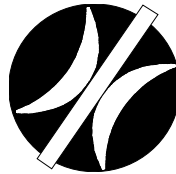


**US 30 CORRIDOR STUDY
NJ 73 to Atlantic County Border
Camden County**

**Delaware Valley Regional Planning Commission
September 2006**

Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency that provides continuing, comprehensive and coordinated planning to shape a vision for the future growth of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties, as well as the City of Philadelphia, in Pennsylvania; and Burlington, Camden, Gloucester and Mercer counties in New Jersey. DVRPC provides technical assistance and services; conducts high priority studies that respond to the requests and demands of member state and local governments; fosters cooperation among various constituents to forge a consensus on diverse regional issues; determines and meets the needs of the private sector; and practices public outreach efforts to promote two-way communication and public awareness of regional issues and the Commission.

DVRPC is funded by a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for its findings and conclusions, which may not represent the official views or policies of the funding agencies.



Our logo is adapted from the official DVRPC seal, and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole, while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

US 30 CORRIDOR STUDY

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Delaware Valley Regional Planning Commission (DVRPC) continually programs transportation corridor studies that strive to identify and address problems that impede the efficient and equitable movement of goods and people in the Delaware Valley. The US 30 corridor, originally identified in Direction 2020 DVRPC's long-range transportation plan, is the subject of this study.

US 30 was selected for study by the Camden County representatives to DVRPC's Regional Transportation Committee. To guide the study effort, DVRPC collaborated with a task force comprised of municipal, county, and state representatives. This US 30 study continues the work undertaken on the western section of US 30 between NJ 73 and the Benjamin Franklin Bridge, the findings of which were published in July 2002.

The study area includes 9.8 miles of US 30 between NJ 73 and the Atlantic County border, and includes Waterford and Winslow townships, and Chesilhurst Borough. This study area is unique in that it includes a portion New Jersey's Pinelands. The Pinelands National Reserve includes portions of seven southern New Jersey counties, and exists in Waterford and Winslow townships within the study area. This protected area reduces the amount of available land for development, thus containing growth.

The US 30 study area can be characterized as suburban fringe, with rural areas, as US 30 is one of the many gateways to South Jersey's farm country. According to DVRPC's Congestion Management Process, this section of US 30 is considered an emerging corridor. Currently there is available land for development—albeit limited—and municipal leaders are encouraging growth. Both Chesilhurst Borough and Winslow Township have set the stage for future growth in the recently completed updates to their comprehensive plans. How this growth occurs, in particular development of the frontage along US 30, will have major impacts on the safety, mobility, and accessibility of the corridor and will ultimately impact the quality of life of corridor residents.

In addition, in 2004 the New Jersey Pinelands Commission together with Winslow Township and a consultant team, released the *Livable Community Action Plan* for the Pinelands Regional Growth Area in Winslow Township. This document examines

the strengths and opportunities available to Winslow Township and recommends strategies for maximizing development in a holistic manner that balances natural resources and growth through the use of progressive planning and zoning techniques. These recommendations are reflected in Winslow's updated comprehensive plan.

As both this study and the Pinelands Commission study suggest, now is an ideal time to plan the future development of the corridor and to address potential problems proactively while the corridor is still emerging. As discussed in the Transportation Issues chapter, an important step in guiding growth is the implementation of access management.

A key component of access management is that it recognizes the relationship between land use and transportation. In essence, although commercial and residential development is good for the local and regional economy, poorly planned development can lead to traffic problems that can in turn be detrimental to a location. According to the *Transportation Research Board's Access Management* website, "access management seeks to limit and consolidate access 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."

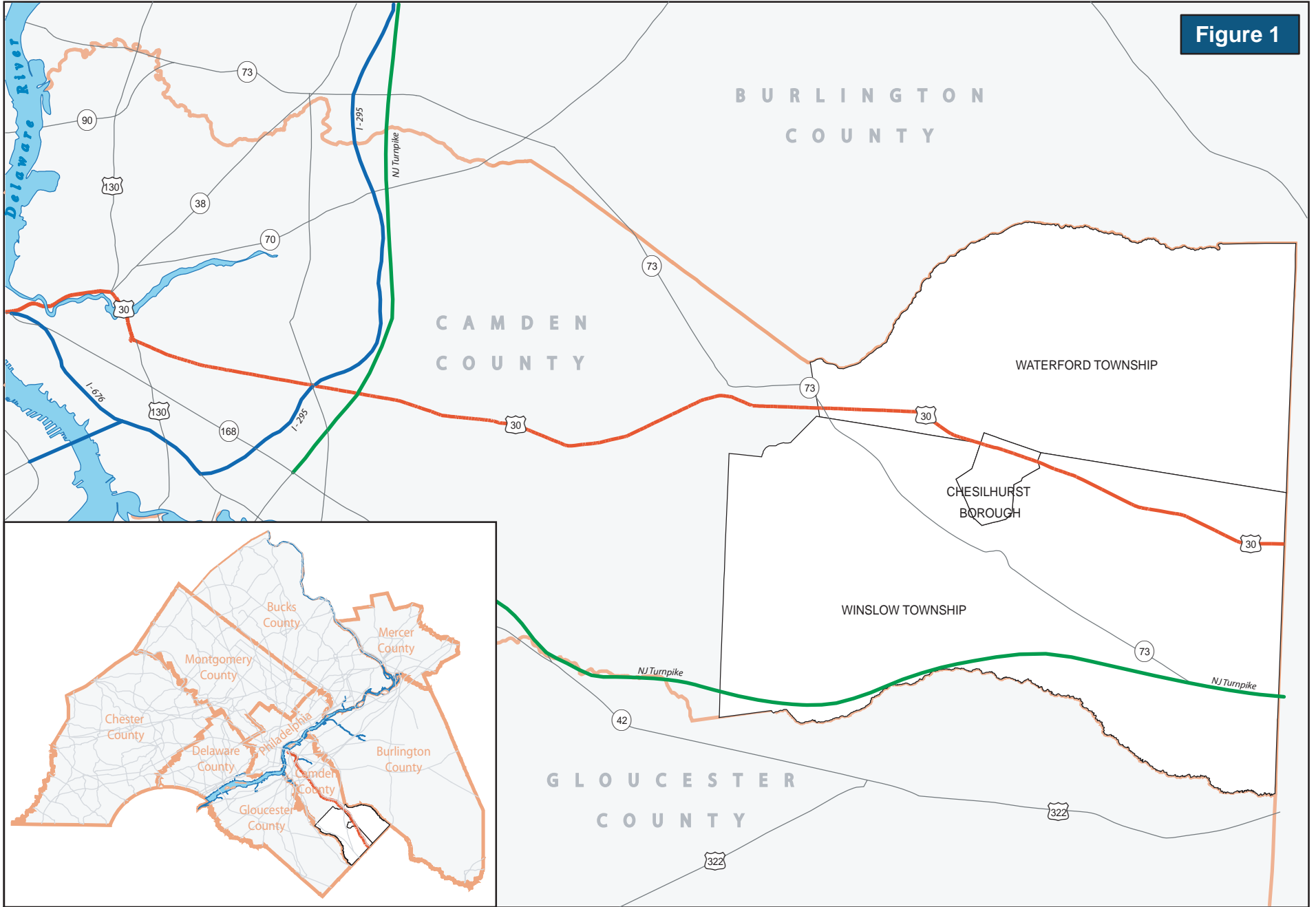
In addition to the access management component, the Transportation Issues chapter also discusses a small number of location-specific problems that were identified during the study process, and provides potential improvement scenarios. These problems involve mainly crash problems and to a lesser extent mobility problems. Further monitoring and analysis was recommended for many of these problems due to low severity at the time of the study.

1. INTRODUCTION

US 30 Corridor Study

Regional Setting

Figure 1



INTRODUCTION

US 30 White Horse Pike was selected for study by the Camden County representatives to Delaware Valley Regional Planning Commission's (DVRPC) Regional Transportation Committee. This route was originally identified as one of the many essential routes for moving people and goods in *Direction 2020*, DVRPC's regional long-range, comprehensive land use and transportation plan. The purpose of the corridor study is to identify site-specific and corridor-wide transportation issues, determine contributing factors, and identify potential improvements. To guide the study effort, DVRPC collaborated with a task force comprised of municipal, county, and state representatives. This US 30 study continues the work undertaken on the western section of US 30 between NJ 73 and the Benjamin Franklin Bridge, the findings of which were published in July 2002.

The study area includes 9.8 miles of US 30 between NJ 73 and the Atlantic County border, and includes Waterford and Winslow townships and Chesilhurst Borough. This study area is unique in that it includes a portion of New Jersey's Pinelands. The Pinelands National Reserve includes portions of seven southern New Jersey counties, and encompasses over one million acres of farms, forests and wetlands. This protected area, in Waterford and Winslow townships within the study area, reduces the amount of available land for development, thus containing growth. Figure 2 depicts the study area.

US 30 is one of the original shore-to-city routes connecting Philadelphia and Camden to Atlantic City, passing through dozens of small communities. Still, today the White Horse Pike serves as both regional corridor and local main street. In many towns, it is the central business district providing commercial and retail destinations. US 30 also provides connections to state and interstate facilities. At the western end of the study area US 30 meets NJ 73 at a grade-separated interchange. Just outside the study area's eastern end US 30 connects with NJ 54 and US 206 in Hammonton Borough.

The corridor's major issues, identified through the study process, were generally related to development, access, and safety. The four-lane cross-section design of US 30 ties all of these issues together. The lack of protected left turn accommodations, and the lack of access controls, creates unsafe conditions. Currently, access to destinations on the opposite side of US 30 is governed by permissive left turns from the passing lane. This practice involves an unnecessary level of risk. This situation will worsen as frontage along the roadway is developed and the number of curb cuts increases, thus generating more traffic and higher demand for left turns.

The report is divided into eight chapters plus executive summary and appendices. Chapter 2, Study Area Description, contains an analysis of demographic characteristics, travel patterns, and environmental justice issues. Chapter 3 describes the transportation system in terms of vehicle, bus, rail, pedestrian, and bicycle movements. Chapter 4 focuses on safety through an analysis of crash data. Chapter 5, entitled Transportation Issues, is divided into two subchapters that focus on corridor-wide and location-specific transportation problems. The identified issues were culled from municipal interviews, field visits, and through collaborations with coordinating agencies. Improvement scenarios are provided for all identified problems. Chapter 6 is an analysis of the congestion management process. The report culminates in chapter 7 with conclusions and a snapshot of the recommended improvements.

2. STUDY AREA DESCRIPTION

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2.1 REGIONAL SETTING

US 30 is a primary arterial facility that connects eastern points along the South Jersey coast with destinations beyond the Pennsylvania counties of DVRPC's region. Also known as the "White Horse Pike," US 30 is oriented radially to the region's core providing a direct connection between Philadelphia and the New Jersey shore. The study area is 9.8 miles long and involves US 30 from NJ 73 in the west to the Atlantic County line in the east. The study area municipalities are Waterford Township, Winslow Township, and Chesilhurst Borough. The corridor study area is depicted in Figure 2.

2.2 DEMOGRAPHICS

Population and Employment

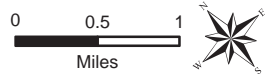
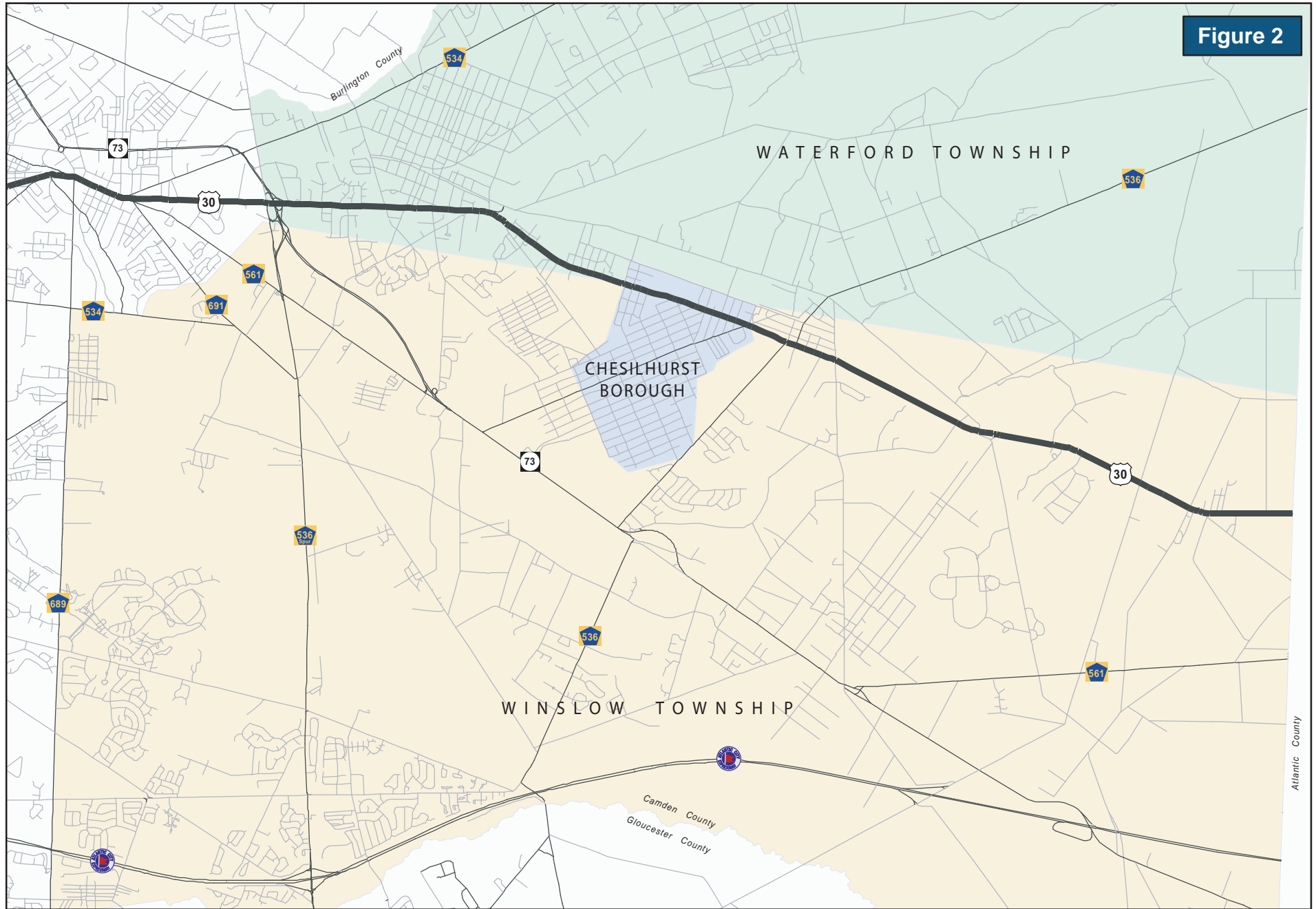
Corridor study area demographic data can be found in Table 1. Winslow is the major population center in the study area, accounting for almost 35,000 of the approximately 58,000 residents. The next most populous municipality is Waterford, with approximately 10,500 residents. Population density in these two municipalities is low, from 300 to 600 people per square mile. Developable land is scarce in Waterford because Wharton State Forest occupies a large proportion of the land inside the municipal boundaries. Furthermore, the density of development around the forest is restricted. Developable land is limited in Winslow because large swathes of land adjacent to Egg Harbor River and its tributaries is swampland, unsuitable for development or protected as wetlands. In addition, Winslow is the site of New Brooklyn Park and the Winslow Wildlife Management Area. Population density just outside the study area in Berlin Borough and Berlin Township is much higher, approximately 1,700 people per square mile.

Employment numbers are highest in Winslow where there are almost 7,500 jobs, followed by Waterford with 2,900 jobs. Chesilhurst, a predominantly residential community that is significantly smaller in land area by comparison, accounts for just fewer than 300 jobs within the study area. Study area automobile ownership (1.8) exceeds the county average of 1.6 per household; with the highest rates in Waterford (2.0).

US 30 Corridor Study

Study Area

Figure 2



From 1990 to 2000, study area population and employment trends ran counter to those for Camden County. Although the county grew very slowly — 1 percent for the decade — the study area posted modest growth of around 10 percent, carried by Winslow which had the only positive numbers. Almost all of the study area population growth was in Winslow, which added more than 4,500 residents. The other study area municipalities either stayed the same or declined slightly. County employment actually fell by 5 percent, but the number of employed residents in the study area went up by 10 percent. Most of the employment growth also occurred in one municipality, Winslow Township, which added almost 2,000 jobs. Jobs in Winslow and Waterford stayed the same during the decade.

		Population		Autos / Household		Employed Residents		Employment	
Municipality	Area (mi ²)	1990	2000	1990	2000	1990	2000	1990	2000
Chesilhurst Borough	1.7	1,526	1,520	1.7	1.7	604	599	169	276
Waterford Township	36.2	10,940	10,494	2.0	2.0	5,694	5,594	2,977	2,932
Winslow Township	58.2	30,087	34,611	1.8	1.8	14,461	16,590	7,395	7,457
Total	96.1	42,553	46,625	1.8	1.8	20,759	22,783	10,541	10,665
Camden County	227.5	502,824	507,889	1.6	1.6	240,113	235,770	227,933	216,931

Source: 1990 Census, DVRPC 2000 Municipal Population Estimates (based on 2000 Census), and DVRPC Preliminary 2000 Municipal Employment Estimates (based on 2000 Census)

2.3 FUTURE DEMOGRAPHICS

Table 2 summarizes demographic projections for the study area. From 2000 to 2025, study area population is projected to grow faster than the Camden County average. The 2025 study area population is forecast to be more than 62,000, a growth rate of approximately 33 percent. In contrast, the rate of growth of Camden County is forecast to be 1 percent.

Most of the available land for development in the study area is located in Winslow; as a result most of the population growth in the study area is forecast to be in Winslow. Almost 14,000 new residents are expected in Winslow by 2025, an increase of 40 percent. Another 2,000 residents are forecast for Waterford. Chesilhurst will remain relatively the same.

Study area employment is also projected to grow faster than the Camden County average. Camden County employment growth is forecast to be solid, at 12 percent. In contrast, study area employment is forecast to jump significantly, with a net increase of 6000 new jobs, a growth rate of 61 percent. Almost half of the new jobs created will be in Winslow.

Municipality	Area (mi ²)	Population				Employment			
		2000	2025	Change		2000	2025	Change	
				Abs.	%			Abs.	%
Chesilhurst Borough	1.7	1,520	1,510	-10	-1	276	358	82	30
Waterford Township	36.2	10,494	12,450	1,956	19	2,932	4,469	1,537	52
Winslow Township	58.2	34,611	48,340	13,729	40	7,457	12,366	4,909	66
Total	96.1	46,625	62,300	15,675	33	10,665	17,193	6,528	61
Camden County	227.5	507,889	513,530	5,641	1	216,931	242,001	25,070	12

Source: DVRPC 2000 and 2025 Municipal Population Estimates (based on 2000 Census), and DVRPC Preliminary 2000 and 2025 Municipal Employment Estimates (based on 2000 Census)

2.4 LAND USE

Figure 3 illustrates land use conditions in the corridor in 2000. Throughout the study area, US 30 traverses a suburban/rural landscape that includes the New Jersey Pinelands Natural Preserve, a protected area accounting for the larger part of Waterford Township. The proximity of the study area to the Pinelands contributes significantly to its rural character by limiting development potential.

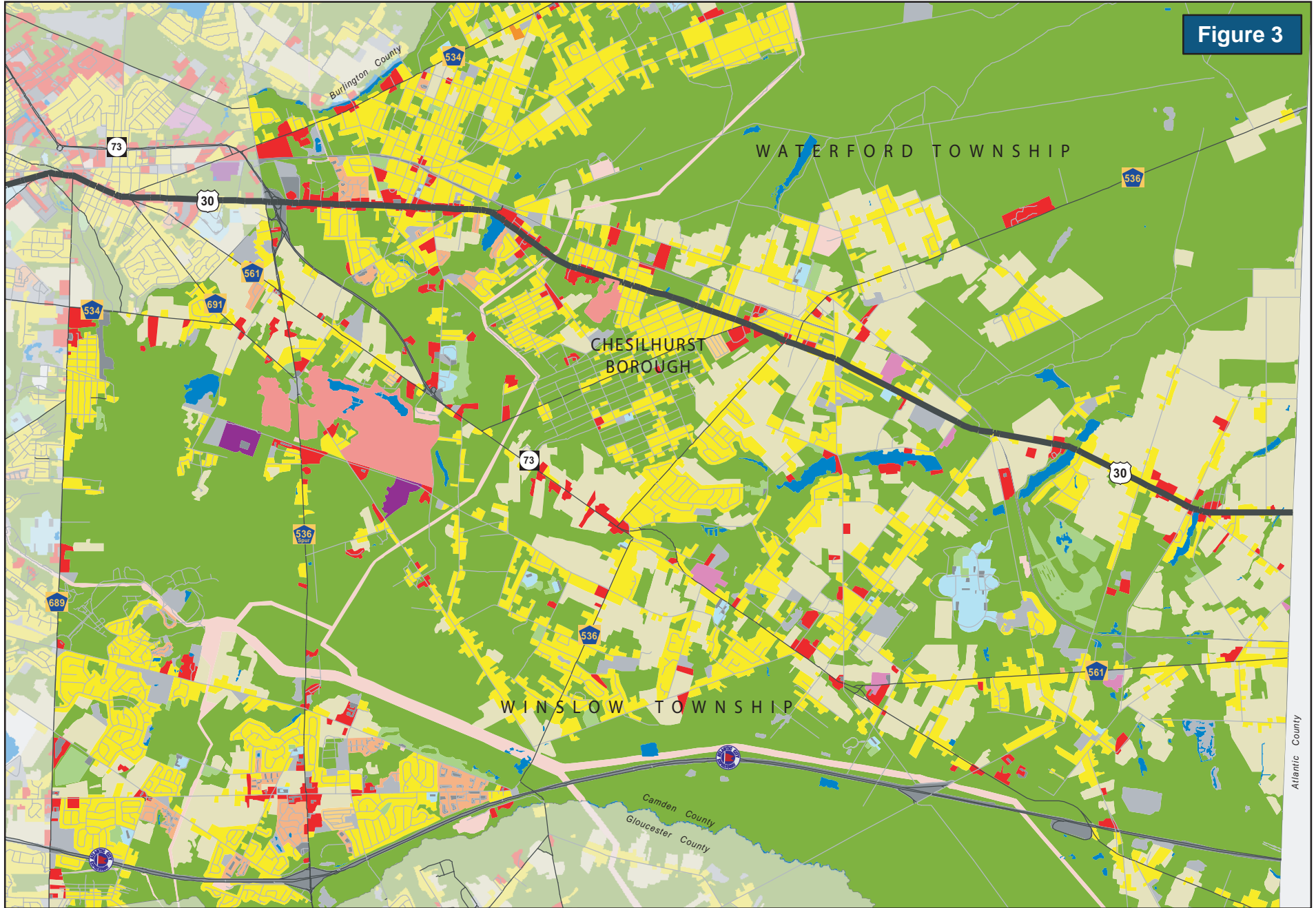
On the contrary, Winslow Township is relatively unaffected by the Pinelands. Recently, the township completed an update to its master plan that outlines a development strategy that promotes village and town center locations and a commercial empowerment zone. In addition, the township has also recently upgraded and expanded the municipal water and sewer system. Next door in the Borough of Chesilhurst, a master plan was completed in 2005 that seeks to balance open space conservation with residential and commercial development.

Most of the corridor's commercial developments front US 30 in Waterford Township, and NJ 73 in Winslow Township, and are concentrated in the western third of the study area. Housing developments, largely found behind US 30, are predominantly single-family detached residences that access US 30 via local network streets. In addition, agricultural lands and woodlands figure prominently in the study area.

US 30 Corridor Study

2000 Land Use

Figure 3



0 0.5 1 Miles

Land Use Categories for Study Area

Residential - Single Family (Detached)	Manufacturing - Light	Utility	Community Service	Wooded
Residential - Multi-Family	Manufacturing - Heavy	Commercial	Recreation	Vacant
Residential - Row Home	Parking / Transportation	Agriculture	Water	Mining
Residential - Mobile Home				

Delaware Valley Regional Planning Commission
September 2006

2.5 JOURNEY-TO-WORK

A significant share of all trips made on an average weekday are those involving commuting to and from work (approximately 20 to 25 percent of total trips). Typically, work trips are compressed into just two to three hours in the morning and two to three hours in the evening on any given workday. The inclination to use public transportation in completing work trips is higher than for any other trip purpose. As a result, travel to and from work creates a high temporal demand on highway and transit facilities, and contributes significantly to the degree of congestion and delay encountered on those facilities.

Municipality	Workers Traveling From Municipality ¹					Workers Traveling to Municipality ¹				
	Total Workers	Means of Transportation				Total Workers	Means of Transportation			
		Drive Alone	Car/Van Pool	Public Transit	Other		Drive Alone	Car/Van Pool	Public Transit	Other
Chesilhurst Borough	562	402	100	47	13	221	179	36	0	6
Waterford Township	5,283	4,530	473	193	87	2,347	1,926	302	9	110
Winslow Township	15,851	12,815	1,677	1,053	306	6,223	5,165	748	114	196
Total	21,696	17,747	2,250	1,293	406	8,791	7,270	1,086	123	312

¹Includes residents who work and reside in same municipality

In order to gain a better understanding of these conditions within the US 30 corridor, detailed evaluations of Journey-to-Work data from the 2000 Census were conducted. Table 3 summarizes some of the information pertinent to the study corridor. At the time the census was conducted (April 2000), there were about 30,000 work trips made to, from, and within the study corridor's municipalities. Most of the corridor's work trips (71 percent) were outbound to job sites, and 28 percent were inbound — although commuting characteristics vary by municipality. Typically, Winslow and Waterford are net trip exporters — from 69 percent of worker trips in Waterford to 72 percent of worker trips in Winslow and Chesilhurst are outbound.

The most popular mode of travel by far, for workers commuting to or from the study area, is the single-occupant vehicle. More than 80 percent of commuters drive alone. In addition, a significant number of commuters participate in carpools or vanpools — 12 percent of study area workers and 10 percent of study area residents. Public transit is used by 5 percent of study area residents and by 1 percent of study area workers. Finally, approximately 2 percent of worker trips were accomplished by other means, for example by walking or riding a bicycle. These proportions are pretty uniform across the study area municipalities; the only exception is Chesilhurst, whose residents use carpools, vanpools, or public transit at higher rates than residents of the other municipalities.

Major work trip origin-destination pairings (desire lines) to/from the corridor municipalities were determined and are shown in figures 4 and 5. For analytical purposes, the top five work trip pairings from or to the study area were identified as “major.” Work trip pairings from or to Atlantic County were also included. Figure 4 shows outbound work trips and Figure 5 illustrates inbound work trips. Only trips for which Winslow or Waterford is a trip end are shown, but these include almost all major trip pairings. On each figure, the major work trips desire lines are identified, with the number of trips shown in red or blue. The value in the center of the municipality, which is common to both figures, is the number of worker trips that begin and end in the same municipality.

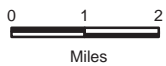
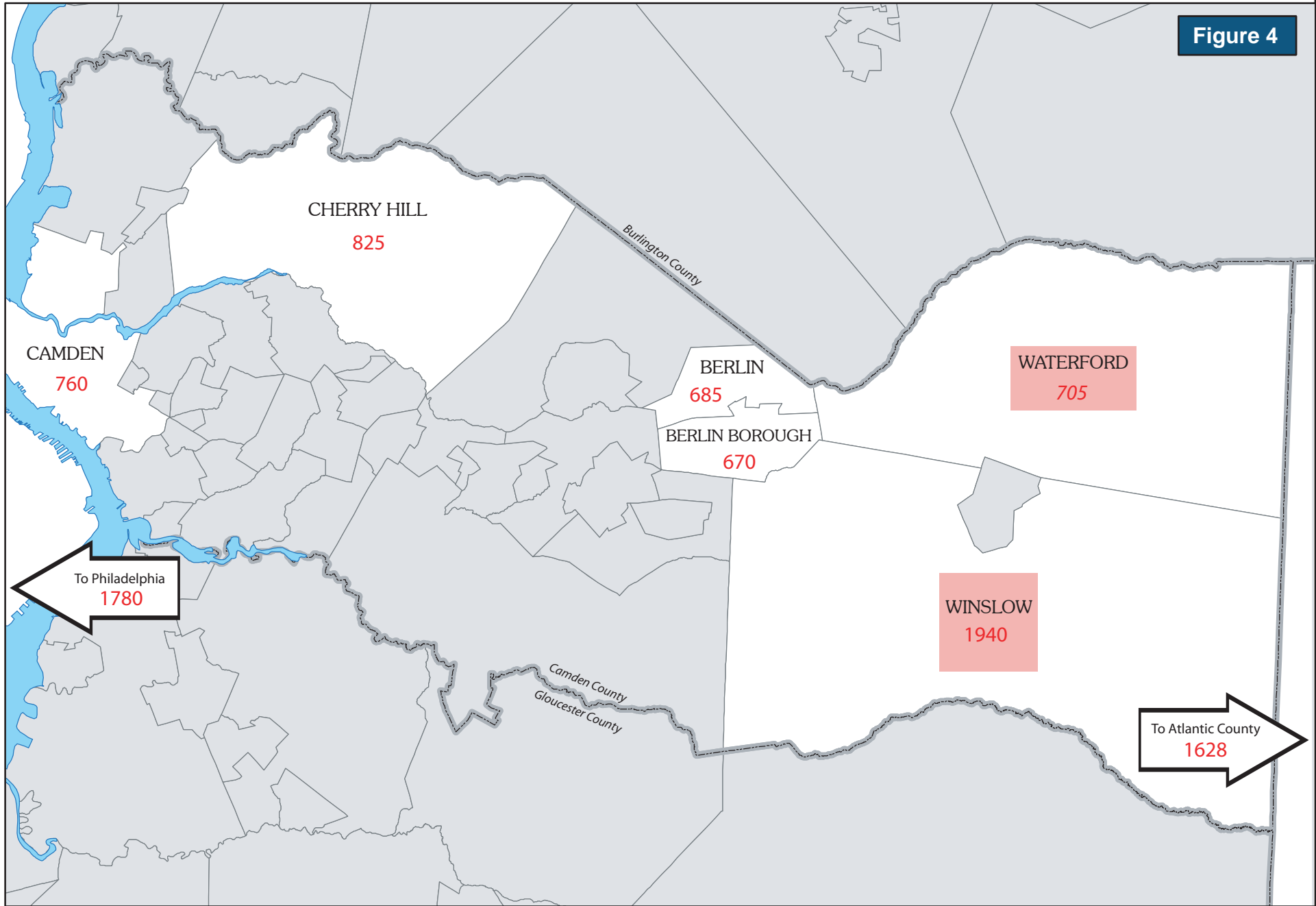
Observations about the desire lines shown on the figures are:

- The length of the trips made by study area residents is somewhat significant. Although the largest trip pairing is between Winslow and Philadelphia, trip pairings between Winslow or Waterford and northbound locations are numerous.
- Intense travel activity within Winslow itself, and between Winslow and adjacent municipalities.
- The trip pairings between Atlantic County and Winslow is another notable trip pairing in the corridor.

US 30 Corridor Study

Journey to Work Travel Patterns FROM *Winslow* and *Waterford*

Figure 4



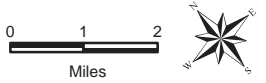
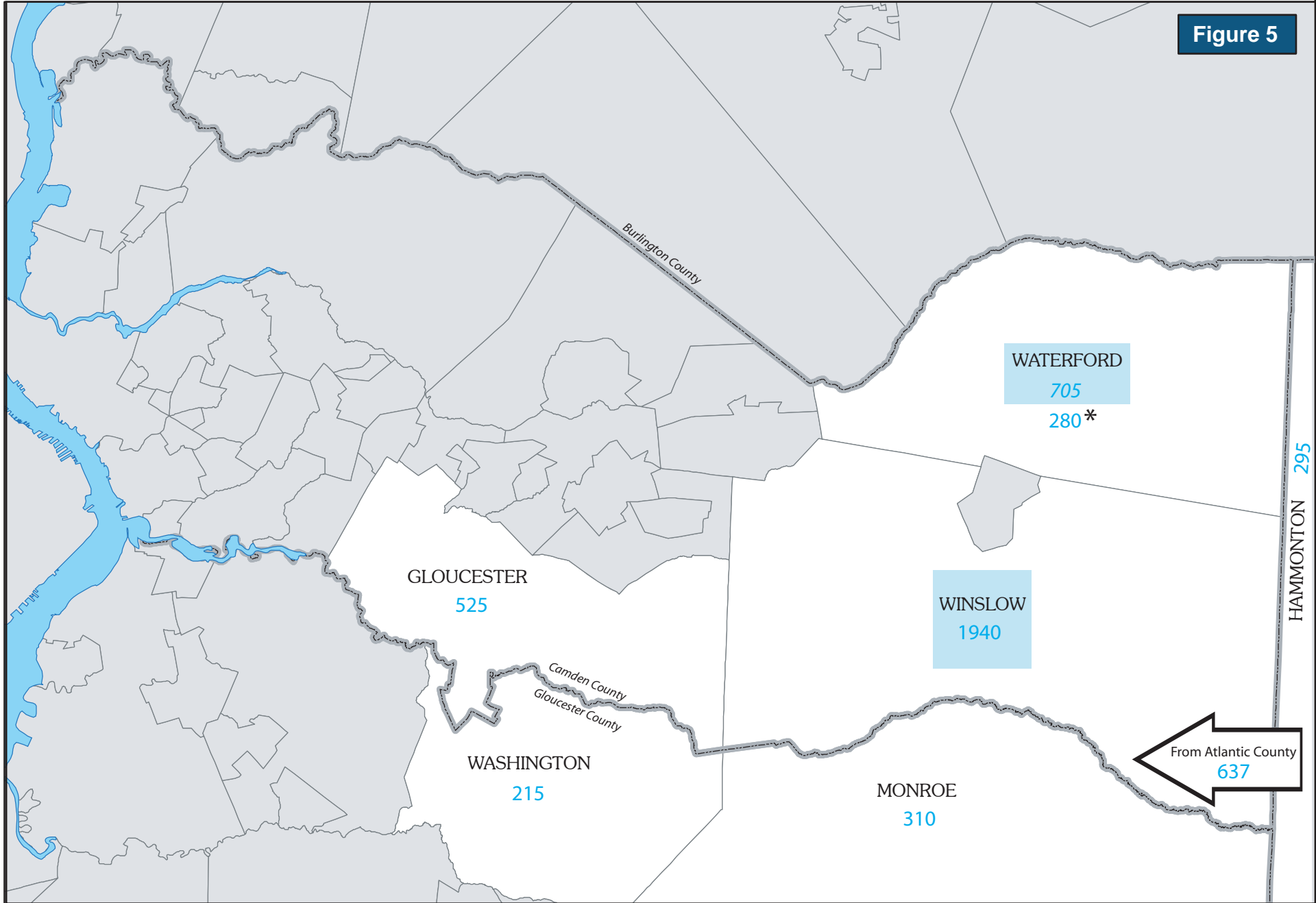
Municipality	Work Trips
Waterford	1780
Winslow	1780

Note : Waterford Township's greatest number of worker trips are internal.

US 30 Corridor Study

Journey to Work Travel Patterns TO Winslow and Waterford

Figure 5



Municipality	Work Trips
Waterford	1780
Winslow	1780

* - Trips from Waterford to Winslow

2.6 ENVIRONMENTAL JUSTICE

Introduction

Title VI of the Civil Rights Act of 1964 and the 1994 President's Executive Order on Environmental Justice (#12898) states that no person or group shall be excluded from participation in, or denied the benefits of, any program or activity utilizing federal funds. Each federal agency is required to identify any disproportionately high and adverse health or environmental effects of its programs on minority and low-income populations. Metropolitan Planning Organizations (MPOs), as part of the United States Department of Transportation's Certification requirements, are charged with evaluating their plans and programs for environmental justice sensitivity, including expanding their outreach efforts to low-income and minority populations.

2000 Census Data for Degrees of Disadvantage

As environmental justice (EJ) is concerned with the impacts of disparate funding and disparate services on defined minority and low-income groups, locating and mapping these groups in the region, at the smallest geographic units possible (either census tract or municipality), is important. The quantitative methodology developed in the original report "*...and Justice for All*": *DVRPC's Strategy for Fair Treatment and Meaningful Involvement of All People in September 2001*, and subsequent updates rely primarily upon available U.S. Census data on the following demographics: minorities, Hispanics, the elderly, the disabled, car less households, impoverished households, female head of household with child households, and limited English proficiency households.

Regional Threshold

A total of all persons in the specified demographic group in the nine-county region is divided by the total nine-county population to obtain a regional threshold, or average. Each census tract that meets or exceeds the regional average is considered an "environmental justice area," and is highlighted on the corresponding map. The number of these factors found in a census tract represent the "Degrees of Disadvantage (DOD)."

Application to the US 30 Corridor

The purpose of the US 30 Corridor Study is to identify transportation problem areas and provide potential improvement scenarios. Resulting projects could possibly have environmental justice implications for the study area's population. The

Degrees of Disadvantage Map serves as an “early warning indicator” of EJ-sensitive areas. Improvement projects undertaken in these areas should be evaluated as to the extent to which they may impact neighboring communities. This project-level review process is governed by National Environmental Policy Act (NEPA) procedures, which now incorporate EJ concerns.

Corridor Level Evaluation

The study area involves one county, three municipalities, and 12 census tracts, representing 42,547 residents (2000 Census). Only census tracts wholly contained within the study area municipalities were considered. The degrees of disadvantage by census tract are shown on Figure 6. The following observations were made:

- Three tracts had no DODs, nine tracts had 1-2 DODs, four tracts had 3-4 DODs, zero tracts contained car-less households

Of the nine tracts that contained one or two DODs, the demographics that did not exceed the regional threshold were limited-English proficiency, zero car households, Hispanic, and impoverished households. Concerning the four tracts having three to four DODs, none contained zero car households or seniors aged 85 or older, and all four tracts had only three DODs.

Environmental Justice Categories, “Degrees of Disadvantage”

Poverty (low-income) concentrations include persons whose household income is at or below Dept. of Health and Human Services poverty guidelines.

“Limited English Proficiency” is defined in the U.S. Census as “Primary Language Spoken At Home Other Than English” and “Speak English Not Very Well.”

Car less households are defined in the U.S. Census as having zero vehicle availability. This population is often referred to as “transit dependent,” i.e., those who must rely on public transit for their daily travel needs and who have limited mobility.

Although no generally accepted definition of *disabled* exists in this country, the 2000 U.S. Census identifies disabled persons according to the categories of sensory, physical, mental, self-care, and employment capabilities.

In assessing elderly populations, DVRPC has chosen to define *elderly* as only those considered extremely old, age 85 and older.

Non-Hispanic minority status is derived from the year 2000 Census, for which 98 percent of respondents in the U.S. population reported only one race.

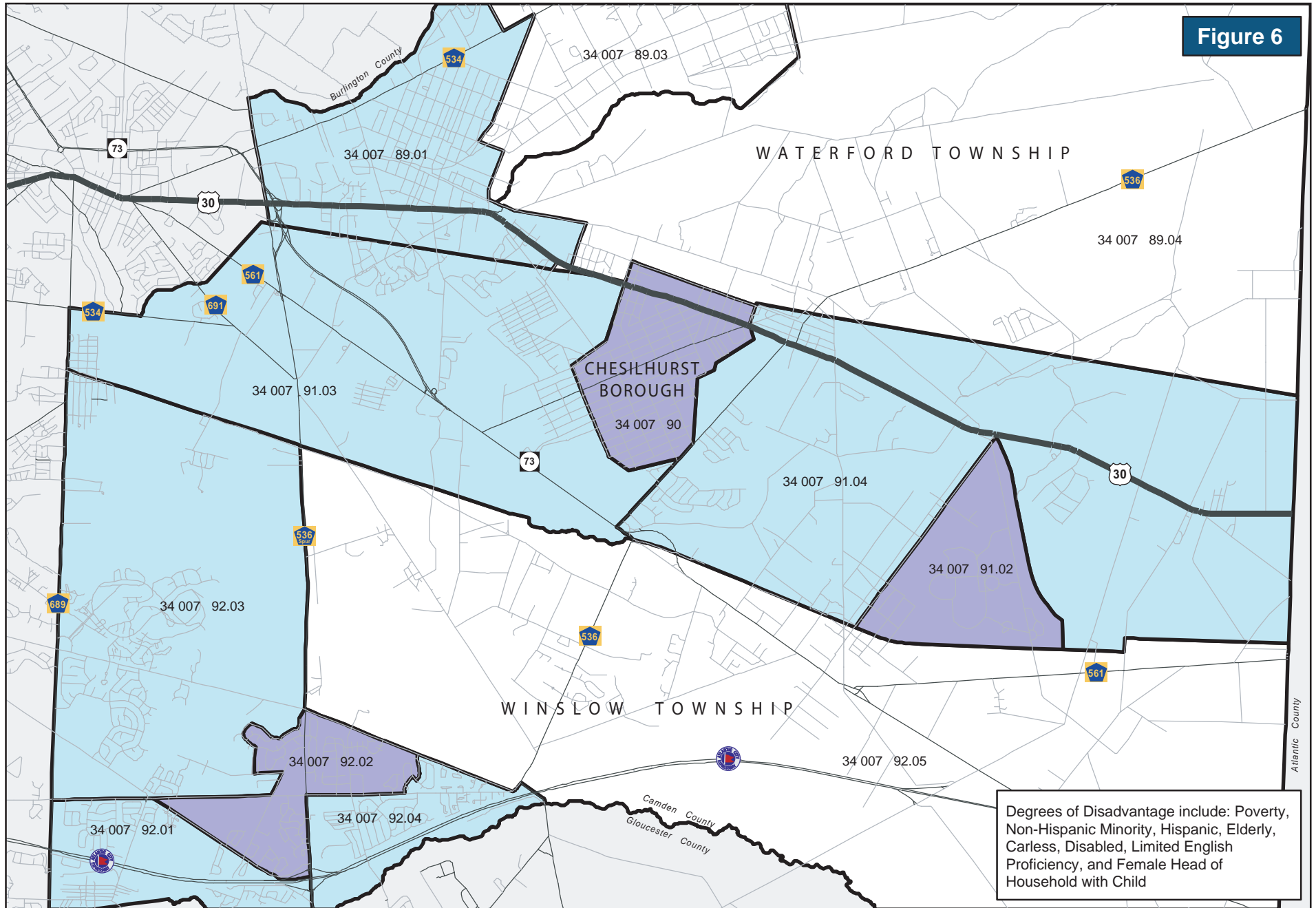
Hispanic defines persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

“Female Head of Household with Child” is defined in the 2000 Census as a female maintaining a household with no husband present, and with at least one child under 18 years old who is a son or daughter by birth, marriage (a stepchild) or adoption residing in the home.

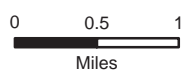
US 30 Corridor Study

Environmental Justice Degrees of Disadvantage

Figure 6



Degrees of Disadvantage include: Poverty, Non-Hispanic Minority, Hispanic, Elderly, Carless, Disabled, Limited English Proficiency, and Female Head of Household with Child



2000 Census Tract

○ 0 Degrees of Disadvantage

○ 1 - 2 Degrees of Disadvantage

○ 3 - 4 Degrees of Disadvantage

○ 5 - 6 Degrees of Disadvantage

○ 7 - 8 Degrees of Disadvantage



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3. TRANSPORTATION SYSTEM

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3.1 ROAD NETWORK

US 30 is classified as an urban principal arterial. Throughout the 9.6-mile length of the study area, US 30 is a four-lane cross section with 11-foot-wide lanes, and shoulders of varying width (1 to 5 feet). Dedicated left-turn lanes are not provided, thus all left turns are made from the passing/left lane. At the western end of the study area, US 30 meets NJ 73 at a full cloverleaf grade-separated interchange. Just outside the study area's eastern end, US 30 connects with NJ 54 and US 206 in Hammonton Borough. US 30 is paralleled to the south by the Atlantic City Expressway, which connects to the corridor via CR 536 Spur New Brooklyn – New Freedom Road at exit 38. Several county routes comprise the bones of the street network through the study area and are summarized in Table 4.

Roadway	Limits	Ownership	Functional Classification	Lanes by Direction	Posted Speed (mph)
US 30	NJ 73 to Atlantic County Line	NJDOT	Principal Arterial	2	50
NJ 73	US 30 to Atlantic City Expressway	NJDOT	Principal Arterial	4	55
Atlantic City Expressway	Winslow Township	South Jersey Transportation Authority	Expressway	4	65
Jackson Road	CR 561 to Burlington County	Camden County (CR 534)	Minor Arterial	2	45
Pump Branch Road	Atlantic City Expressway to Atlantic County	Camden County (CR 536)	Minor Arterial	1	40
Taunton Road	US 30 to Atlantic City Expressway	Camden County (CR 536 Spur)	Minor Arterial	2	45
Cooper Landing Road	Berlin Borough to NJ 73	Camden County (CR 561)	Minor Arterial	1	50
Berlin - Waterford Road	CR 712 to US 30	Camden County (CR 716)	Minor Arterial	1	50
Berlin - New Freedom Road	Berlin Borough to CR 536	Camden County (CR 720)	Minor Arterial	1	25-40
East Central Avenue	NJ 73 to NJ 143	Camden County (CR 721)	Local	1	40-45
Waterford - Blue Anchor Road	NJ 73 to US 30	Camden County (CR 722)	Collector	1	45

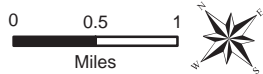
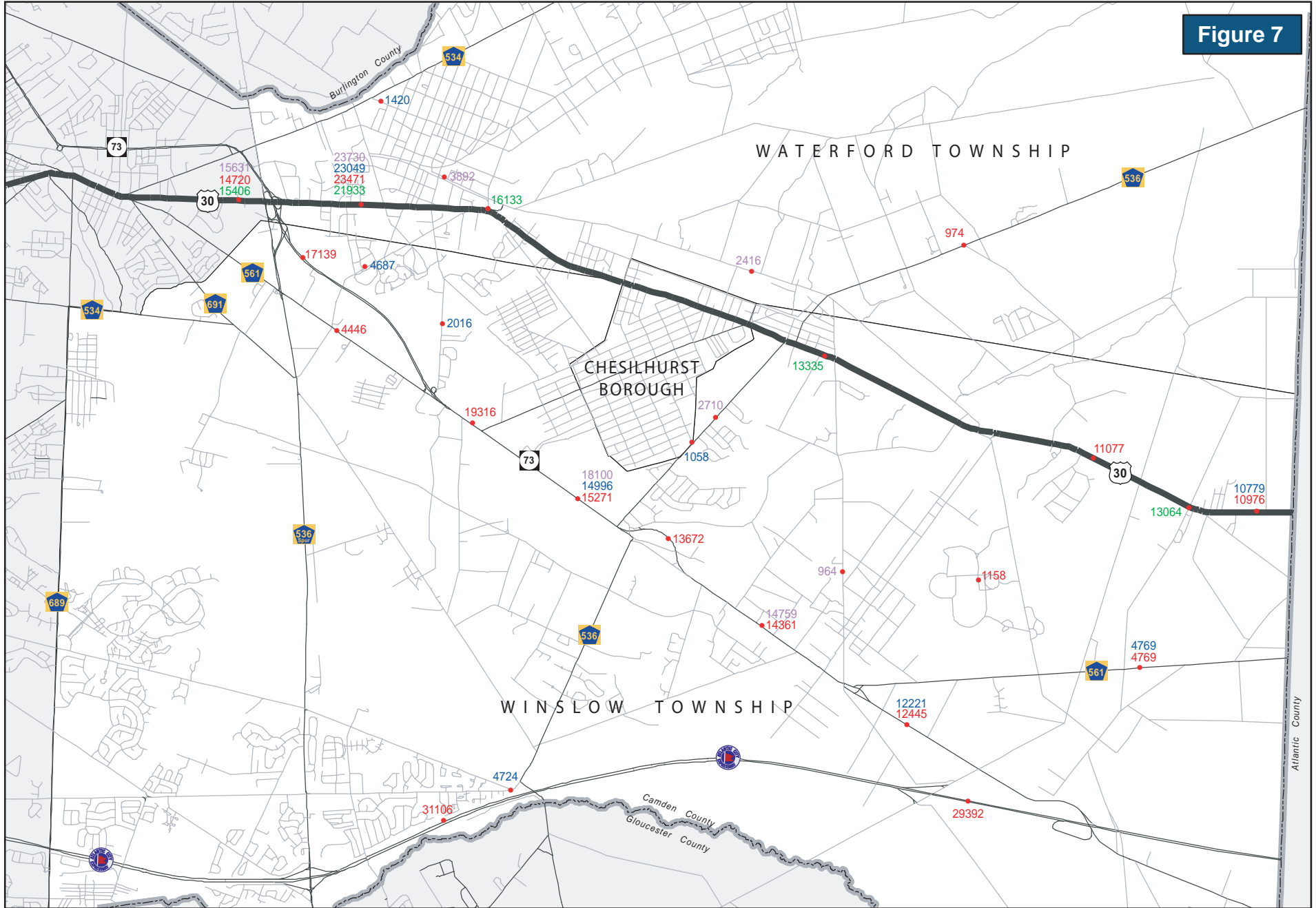
3.2 TRAFFIC VOLUMES

Traffic volumes are depicted on Figure 7. Currently the volume of daily traffic on US 30 is moderate with available capacity. The highest volumes along the corridor were recorded east of NJ 73 in Waterford Township. Between 2000 and 2005, this location has had an average annual daily traffic volume of approximately 23,000 vehicles. Local officials surmise that this spike

US 30 Corridor Study

Traffic Volumes

Figure 7



Average Annual Daily Traffic (AADT)

14000	2000 Traffic Count	14000	2005 Traffic Count
14000	2002 Traffic Count		
14000	2003 Traffic Count		

in traffic volume is due to commuter traffic from the residential developments on the north side of US 30 in Atco. The remainder of the study area experiences traffic volumes of between 13,000 and 16,000 vehicles per day. Local officials have reported higher volumes during the summer months as motorists use US 30 as an alternate to NJ 73 enroute to the New Jersey shore towns of Atlantic and Cape May counties. This extra volume is reportedly not enough to produce congestion.

Through the study area, US 30 is paralleled by two major roadways: NJ 73 and the Atlantic City Expressway. Both are important north-south routes carrying an average of 16,000 and 30,000 vehicles (respectively) through the study area. County routes in the study area handle mostly local traffic traveling between the major arterials and carry less than 5,000 vehicles per day.

3.3 BUS AND RAIL TRANSIT

Bus

The study area is served primarily by NJ Transit's Route 554 bus. Although four other bus lines serve the larger study area, only the 406 bus connects with the 554. Bus routes are depicted on Figure 8. The 554 travels the corridor from Lindenwold, connecting to the PATCO station, to Atlantic City, and serves the following communities between: Berlin, Atco, Hammonton, Mullica Township, Egg Harbor City, Galloway Township, Absecon, and Pleasantville. Service is hourly by direction for the majority of the 24 hour running time. Extra buses run on the half hour for approximately an hour and a half's time during both the a.m. and p.m. peak periods.

NJ Transit's Route 554 bus boardings data, with service from the Lindenwold Station to Atlantic City, uses a farebox sample drawn from Thursday, March 9, 2006. The following analysis examines trips by zone, determining movements completely internal and external to the chosen fare zone, those trips moving through the zone, and those with origins or destinations within the specified zone. The area selected to represent the study area, Zone 6, has limits along US 30 between NJ 73 and CR 722 Waterford-Blue Anchor Road, and lies in the middle of the study area.

US 30 Corridor Study

Figure 8

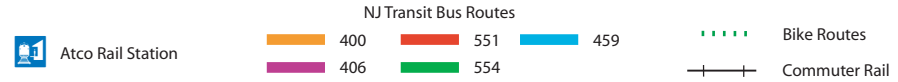
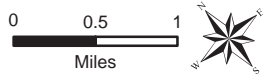
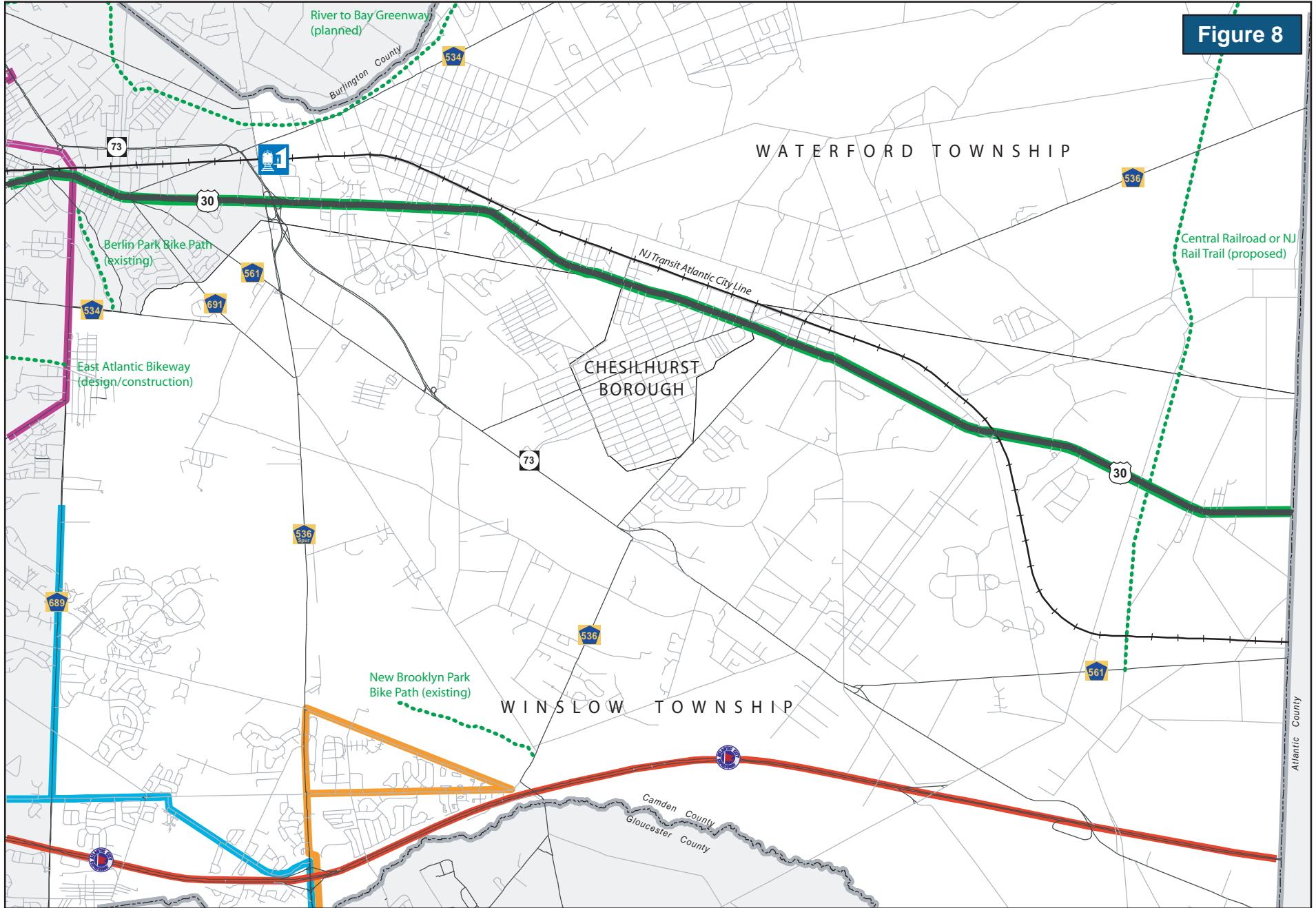


Figure 9 shows the external, internal, through, and intersecting trips for Zone 6. Trip symmetry is assumed and trips shown must be doubled for an accurate number of total trips (coming and going, or eastbound and westbound). The diagram is best thought of as a description of the magnitudes of movement about the selected segment. Approximately 197 round trips were taken to the west of Zone 6, less than a quarter of the number taken to the east, suggesting the Atlantic City area as a major origin and destination. About 91 round trips were taken that passed entirely through Zone 6, and only 135 and 30 round trips intersected Zone 6 from the west and east respectively. The implication is that there are few origins or destinations in Zone 6, the center of the Route 30 corridor study area in which bus transit is the preferred mode. The analysis also suggests that bus ridership is much more robust between Hammonton Borough, Atlantic County, and Atlantic City.

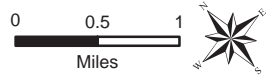
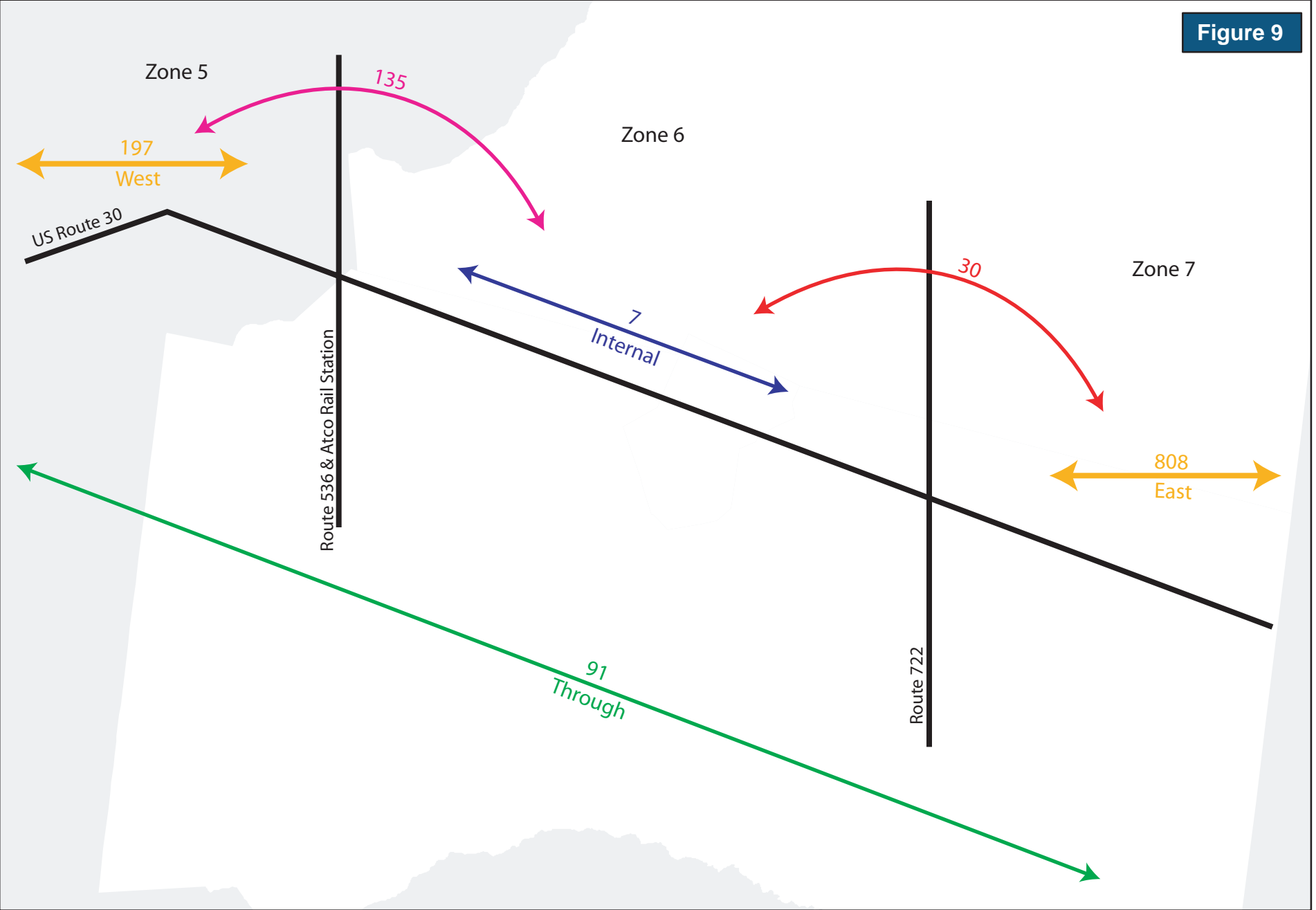
Rail

The Atlantic City Rail line connects 30th Street Station in West Philadelphia with Atlantic City and stops in Cherry Hill, Lindenwold, Atco, Hammonton, Egg Harbor City, and Absecon. The train makes 15 trips per day with headways of 60 to 70 minutes. The primary function of this line is to provide service to Atlantic City, although a small number of riders use it to commute to Philadelphia. This train shares track with Amtrak which is often cited as a stumbling block to increased service frequency.

The number of boards at the Atco station (within the study area) has grown by about 15 percent over the last three years, a modest increase when compared to the other stations along the line within the DVRPC region. Parking has not posed a constraint at Atco Station given a parking lot of about 220 slots that historically are not filled. New Jersey Transit's Atco Station boardings were derived from the Fourth Quarter Ridership Trends reports of 2003, 2004, and 2005.

US 30 Corridor Study

Figure 9



3.4 BICYCLING AND WALKING

Introduction

In 1995, NJDOT released the state's first bicycle and pedestrian master plan. The year 2004 saw the completion of a major update of that plan. The original plan consisted of a comprehensive set of policies designed to achieve a vision for bicycling and walking. The 2004 update, or Phase 2, revisited the vision, goals and objectives of the 1995 policy plan.

Reflecting changing concerns and priorities, the revised vision states: "New Jersey is a state where people choose to walk and bicycle; residents and visitors are able to conveniently walk and bicycle with confidence and a sense of security in every community; and both activities are a routine part of the transportation and recreation systems and support active, healthy life styles."

While Phase 1 focused on policies, Phase 2 concentrates on facilities. This focus is the result of heightened interest in developing bicycle and pedestrian accommodations to the extent that funding requests for such projects far exceed available funds. Therefore, the primary goal of Phase 2 is to provide clear guidance on the most efficient and effective use of federal, state and local resources to implement bicycle and pedestrian initiatives.

Phase 2 prioritized, through the application of demand and suitability measures, segments of the Congestion Management Process (CMP) roadway network for bicycle and pedestrian infrastructure improvements. Segments were identified as high priority where demand is high yet facilities are least suitable. Bicycle Demand is principally a function of demographics and mode split, where a younger population, college students, a high-transit mode split, and numbers of current bicycle commuters contribute to demand. Pedestrian Demand is derived from street network, population and employment density, and relative balance of land uses.

Suitability is a level-of-service measure, a way of quantifying how comfortable a bicyclist or pedestrian would be traveling along or across a given facility. Bicycle Suitability is determined by roadway characteristics such as traffic speed and volume, presence of shoulders, or shoulder lane width. Pedestrian Suitability, defined as the ability of a person on foot to cross the roadway, factors in the speed and volume of traffic, the presence of a median refuge, and spacing of signalized crossings to

determine overall delay from waiting for a safe gap in traffic in which to cross. Details on the analytical methodology used to classify priority segments may be found in the Phase 2 plan document.

US 30 Corridor Study

The priority segments identified in the Statewide Bicycle and Pedestrian Master Plan Phase 2 within the study area are listed in Table 5, and are depicted on Figure 10.

TABLE 5 US 30 CORRIDOR HIGH PRIORITY BICYCLE LINKS		
Beginning Milepost	Ending Milepost	Miles
18.23	18.33	0.1
24.78	25.43	0.65
26.57	26.77	0.2

There were no links on US 30 identified as high priority for pedestrian improvements. The only high-priority pedestrian CMS link identified within the study area is NJ 73 from MP 31.69 to MP 32.35 in Berlin Township. The immediate vicinity of this link has sufficient population density and trip attractors to generate substantial numbers of walking trips. However, the roadway’s overall width, coupled with high traffic speeds and volumes, makes it difficult to cross on foot.

The demand model does not predict a high level of demand for either bicycling or walking within the study area outside of Berlin Borough and Berlin Township, largely due to its rural nature and relatively few trip attractors. US 30 is generally suitable for bicycling, owing to adequately wide shoulders. The short segments identified as high priority are found at locations where the shoulders drop. The roadway is relatively easy to cross on foot, although signalized crossing locations are few. High-priority bicycle links were not found on other CMS roadways within the study area.

As the study area is developed, an environment favorable to bicycling and walking must be intrinsic to all plans. To that end, all study area municipalities should develop bicycle and pedestrian plans as part of their comprehensive master plans.

Existing Bicycle Facilities in Study Area:

- Berlin Park Trail (multiuse trail, 0.8 mi., paved, from New Freedom Road to US 30)
- New Brooklyn Park Trail (multiuse trail, 1.0 mi., along New Brooklyn-Blackwood Road)

Planned and Proposed Bicycle Facilities in the Study Area:

- River to Bay Greenway (multiuse trail, planned, along Mullica River)

In 1997, DVRPC released its Southern New Jersey Bicycle and Pedestrian Mobility Plan as part of the *Direction 2020* long-range plan. Roadways recommended for enhancements to bicycling in that plan include:

- CR 536, from US 30 to Gloucester County line
- CR 716, from Burnt Mill Road to US 30
- NJ 143 from CR 716 to CR 561 (Egg Harbor Road)
- CR 709 from CR 716 to CR 712 (Bartram Avenue)
- CR 712 from CR 709 to CR 713
- CR 713 from CR 712 to study area limits (Burlington County line)

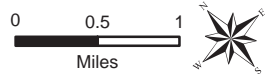
The model used to prioritize CMS links has not been applied to county roads.

During the third weekend of September, one of the nation's largest charity bike rides passes through the study area. The MS 150 City to Shore bike ride typically attracts about 7,000 participants of all ages and abilities who ride from Cherry Hill to Ocean City and back, using CR 713, CR 712, CR 709, CR 716, and CR 536 within the study area. These roads are left open to traffic during the ride.

US 30 Corridor Study

Bicycle LOS Improvement Priority/
CMP Network Daily Bike Trips by Census Tract

Figure 10



Daily Bike Trips



Bicycle LOS Improvement Priority



4. CRASH ANALYSIS

<u>4.1 US 30 COMPARED TO STATE SYSTEM ROADS, 2004 DATA</u>	<u>32</u>
<u>4.2 CRASH CLUSTERS</u>	<u>34</u>

Introduction

The crash analysis is a comprehensive safety overview of the study corridor using available crash data. The main goal is to identify the most problematic locations along the study corridor and determine causes. In many cases, the results of this analysis substantiated safety problems identified by the local officials. More in-depth study will be required to develop the most appropriate improvements.

The crash data used in this analysis was obtained from the New Jersey Department of Transportation's (NJDOT) data reference Web page for years 2002 through 2004. The crash analysis is divided into two parts: 1) Corridor Crash Summary, and 2) Crash Clusters. According to NJDOT, rear-end and sideswipe collisions involve traffic moving in the same direction. Angle crashes involve angular traffic (i.e. northbound and westbound); left-turn and head-on events involve opposing traffic.

4.1 US 30 COMPARED TO STATE SYSTEM ROADS, 2004 DATA

As published in the NJDOT At/Between Intersections Accident Summary for State System Roads (excluding toll roads and interstates), 68,049 crashes occurred on the state system during 2004. Selected summary data is compiled in Table 6. Concerning collision type, the US 30 corridor exceeded state percentages in three categories: angle crashes (state: 12 percent, US 30: 16 percent), left-turn crashes (state: 3.8 percent, US 30: 10 percent), and fixed-object crashes (state: 11 percent, US 30: 18 percent). Although same-direction, rear-end crashes were the most predominant collision type in the study area at 29 percent, this percentage is just over half of the statewide number (45 percent).

The study area portion of US 30 experiences relatively low traffic volume and very low levels of nonrecurring congestion for a four lane US route, which gives some justification for the lower-than-average rear-end collisions. The higher levels of angle and left-turn crashes are most likely related to the problems inherent in this roadway cross section type: four lanes, no turning lanes, narrow shoulders. In this situation, all left turns are made from the inner/left lane across live lanes of oncoming traffic. Low volumes, available capacity, and low development density, often results in higher speeds. High speeds reduce the lead time for turning traffic, thus increasing the likelihood for left-turn and angle crashes. More access points along US 30 increases the likelihood of conflicts.

TABLE 6					
US 30 CORRIDOR (MP 18.2-28.0) CRASH SUMMARY, 2004			NJ STATE ROADS CRASH SUMMARY, 2004		
Collision Type	Count	% of Total	Count	% of Total	
Rear End	25	29%	30840	45.3%	
Sideswipe	6	7%	11197	16.5%	
Angle	16	19%	8432	12.4%	
Left Turn	10	12%	2604	3.8%	
Head On	1	1%	1018	1.5%	
Overtuned	1	1%	261	0.4%	
Pedestrian	1	1%	505	0.7%	
Fixed Object	18	21%	7740	11.4%	
Animal	1	1%	1875	2.8%	
Parked Vehicle	2	2%	1012	1.5%	
Pedacycle	1	1%	347	0.5%	
Other or Unknown	4	5%	2218	3.3%	
total	86	100%	68049	100.0%	
Intersection					
At Intersection	40	47%	24909	36.6%	
Not at Intersection	46	53%	43140	63.4%	
At or Near Railroad Crossing	0	0%	0	0.0%	
total	86	100%	68049	100.0%	
Light					
Daylight	58	67%	47880	70.4%	
Night, Dawn or Dusk	28	33%	19924	29.3%	
Other or Unknown	0	0%	245	0.4%	
total	86	100%	68049	100.0%	
Severity					
Fatal	1	1%	209	0.3%	
Injury	47	55%	20445	30.0%	
Property Damage	38	44%	47395	69.7%	
total	86	100%	68049	100.0%	
Surface Condition					
Dry	57	66%	50316	73.9%	
Wet Surface	23	27%	15266	22.4%	
Snow or Ice	6	7%	2211	3.3%	
Unknown or Other	0	0%	256	0.4%	
total	86	100%	68049	100.0%	

The percentage of fixed-object crashes exceeded the state average at 18 percent and 11 percent, respectively. A further investigation into crash sequence of event data—run off road, speeding, alcohol involvement—may provide insights. Crashes occurring at intersections, both signalized and unsignalized, accounted for 40 percent of the total, compared to only 36 percent statewide. This too may be related to the higher average speeds that are typical in this type of situation. Other factors possibly contributing to intersection crashes include: compromised sight distance, queuing in the through lanes, signal timing, sun glare, etc. Concerning severity, injury crashes (47 percent) were over-represented compared to state data (30 percent). In addition, there was one fatal crash in the study area during 2004, and 209 on state system roads.

4.2 CRASH CLUSTERS

Methodology

DVRPC's cluster finder database application was used to identify one-tenth-mile long crash clusters on US 30 only. After reviewing the initial results, the crash cluster threshold was set at 17 crashes for the three-year period due to the low number of total crashes and the low concentrations of crashes. In past analyses of state or higher functional class roadways, 24 or more crashes has been used to define a cluster. Although 17 crashes is below that standard, these locations are still noteworthy due to the study corridor's lower volumes and suburban/rural character. Using this method, five clusters were identified within the 9.8 mile study area. Combined, the five clusters total 120 crashes, or 42 percent of the three-year analysis period total of 286. Figure 11 shows the location and crash total for each cluster. The number of crashes within each cluster range from 17 to 32. Next is a brief discussion regarding the characteristics of the identified clusters. The following observations were made:

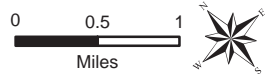
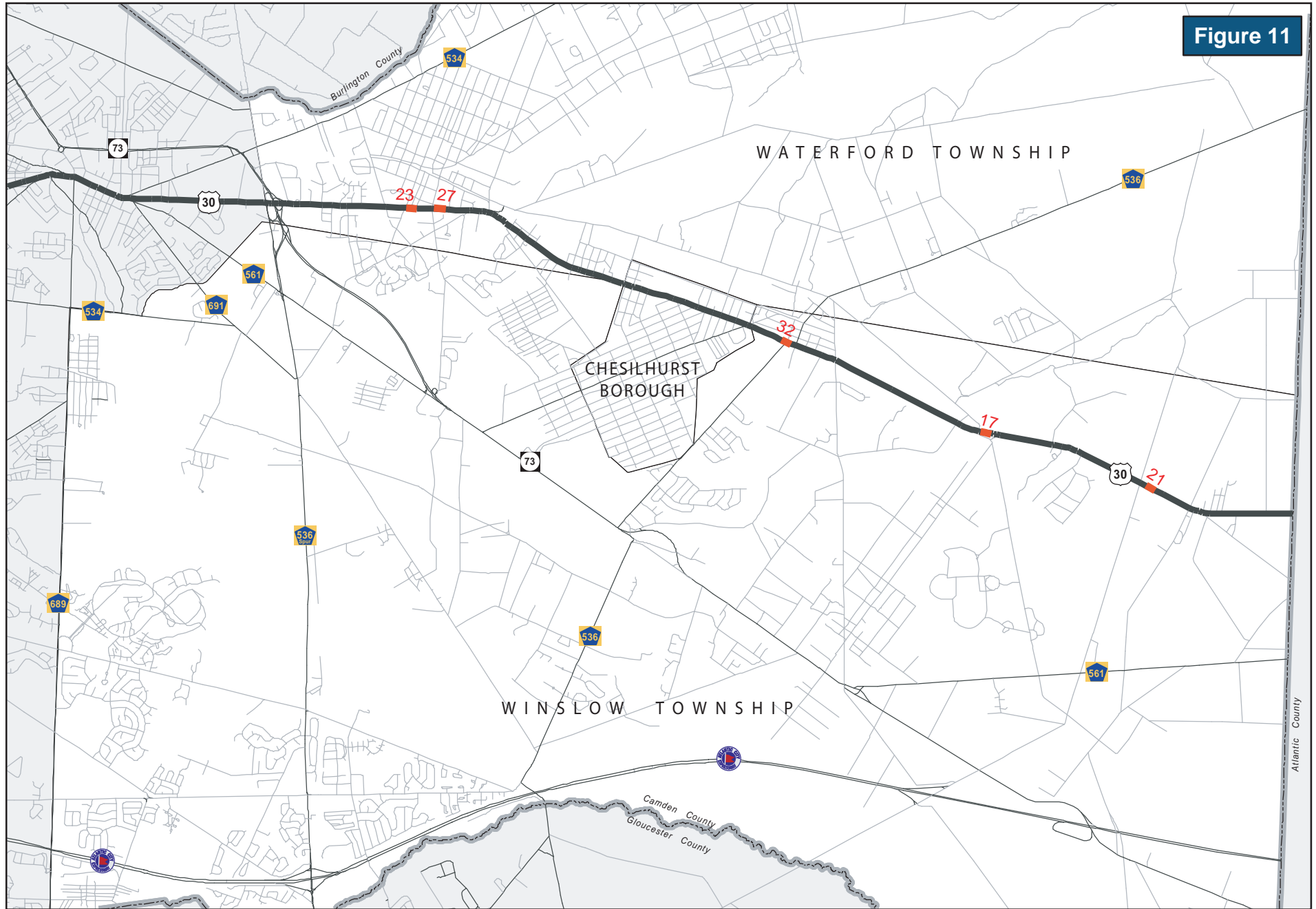
Mileposts 19.46 – 19.56: 23 crashes

The signalized intersection at US 30 and CR 710 Atco Avenue is at the center of this cluster. At this location in Waterford Township, US 30 is two lanes per direction and Atco Avenue has a left-turn lane and a shared through/right-turn lane on each approach. Three of the four intersection quadrants contain businesses with access points on both US 30 and Atco Avenue. The fourth quadrant also contains a business, but its access points are located further away from the intersection. There were eight angle crashes at this location which could possibly be the result of red light running, poor visibility of signals, or not enough green time for the cross streets.

US 30 Corridor Study

Crash Clusters

Figure 11



NJDOT Crash Cluster - 1/10 mile
(Data Years 2002 - 2004)

■ 25 - Total crashes per cluster

Mileposts 19.70 – 19.80: 27 crashes

The signalized intersection at US 30 and CR 712 Bartram Avenue/Cooper Folly Road in Waterford Township is at the center of this cluster. At this location, US 30 has two lanes per direction and the cross streets each have a one-lane approach providing for all movements. All four quadrants are occupied by commercial developments, none of which has a driveway close to the intersection. Of the 27 crashes, there were 11 angle and 9 left-turn crashes. The cross streets meet US 30 at a slight angle that may be compromising sight distance for turning traffic.

Mileposts 23.06 – 23.16: 32 crashes

The signalized intersection at US 30 and CR 536 Pump Branch Road/ Southard Avenue is within this cluster. This location was the highest cluster within the study area. Left-turn crashes (14) were the most predominant type followed by rear-end crashes (9). Pump Branch Road meets US 30 at a slight angle, which may compromise sight distance. Local officials explained that safety has been addressed at this location by the addition of a traffic signal. This analysis does not provide a before and after comparison of safety.

Mileposts 25 – 25.1: 17 crashes

The signalized intersection at US 30 and NJ 143/CR 716 Waterford Road is within this cluster. This junction is fully designed with three approach lanes on US 30 southbound and four lanes northbound, channelized right turns into and out of NJ 143, and two approach lanes on CR 716. This project was completed during the study period and addresses safety and mobility.

Mileposts 26.56 – 26.66: 21 crashes

The unsignalized intersection at US 30 and CR 723 Fleming Pike is within this cluster. This is a very rural location dominated by farmland. At the intersection, one quadrant contains a business, two quadrants contain homes, and the last is farmland. The intersection is located less than 1/10 mile west from a rail overpass of NJ Transit's Atlantic City Line; US 30 dips under the overpass to provide adequate clearance. The crashes are almost evenly divided between five collision types: rear-end (4), sideswipe (4), angle (3), left-turn (5), and fixed-object (4), with one crash coded as other or unknown. Local officials explained that motorists on US 30 northbound have difficulty seeing vehicles exiting onto US 30 from Fleming Pike due to the rail overpass.

TABLE 7							
US 30 CRASH CLUSTERS >= 17, 2002-2004 (WEST TO EAST)							
#	Mile Post Range	Total Crashes	Total Killed	Total Injured	Property Damage Only	Predominant Collision Types (# of crashes)	
1	19.46 - 19.56	23	0	12	11	Angle 8	Rear End 6
2	19.7 - 19.8	27	0	18	9	Angle 11	Left Turn 9
3	23.06 - 23.16	32	0	18	14	Left Turn 14	Rear End 9
4	25.0 - 25.1	17	0	7	10	Other/Unknown 7	Rear End, Left Turn, Fixed Object 2 each
5	26.56 - 26.66	21	0	10	11	Left Turn 5	Rear End, Sideswipe, Fixed Object 4 each

5. TRANSPORTATION ISSUES

<u>5.1 CORRIDOR-WIDE ISSUES</u>	<u>40</u>
<u>5.2 IDENTIFIED PROBLEM LOCATIONS</u>	<u>50</u>

5.1 CORRIDOR-WIDE ISSUES

The major issues along the corridor are generally related to development, access, and safety. The four-lane, cross-section design of US 30 ties all of these issues together. Due to the absence of left-turn lanes, access to destinations on the opposite side of US 30 is governed by permissive left turns from the passing lane. Queuing in the passing lane while waiting for a gap, followed by crossing two live lanes of oncoming traffic, is an inherently unsafe practice. This situation will become worse as frontage along the roadway is developed and the number of curb cuts increases, thus generating more traffic and more left turns. Right turns from US 30 into driveways can also be problematic under these conditions as motorists passing through the study slow down abruptly, or weave to the avoid turning vehicles.

This type of safety problem was documented in DVRPC's US 30 Corridor Study, published in July of 2002. The study focused on the western portion of US 30 between NJ 73 and the Benjamin Franklin Bridge. A significant finding from this study was in regard to the total number of crashes, and the number of crash clusters, of the varying cross-section types along US 30. Specifically, there were 24 crash clusters identified in the four-lane, no-shoulder cross section, found east of I-295, and only one cluster identified in the section west of I-295 where US 30 is two lanes with shoulders and left-turn lanes at signalized intersections. In the four-lane section of the corridor between Lawnside and Clementon (east of I-295), US 30 is densely developed with retail and commercial establishments. Most of these businesses have individual curb cuts accessing US 30. The four-lane cross section — which lacks safe, controlled, left-turn access — is a mismatch for the multiple curb cuts of the retail environment, as shown by the safety analysis.

Currently, the situation along US 30 in Waterford, Winslow, and Chesilhurst has not reached a level of concern documented in the previous US 30 study. The threat is in the future development of the corridor. Land is available and each municipality is seeking growth. It is important that an access management plan is developed to ensure safe access to businesses and residences, and to preserve mobility through the corridor. The best approach is a coordinated effort between neighboring municipalities to utilize the infrastructure for its best and highest use in serving local and regional traffic in a safe and efficient manner. The next section discusses access management and its application to the US 30 study area.

ACCESS MANAGEMENT

Introduction

The US 30 corridor is at a critical point in history. At present, its stakeholders have an opportunity to proactively shape the landscape by guiding future land developments in an organized manner that will produce a desirable outcome. Development density along the White Horse Pike is low and capacity for future development is available. In order to best serve the future needs of business owners and residents of the corridor, local governments should seize the opportunity to collaborate on the development of a vision for the corridor. A vision that includes a vibrant business corridor where transportation mobility is idealized, accommodating all modes and all users. A vital component of this initiative, and to the success of the corridor, is access management. Such a vision is attainable, and it begins with a corridor access-management plan.

What Is Access Management?

According to the *Transportation Research Board's Access Management* website, "access management seeks to limit and consolidate access 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." It is a process that provides access to land development while preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed.

Access management achieves this through a two-pronged approach: coordinated land use planning, and roadway design standards. When properly implemented, corridor mobility is maintained, safety is improved, and access to businesses and residential streets is optimized. Some common access management techniques include: clustering development, creating sanctioned left-turn opportunities, limiting the number of driveways, improving connectivity, and implementing pedestrian and bicycle amenities.

A key component of access management is that it recognizes the relationship between land use and transportation. In essence, although commercial and residential development is good for the local and regional economy, poorly planned development can lead to traffic problems that can, in turn, be detrimental to a location.

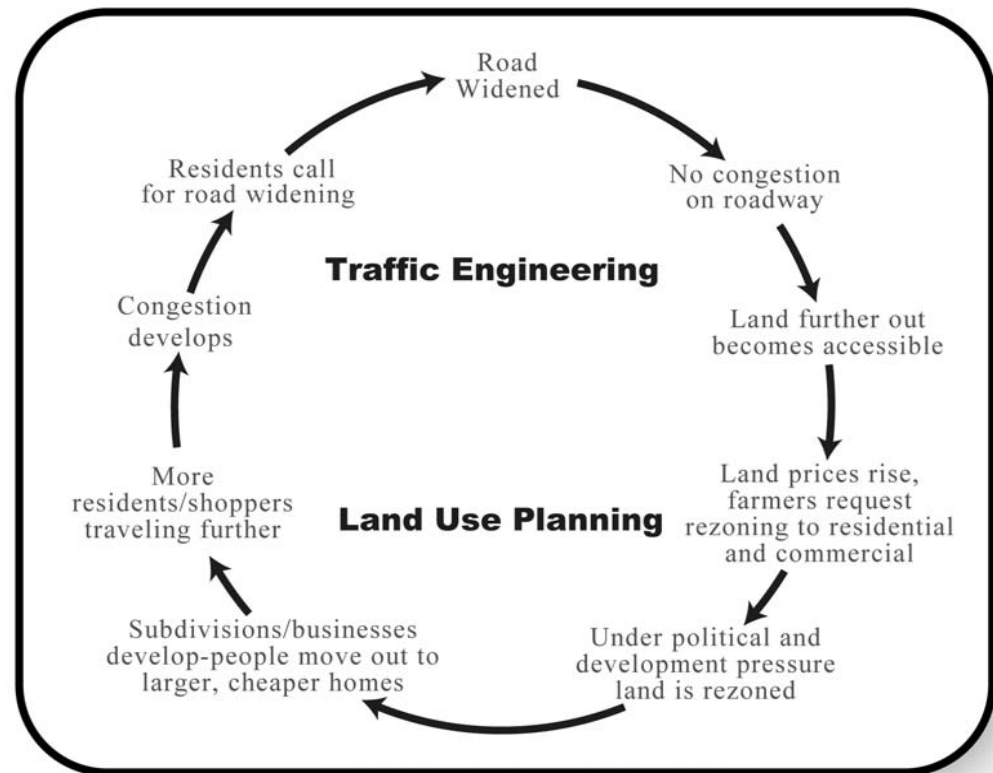
The Land Use / Transportation Relationship

Traffic problems, namely congestion and cut through traffic, are fatefully linked to land use. There is a growing awareness that land use decisions affect transportation needs; and transportation improvements, in turn, affect land use decisions. The way a land development takes shape, the nature of the use, and the volume and type of trips generated all have a direct influence on the transportation system they are served by. Land use patterns dictate the trips we make for work, school, recreation, and for necessities (groceries, etc.).

Easy accessibility is a key component of land value. In an emerging area where density is low, new developments often have great appeal in terms of their easy accessibility. With the development of each subsequent parcel comes increased traffic seeking to access these developments, thus increasing traffic volumes. Adding to this growth is an ever-increasing rate of car ownership and car use. Nationally, vehicle ownership has doubled over the last 20 years and vehicle miles traveled is at an all-time high. In addition, people commuting to work alone; a practice referred to as single occupant vehicle (SOV) trips, quickly depletes roadway capacity. More cars on the road and more land developments lead to congestion.

In the past, congestion was often dealt with by widening roadways. Over time, it became apparent that widening is an unsustainable

Diagram 1: Land Use / Transportation Cycle



Source: *New Jersey Future In Transportation*

practice and that congestion is not something that can be solved, only managed. Diagram 1 is an example of the land use/transportation cycle taken from the New Jersey Department of Transportation's "Future In Transportation (FIT)" website.

Exacerbating the problems created by this cycle is the move away from traditional neighborhood development patterns that follow a grid network of streets, which allows better distribution of traffic volumes. Cul-de-sac style developments without through streets typically funnel large numbers of vehicles through single access points. In addition, this development type typically discourages mixed use and multimodalism, often making travel by car for work, shopping, and recreation, a necessity.

Corridor Access Management

Corridor Access Management is an approach that applies the techniques of access management at a corridor level, rather than at a municipal or state level. This can be a useful approach when planning the future of a roadway that spans several municipalities and/or counties. According to the *Berkshire Access Management Guidelines*, "Corridor access management is applicable to any roadway or highway that currently or potentially has problems with driveway access and traffic congestion. It can be applied to roadways that currently do not have any access problems so that future problems can be prevented."

One way of approaching corridor access management is to create an access management overlay district. This tool adds special requirements to the existing zoning regulations and can be tailored to suit the specific needs of the subject corridor. These additional regulations will apply only to the corridor and can be more restrictive than the municipal regulations. Pennsylvania's *Access Management Model Ordinances for Pennsylvania Municipalities* guide states that a planning study should be completed before an overlay district is adopted, and it should focus on the following issues:

- Purpose of the overlay district,
- Analysis of existing traffic conditions,
- Analysis of future traffic conditions based on projected land development patterns,
- Recommended access improvements and management practices, and
- Establishment of the boundary for the overlay district.

This type of study helps to ensure that the overlay districts are properly developed and contain clearly defined regulations that can be easily implemented.

Access Management Techniques

The following text provides a brief overview of the techniques available for inclusion in an access management plan.

Land Use Techniques

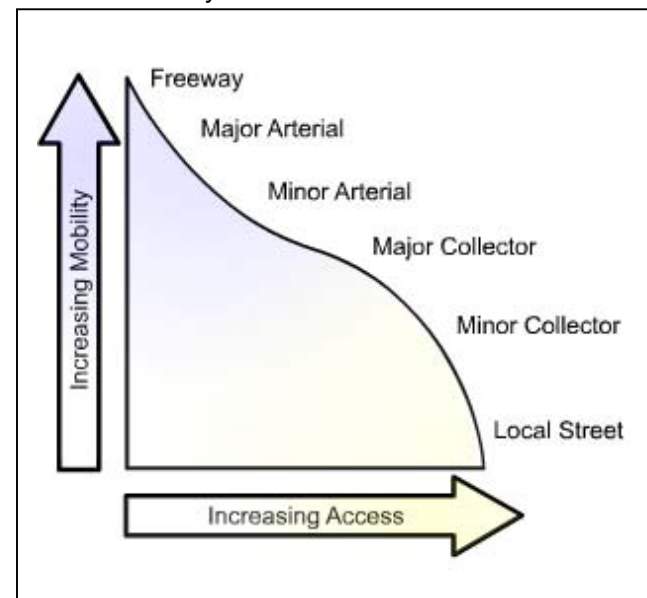
Local comprehensive plans and zoning ordinances are the policy documents that guide future development and conservation for a municipality. There are many ways in which these documents can address access management issues. The following techniques are cited in the Iowa *Access Management Handbook*:

- Designate compact growth areas and limit the amount of development that can take place in rural areas along arterials.
- Prohibit strip development along arterials, including the proliferation of single-lot, house-by-house development.
- Develop regulations to require that development along the arterials be clustered or limited to certain areas.
- Include guidelines in a local ordinance to ensure that arterial development will not significantly reduce traffic safety and traffic carrying capacity.
- Require traffic impact analyses and site plans for all developments exceeding a certain threshold.
- Meet with officials of adjacent communities to review transportation issues and develop a coordinated, regional approach to access management.

Roadway Functionality

State, regional, and local governments across the United States use access management policies to preserve the functionality of their roadway systems. This is often done by designating an appropriate level of access control for each of a variety of facilities. Local residential roads are allowed full access, while

Diagram 2: Conceptual Roadway Functional Class Hierarchy



Source: *Access Management*, FHWA, 2005

major highways and freeways allow very little (see Diagram 2). Between are a series of road types that require standards to help ensure the free flow of traffic and minimize crashes, while still allowing access to major businesses and other land uses along a road. An efficient transportation network will include appropriate transitions between classifications.

Official Map

An official map can be created to designate the jurisdiction of all roads and public rights-of-way, including the functional class of each, within a municipality or other civil division. Once reviewed and adopted, the official map becomes a legal document and can be used in making determinations regarding land developments.

Land Use Intensity

The Institute of Transportation Engineers (ITE) has developed a guide for determining typical trip-generation numbers for specific land use types based on project size in acres. This guide can be used to determine the appropriate zoning designation desired for an area. This approach fosters access management by allowing a municipality to plan for the future growth of a location and the subsequent traffic impacts to the local road network of anticipated developments.

Interconnected Access

Essentially, this tool provides access between adjacent land developments; i.e., between businesses by connecting parking lots, and between subdivisions by interior connecting roads. This allows motorists to drive between developments without reentering the street network. This tool can be effective both in planning new developments or retrofitting existing businesses in the interest of access management. This tool can be adopted as a component of municipal zoning regulations, thus requiring compliance by developers.

Consolidated Access

Fewer access points on a roadway means fewer conflict points and better mobility. As an undeveloped corridor begins to grow, lack of an access management plan can lead to multiple driveways for each new development. Coordinated and consolidated driveways, or shared access, improves traffic circulation and improves safety — both necessary components for attaining an economically viable location. In a best-case scenario, adjacent land developments (where appropriate) will have shared access and be interconnected.

Preserve Functional Area of Intersections/Interchanges

Access connections too close to intersections or interchange ramps create additional conflict points that often have a history of frequent crashes. Such areas are the four quadrants of land where two roads cross. Oftentimes, high trip-generating businesses can be found on these parcels; and, oftentimes, uncontrolled access is available from both the main arterial and the cross street. Turns made into or out of these parcels may also compromise mobility because these access points are where motorists are responding to intersections and are often decelerating to stop or maneuvering to turn.

Engineering Techniques

Driveways

According to the Iowa Access Management Handbook, “Encouraging wide spacing between driveways is the single most important step that a municipality can take to ensure safety and maintain the traffic carrying capacity of its arterials.” In addition to driveway spacing, driveway location and design are also important considerations and are typically more effective when used in conjunction with driveway spacing. The benefits of these techniques include: fewer conflict points, fewer crashes, orderly merging of traffic, increased mobility, reduced congestion, and improved access to land developments.

The following table contains national standards for driveway spacing developed by the American Association of State Highway and Transportation Officials and found in the publication *A Policy on Geometric Design of Highways and Streets*:

Driveway Spacing Standards Based on Travel Speed

Posted Speed (MPH)	Minimum Spacing (ft)	Ideal Spacing (ft)
20	115	225
30	200	335
40	305	445
50	425	555
60	570	665

Standards for driveways must also include turn radius, driveway width, and driveway slope standards. These are important criteria in maintaining mobility and average speed through the corridor by allowing easier access to and from the roadway. Roadway type will dictate suitable standards.

Lane Configurations and Treatments

Use of exclusive turning lanes removes turning vehicles from through lanes and provides a safe queuing area while waiting to turn. Such lanes can be marked by striping and/or impervious or planted median treatments. Two-way left-turn lanes (TWLTL) that allow turn movements from both directions from a center lane are very effective in commercial areas where driveways to businesses are frequent.

Service/Frontage Roads

The purpose of service roads, or frontage roads, is to provide access to several land parcels via parallel roadway along an arterial without having individual driveways accessing the main arterial. Instead, these parcels have driveways onto the service road, not the arterial. The benefit is that the service road does not carry through traffic and thus has lower volume and speed than an arterial, where such access points would be more dangerous. This is a safer environment for the frequent in-and-out traffic movements that are common with high trip-generating land developments. The service road can be designed to connect with adjacent cross streets that intersect the arterial. In this scenario, mid-block conflict points are eliminated from the main arterial and all movements take place at intersections. This also results in better traffic flow along the main arterial.

Signalized Intersections

Depending on the volume of an arterial, and the volume of traffic accessing that arterial from an intersecting street, a signalized intersection can be a useful tool for regulating access. Equally as important is the logical placement and uniform spacing of signals to favor through movements on an arterial. Disregard to the importance of signal placement — as well as optimized signal coordination — combined with increased traffic volumes may lead to congestion that cannot be addressed by signal timing changes alone. In terms of signals as conflict points, the necessary space between conflict points increases as travel speed increases in order to provide adequate reaction time for drivers.

Depending on the configuration of the traffic signal, controlling access with a signal can provide dedicated movements for vehicles seeking to turn. A dedicated turning movement, one where cross traffic has a red light, is the safest turning movement. In addition, combining dedicated turn lanes with the dedicated turning signal phase can increase mobility and reduce congestion by removing turning traffic from the through-traffic lanes.

How It Is Implemented

Access Management is promoted by transportation professional organizations, such as the Institute of Transportation Engineers (www.ite.org), the Transportation Research Board (www.accessmanagement.gov) and the American Association of State Highway and Transportation Officials (www.aashto.org). Access Management programs are usually implemented by transportation agencies. A particular staff or group may be assigned to develop Access Management guidelines and standards, and to implement Access Management activities.

New Jersey

Conflict points are controlled through permits for access to a main road, by road improvements for better design, and cooperation between local governments to plan for the safe development of their roads. New Jersey adopted the State Highway Access Management Code in April of 1992. This code applies the principles of access management to all state roads. It also allows county and municipal governments to work with the Department of Transportation to develop local access management plans. When the municipal, county and state institutions work together to develop access management plans or policy, the results are more likely to be coherent and effective. Access management must fit into the overall picture of planning, zoning and land use in order to achieve its goals. When the different levels of government agree on common goals and work together to develop plans, the overall planning process is more integrated. As more communities adopt access plans, the effects of good access management are seen across the state.

The following excerpt is taken from the *New Jersey Department of Transportation State Highway Access Management Code and New Jersey Administrative Code*, and defines the terms *access code*, *access level*, and *access management plan*:

Title 16 Chapter 47

“Access Code” means the State Highway Access Management Code adopted by the Commissioner pursuant to N.J.S.A. 27:7-91 and readopted, as required by Executive Order 66 (1978). “Access level” means the allowable turning movements to and from access points on a State highway segment based on the highway access classification. “Access management plan” means a plan showing the design of access for every lot on a State highway segment developed jointly by the Department, the municipality in which the highway is located, and the county, if a county road intersects the segment.

Conclusions

The access management recommendations for the US 30 Corridor are suggestions for guiding the development of the corridor to ensure mobility and promote safety. The US 30 corridor is a developing suburban landscape that presents many opportunities to implement both engineering and land use access-management techniques.

It is DVRPC's intention that the ideas and suggestions presented in this study will foster coordination between the study area municipalities and the New Jersey Department of Transportation. Through collaboration and coordination, these entities can implement access management strategies in the study corridor by incorporating the appropriate modifications to local comprehensive plans and land development regulations, and by retrofitting the existing roadway to incorporate engineering techniques that promote safety and ensure mobility. The most appropriate retrofit application for the interim period is driveway consolidation. This is a low cost technique that will reduce the number of driveways onto US 30. The benefits include retaining access, increasing safety, and improving mobility on US 30.

5.2 IDENTIFIED PROBLEM LOCATIONS

Waterford Township

General Concerns

Waterford Township's foremost concern is the corridor-wide impact of future retail and commercial developments planned for Winslow Township as a result of the township's recently updated master plan and zoning ordinances. New development will likely increase traffic on the local and regional network, and on US 30. The majority of the corridor's retail establishments are located along Waterford Township's 3.35 miles of the White Horse Pike. Existing issues related to access and safety will become more pressing as traffic volumes rise. These issues have been addressed in the corridor-wide problems section.

Winslow Township

Development

The township's recently updated master plan and zoning ordinance set forth a strategy for growth and development that puts new demands upon the transportation infrastructure and provides an opportunity to explore alternatives.

1. Intersection of US 30 and Fleming Pike

MP 26.58

Identified Problem

The unsignalized intersection at US 30 and Fleming Pike is a persistent safety concern and the township's number one transportation problem. Sight distance is restricted due to the proximity of nearby trees and the rail overpass located to the east. At the underpass, the roadway dips slightly for improved clearance. US 30's lanes narrow under the overpass and no shoulders are present. Traffic is reportedly heaviest on the Fleming Pike approach to US 30. This route connects US 30 to NJ 73 and the Atlantic City Expressway.

Improvement Scenario

Short-term

Add “Stop Ahead” beacons and warning signage on the Fleming Pike approaches to the intersection to raise awareness. “Intersection Ahead” warning signs can also be added to US 30 in advance of the intersection. These treatments can be supplemented by reflective pavement markings. Additionally, rumble strips can be used as an effective tool for slowing traffic and making the drivers more alert. This treatment would only be appropriate on the minor street approaches.

Long-term

Conduct a signal warrant analysis to evaluate whether or not this intersection is a candidate for signalization. Making an intersection signalized does not guarantee a reduction in crashes. For best results, it is important to make necessary safety improvements to the site in conjunction with signal implementation.

2. Intersection of US 30 and CR 536 Pump Branch Road

MP 23.16

Identified Problem

At this signalized intersection, left turns from US 30 to Pump Branch road are resulting in left-turn type crashes, according to local officials. Pump Branch Road meets US 30 at a slight angle, which may compromise sight distance. Local officials explained that safety has been addressed at this location by the addition of a traffic signal. A before-and-after safety analysis was beyond the scope of this study.

Improvement Scenario

A dedicated left-turn lane and protected signal phase is a significantly safer turning accommodation than the existing permissive left turn. This type of improvement can be implemented at individual sites or can be part of an access management plan that incorporates a two-way, left-turn lane.

3. Future Traffic

Identified Problem

Development planned for the south side of US 30 and along NJ 73 is projected to increase traffic on local streets and connecting county routes.

Improvement Scenario

Monitor traffic volume and speed before, during, and after development to quantify its impacts. Depending on the data findings, several improvement strategies may be warranted, i.e. signalization at appropriate intersections, access management, traffic calming, or safety improvements.

Chesilhurst Borough

General Concerns

Chesilhurst Borough completed an update to its master plan in January of 2005 that details a planning initiative for future residential, retail, and commercial developments. These new developments will have impacts on the existing transportation infrastructure.

1. Center Avenue

Identified Problem:

Center Avenue is a local street that traverses the heart of Chesilhurst Borough. It is an important facility because it connects US 30 with NJ 73. Center Avenue has no controls along the approximately 2.5 mile stretch between US 30 and NJ 73. According to local officials, speeding has become commonplace as a result of these conditions.

Improvement Scenario

A warrant analysis for traffic controls should be undertaken. Several intersections along Center Avenue may be appropriate locations for new stop signs. Traffic-calming improvements may also be appropriate in some locations. Increased enforcement can also be effective in slowing traffic, however this approach is typically employed only on a temporary basis due to cost.

2. Intersection of Center Avenue and CR 718 4th Street

Identified Problem:

Local officials reported this intersection to be the highest crash location in the borough. This intersection is the most problematic along Center Avenue due to higher volumes on the cross street. Fourth Street is a county route that connects US 30 and CR 536 Pump Branch Road.

Improvement Scenario

This location can be addressed in coordination with the analysis of the Center Avenue corridor (see #1). A traffic control warrant analysis should be undertaken as part of a comprehensive analysis that considers impacts to adjoining network streets.

3. Pedestrian Environment along US 30

Identified Problem:

Local representatives have reported seeing residents walking along the shoulder of US 30 en route to and from the NJTransit bus stops. In particular, residents of the senior home often walk west along US 30 eastbound to the signalized intersection at Garfield Avenue in order to cross US 30 for the westbound NJTransit bus. If the plan for new retail development along US 30 is realized, the need for sidewalks and pedestrian crossing amenities will be even greater. Still, there is a need to improve access to transit regardless of future developments.

Improvement Scenario

This corridor needs a comprehensive evaluation of pedestrian amenities along the entire length of US 30. An abbreviated version of this approach is presented in chapter 3 of this report. Short of that, a piecemeal approach that provides adequate sidewalks and crossing amenities (pedestrian signal heads with countdown timers) between developments where pedestrian demand is high would be an appropriate starting point. It is important to consider the abilities of all potential users (senior citizens, children), and to design improvements according to the standards set forth in the *Guide for the Planning, Design, and Operation of Pedestrian Facilities*, American Association of State Highway and Transportation Officials (AASHTO).

4. Left Turns Onto US 30 and Right Turns From US 30

Identified Problem:

Local representatives reported left turns from select borough streets onto US 30 are problematic due to the oblique angle at which they meet US 30; they are Miller, Thompson, Washington, and Center avenues. Approach angles at these intersections cause a compromise in sight distance creating an unsafe movement. Although the crash analysis did not identify any clusters in the vicinity of these intersections, the potential for crashes may increase over time as traffic volumes increase.

Improvement Scenario

A focused analysis of the problematic intersections should be undertaken. If land constraints prohibit redesigning an intersection, then a one-way routing may be an appropriate improvement. This will require thorough evaluation of the impacts to local residents and businesses, and to the adjoining network streets.

6. CONGESTION MANAGEMENT PROCESS

INTRODUCTION

The Congestion Management Process (CMP) advances the goals of the DVRPC long-range plan and strengthens the connection between the Plan and the Transportation Improvement Program. It identifies congested corridors and strategies to mitigate the congestion. Where additions to capacity are appropriate, the CMP includes supplemental strategies to reduce travel demand and improve operations. For more information regarding DVRPC's CMP, see "Limiting Traffic Congestion and Achieving Regional Goals: the DVRPC Congestion Management System."

Summary of the Principles of the CMP

1. The CMP is region-wide.
2. The CMP provides information on transportation system performance and identify strategies to minimize congestion and enhance the mobility of people and goods.
3. Building new road capacity may be appropriate when other strategies do not reasonably reduce congestion.
4. Regulations require that projects that add Single Occupancy Vehicles (SOV) capacity conform to the CMP to be eligible for federal funding.
5. The CMP will be updated on a regular basis.

CMP Subcorridor Types

Subcorridor types help with selecting strategies to reduce or manage congestion in congested corridors. Subcorridors are divided where similar strategies may be applicable. Each subcorridor is assigned one primary type, with notes providing more detail about its other characteristics.

US 30 CMP Corridor

The majority of the study area section of US 30 is defined in the CMP as an *emerging* or *regionally significant corridor*. This designation reflects several factors considered in the CMP, including density of development, traffic volumes, and traffic safety. At the western edge of the study area, a short section of US 30 falls within the *dense suburban network* subcorridor, which

includes US 30 from I-295 to Berlin. A regional map (Figure 12) found at the end of this section depicts the US 30 corridor and its CMP characteristics. The following text describes subcorridor limits and general characteristics.

Subcorridor One: I-295 to Berlin

Type: Dense Suburban Network

CMS Description: Highly developed suburban centers where much of the movement is internal — these are areas where people live, shop, and work. They share some qualities with dense urban grid, but are generally more auto-oriented. While there is significant through traffic, local trips going in all directions are a large component of the mix. In some cases, there is opportunity to enhance a sense of community character.

Transportation and Land Use Characteristics of the Subcorridor

The study area component of this subcorridor includes US 30 from the NJ 73 interchange east to Pine Hurst Drive, a total distance of about one-half mile. This short stretch has some stand-alone retail with building-front parking, although not densely developed. A low-density residential neighborhood can be found immediately behind the businesses along US 30 accessible via Pinehurst Drive.

Important Issues for this Subcorridor

As with the majority of the study area, access problems will be a growing concern as development occurs. The primary need is to address mobility and safety issues through access management.

Selected CMP Strategies for Managing Congestion

Very Appropriate Strategies

- Intersection Improvements
- County and Local Road Connectivity; Short Connections
- Improvements for Pedestrians and Bicyclists
- Access Management Policies
- Integrated Corridor Management
- Frontage/Service Roads

Secondary Appropriate Strategies

- Safety Improvements and Programs
- Growth Management and Smart Growth
- Accessibility and Environmental Justice
- Community Friendly Transportation Policies
- Arterial and Collector Roads

Subcorridor Two: NJ 73 to Atlantic County

Mile Post Limits: 0.00 – 2.66

Type: Emerging Corridor

CMS Description: Travel routes through lesser-developed areas that are typically rural in character, sometimes passing through smaller community centers. These places tend to be found on the suburban fringes of the region. It is fairly usual for them to have transit service and, in some cases, maintenance or reinvestment is an issue.

Land Use and Transportation Characteristics of Subcorridor

Comprising most of the study area, the landscape along US 30 is intermittently developed with pockets of suburbia within a largely rural setting where farmland is commonplace. Retail fronting US 30, in piecemeal fashion — not clustered, typically have individual access points along the roadway. Transit service is made up of one bus line along US 30 proper and supplemented by service along NJ 73 and the Atlantic City Expressway. Sidewalks are not continuous, which is typical for this type of setting.

Important Issues for this Subcorridor

As this corridor develops, access, mobility, and safety issues will become more pressing. Access management will be a necessary tool for addressing these issues and planning for an efficient corridor that promotes vitality.

Area-wide CMP Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- Pedestrian and Bicyclist Improvements

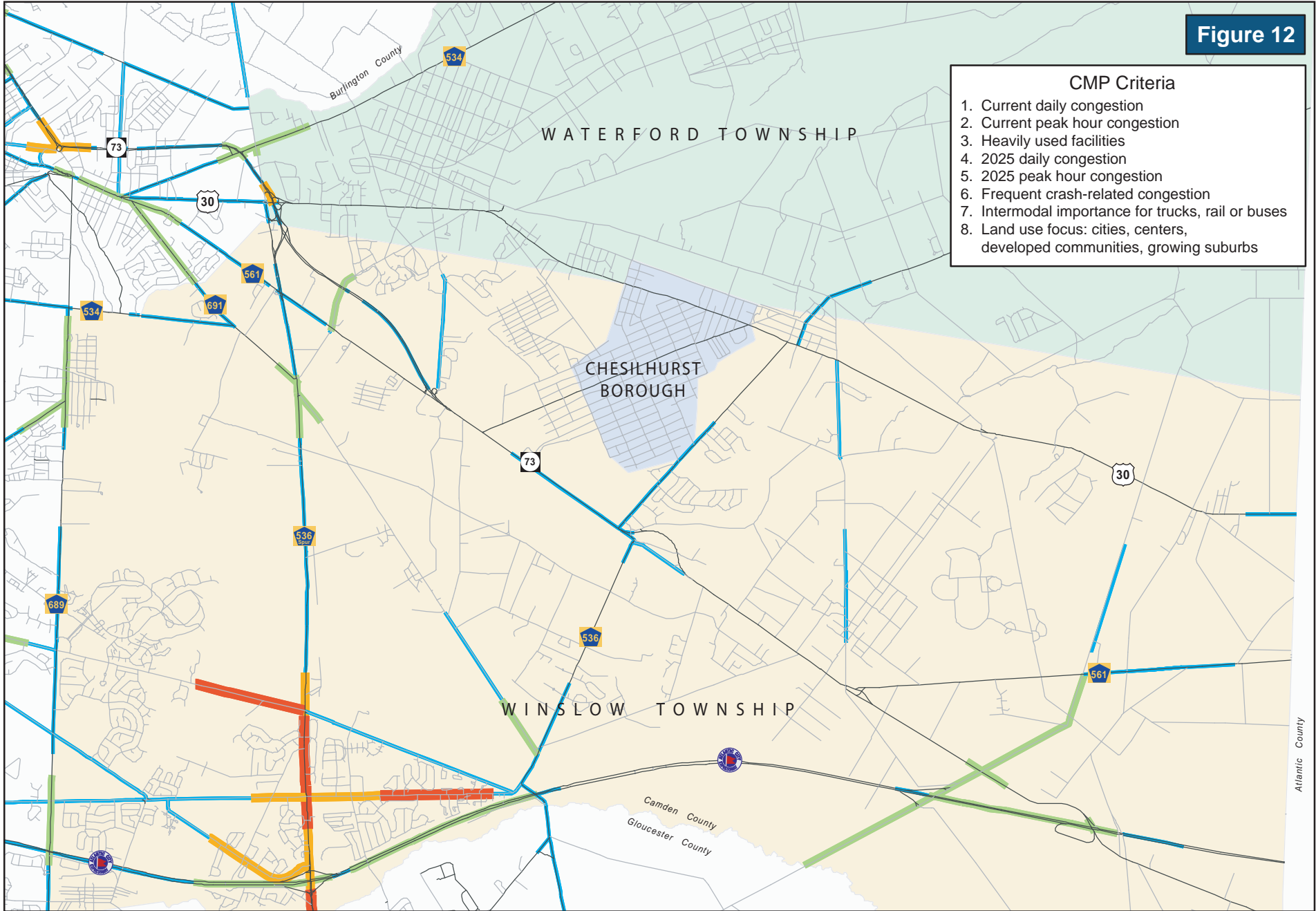
- Signage
- Basic Upgrades of Signals
- Intersection Improvements (of a limited scale)
- Bottleneck Improvements (vehicle or rail)
- Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and Transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where applicable
- Review of Existing Land Use/Transportation Regulations
- Growth Management and Smart Growth

US 30 Corridor Study

Congestion Management Process Criteria

Figure 12

- CMP Criteria**
1. Current daily congestion
 2. Current peak hour congestion
 3. Heavily used facilities
 4. 2025 daily congestion
 5. 2025 peak hour congestion
 6. Frequent crash-related congestion
 7. Intermodal importance for trucks, rail or buses
 8. Land use focus: cities, centers, developed communities, growing suburbs



Segments Meeting CMP Criteria

- 0.00 - 3.00
- 3.01 - 4.00
- 4.01 - 5.00
- 5.01 - 6.00

7. CONCLUSIONS

CONCLUSIONS

The US 30 study area, as defined by the Congestion Management Process, is an emerging corridor. Being situated in the suburban fringe of Camden County, this corridor has many strengths including available land for development, albeit limited. How this land develops, in particular the frontage along US 30, will have major impacts on the safety, mobility, and accessibility of the corridor and will ultimately impact its users and local residents. While still an emerging corridor, now is an ideal time to shape the future development of the corridor and address potential problems proactively. As discussed in the Transportation Issues chapter, access management can be an effective tool in this pursuit.

Current conditions along US 30 through the study area are not at the critical stage, i.e.: compromised safety, recurring congestion, and a struggling economy. Although if development trends continue in an uncoordinated fashion, this section of US 30 may eventually resemble the section between I-295 and Berlin resulting in similar issues: excessive number of curb cuts, numerous crash cluster locations, peak period congestion, and cut-through traffic. These problems can have a negative impact on economic vitality and on quality of life.

Our recommendation for addressing the corridor-wide transportation issues of this study area is for neighboring municipalities to coordinate their efforts in developing, and implementing, an access management plan for US 30. The components of an access management plan, and the benefits, are discussed in this report.

A small number of location-specific issues were also identified, most of which have not reached a critical stage. The Transportation Issues chapter addresses each of these and provides potential improvement scenarios. Many of these locations require further study due to the developing nature of the problem.

APPENDIX A

NEW JERSEY

SUBCHAPTER 6. ACCESS MANAGEMENT PLANS

16:47-6.1 Authority

- (a) The Commissioner may adopt access management plans for State highways provided that the following conditions are met:
1. The governing body of the municipality has incorporated the access management plan conditions into its land development ordinances and master plan as set forth in N.J.A.C. 16:47-6.7;
 2. The access management plan complies with or exceeds the standards established in N.J.A.C. 16:47-2, 3 and 4 of the Access Code, as modified by those waivers which meet the requirements set forth in N.J.A.C. 16:47-4.35; and
 3. An appropriate means of access has been identified in such plan for every lot within the subject State highway segment.

16:47-6.2 Effect of adoption

- (a) An access management plan, when adopted by the Commissioner, shall be binding upon the Department and upon the municipalities which have modified their master plans and development ordinances in accordance therewith. All approvals and decisions shall be in accordance with the access management plan.
- (b) An adopted access management plan may not be abandoned by any party without the joint agreement of all parties.
- (c) An adopted access management plan may not be revised except in the manner set forth in N.J.A.C. 16:47-6.11.
- (d) An adopted access management plan shall govern access on the subject State highway segment. When an access management plan is adopted for a State highway segment that serves as a boundary between two or more counties or municipalities and one or more of the counties or municipalities on one side of the State highway choose not to participate, then the access in the nonparticipating entities shall be compatible with the adopted access management plan.

16:47-6.3 Effect on access applications prior to approval of an access management plan

The standards governing access onto the State highway system set forth in N.J.A.C. 16:47-3 and 4 shall apply to all access permits for lots which are not subject to an adopted access management plan, and decisions on permit applications may not be delayed or deferred pending adoption of an access management plan. The provisions of an adopted access management plan shall only apply to complete access applications received by the Department after the date of adoption, unless the applicant agrees to comply with the anticipated provisions of a pending access management plan.

16:47-6.4 Contents

(a) The access management plan shall consist of a report and map.

1. The report shall identify the following:
 - i. The subject highway segment by route number, directions, and milepost limits;
 - ii. All existing and future access points and shared access points on the State highway and alternative access points on parallel or perpendicular streets;
 - iii. All participants in the joint planning process;
 - iv. All transportation development districts located in whole or in part within the study area;
 - v. Any transportation management associations serving the study area;
 - vi. Any contiguous municipality or county where proposed improvements may be located;
 - vii. The vehicular use limitations for all nonconforming lots;
 - viii. Projections of traffic generation based on zoning and other regulatory constraints applicable to all conforming lots;
 - ix. Projections of State highway traffic volumes based on build-out and the capacity of the desirable typical section; and
 - x. Recommendations for changes to the access classification or desirable typical section.
 - xi. Any public transportation facilities and routes and bicycle paths in the study area.
2. The report may also identify the following:
 - i. The estimated cost of the proposed improvements;
 - ii. The cost shares to be borne by the Department and participating public agency;
 - iii. The responsibilities of each of the participants for the improvements contemplated by the plan;
 - iv. The manner in which the timing and sequence of construction of the improvements is to be determined;
 - v. Provisions for temporary access pending completion of the improvements set forth in the access management plan; and
 - vi. Other appropriate factors.
3. The map shall be at a scale of one inch equals 100 feet (1=1,000 for metric) or one inch equals 200 feet (1=2,000 for metric), shall be on sheets no larger than 24 inches (594 millimeters) by 36 inches (841 millimeters), and shall include:
 - i. The subject highway segment with route number;
 - ii. The study area shall extend 1,000 feet (300 meters) beyond each end of the subject highway segment and have a width of at least 500 feet (150 meters) from the centerline of such segment. The study area shall include all lots having frontage on the State highway in their entirety, proposed improvements, and all other lots on which the proposed improvements will be located;
 - iii. Tax map block and lot, current land use, and zoning classification for each lot within the study area;
 - iv. The boundaries of all municipalities and counties located within the study area;
 - v. All existing and proposed roadways and driveways intersecting the subject highway segment and any other roadways and driveways which provide access from lots fronting on the subject highway segment;
 - vi. All existing traffic control devices along the subject highway segment and access points;

- vii. A scaled plan setting forth in schematic form the proposed improvements intended to provide access to the general systems of streets and highways for each lot having frontage on the subject highway segment for which access is designed and for any other lot for which the access management plan has designed access; and
- viii. Highway lighting and underground utilities within State highway right-of-way.

16:47-6.5 Process

(a) The Department may propose the development of an access management plan for any lots fronting on any segment of the State highway system. The proposal shall be initiated by notice to:

1. The mayor of any municipality within which the subject highway segment is located;
2. The mayor of any other municipality within which any proposed improvements designed to provide access to lots fronting on the segment are located;
3. The mayor of any municipality whose local roads would provide access from the lots covered by the access management plan to the subject highway segment;
4. The chief governing official of any county within which the segment is located if a county road intersects such segment;
5. The mayor or chief governing official of any contiguous municipality and chief governing official of any county if the improvements contemplated by the access management plan necessitate coordinated improvements in such municipality or county or if the cooperation of such municipality and county is otherwise necessary;
6. The heads of transportation development districts within which the proposed improvements or lots for which access is designed are located;
7. The heads of transportation management associations whose geographical jurisdiction encompasses all or a portion of a subject highway segment;
8. The heads of independent toll road authorities having jurisdiction over a roadway or ramp intersecting the subject highway segment; and
9. The heads of the metropolitan planning organizations whose geographical jurisdiction encompasses all or a portion of a subject highway segment.

(b) Any municipality may notify the Department by letter addressed to the Commissioner of Transportation, Attention, Director, Division of Transportation Systems Planning, Department of Transportation, 1035 Parkway Avenue, PO Box 609, Trenton, New Jersey 08625-0609, of a proposal to develop an access management plan for lots fronting on a subject highway segment, provided that the municipality is one within which such segment is located or is one within which improvements proposed to be made as part of the plan [or] are located or within which a municipal road which would provide access to the lots fronting on the segment is located. At the same time, the municipality shall notify those persons identified in (a) above. Any county interested in initiating an access management plan for a State highway shall ask the affected municipalities to proceed as required in this subsection.

(c) The public agency initiating the proposal shall bear 50 percent of the cost of developing the access management plan, and the remaining cost shall be shared equally by the other public agencies participating in the joint planning process, except that the expenses for reproduction, travel, communication, and supplies shall be borne by each public agency. Costs to be shared shall include the time of on-staff professionals and of consultants. In the case of joint initiation, one public agency shall be designated as the initiator and shall be responsible for conveying the 50 percent cost share to the Department.

(d) The Commissioner shall arrange for a preliminary meeting or meetings as soon as practical between representatives of the Division of Transportation Systems Planning and the public agencies which received notice pursuant to (a) above. In the case of a municipally-initiated proposal, however, the first meeting shall take place not later than 60 days after receipt by the Commissioner of the notice from the municipality. At the meeting or meetings, the public agency initiating the proposal shall present such proposal in such detail as it deems appropriate.

(e) The Commissioner, within 30 days of the last preliminary meeting, shall send to the represented public agencies written notice of the Department's decision whether or not to proceed with the development of the access management plan.

(f) Should the invited municipalities and counties decide to proceed with the development of the access management plan, the municipal governing body or county board of chosen freeholders shall, after receipt of a written notice from the Commissioner indicating that the Department agrees to proceed, adopt resolutions:

1. Agreeing to enter into the joint planning process with the Department;
2. Agreeing to share in the cost of developing such plan, either by providing inkind services or cash contributions, and specifying the respective shares of each municipality and county and of the Department; and
3. Designating a primary contact person who shall be authorized to act on behalf of the municipality or county.

(g) Should any of the heads of organizations listed in (a)6 through 9 above receiving notice decide to participate in the development of the access management plan, they shall notify the Commissioner thereof, in writing, and, when so doing, designate a primary contact person.

(h) The Commissioner, shall notify each primary contact person, within 120 days of sending the notice pursuant to (e) above, that all resolutions have been received and that the joint planning process may begin. The date of this notice shall be known as the start date for the proposed access management plan. The Commissioner may also, at his or her discretion, provide such notification even if:

1. A municipality or county does not submit such resolution, in which case the access management plan shall not set forth means of access to or improvements on lots within such county or municipality; or

2. An independent toll road authority, transportation development district, transportation management association, or metropolitan planning organization fails to provide notice.

(i) The primary contact people shall constitute the working committee for the access management plan and shall be jointly responsible for maintaining the progress of the work activities. The committee shall be chaired by the Department's primary contact person. Meetings shall be held as often as necessary to formulate the access management plan, but no less than once a month. All primary contact people shall receive advance written notice of the meetings.

(j) A progress report signed by all members of the working committee shall be submitted to the Commissioner every 90 days from the start date.

(k) The committee shall submit the proposed access management plan, in the form of the report and map set forth in N.J.A.C. 16:47-6.4, to the Commissioner within 360 days of the start date or such later time as may be agreed to by the Commissioner upon a showing by the working committee that completion within the required time is impractical. The extension shall be no greater than 180 days. At the time the proposed access management plan is submitted, each contact person, other than the Department representative, shall submit a resolution from the governing body of his or her municipality or county approving the draft access management plan. At such time, the working committee shall also submit such background reports as are necessary. Such reports shall include at least the names of the working committee members, a chronicle of the start and the completion dates of the different tasks, copies of all municipal and county resolutions, and a complete set of all progress reports and such engineering plans as have been prepared in support of the access management plan.

16:47-6.6 Public notice and hearing

(a) Upon completion and submission of the access management plan, the Department, municipalities, and counties participating in the joint planning process shall hold a public hearing thereon at a location designated by the Commissioner. A minimum of 15 days notice thereof shall be provided in a local newspaper of general circulation and by mail to owners of lots for which access is designed and upon which any improvements set forth in the plan are located, and to all municipalities and counties located within 200 feet (60 meters) of such lots. The notice shall give the time and place of the hearing and provide that public comments on the proposed plan may be made to the Commissioner.

(b) The working committee shall meet and review the comments made during the public comment period within 60 days after the public comment period. It shall make whatever amendments to the access management plan are appropriate in light of the comments and, within 60 days of such meeting, submit any revisions to the plan to the Commissioner. Such revisions shall be signed by all members of the working committee. Revisions that propose changes in the location, but not the number of driveways and

streets shall be classified as minor revisions and shall not require a new public hearing. All other revisions shall be classified as major, unless otherwise designated by the Commissioner, and shall require a new public hearing.

16:47-6.7 Incorporation

Upon completion of the review of public comments by the working committee and such revisions to the access management plan conditions as may be made, the governing body of the municipality which participated in the joint planning process shall incorporate the access management plan into its land development ordinances and the planning of such municipality shall amend its master plan to incorporate the access management plan. Certified copies of the ordinances and master plan amendments shall be forwarded to the Commissioner.

16:47-6.8 Termination or withdrawal

(a) The Commissioner may terminate the work activity if the working committee fails to complete the draft access management plan or to review the public comments and revise the access plan in a timely manner, or the municipalities or counties fail to adopt the ordinance and master plan amendments. In the case of withdrawal by the Department, the work activity shall terminate.

(b) Any participant in the joint planning process may withdraw at any time by so notifying all other participants thereof. The notice shall state the reasons for such withdrawal. In the case of withdrawal by a municipality, the work activity shall terminate in that municipality.

(c) Upon withdrawal or termination, each party shall pay its share of the cost expended to date for developing the access management plan.

16:47-6.9 Adoption

Within 60 days of receipt of all of the municipal ordinances and master plan amendments, the Commissioner shall incorporate the access management plan into the Access Code in the manner established for adoption of rules pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq.

16:47-6.10 Access permit coordination

Upon the adoption of the access management plan, access permits along the highway segment will be processed according to N.J.A.C. 16:47-4.17.

16:47-6.11 Revisions

(a) The Commissioner and any municipality, county, or other noticed public agency listed in N.J.A.C. 16:47-6.5(a) which participates in an access management plan may request a revision therein by mailing a letter to all participants setting forth the proposed

changes. Within 60 days of such notification, the Commissioner shall schedule a meeting of all members of the original working committee, or such successors as are designated to discuss the revisions. This subsequent working committee shall at least contain representatives from the Department and the municipality. The Commissioner shall determine within 30 days of such meeting whether the proposed revisions are major or minor. The Commissioner shall classify proposed revisions as minor whenever such revisions propose changes in the location of, but not in the number of, driveways or streets which are the subject of the access management plan or whenever it is determined that the proposed revisions should otherwise be treated as minor. All other proposed revisions shall be treated as major. Major revisions may require additional study and shall require public notice and hearing as set forth by N.J.A.C. 16:47-6.6. Major revisions shall also require acceptance by the working committee, adoption of conforming municipal and county ordinances and master plan amendments, and incorporation into the Access Code by the Commissioner. Revisions shall be completed and submitted within the time frame and in the manner set forth in (b) and (c) below.

(b) Minor revisions shall require acceptance by the working committee, adoption of conforming municipal and county ordinance and master plan amendments, and incorporation into the Access Code by the Commissioner. They shall be accepted by the working committee within 90 days of the first meeting of the committee. The party initiating the proposed revisions shall be responsible for all costs associated with reevaluating and changing the access management plan.

(c) Major revisions may require additional study and shall meet all requirements set forth in N.J.A.C. 16:47-6.5 through 16:47-6.9.

16:47-6.12 Adopted access management plans

(a) Adopted access management plans, incorporated by reference into this chapter in accordance with N.J.A.C. 16:47-6.9, are listed in this section. Copies of said plans shall be available from the municipal clerk of the affected municipalities and through the Commissioner, Attention: Director of Transportation Systems Planning, PO Box 600, 1035 Parkway Avenue, Trenton, New Jersey 08625-0600. Either agency is permitted to charge a fee to cover costs of reproducing and shipping the document to any interested party. The procedure by which an adopted access management plan may be revised is contained in N.J.A.C. 16:47 -6.11.

(b.) The following municipalities have approved access management plans:

1. The "Final Report: Route 34, Colts Neck, Highway Access Management Plan," covering the State highway segment from milepost 12.28 to milepost 13.71, dated April 4, 1997, is incorporated into this chapter by reference. A copy may be obtained from the following source:

Township Clerk
Township of Colts Neck
124 Cedar Drive
Colts Neck, New Jersey 07722

2. The report for the "NJ Route 72 Access Management Plan Study and Transportation Needs Analysis," covering the State highway segment from milepost 18.06 to milepost 28.13, dated August 1997, and the plan sheets for Access Management Plan for New Jersey Route 72" dated May 19, 1997 may be obtained from the following source:

Township Clerk
Stafford Township
775 East Bay Avenue
Manahawkin, New Jersey 08050-3498

16:47-5.3 Review of application

Within 20 days of receipt of an application for a change in classification, the Division Of Transportation Systems Planning shall notify the applicant whether or not the application is complete. If the application is incomplete, the notice shall list those items needed to complete the application. Within 60 days of receipt of a notice that an application is incomplete, the applicant may submit such additional information as is necessary to complete the application. Within 20 days of receipt of the additional information, the Division of Transportation Systems Planning shall notify the applicant whether or not the application is complete. The application shall be rejected if the Division of Transportation Systems Planning determines that a complete application has not been submitted within the specified time periods.

16:47-5.4 Notice to counties, municipalities, and metropolitan planning organizations

Within 10 days of notifying an applicant that an application is complete, the Director, Division of Transportation Systems Planning, shall forward a copy of the completed application to the clerks of all counties and municipalities in which the segment is located and the metropolitan planning organization associated with the segment.

16:47-5.5 Decision on request for change in classification

(a) A decision on the request for a change in classification shall be made by the Assistant Commissioner, Planning, Research and Local Government Services. In evaluating the application, the Assistant Commissioner shall consider the existing access classifications of adjacent segments of the State highway system and the county and municipal road networks, conformity with municipal and county master plans and development ordinances and with the State Development and Redevelopment Plan, access classification criteria set forth in N.J.A.C. 16:47-2.1, and other appropriate factors.

(b) Within 50 days of receipt of a complete application, the Assistant Commissioner, Planning, Research and Local Government Services, shall advise the applicant in writing whether or not the classification change request has been accepted or rejected and, in either case, shall provide the applicant with reasons for the decision.

(c) Any accepted change in the access classification of a segment of highway shall be promulgated as an amendment to N.J.A.C. 16:47-2.1, pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. A proposed change is subject to a public comment period of 30 days.

US 30 CORRIDOR STUDY

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ABSTRACT: This document presents an analysis of the transportation issues of the US 30 Corridor in eastern most portion of Camden County. The corridor planning effort undertakes the traditional examinations of an existing transportation/circulation system, in this case US 30 and surrounding facilities, identifying safety and functional or operational problems and recommending potential solutions, as appropriate.

Delaware Valley Regional Planning Commission
8th Floor — The ACP Building
190 North Independence Mall West
Philadelphia, PA 19106-1520

Phone: 215-592-1800
Fax: 215-592-9125
Internet: www.dvrpc.org

Staff Contact: Kevin Murphy
Direct Phone: (215) 238-2864

