US ROUTE 219

I-68 (MD) to Somerset, PA

NEEDS ANALYSIS

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

DISTRICT 9-0

March 1999

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I-68 TO SOMERSET

EXECUTIVE SUMMARY

In accordance with PennDOT Publication No. 319 - Needs Study Handbook and Publication No. 278 - Environmental Impact Statement Handbook, the Pennsylvania Department of Transportation has undertaken this study in order to evaluate transportation needs along US 219 (a two-lane, rural principal arterial) from I-68 in Garrett County, MD to the southern terminus of the Meyersdale Bypass, a distance of approximately 13 km (8.1 mi.), and from the northern terminus of the Meyersdale Bypass to the southern terminus of the four-lane US 219 in Somerset, PA, a distance of approximately 24 km (15.2 mi.). This study also includes SR 2031 and SR 653 (two-lane, rural collectors) between Garrett Borough, PA and US 219 known as the "Garrett Shortcut", a distance of approximately 15 km (9.1 miles).

The present needs analysis evaluates the following issues regarding US 219 and its associated study area: existing roadway geometric constraints; existing and future traffic congestion; travel times; origin/destination survey; accidents; system linkage and continuity; emergency services; socioeconomic characteristics; and, economic development potential.

Existing Roadway Geometric Constraints:

In Pennsylvania, much of the current alignment is below standards. There are numerous horizontal curves and vertical grades exceeding acceptable standards. Eleven-foot lane widths are common on most of US 219 within Pennsylvania, below the minimum travel lane width of 12 feet. Approximately 89% of the roadway has shoulders that are less than the 8-feet (2.5 m) minimum width. Numerous areas of both roadways contain horizontal and vertical curves with limited sight distances due to the poor alignments or obstructions.

Existing and Future Traffic Congestion:

Levels of Service (LOS) Analysis was conducted on US 219 and SR 2031 for 1998 and 2020 for PM peak - representing the worst case. The results for 1998 indicated a majority of the roadway segments have deficient levels of service. LOS projections for 2020 indicate the road segments generally degrade one level of service between 1998 and 2020 with many segments projected to operate at unacceptable LOS in 2020.

Travel Times:

Travel time runs were performed in both directions on US 219 and the Garrett Shortcut during both peak and off-peak hours. The average travel speed varied from 25.3 to 64.8 miles per hour. Travel speed was slowest on US 219 between Meyersdale to SR669 in Salisbury due to intersection delays, poor roadway geometry, and turning vehicles. Posted truck speed along some sections is reduced to 20 mph due to steep grades. Another slow section was on the Garrett

Shortcut along its southern-most portion due to a narrow (18' width) bridge and substandard geometry.

Origin/Destination Survey:

An origin/destination survey was completed in order to obtain data on the number, type, and frequency of trips made within and through the study area. A predominant trend in the trip distribution data is the length of the trips being made:

- 44% of the total trips have either one or both ends of the trip outside the study area.
- The remaining 56% are local trips, but nearly half of these trips are longer distance trips extending further than the adjacent town (i.e., Somerset to Salisbury).
- Most of the through trips stem from Western Maryland, Johnstown, and points north.
- The most common termini for trips having one end inside the study area and the other outside the study area are Johnstown and the greater Pittsburgh area.
- The majority of local trips either start or end in Meyersdale or Somerset.

Accidents:

Accident data was provided by PennDOT for US 219 from the Maryland State Line to Somerset and for State Routes 653 and 2031 (the Garrett Shortcut) and by the Maryland State Highway Administration for the section of US 219 from I-68 to the PA State Line. The data showed many accidents resulting with injuries and three with fatalities.

Of the 39 total segments studied along US 219, 43% of the segments had accident rates higher than statewide accident rates and 18% of them had accident rates more than twice the statewide accident rate. Of the segments studied along the Garrett Shortcut, 47% had accident rates higher than the statewide accident rate with one segment being more than two times the statewide rate.

System Linkage and Continuity:

Due to its location and connections, US 219 receives heavy local, regional, and interstate traffic. The substandard, two-lane roadway between I-68 in Maryland and the Pennsylvania Turnpike in Somerset (excluding the Meyersdale Bypass) is a noticeable *north-south* "missing link" in the transportation system of this region.

Emergency Services:

An efficient transportation system for vital emergency services is a fundamental component of quality of life; it ensures that the local population is well protected and can have adequate emergency care.

Due to a variety of geometric deficiencies and decreasing levels of service along US 219 and SR 2031, the ability of these roads to efficiently support an emergency response system is a concern.

Socioeconomic Characteristics:

The population of most of the municipalities within the study area in Pennsylvania was stagnant or exhibited minor declines between 1980-1990. Somerset County exhibited a significant decrease in the under-17 age group.

The average of the median housing values for the study area in PA is approximately 65% of the median value for the Commonwealth of PA - an indication that the quality and/or condition of the housing stock is not as high in the study area as other parts of Pennsylvania.

The greatest number of jobs in both Somerset County, PA and Garrett County, MD are found in the services sector. Although the mining and agricultural sectors have relatively low percentages of total jobs, these two sectors are economic mainstays for Somerset County.

Unemployment rates in the study area for 1990 were generally higher than state averages. Garrett County, MD, had a rate almost double the Maryland state average.

A majority of the municipalities experienced declines in median household income (MHI) between 1979-1989. The poverty status for the study area in 1989 was higher than state and national rates.

Economic Development Potential:

Personal and telephone interviews were conducted with local officials, Chambers of Commerce representatives, county and regional planning officials, and business leaders. Many of them commented on the need for an efficient north-south highway linkage for better accessibility; the stagnant economy and the need for economic development; poor accessibility to and from the area; and, vehicles (trucks and cars) avoid using US 219 due to safety concerns.

The area has developable land (close proximity to public infrastructure) and several key industrial parks that have infrastructure present but have yet to be fully developed. They include: Grantsville, MD (20 acres undeveloped); Meyersdale (nine acres); Somerset (35 acres); and, PBS Coal Company property at the intersection of US 219 and SR 281 in Somerset Township (300 acres).

Project Needs Statement

Transportation improvements to US 219 between Somerset, PA and I-68 in Maryland (excluding the Meyersdale Bypass) are needed based on the following:

- Forty-three percent (43%) of the 39 total roadway segments on US 219 and 47% of the 19 total roadway segments on the Garrett Shortcut have accident rates that exceed the statewide accident rate. Seven of these roadway segments (18%) on US 219 and one segment (5%) on the Garrett Shortcut have accident rates that are more than twice the statewide accident rate.

- Current and future transportation demands result in deficient levels of service for most of US 219 and all of Garrett Shortcut.

- Numerous roadway geometric features on both US 219 and the Garrett Shortcut do not meet current design standards with regards to lane and shoulder width, vertical grade, horizontal curvature, and sight distance.

- Motorists use the Garrett Shortcut (rural collector) in order to avoid traveling the longer more circuitous segment of US 219 (rural principal arterial) north of Garrett Borough.

- Deficient levels of service, geometric constraints, and lack of passing zones along US 219 and the Garrett Shortcut result in increased travel times and delays.

- The two-lane section of US 219 represents a less efficient system linkage for motorists traveling between the four-lane section of US 219 or the PA Turnpike (I-70/76) in Somerset, PA and I-68 in Maryland.

- US 219 does not provide adequate access to the surrounding municipalities and is a significant contributing factor in limiting economic development.

Project Purpose Statement

Based on the identified transportation needs, the purpose of the US 219 project between I-68 in Maryland and Somerset, PA (excluding the Meyersdale Bypass) is to:

- Improve the level of safety for motorists traveling on US 219;

- Improve the level of service on US 219;

- Improve system linkage between I-68, the Meyersdale Bypass, the four-lane section of US 219, and the PA Turnpike (I-70/76); and

- Provide safe and efficient access for the southern Somerset County region in order to improve economic development potential.

1.0 INTRODUCTION

In accordance with PennDOT manuals, Publication No. 319 - Needs Study Handbook and Publication No. 278 - Environmental Impact Statement Handbook, the Pennsylvania Department of Transportation has undertaken this study in order to evaluate transportation needs along US 219 (a two-lane, rural principal arterial) from I-68 in Garrett County, MD to the southern terminus of the Meyersdale Bypass, a distance of approximately 13 km (8.1 mi.), and from the northern terminus of the Meyersdale Bypass to the southern terminus of the four-lane US 219 in Somerset, PA, a distance of approximately 24 km (15.2 mi.). This study also includes SR 2031 and SR 653 (two-lane, rural collectors) between Garrett Borough, PA and US 219 known as the "Garrett Shortcut", a distance of approximately 15 km (9.1 miles) (Figure 1-1).

The study area for this project encompasses the following municipalities: Berlin Borough, Brothersvalley Township, Elk Lick Township, Garrett Borough, Meyersdale Borough, Salisbury Borough, Somerset Borough, Somerset Township, Summit Township, and Garrett County, Maryland. It is located in the Appalachian Plateau between the Allegheny Mountains to the east and the Laurel Hills to the west with topography consisting mainly of rolling hills. In general, the study area is rural in character with very low population densities - approximately 28 persons per square kilometer (120 persons per square mile) in Somerset County, PA and 19 persons per square kilometer (49 persons per square mile) in Garrett County, Maryland. The dominant land uses are agriculture, forest, and strip mines (abandoned and active) with urban development being limited to relatively small isolated towns.

This segment of US 219 is listed in the Pennsylvania Department of Transportation 12-Year Transportation Program. Both local and regional support for US 219 improvements from public officials, business leaders, and citizens is evident via the Route 219 Association. This association promotes the need for improvements to US 219 from New York to Virginia as part of an international trade corridor. Also, the U.S. Route 219 project is listed under Subtitle F - High Priority Projects of the Transportation Equity Act for the 21st Century (TEA-21). All projects listed as a high priority project can receive funding from fiscal year 1998 through 2003. U.S. Route 219 is allocated over 7 million dollars through TEA-21 funding.

Plans to improve US 219 in Somerset County began in the 1960s. The 1966 and 1970 Comprehensive Plan for Somerset County expressed the need for US 219 to be upgraded along much of its north-south length. As improvements are made, the report stated, the economic development potential should improve.

More recently, the Somerset County Community Economic Recovery Program (CERP) (1991) report discussed transportation concerns by saying "improvements to US 219 south of Somerset to US 48 in Maryland would increase the economic development potential of the local area by reducing travel time and cost."

In 1992, PennDOT completed the US 219 Project Need Analysis which evaluated transportation needs of US 219 between I-68 and Somerset. This study revealed numerous deficiencies along the entire corridor. However, it was determined that the section of US 219 through Meyersdale demonstrated the greatest and most immediate need for transportation improvements. From this, an Environmental Impact Statement (EIS) for the Meyersdale Bypass was prepared which

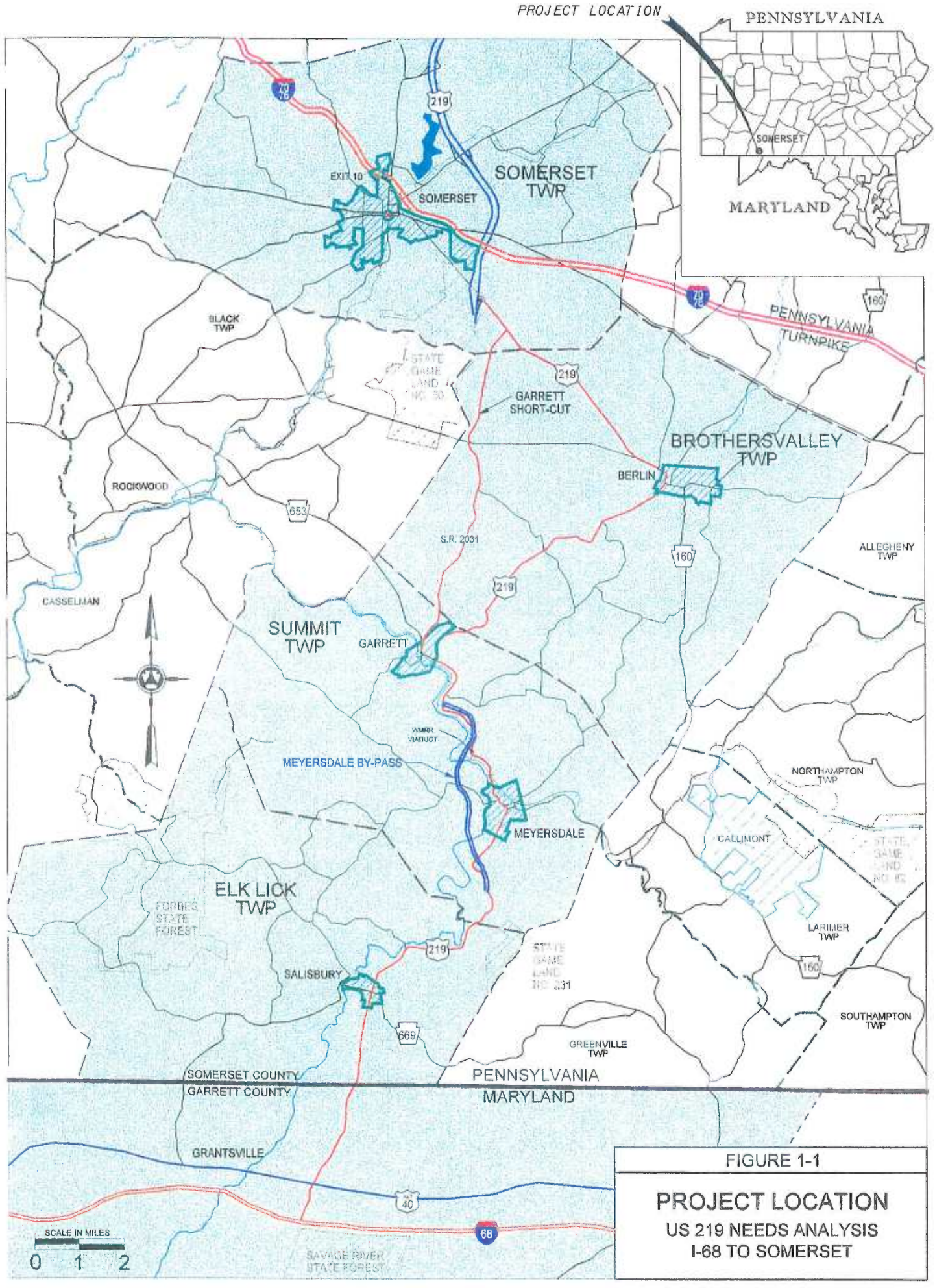


FIGURE 1-1

PROJECT LOCATION

US 219 NEEDS ANALYSIS
I-68 TO SOMERSET

encompassed an approximately 8 km (5 mi.) segment of US 219. The EIS subsequently led to the selection, design, and construction of the recently completed Meyersdale Bypass.

The State of Maryland has completed a preliminary study for its portion of US 219 from I-68 to the Pennsylvania State Line in a recent report titled Feasibility Study: U.S. 219 from I-68 to the PA State Line, Garrett County, Maryland.

This needs analysis evaluates the following issues regarding US 219 and associated study area: existing and future traffic congestion; traffic movement patterns; existing roadway geometric constraints; accidents; system linkage and continuity; socioeconomic characteristics; and, economic development potential.

2.0 TRANSPORTATION

2.1 Existing Roadway Characteristics and Geometric Constraints

The roadways evaluated for geometric constraints included US 219 (a two-lane, rural principal arterial) from I-68 in Maryland to the southern terminus of the four-lane US 219 in Somerset, PA, excluding the section of US 219 along the Meyersdale Bypass, and SR 2031 and SR 653 (two-lane, rural collectors) between Garrett Borough, PA and US 219, also known as the Garrett Shortcut.

Major points of concern for this evaluation were design speeds, horizontal and vertical alignments, lane and shoulder widths, sight distances and safety features such as structure widths, objects in the clear zone, and intersecting streets. The criteria for the evaluation of the roads is based on the standards set by the Pennsylvania Department of Transportation, Design Manual Part 2, and are outlined below:

• Design Speed	60 mph.
• Pavement Width	12 feet, 0 inches, minimum.
• Shoulder Width	8 feet, 0 inches, minimum.
• Vertical Grades	4% maximum.
• Horizontal Curves	4 degrees, 45 minutes, maximum.
• Sight Distance	525 feet minimum (stopping).
• Number of Lanes	Determined by lane capacity design selected for level of service.

Topographic maps and aerial photography, along with information presented in the Somerset County SR 6219 Section B08 Existing Roadway Deficiencies Report, Commonwealth of PA, 1992 were used to identify vertical grades and horizontal curves along the study routes. This information was then field verified.

The horizontal and vertical alignments of US 219 in Maryland appear acceptable. In Pennsylvania, however, much of the current alignment is below standards. There are at least 19 horizontal curves exceeding the 4° 45' maximum curvature. Also, there are eight segments with vertical grades greater than 5% (Figure 2-1).

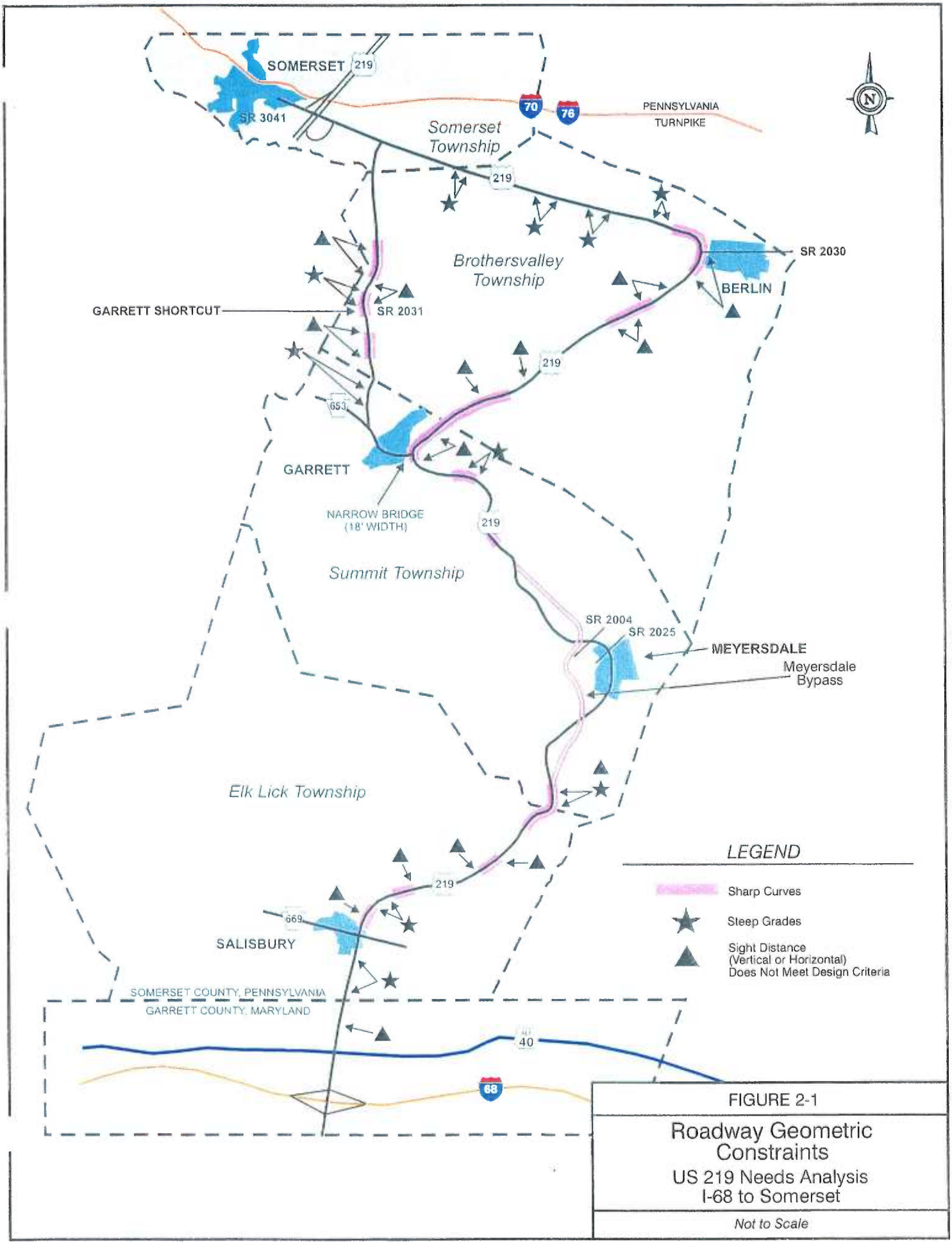


FIGURE 2-1

Roadway Geometric Constraints

US 219 Needs Analysis
I-68 to Somerset

Not to Scale

Eleven feet lane widths are common on most of US 219 within Pennsylvania. Sixty-five percent of the roadway does not meet the minimum travel lane width of 12 feet. Approximately 89% of the roadway has shoulders that are less than the 8 feet minimum width.

Numerous areas of both US 219 and the Garrett Shortcut contain horizontal and vertical curves with limited sight distances due to the poor alignments or obstructions. Nearly 50% of US 219 *does not* meet design criteria for horizontal curves, while approximately 30% *does not* meet vertical grade criteria.

For all of US 219, there are unprotected objects within the clear zone of the roadway. Most of these objects are utility poles, trees, and signs. In addition, there are several unprotected rock outcrops and structures located within ten feet of the roadway.

State Routes 653 and 2031 (Garrett Shortcut) contain numerous curves and grades that do not meet current design standards. The bulk of Garrett Shortcut is over SR 2031. This portion has 10-foot travel lanes and 3-foot shoulders. This road follows the ridges and hilltops of the existing terrain. There are many road and driveway intersections along the entire length of SR 2031.

Sight distance is limited by curves and obstructions at numerous locations along SR 653 and SR 2031. Within the Borough of Garrett, businesses, homes, and sidewalks are close to the street. The narrow bridge crossing Buffalo Creek in Garrett has a total width of 18 feet.

Approximately 84% of US 219 and 96% of the Garrett Shortcut are designated as no-passing zones.

2.2 Traffic Analysis

2.2.1 Existing Traffic Volumes and Level of Service

Existing traffic data was assembled at key locations along US 219 and SR 2031 (Garrett Shortcut) to quantify the existing traffic volumes and levels of service in the study area (Figure 2-2). Intersection turning movement counts and 24 hour automatic traffic recorder (ATR) counts were conducted at seven intersections and six roadway segments between SR 3041 (the end of the four-lane US 219) and the Maryland State Line. The traffic counts were performed on typical commuting weekdays in May of 1998. The turning movement counts were taken during the morning (7 AM-9 AM), midday (11:30 AM-1:30 PM), and afternoon (3 PM-5 PM) peaks as determined from the ATR counts. Traffic data for US 219 in Maryland from the Pennsylvania State Line and Interstate I-68 was obtained from a recently completed Maryland State Highway Administration Study.

Annual Average Daily Traffic (AADT) volumes and truck percentages were computed from the ATR counts (Figure 2-3). AADT was calculated by applying annualization factors from the PennDOT Traffic Data Collection and Factor Development Report (1995) to the ATR counts. The following traffic characteristics can be observed from the data:

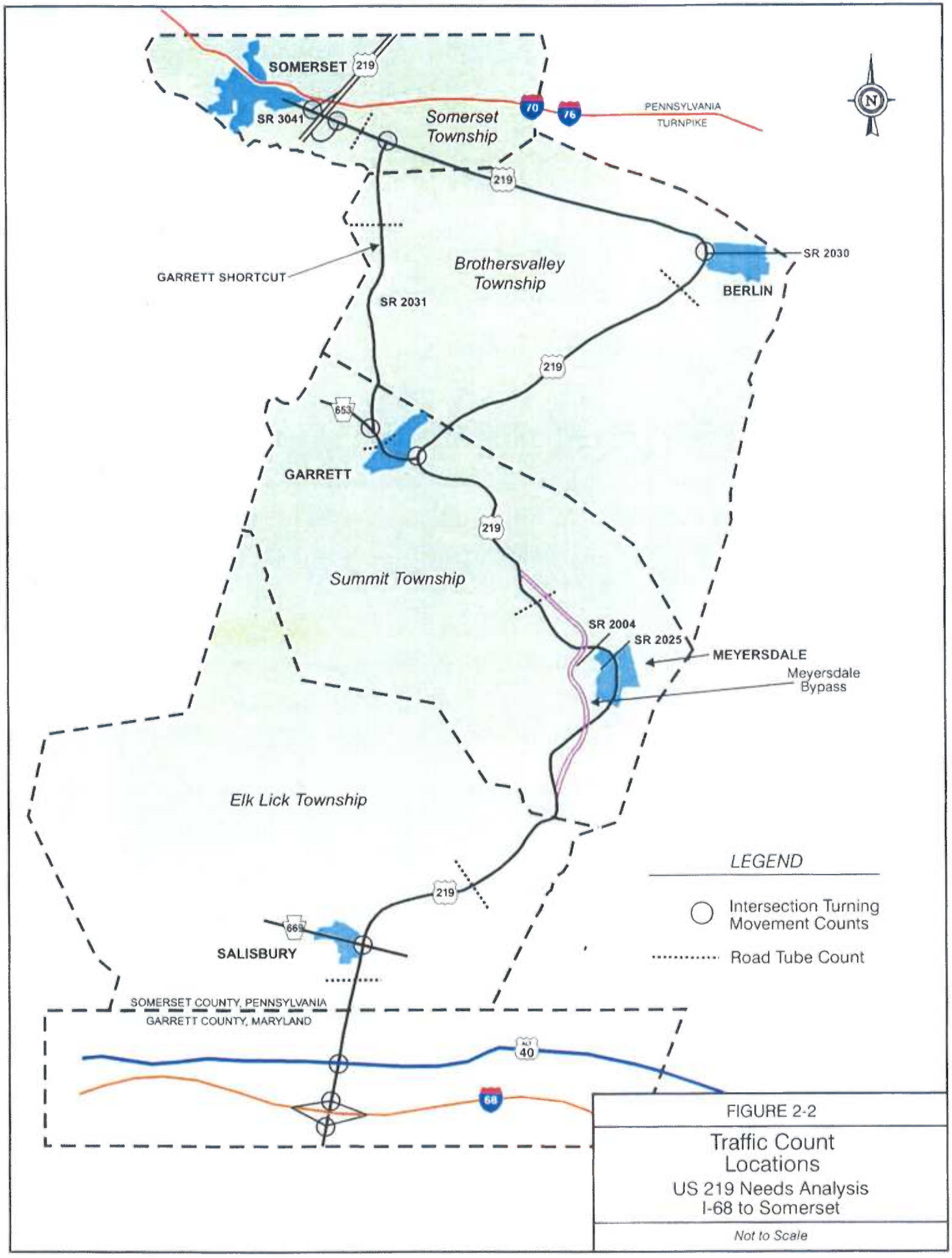


FIGURE 2-2

Traffic Count Locations

US 219 Needs Analysis
I-68 to Somerset

Not to Scale

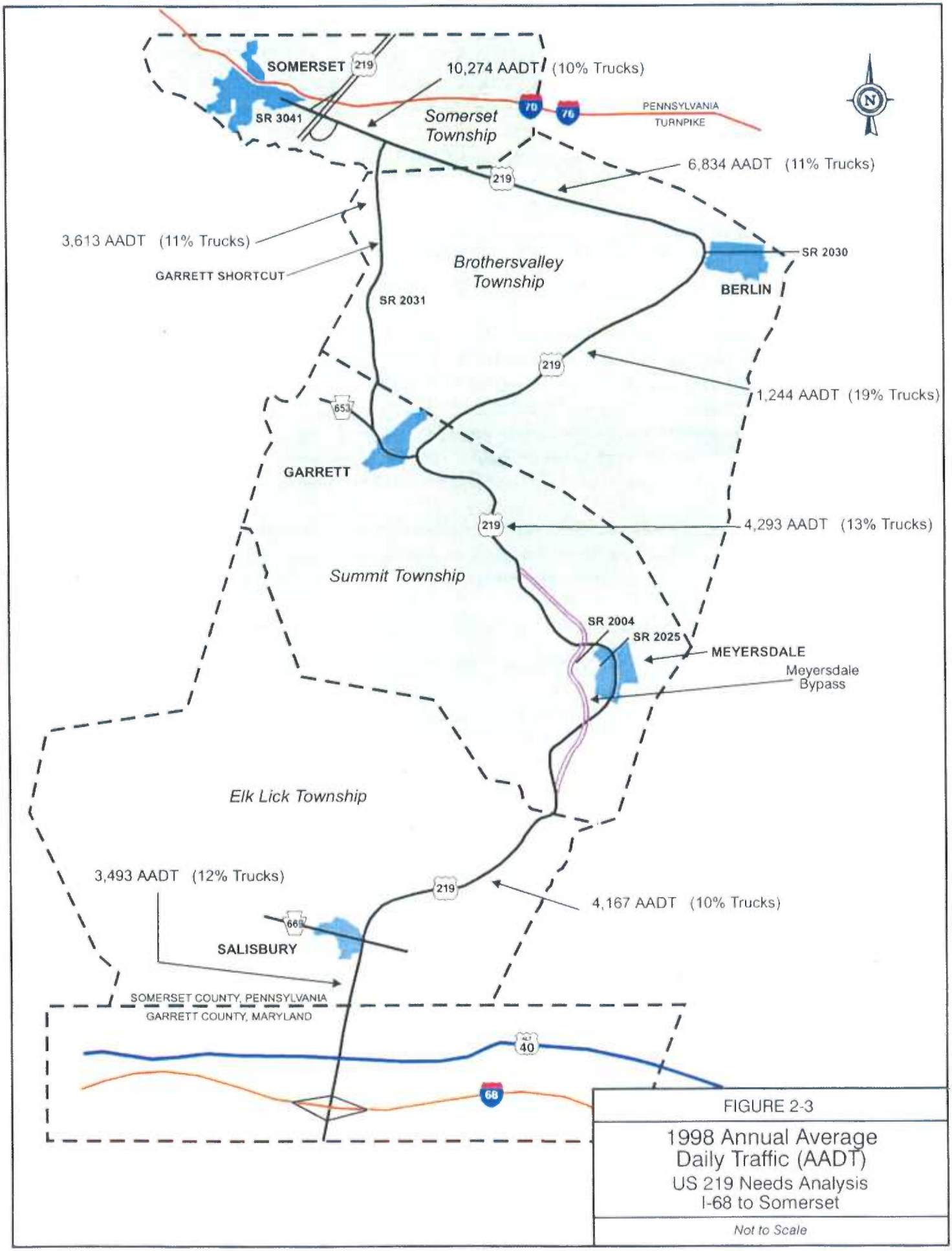


FIGURE 2-3

1998 Annual Average Daily Traffic (AADT)

US 219 Needs Analysis
I-68 to Somerset

Not to Scale

- The highest traffic volume occurs just south of the ramps between two-lane US 219 and improved US 219 (10,274 AADT).

- The Garrett Shortcut carries about three times the traffic of US 219 north of Garrett.

- Heavy truck traffic is experienced along the entire corridor ranging between 10 and 19%.

- The highest truck percent (19%) is on US 219 between Garrett and Berlin. More trucks stay on US 219 than the Garrett Shortcut, the latter having steeper terrain and narrower lanes. The total traffic on US 219 between Garrett and Berlin is lower which also increases the percentage of trucks with respect to the total volume.

Capacity analysis was performed to determine level of service (LOS) for roadway segments and intersections in the study area. Segments were defined by changes in roadway characteristics or intersections of significant roads. Segment analysis was performed using the Highway Capacity Software two-lane rural highway module. Intersection analysis was performed using the unsignalized intersection module of the Highway Capacity Software and signalized intersection analysis was performed using TEAPAC Signal 94 Software. Segment and intersection LOS were calculated for morning, midday, and afternoon peaks.

Since the PM peak represents the highest traffic volumes, only the PM levels of service are reported (Figure 2-4). LOS C was chosen as the threshold for acceptable levels of service for a rural facility. Levels of Service D, E, or F were considered deficient.

The following observations can be made from the existing LOS analysis:

- Six out of the eight roadway segments analyzed have deficient levels of service.

- The entire Garrett Shortcut operates at LOS D or worse.

- US 219 north of Garrett operates at LOS B due to the low volume of traffic; much of the traffic diverts to the Garrett Shortcut. The level of service is a function of the low volume, *not* the performance of the roadway.

- A narrow bridge at the beginning of SR 653 between US 219 and SR 2031 constricts traffic flow producing LOS E.

- US 219 between SR 2030 (Berlin) and SR 2031 (the north end of the Garrett Shortcut) functions at LOS D. This change in LOS along US 219 is due to the addition of traffic from SR 2030.

- US 219 between SR 2031 and improved US 219 is LOS E due to the high volume of traffic at the interchange.

- All of the intersections analyzed function at acceptable level of service (LOS C or better). With existing traffic volumes, the capacity constraints are the roadway segments, not the intersections.

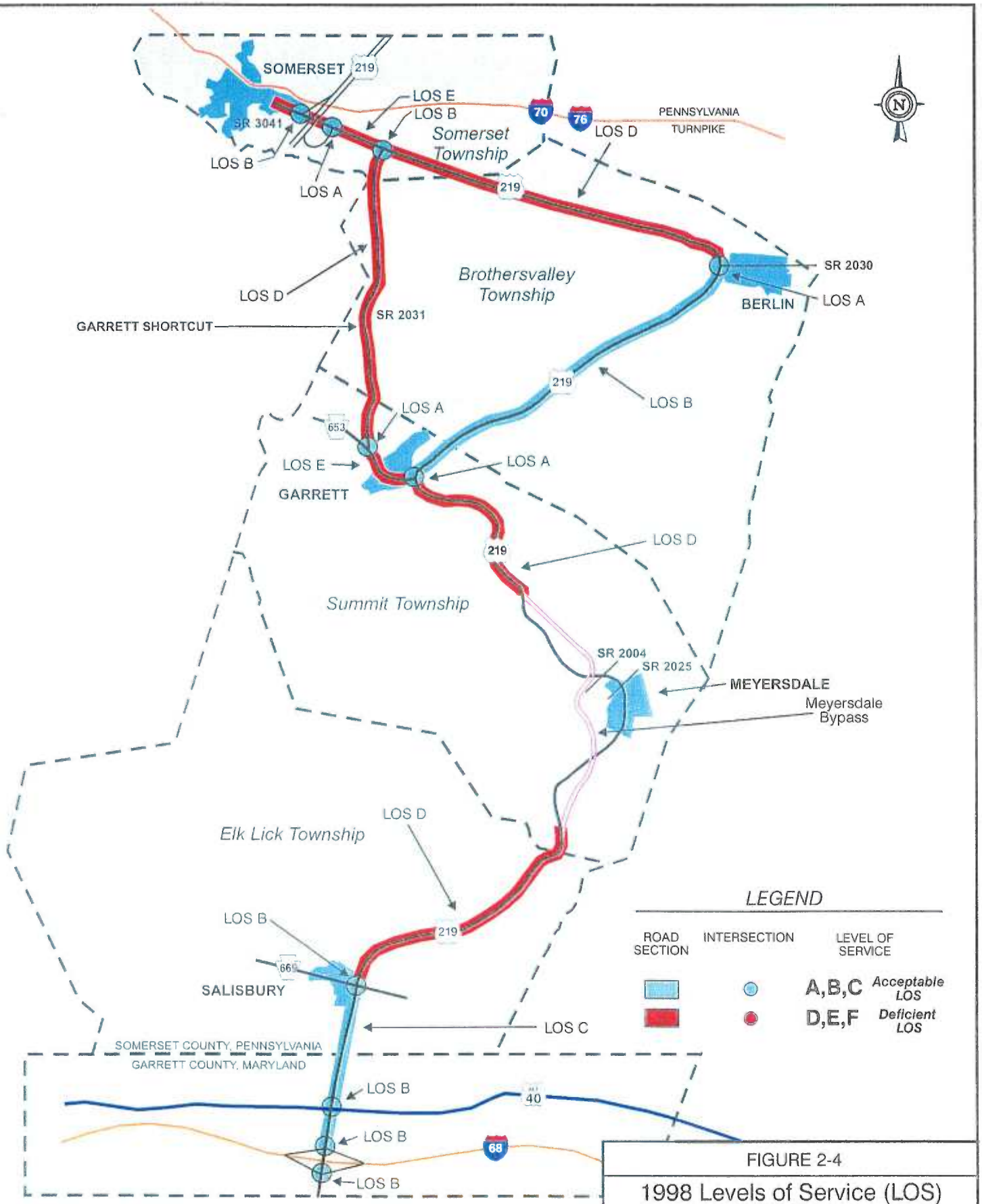


FIGURE 2-4

1998 Levels of Service (LOS)
PM Peak

US 219 Needs Analysis
I-68 to Somerset

Not to Scale

2.2.2 Travel Times

Travel time delay studies were conducted to document average travel times and speeds through the study area. Travel times were measured along US 219 between SR 3041 in Pennsylvania and I-68 in Maryland, and along the Garrett Shortcut in Pennsylvania. The cause, location, and duration of delays were recorded along each travel route. The delay studies can be used to evaluate system performance and identify areas which produce significant delays. The studies were conducted in accordance with the ITE Manual of Transportation Engineering Studies.

The average vehicle method was used to collect the data. This method involves a driver and a recorder who drive a test vehicle over the subject roadway segments while using two stop-watches to measure travel times and delay. Data forms are used to record time, cause and location of delay, and the vehicle's odometer to measure distance traveled. The driver operates the vehicle at the perceived average speed of the traffic stream.

Travel time runs were performed in both directions on US 219 and the Garrett Shortcut during both peak and off-peak hours. The trips were conducted on weekdays between 10 AM and 6 PM. The average travel speed varied from 25.3 to 64.8 miles per hour (Figure 2-5). The following observations were made of the travel times and delay along US 219 and the Garrett Shortcut:

- Delays along US 219 ranged from a 5 second stop behind a left turning vehicle to a 60 second stop at the US 219 and US 40 intersection traffic signal.

- No delays were recorded along US 219 north of Meyersdale. Most of the delays along US 219 occurred in the towns and more populated areas surrounding the towns.

- There was little variation in travel time between northbound and southbound trips on US 219.

- Delays along the Garrett Shortcut occurred at the intersection of SR 2031 and SR 653 (stop sign) and also occurred because of a wildlife obstruction. Although few traffic delays were experienced along the Garrett Shortcut, the road has many curves and steep grade segments.

- Twice on the Garrett Shortcut, the test vehicle was slowed while following behind a truck. The posted truck speed along the southern end of the shortcut is 20 mph due to the steep grades.

- The Garrett Shortcut is approximately 5 miles shorter than the parallel portion of US 219. Although the average travel speed is slower on the Garrett Shortcut, overall travel time is still about 4 minutes shorter than US 219 due to the shorter distance.

- The highest travel speed (64.8 mph) was for the segment of US 219 between SR 3041 and the Garrett Shortcut. This segment has a straight and level geometry, wide shoulders and left turn lanes at the ramps at improved US 219. Drivers tend to travel this segment at a high rate of speed after coming off a four-lane limited access highway.

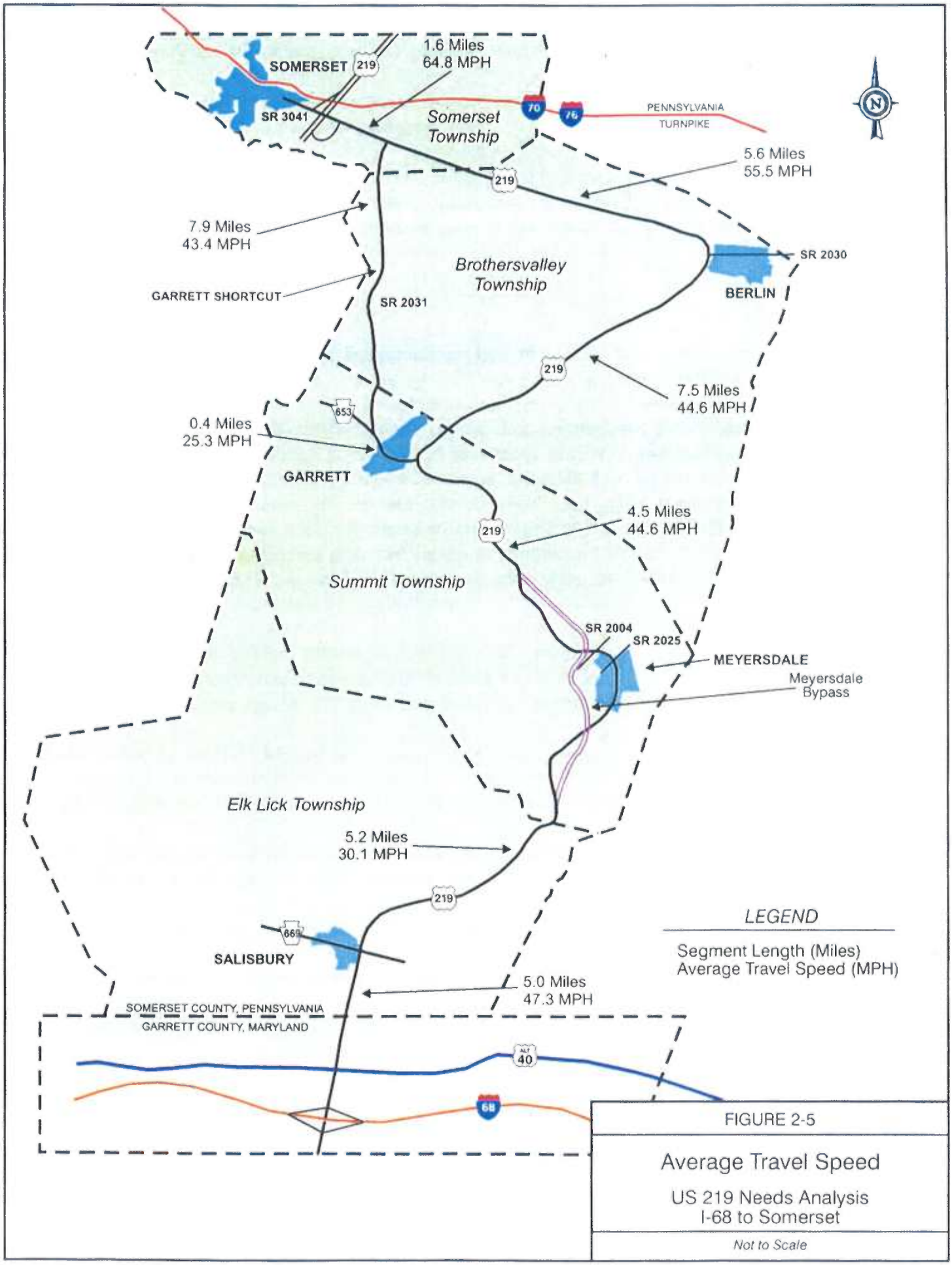


FIGURE 2-5

Average Travel Speed

US 219 Needs Analysis
I-68 to Somerset

Not to Scale

- Travel speed was slowest on US 219 from Meyersdale to SR 669 in Salisbury due to intersection delays, poor roadway geometry, and turning vehicles.

- Travel speed was slowest on the Garrett Shortcut along its southern-most portion due to a one-lane bridge and substandard geometry.

Travel delays throughout the study area can be attributed to slow moving trucks, lack of adequate passing zones, left turning vehicles, and business districts in small towns where traffic signals, reduced speed limits, and pedestrian movements conflict with the through movements on US 219.

2.2.3 Origin/Destination Surveys

The objective of the origin/destination survey was to obtain data on the number, type and frequency of trips made within and through the study area. The survey questions were designed to determine when, where, how and why users made trips (see Appendix A). The survey was conducted on June 9, 1998 by distributing color-coded, postage paid survey cards to users who were stopped in their vehicles along US 219 and asked to fill out and mail in the survey card within ten days. Three survey stations were set up along US 219: a north station, just south of Somerset where blue cards were distributed to all southbound traffic, a central station, south of Garrett, where red cards were distributed to northbound traffic and a south station, south of Salisbury, where green cards were distributed to southbound traffic. Cards were distributed between 7 AM and 5 PM, or until all 2000 survey cards were distributed. The number and type of cards distributed and returned are as follows:

- North station: (blue) 2000 cards distributed, 811 returned
- Central station: (red) 1201 cards distributed, 433 returned
- South station: (green) 825 cards distributed, 307 returned

According to the ITE Manual of Transportation Engineering Studies, a 20% return rate is required for accurate analysis and reporting; a 30% return rate is considered excellent. The return rate experienced for this survey was 39% which easily exceeded these thresholds.

The data from the returned cards was entered into a database to quantify the survey results. Part of the survey was used to identify the starting and ending points of trips using the US 219 corridor. A trip matrix was assembled from the data collected for each of the major origin/destination pairs. The distribution of trips was evaluated by classifying the trips into 3 subgroups: to/from the study area (one trip beginning or endpoint is inside the study area, the other beginning or endpoint is outside), through trips (both trip beginning/endpoints are outside the study area), and local trips (both beginning and endpoints of the trip are inside the study area). Figure 2-6 depicts the distribution among the three trip types and the predominant origin/destination points of each trip type.

A predominant trend in the trip distribution data is the length of the trips being made:

- 44% of the total trips have either one or both ends of the trip outside the study area.
- The remaining 56% are local trips, but nearly half of these trips are longer distance trips extending further than the adjacent town (i.e., Somerset to Salisbury).
- Most of the through trips stem from Western Maryland, Johnstown, and points north.
- The most common ending point of trips having one end inside the study area and the other outside the study area is Johnstown and the greater Pittsburgh area.
- The majority of local trips either start or end in Meyersdale or Somerset.

Fifty-four percent of the returned responses indicated that the Garrett Shortcut was used to make the trip. Regarding trip purposes, over half (54%) of the responses were journey to work trips or people on company business (Figure 2-7). A question was also asked on the survey regarding the number of trips per week. The survey indicated a vast majority of people are using US 219 every day (most likely residents) or every weekday (most likely business related trips). The survey was also used to describe the mixture of vehicle types traveling on US 219; the responses were as follows: 85% passenger cars, 14% trucks, and 1% buses and other vehicle types. The last survey question requested motorist comments about travel problems within the study area. The most frequent comment was truck traffic (Figure 2-8). Other frequent comments included the existing geometry, conditions of US 219, and the need to finish or complete US 219. Other less frequent comments received about travel problems along US 219 included:

- Dangerous intersections
- Need turning lanes
- Needs resurfacing
- School bus stops
- Poor visibility
- Need traffic light at Garrett intersection
- Speeding or fast drivers
- Traveling through towns

2.2.4 Projected Traffic Volumes and Level of Service

Future traffic volumes were projected for the year 2020 using growth rates derived from trends between 1991 and 1998 ATR counts at the same locations in the US 219 study area (Figure 2-9). The growth rates ranged from 2% per year at the Pennsylvania/Maryland border to 3.7% per year along the Garrett Shortcut. The same trends are assumed to apply in 2020 regarding the distribution of traffic volumes such as the split of traffic between US 219 and the Garrett shortcut as well as the amount of truck traffic.

Trip Purpose

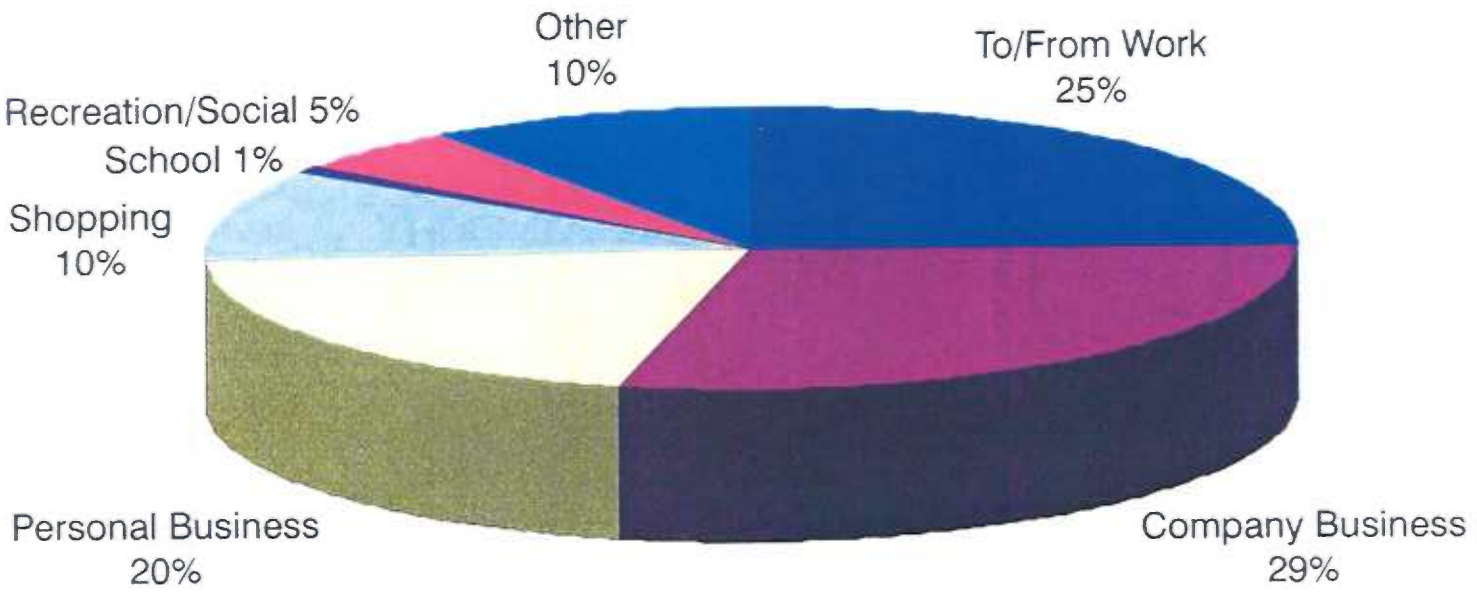


FIGURE 2-7

Origin/Destination Survey
Trip Purpose
US 219 Needs Analysis
I-68 to Somerset

MOST FREQUENT COMMENTS ABOUT TRAVEL PROBLEMS ALONG US219

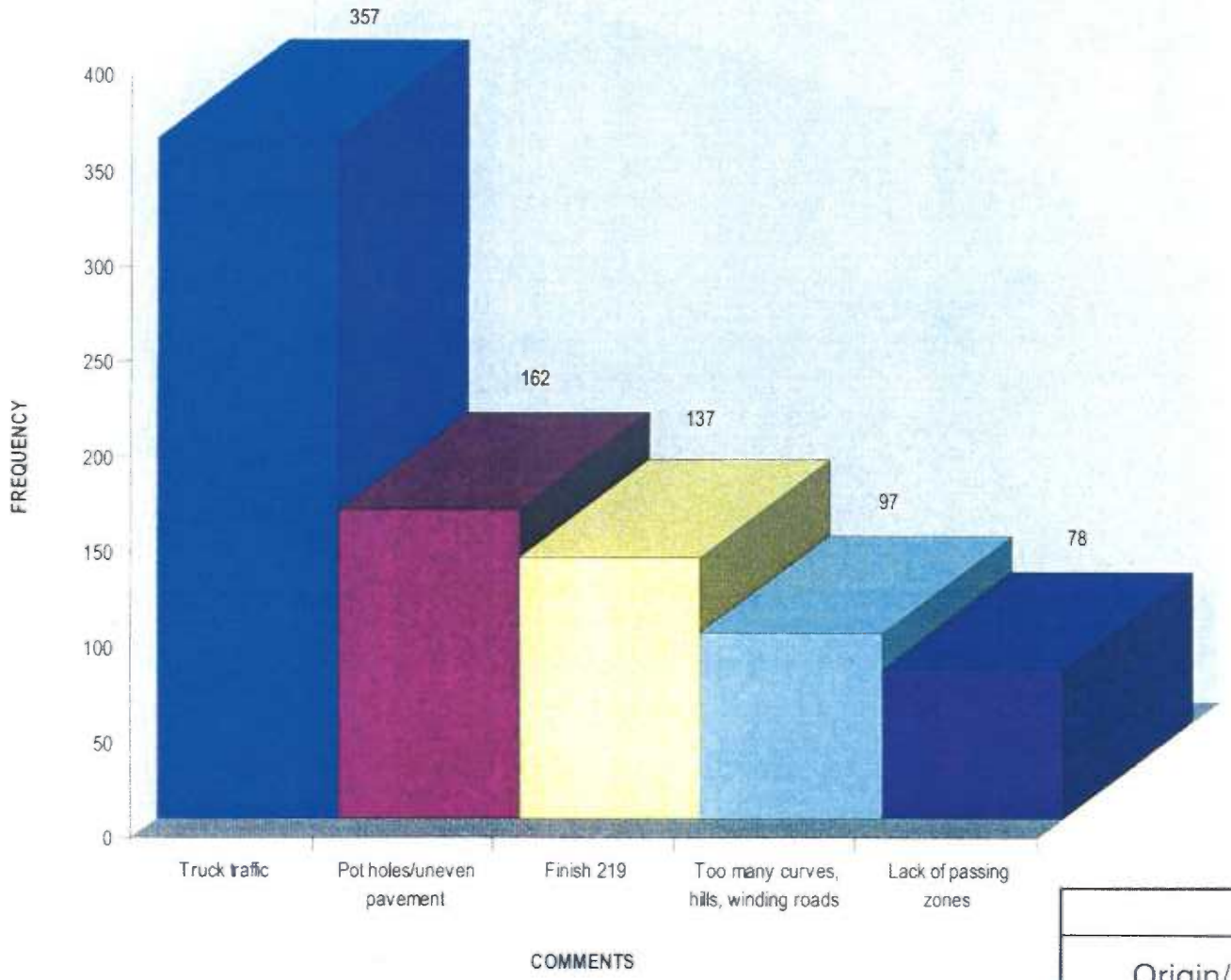


FIGURE 2-8

Origin/Destination Survey
Frequent Comments
US 219 Needs Analysis
I-68 to Somerset

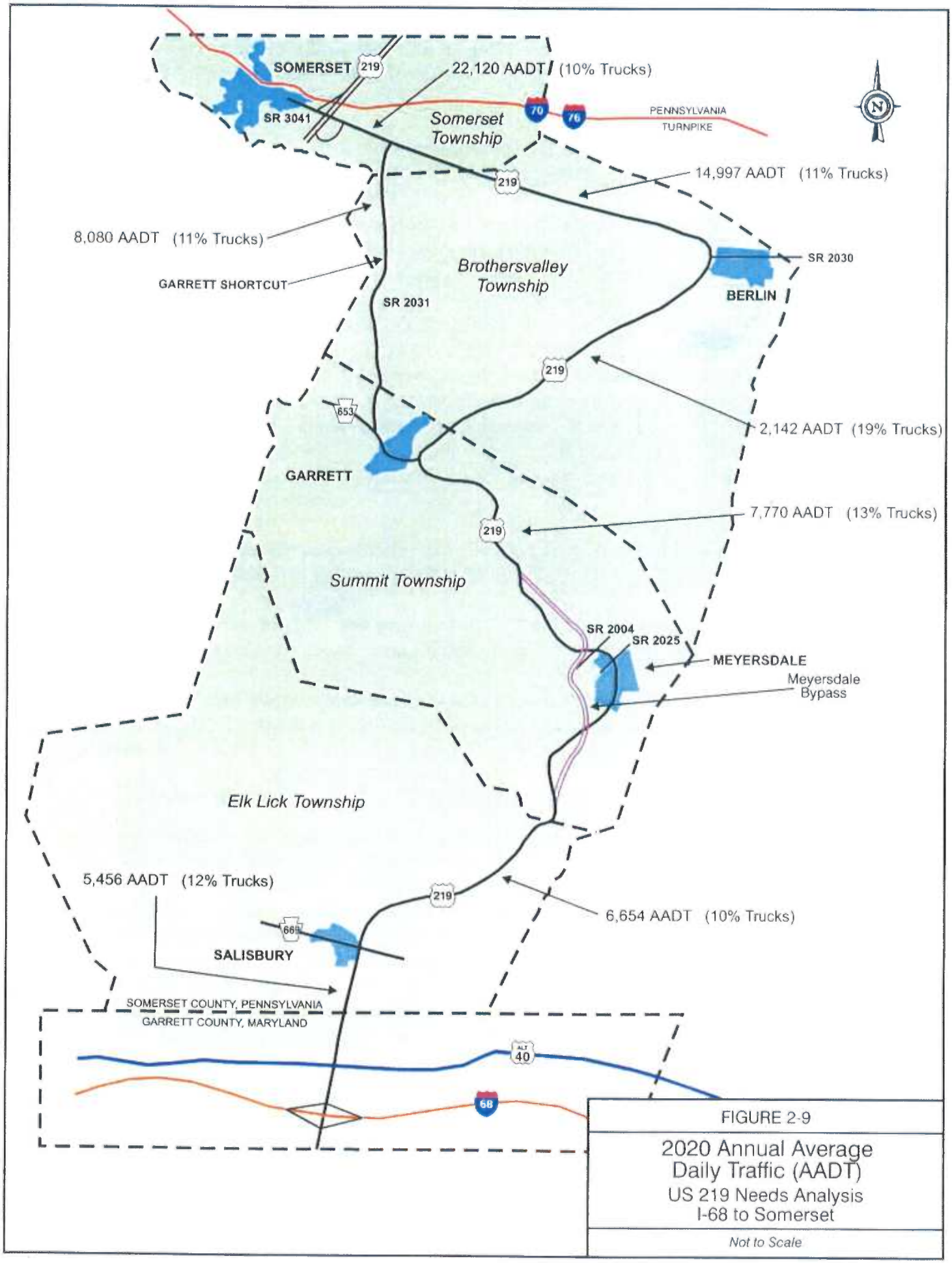


FIGURE 2-9

2020 Annual Average Daily Traffic (AADT)

US 219 Needs Analysis
I-68 to Somerset

Not to Scale

LOS were computed for the intersections and roadway segments with year 2020 volumes using the same software and procedures used with the 1998 volumes. Again, although LOS were computed for morning, midday, and afternoon (PM) peaks, only the PM peak results are reported to represent the worst case (Figure 2-10).

The following observations were made from the year 2020 in contrast with the existing LOS analysis:

- The road segments generally degrade one level of service between 1998 and 2020. The number of deficient roadway links increases from 6 in 1998 to 7 in 2020. The remaining eighth roadway segment (US 219 north of Garrett) is at LOS C in 2020.

- The entire Garrett Shortcut is at LOS E in 2020.

- The LOS for US 219 north of Garrett changes from LOS B in 1998 to LOS C in 2020. The acceptable level of service on this segment is again due to the lower volume since a majority of the traffic diverts to the Garrett Shortcut.

- The narrow bridge at the beginning of SR 653 between US 219 and SR 2031 which constricts traffic flow remains a LOS E.

- US 219 between SR 2030 (Berlin) and SR 2031 (the north end of the Garrett Shortcut) drops from a LOS D in 1998 to LOS E in 2020.

- US 219 between SR 2031 and improved US 219 is projected to operate at LOS F in 2020. The ramp interchange intersections are also projected to be LOS F in 2020.

Four of the ten intersections analyzed drop to LOS F in 2020. With the projected 2020 traffic volumes, capacity constraint problems are indicated in both the roadway segments and the intersections.

2.3 Accident Analysis

Accident data for a five-year period from 1992-1997 was provided by PennDOT for US 219 from the Maryland State Line to Somerset and for State Routes 653 and 2031 (the Garrett Shortcut). For the section of US 219 from I-68 to the PA State Line, the Maryland State Highway Administration provided accident data for a three-year period from 1995-1997. The analysis showed a total of 285 accidents for US 219 in PA, 92 accidents for the Garrett Shortcut and 24 accidents on US 219 in Maryland north of I-68. Of the accidents in Pennsylvania, 64% of the US 219 accidents and 53% of the Garrett Shortcut accidents involved injuries. In addition, there were two fatal accidents on US 219 in Pennsylvania and one fatal accident on the Garrett Shortcut. The total number of accidents from a previous study for the period 1986-'90 was 262 for US 219 and 47 for SR 2031, this accounts for an increase of 9% for US 219 and an increase of 96% for SR 2031.

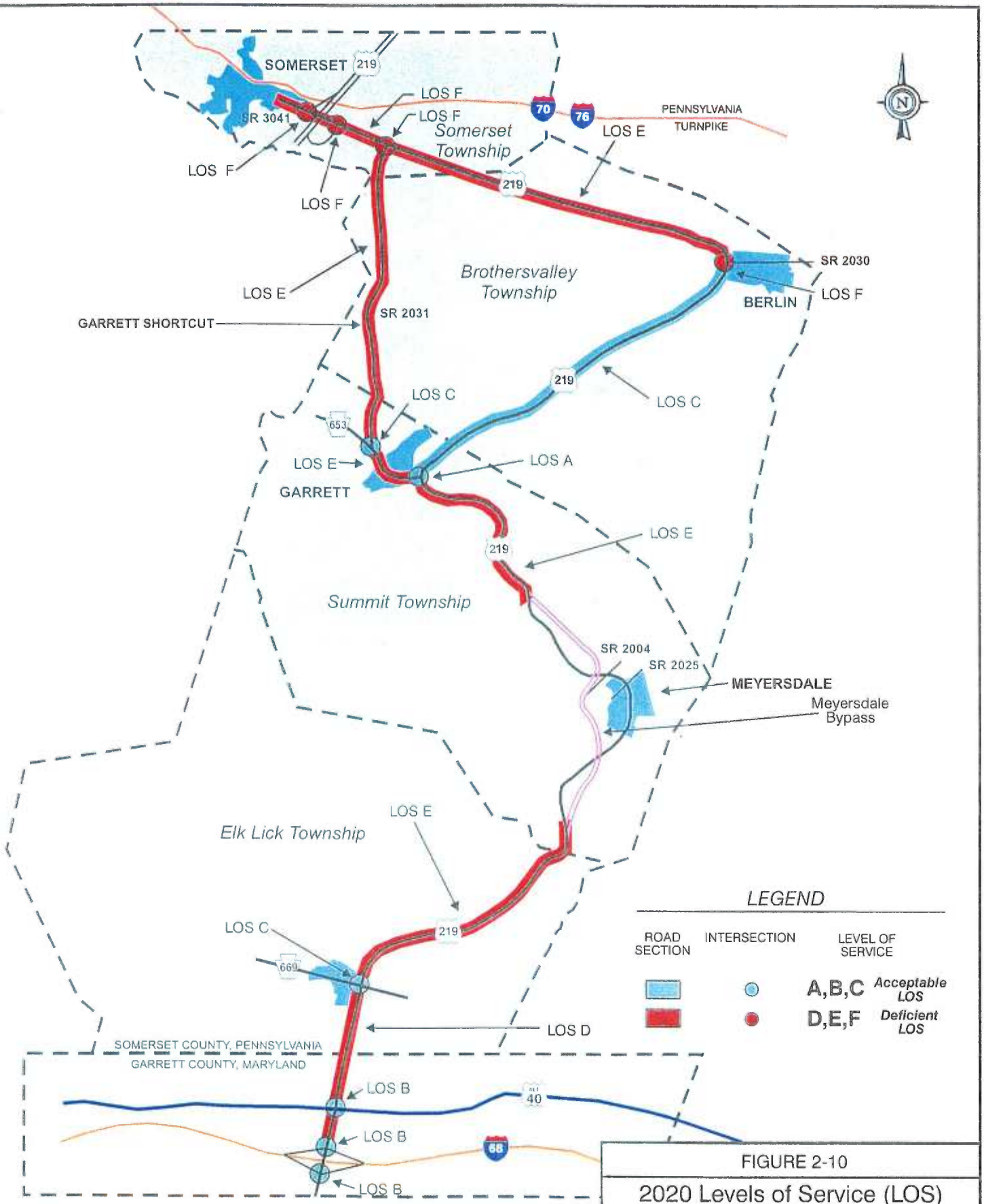


FIGURE 2-10

2020 Levels of Service (LOS)
PM Peak

US 219 Needs Analysis
I-68 to Somerset

Not to Scale

Of the total 39 segments studied along US 219, 17 segments (43%) had accident rates higher than the statewide accident rate (Figure 2-11). Seven segments (18%) had accident rates more than twice the statewide accident rate. Of the total 19 segments studied along the Garrett Shortcut, nine segments (47%) had accident rates higher than the statewide rate with one segment being more than twice the statewide rate. (Figure 2-12). The location of these segments is shown in Figure 2-13.

As shown in Figures 2-14 and 2-15, the majority of accidents on both roads resulted in the vehicle hitting a fixed object. This is directly related to the substandard widths of the lanes and shoulders, sharp curves, and objects such as trees, telephone poles, and buildings located close to the road. Other frequent types of accidents included rear-end and angle collisions, and sideswipes. A rear-end collision typically occurs when a vehicle is stopped for a left turn and the rear-approaching vehicle has poor sight distance. An angle collision typically results from a vehicle pulling onto the roadway from a private driveway or other roads and the oncoming vehicle, has poor sight distance. Sideswipe accidents are due to narrow lanes and shoulders, sharp curves, and poor sight distance.

As shown in Table 2-1, the majority of accidents during this period occurred during favorable driving conditions - dry pavement, clear skies, and daylight hours.

TABLE 2-1
Accident Characteristics, 1992-1997

Characteristics		US 219	SR 2031 (Garrett Shortcut)
Percentage by Pavement Conditions	Dry	58%	50%
	Wet	19%	9%
	Snow/Ice	15%	37%
Percentage by Weather Conditions	Clear	67%	56%
	Rain/Fog	15%	14%
	Snow/Sleet	18%	29%
Percentage by Time of Day	Daylight	57%	63%
	Dawn/Dusk	5%	4%
	Night	38%	33%

Source: Pennsylvania Department of Transportation, Bureau of Highway Safety & Traffic Engineering, Accident Records Systems, 1998.

2.4 System Linkage and Continuity

Due to its location and connections, US 219 receives heavy local, regional, and interstate traffic. North of the study area, US 219 has been upgraded to a four-lane, limited-access highway serving Johnstown and Ebensburg. Regional east-west links include SR 56 in Johnstown, and US 22 in Ebensburg - connecting Altoona with Pittsburgh. At Somerset, motorists have access to the Pennsylvania Turnpike (I-76/70), a major east-west corridor. In Maryland, US 219 connects with another major east-west corridor, I-68. The substandard, two-lane roadway between I-68 in Maryland and the Pennsylvania Turnpike in Somerset (excluding the Meyersdale Bypass) is a noticeable north-south "missing link" in the transportation system of this region. The Somerset County Comprehensive Plan (1970) and the Somerset County Community Economic Recovery Program (1991) both identified a key infrastructure element that is vital to future economic development in the area - improvements to US 219 between Somerset and I-68.

Figure 2-11
US 219 Accident Rate by Road Segment, 1992-1997

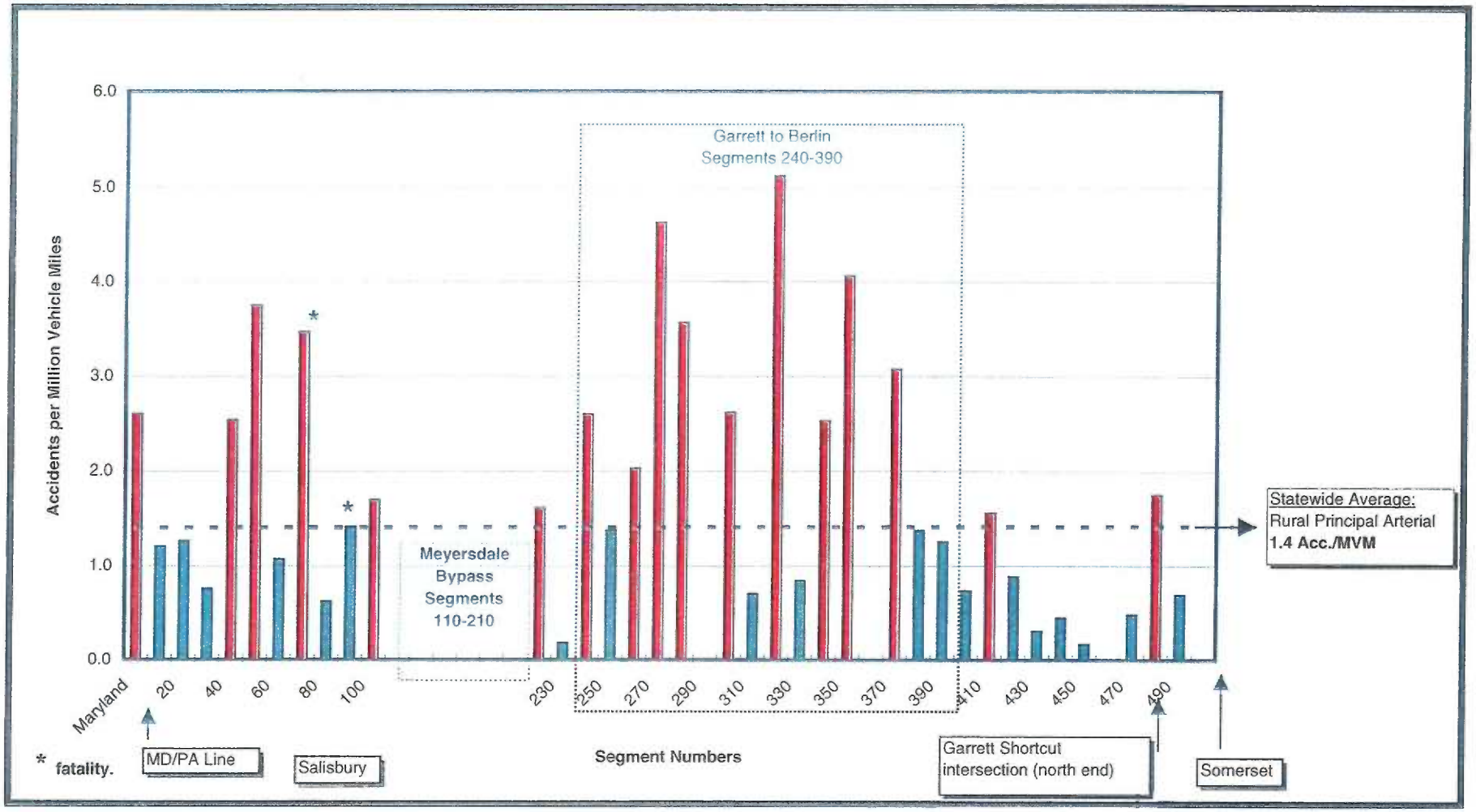
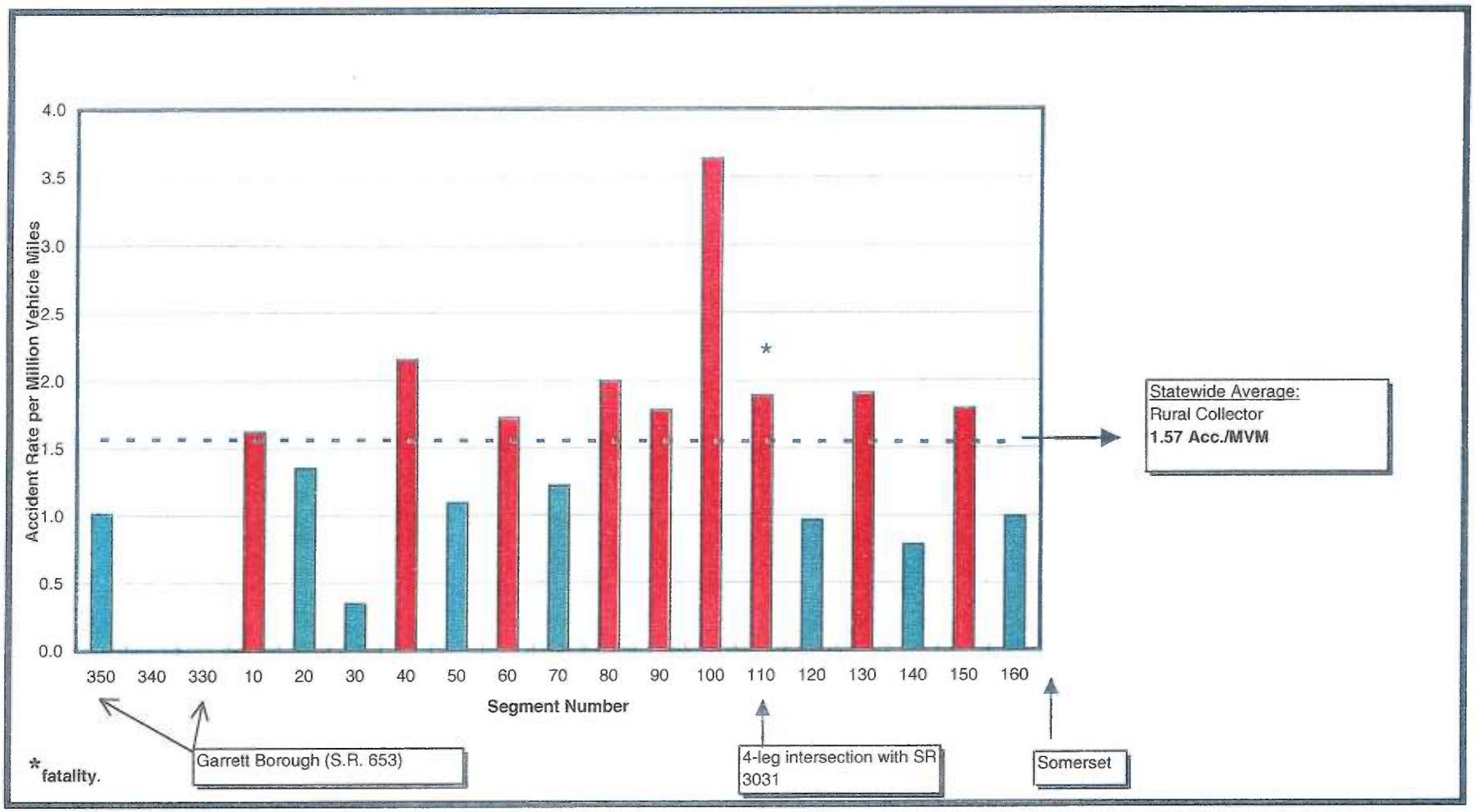


Figure 2-12
Garrett Shortcut (SR 653 and 2031) Accident Rate by Road Segment, 1992-1997



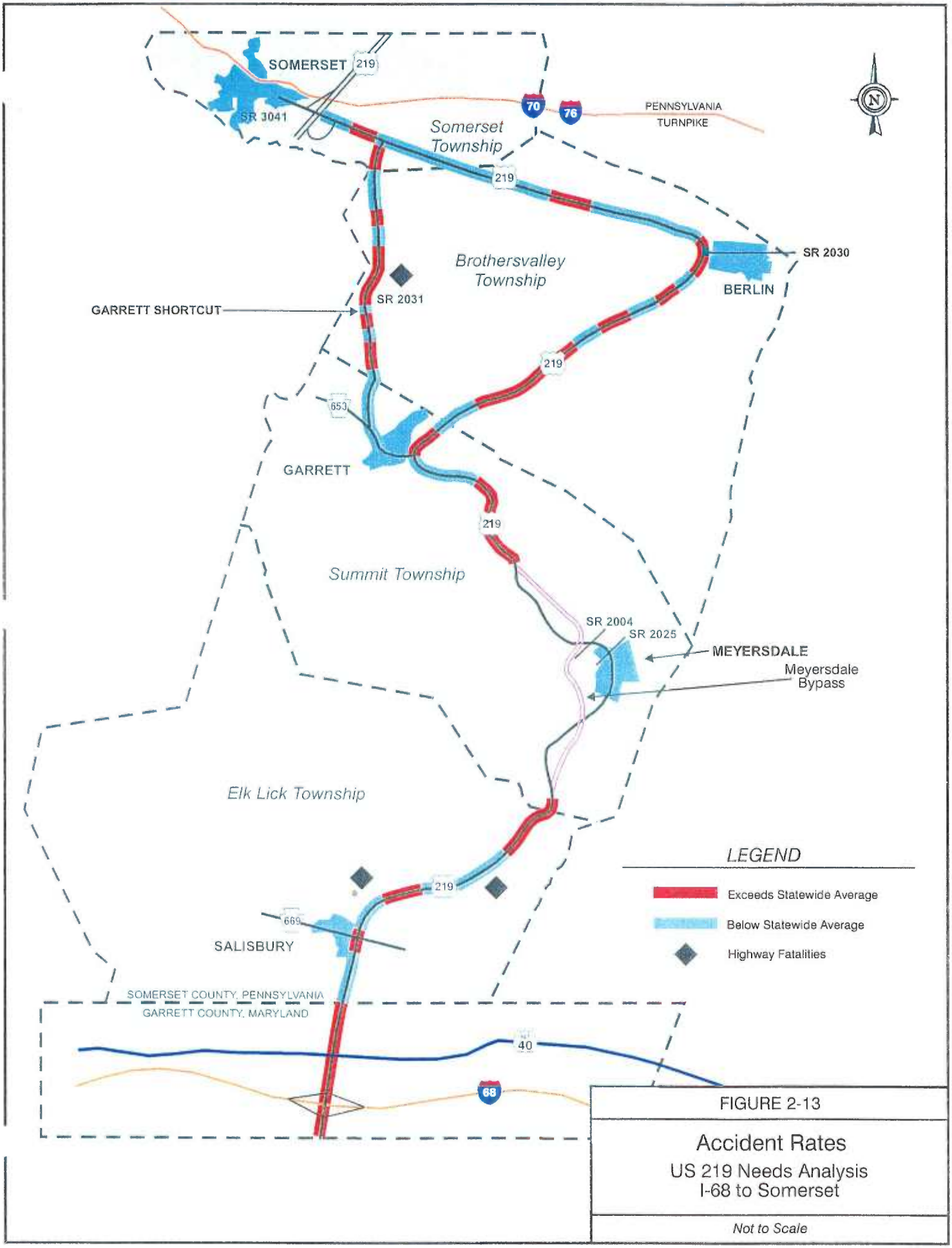


FIGURE 2-13

Accident Rates

US 219 Needs Analysis
I-68 to Somerset

Not to Scale

FIGURE 2-14

US 219: Accident Type.

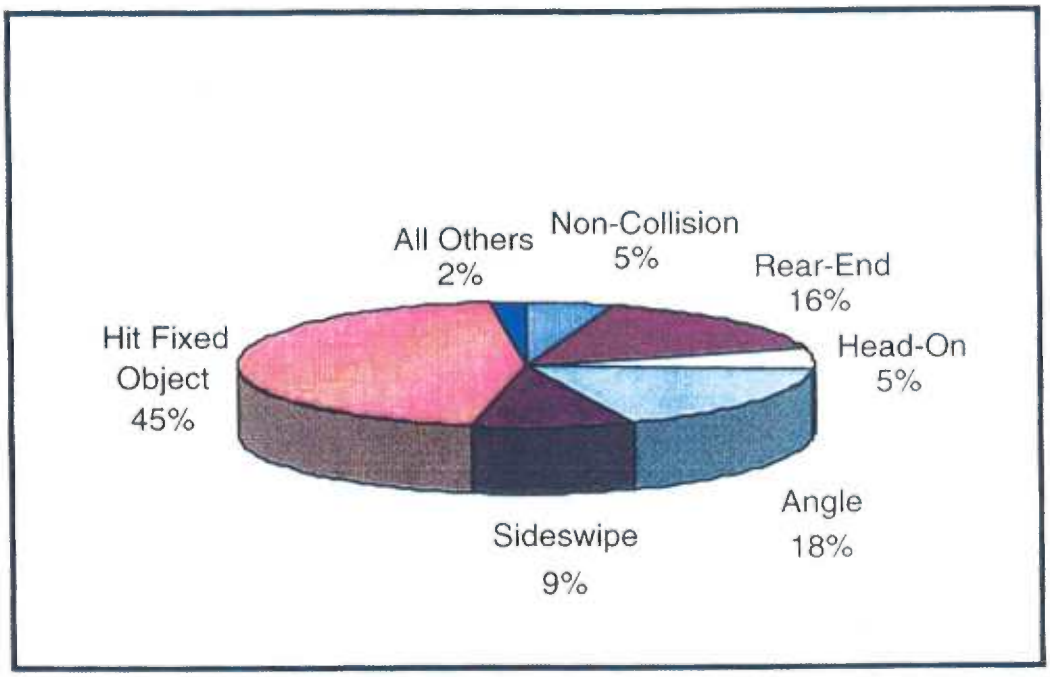
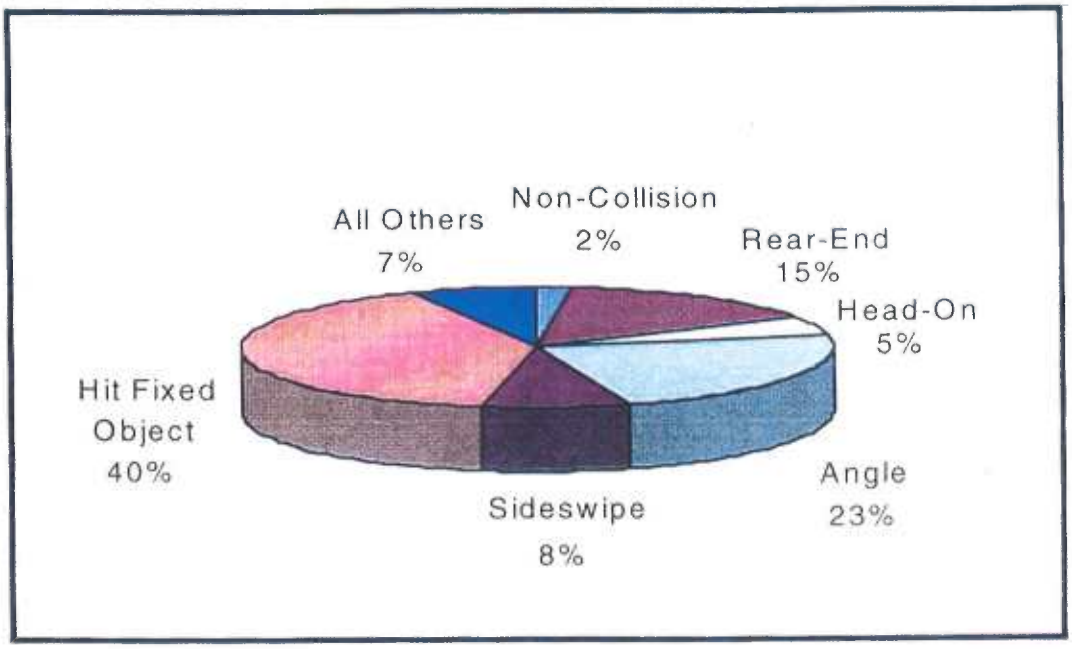


FIGURE 2-15

Garrett Shortcut: Accident Type.



2.5 Emergency Services

An efficient transportation system for vital emergency services is a fundamental component of quality of life; it ensures that the local population is well protected and can have adequate emergency care. Ambulance services in Salisbury, Meyersdale, and Berlin rely on US 219 for transporting patients and accident victims to local hospitals such as Meyersdale Community Hospital, and regional medical facilities in PA and MD including Somerset, Johnstown, and Cumberland. Volunteer fire companies (VFC) are found in Berlin Borough, Garrett Borough, Meyersdale Borough, Salisbury Borough, and Somerset Borough.

All municipalities are provided police protection by the Pennsylvania State Police Department located in Somerset. Municipal police departments provide service only to their municipality; they include Berlin Borough, Elk Lick Township, Garrett Borough, Meyersdale Borough, Salisbury Borough, and Somerset Borough.

As discussed in previous sections, US 219 and the Garrett Shortcut have a variety of geometric deficiencies and decreasing levels of service. Therefore, the ability of these roads to efficiently support the emergency response system is a concern.

3.0 SOCIOECONOMIC TRENDS

3.1. Demographics and Housing

The population of most of the municipalities within the study area in Pennsylvania was stagnant or exhibited minor declines between 1980-1990 (Table 3-1). The only noticeable increase for this period occurred in Somerset Township with a 3.3% increase. Garrett County, Maryland had modest growth of 6.2% for the period. This increase, however, lagged behind the growth for the State of Maryland of 13.4%.

The overall rate of growth for the study area has been negative for the period 1980-1990 (-6.2%) and projections for 2010 show a negligible increase of 1.4%. The population growth occurring in Somerset Township is typically a result of people moving out of the urban area, Somerset Borough. For the period 1990-2010, the population of Somerset County is expected to remain essentially unchanged, showing a decline of only one percent.

TABLE 3-1
Population Trends

	1980	1990	Percent Change 1980-1990	2010	Percent Change 1990-2010
Berlin Borough	1,999	2,064	3.2	2,177	5.5
Brothersvalley Twp.	2,373	2,395	1.0	2,429	1.4
Elk Lick Twp.	2,293	2,313	1.0	2,344	1.3
Garrett Borough	563	520	-7.6	453	-12.9
Meyersdale Borough	2,581	2,518	-2.4	2,412	-4.2
Salisbury Borough	817	716	-12.4	589	-17.7
Somerset Borough	6,474	6,454	-0.3	6,461	0.1
Somerset Twp.	8,457	8,732	3.3	9,212	5.5
Summit Twp.	2,535	2,495	-1.6	2,525	1.2
STUDY AREA in PA	**30,072**	**28,207**	**-6.2**	**28,602**	**1.4**
Somerset Co., PA	**81,243**	**78,218**	**-3.7**	**77,405**	**-1.0**
Pennsylvania	**11,864,720**	**11,882,643**	**0.2**	**12,407,523**	**4.4**
Garrett Co., MD	**26,498**	**28,138**	**6.2**	**32,390**	**15.1**
Maryland	**4,216,933**	**4,780,753**	**13.4**	**5,677,600**	**18.8**

Source: US Census; PA State Data Center; Maryland State Data Center.

Garrett County, Maryland is projected to grow by nearly 15% from 1990-2010.

Table 3-2 shows that Somerset County exhibited a significant decrease in the under-17 age group (-14.1%) and increase in 65+ age group (22.7%), indicating a concurrent aging of the existing or remaining population and an outmigration of young-families. Personal interviews with local officials support this trend; young people are leaving to find quality jobs. It is likely, as the "baby-boom" generation moves into middle-age and beyond, that the population will exhibit even greater increases in the older age groups.

TABLE 3-2
Population by Age Group, Somerset County, PA, 1980-1990

	Number		%Change	% of Total		Change 1980-1990
Age Group	1980	1990	1980-1990	1980	1990	in % points
<17	22,765	19,553	-14.1%	28.0%	25.0%	-3.0%
18 to 64	47,675	45,413	-4.7%	58.7%	58.1%	-0.6%
65+	10,803	13,252	22.7%	13.3%	16.9%	3.6%
Total Persons	81,243	78,218	-3.7%	100.0%	100.0%	

Source: Pennsylvania State Data Center, 1998.

The average of the median housing values for the study area in PA is approximately 65% of the median value for the Commonwealth of PA - an indication that the quality and/or condition of the housing stock is not as high in the study area as other parts of Pennsylvania (Table 3-3).

Based upon the number of 1995 residential building permits, more than 50% of all new construction within the study area was limited to Somerset Borough and Somerset Township. New development in other municipalities was insignificant.

TABLE 3-3
Housing Unit Characteristics, 1990

Area	Total Housing Units	Residential Building Permits (1995)	Median Housing Value ($$)
Berlin Boro.	838	9	51,700
Brothersvalley Twp.	875	5	49,500
Elk Lick Twp.	890	4	40,600
Garrett Boro.	218	0	26,200
Meyersdale Boro.	1,058	2	35,400
Salisbury Boro.	332	2	41,900
Somerset Boro.	3,100	10	58,500
Somerset Twp.	3,296	23	56,900
Summit Twp.	942	4	41,300
Study Area	**11,549**	**59**	**44,600***
Somerset Co.	**35,713**	**174**	**43,400**
Pennsylvania	**4,938,140**	**N/A**	**69,700**
Garrett Co.	**14,119**	**N/A**	**60,200**

Source: US Census, 1990; PA State Data Center, 1997.

* Average of Median Housing Values

3.2 Employment and Income

According to 2005 projections by the Pennsylvania Department of Labor and Industry, labor force growth in Somerset County will slow because of declining youth populations. Mirroring the slow growth in the labor force, employment in Somerset County should increase by less than ½ of 1% annually for the 1994-2005 period. As shown in Table 3-4, the greatest number of jobs in both counties are found in the services sector with approximately 29% of the total employment. Other important sectors of the economy include manufacturing, retail trade, and construction. Although the mining and agricultural sectors have relatively low percentages of total jobs, these two sectors are economic mainstays for Somerset County. Somerset is one of the largest soft coal producing counties and the largest producer of maple sugar and syrup in Pennsylvania.

2) How does the existing US 219 network fall short? What are the negative impacts of US 219 on community life in this area?
3) What concerns have been raised in the past with respect to planned or proposed improvements to US 219?
4) Describe factors occurring outside of your immediate area that may affect future economic development planning actions?
5) Will the area develop and grow if no improvements are made to US 219? Why or why not? Where are developable properties?
6) What would be the impacts (positive or negative) on your community from US 219 improvements?
7) Other than an improved highway, are other local improvements or programs needed to stimulate economic growth?

In addition, surveys with 12 business leaders were conducted via telephone to get a business perspective on how the current condition of US 219 may affect present and future operations.

The most frequent comments from the public officials interviewed included: the area needs an efficient north-south highway linkage for better accessibility (56%); the stagnant economy and the need for economic development (45%); poor accessibility to and from the area (33%); and, vehicles (trucks and cars) avoid using US 219 due to safety concerns (28%). Other comments included: young people are moving away to find quality jobs; keep trucks off US 219 - they create very dangerous driving conditions; and, improve the entire length of US 219, not just Meyersdale to Somerset - the latter would create an even greater burden on the southern section.

Most of the comments from the business leaders addressed the need for industrial expansion and competitiveness for the future viability of the area (82%). Another common remark was the need for a good north-south link in the area to improve accessibility (64%). Most of the businesses contacted use common carriers or company trucks to receive materials or to ship finished products. They said US 219 in its present condition is a very dangerous road and many truckers avoid it. Two out of the eleven businesses said they would like to see US 219 from Carrolltown to DuBois completed.

In order to determine if factors other than insufficient access exist that would limit economic development, the study area was evaluated for public water and sewer infrastructure and land use restrictions. Based on this evaluation, it was determined that public water and sewer was primarily restricted to the corporate limits of the following boroughs:

- Somerset
- Berlin
- Garrett
- Meyersdale
- Salisbury

In addition to these boroughs, Somerset Township also has public water and sewer lines that extend along SR 281 from Somerset Borough to the Somerset County Airport and the small towns of Freidens and Listie. They also have a water and sewer line that extends north along SR 601 from Somerset Borough toward the US 219 interchange.

Assuming that access to public water and sewer infrastructure is a limiting factor to economic development, these municipalities were identified as economic development centers. In addition, all land within one (1) mile of the corporate limits of these municipalities and/or public water and sewer lines were identified as having reasonable access to this infrastructure. These areas were then defined as the study area. Within each study area, the acreage of existing development and other land uses that would restrict development (i.e., Undevelopable Land) was determined. Undevelopable Land included wetlands, floodplains, slopes > 15%, and land reserved for agriculture (i.e., Agricultural Security Areas) or public recreation. The acreage of all remaining land was then calculated and defined as Potential Developable Land.

As indicated in Table 3-7, the acreage of Potential Developable Land ranges from 220 ac (Garrett) to 1,460 ac (Somerset Borough/Township). Moreover, when comparing the percent of Existing Developed Land with the percent of Potential Developable Land within the study areas, it would appear that these municipalities or economic development centers have the potential to, at minimum, double in size. This, in turn, would indicate that land use restriction within the study area is not a significant limiting factor for economic development.

TABLE 3-7
Potential Developable Land within the US 219 Corridor, 1998

	Study Area	*Developed Land*		*Undevelopable Land*		*Developable Land*	
	(SA) Acres	*Acres*	*(% of SA)*	*Acres*	*(% of SA)*	*Acres*	*(% of SA)*
Meyersdale	5,700	450	(8%)	4,880	(86%)	370	(6%)
Salisbury	5,000	290	(6%)	4,070	(81%)	640	(13%)
Garrett	3,400	60	(2%)	3,120	(92%)	220	(6%)
Berlin	4,600	320	(7%)	4,020	(87%)	260	(6%)
Somerset	11,800	1,540	(13%)	8,800	(75%)	1,460	(12%)

There are also several key industrial parks located adjacent to US 219 that have infrastructure present but have yet to be fully developed. These include:

- The intersection of US 219 and US 40 near the intersection of I-68 in Grantsville, MD. The county owns a 46-acre industrial park with 20 acres undeveloped.
- The Meyersdale Industrial Park has nine acres (two lots) available for development.
- The Somerset Industrial Park has 35 acres available for development.
- The reclaimed coal strip mines (brownfields) at the southwest quadrant of US 219 and SR 281 in Somerset Township are owned by PBS Coal Company and are available for development. In addition, other adjacent properties at this intersection are ripe for development. This area is served by Somerset Township's Wells Creek Sewage System which is located along SR 281. This site has easy access to the county airport.
- The Quemahoning Industrial Park located north of the study area at the Holsopple interchange of US 219. The site has been designated as an industrial park, but has no infrastructure present.

Within the past five years, the only large developments which have been completed in the study area include the State Correctional Institute prison complex in Somerset and Brothersvalley

Townships; the reconstruction of the state hospital into the State Correctional Institute of the Laurel Highlands in Somerset Township; and, the construction of a Wal-Mart in Somerset Township. There are no other new developments currently planned in the near future.

Based on historic socioeconomic trends, interviews with community and business leaders, and the availability of developable land, it appears that insufficient transportation access is a significant contributing factor in limiting or restricting economic development within the study area.

4.0 PROJECT PURPOSE AND NEED

4.1 Project Needs Statement

Transportation improvements to US 219 between Somerset, PA and I-68 in Maryland (excluding the Meyersdale Bypass) are needed based on the following:

- Current and future transportation demands result in deficient levels of service for most of US 219 and all of Garrett Shortcut.

- Forty-three percent of the roadway segments on US 219 and 47% of the roadway segments on the Garrett Shortcut have accident rates that exceed the statewide accident rate. Seven of the roadway segments, or 18%, on US 219 and one segment on the Garrett Shortcut (5%) have accident rates that are more than twice the statewide accident rate.

- Numerous roadway geometric features on both US 219 and the Garrett Shortcut do not meet current design standards for lane and shoulder width, vertical grade, horizontal curvature, and sight distance.

- Motorists use the Garrett Shortcut (rural collector) in order to avoid traveling the longer, more circuitous segment of US 219 (rural principal arterial) north of Garrett Borough.

- Deficient levels of service, geometric constraints, and lack of passing zones along US 219 and the Garrett Shortcut result in increased travel times and delays.

- The two-lane section of US 219 represents a less efficient system linkage for motorists traveling between the four-lane section of US 219 or the PA Turnpike (I-70/76) in Somerset, PA and I-68 in Maryland.

- US 219 does not provide adequate access to the surrounding municipalities and is a significant contributing factor in limiting economic development.

4.2 Project Purpose Statement

Based on the identified transportation needs, the purpose of the US 219 project between I-68 in Maryland and Somerset, PA (excluding the Meyersdale Bypass) is to:

- Improve the level of service on US 219;

- Improve the level of safety for motorists traveling on US 219;

- Improve system linkage between I-68, the Meyersdale Bypass, the four-lane section of US 219, and the PA Turnpike (I-70/76); and

- Provide safe and efficient access for the southern Somerset County region in order to improve economic development potential.

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APPENDIX A

Origin/Destination Survey