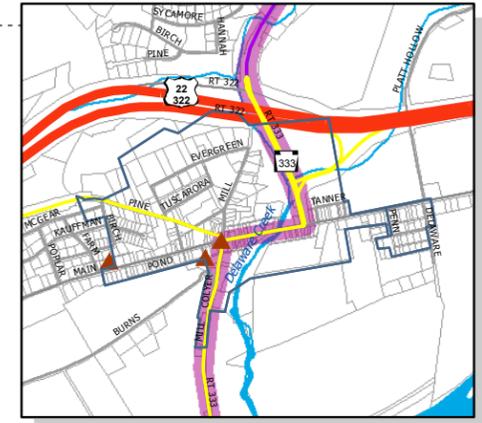
Traditionally, municipalities in Pennsylvania have relied on state and county funding to provide major upgrades to their transportation system. There are, however, significant tools provided by the legislature that municipalities often fail to utilize. As a result, many planned transportation improvements are never implemented.

One tool available to municipalities for funding transportation improvements is the establishment of impact fees. Acts 203 and 209 of 1990 provide municipalities with the legal authority to assess impact fees on developers for transportation improvements. The laws authorize the use of impact fees for improvements that are included in a municipality’s Transportation Capital Improvements Program. The costs attributable to development, including acquisition of lands

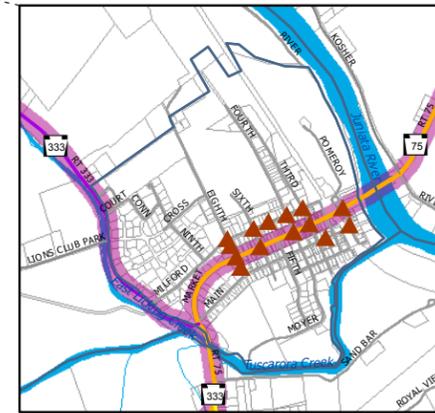
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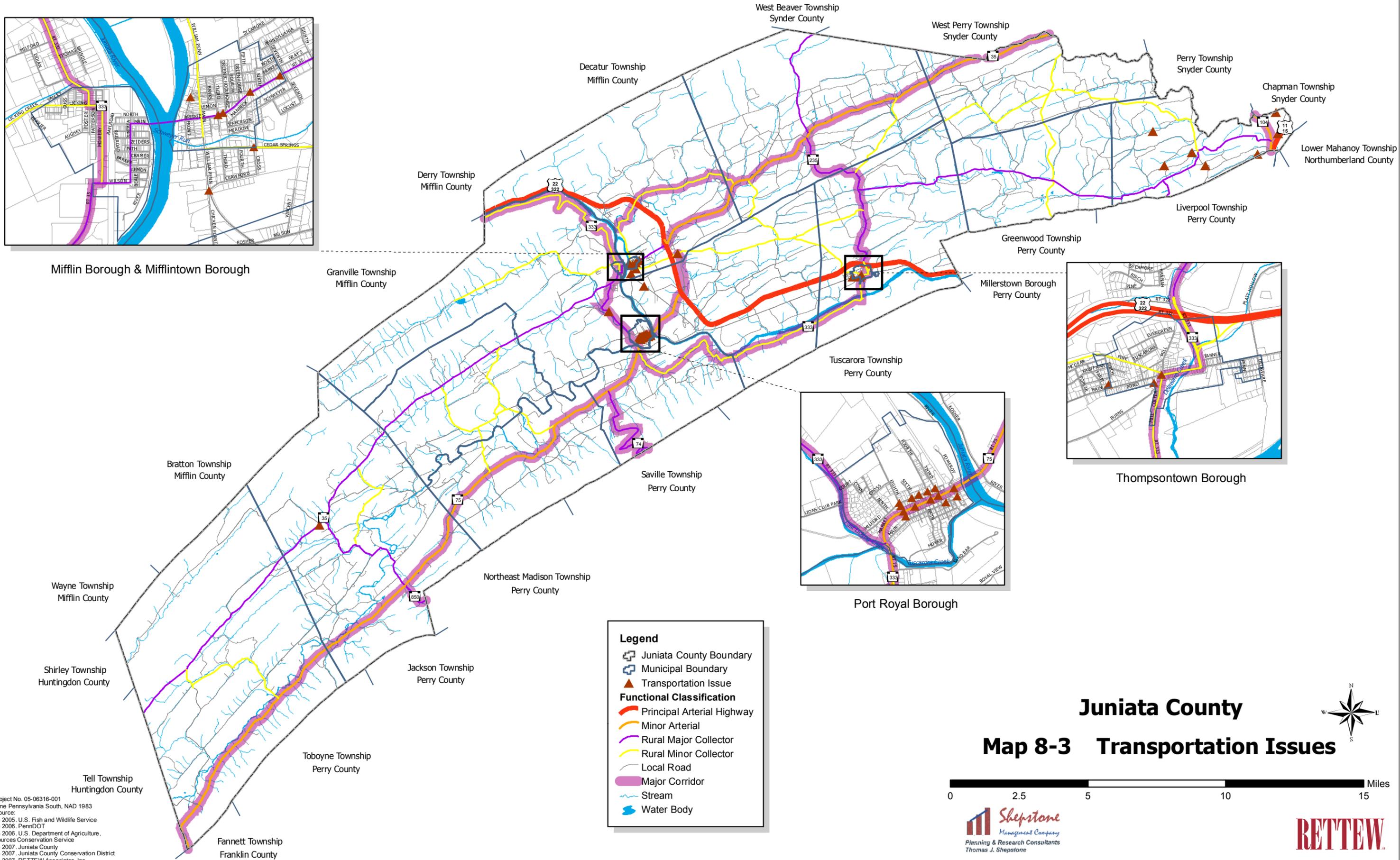
Mifflin Borough & Mifflintown Borough



Thomsontown Borough



Port Royal Borough

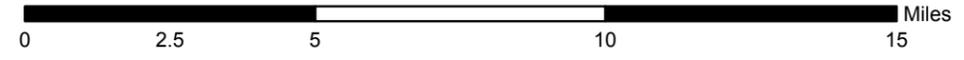


Legend

- Juniata County Boundary
- Municipal Boundary
- Transportation Issue
- Functional Classification**
- Principal Arterial Highway
- Minor Arterial
- Rural Major Collector
- Rural Minor Collector
- Local Road
- Major Corridor
- Stream
- Water Body

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Map 8-3 Transportation Issues



RETTEW Project No. 05-06316-001
 PA State Plane Pennsylvania South, NAD 1983
 Base Map Source:
 Copyright (c) 2005, U.S. Fish and Wildlife Service
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 Natural Resources Conservation Service
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and rights-of-way, legal costs, engineering and planning costs, debt service, and any other cost directly related to road improvements within the service area or areas may be paid for with these fees. In short, developers can be required to contribute to projects that may not lie directly adjacent to their site, costs that cannot be assessed without the use of impact fee legislation.

Impact fees would appear to be a powerful tool for raising the necessary funds to pay for transportation improvements, yet they are rarely used in implementing comprehensive plans in Pennsylvania. The primary reasons for the lack of use are the limited utility of impact fees in areas with existing traffic congestion problems and the fact that the existing laws require a lengthy and expensive process, culminating in the adoption of an impact fee ordinance, before such fees can be assessed. Municipalities often consider the up-front costs associated with implementing an impact fee assessment to be too costly; however, these costs will eventually be recouped through increased efficiency of the transportation system. The county should work with local municipalities to educate them on their ability to assess impact fees.

Developer Contributions

Even without an impact fee ordinance, developers can be required to mitigate the effects of the traffic generated by their site within their project area. The county should encourage municipalities to ensure that appropriate traffic studies and subsequent roadway and signal improvements are required of the developer for each new development project. Municipal officials should also be hesitant in granting waivers or accepting fees in lieu of required transportation improvements, as the necessary improvements may never occur. Additionally, municipal officials should encourage developers working in the same area to pool their resources to make necessary roadway upgrades. The subdivision and land development ordinance can provide greater approval, oversight, and control of new development, and can allow local officials to negotiate necessary roadway and other public improvements with developers.

Traffic Calming

Speeding has been identified as an issue in several areas of the county. Corrective measures to curtail speeding include increased police presence and employing traffic calming techniques. Increasing police presence is not always possible and comprehensive safety improvements may not be possible due to existing limitations. In lieu of increasing police presence or reconstructing entire sections of roadway to curtail speeding and other problems associated with vehicular traffic, this plan recommends the incorporation of traffic calming techniques where appropriate. The Pennsylvania Department of Transportation developed a “Traffic Calming Handbook” to provide information on traffic calming and its place on the roadways of Pennsylvania. The handbook contains information on various traffic calming issues such as legal authority, liability, funding, and impacts on emergency services.

Traffic calming began in the Netherlands in the 1960s with the design of “Woonerven” or “living yards.” “Woonerven” integrated motor traffic with pedestrian and bicycle traffic on shared street space. Traffic calming measures are typically limited for use on local streets; however, they have been incorporated on collector streets with predominantly residential land use and on streets through downtown business districts. Because traffic calming devices are designed to slow

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traffic and reduce cut-through volumes, they are generally not appropriate for use on arterial streets, which are intended to accommodate higher speeds and larger traffic volumes.

Traffic calming measures are mainly used to address speeding and cut-through traffic volumes on neighborhood streets, which often cause intimidating or unsafe conditions for pedestrians and other non-motorized traffic. By addressing high speeds and cut-through volumes, traffic calming can increase both the real and perceived safety of pedestrians and bicyclists, and improve the quality of life within the neighborhood.

Traffic calming devices can be divided into three classifications: horizontal deflection; vertical deflection; and physical obstruction. Examples of traffic calming methods are listed below.

- **Horizontal Deflection**

- Curb extension / bulb-out – This type of device creates a safer atmosphere for pedestrians by lessening the crossing distance. Narrowing the street width encourages motorists to slow down.
- Chicane – Chicanes are curb extensions that alternate from one side of the street to the other, forming S-shaped curves and encouraging motorists to slow down. Chicanes can also be artificially created by allowing parking on alternating sides of the street.
- Raised median island / pedestrian refuge – islands in the middle of a crosswalk or intersection that divide the distance pedestrians are required to walk in half and encourage motorists to slow down through the intersection.
- Traffic Circles – Raised islands, placed in intersections, around which traffic circulates. They are appropriate for neighborhood streets by forcing motorists to drive around the circle, but are not effective for large vehicles, such as fire trucks, or high volumes of traffic.
- Roundabouts – Roundabouts are circular intersections appropriate for streets with medium to high volumes of traffic and force motorists to decrease their speed by driving around the circle.

- **Vertical Deflection**

- Textured Pavement – Textured and colored pavement highlights the presence of a crosswalk or intersection. Stamped pavement or alternating paving materials create an uneven surface for vehicles to traverse and may be used to emphasize an entire intersection, pedestrian crossing, or entire street block.
- Speed Hump and Speed Table – Round raised areas placed across the roadway that are generally 10 to 14 feet long and are 3 to 4 inches high. Speed tables are longer, flat-topped speed humps that are typically long enough for the entire wheelbase of a passenger car to rest on the flat section. Speed humps reduce speeds more than speed tables, but speed tables are good for locations where low speeds are desired but a somewhat smooth ride is needed for larger vehicles.

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- Raised Crosswalk – Raised crosswalks are speed tables at a crosswalk location. They slow traffic and make pedestrians more visible to motorists.
- Raised Intersections – Flat, raised areas covering an entire intersection that can be marked with alternate paving materials. Raised intersections encourage decreased speed and make the intersection more pedestrian friendly.
- **Physical Obstruction**
 - Diverters – barriers that are placed diagonally through an intersection, creating two L-shaped streets, and forcing traffic to turn. Diagonal diverters maintain full bicycle and pedestrian access while decreasing volume on local streets.
 - Full or Partial Street Closure – barriers placed across one or both lanes of a street to completely or partially close the street to through traffic, decreasing automobile volumes while maintaining pedestrian and bicycle accessibility.
 - Median Barriers – islands located down the center of a street and continuing through an intersection, preventing through movement at a cross street.
 - Triangular Center Island or Forced Turn Island – raised islands that block certain movements on approaches to an intersection. They reduce volumes, improve safety, and make crossing distance shorter for pedestrians. They can force right turns only or tighten a right turn, ensuring slowing or stopping before making a turn.

Gateways

Gateways identify the beginning or the end of distinct places, such as counties and municipalities or villages, districts, or natural areas. They provide a sense of welcome and transition, as well help to orient pedestrians and motorists. Gateway treatments may include signs, landscaping, lighting, and other amenities, and they are typically located at entrances to developed areas such as villages or boroughs, or when transitioning from one natural feature or physiographic area to another. Gateways can also serve as a traffic calming device, alerting motorists that they are entering a developed area.

Speed Display Signs

Another option for speed control is coordination between the county, PennDOT, and local municipalities regarding the placement of speed display signs. The local PennDOT office may have speed display signs available that could be posted on state roads to encourage motorists to slow down.