

**TRAFFIC CIRCULATION PLAN
FOR
EGG HARBOR TOWNSHIP**

April 2003



Prepared by:

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TRAFFIC CIRCULATION PLAN

INTRODUCTION

Egg Harbor Township has recently undergone a re-examination of the Township Master Plan. The adoption of the Master Plan in 2002 produced an overall reduction in the number of housing units required within the N.J. Pinelands Regional Growth Area. However, the traffic conditions on the State, County and Township roads continue to deteriorate. Intersections are overloaded during peak hours. Rural Township roads are subjected to traffic volumes usually found on major collector roads.

Because of the concern for public safety and to seek solutions to traffic congestion, the Mayor and Township Committee have authorized the preparation of this Traffic Circulation Plan. This Plan is only the beginning of the process to improve traffic conditions in Egg Harbor Township. Efforts will be needed to fund improvements, implement recommendations and revisit the Plan to insure it continues to reflect the changing conditions for growth in Egg Harbor Township.

SECTION I

1.0 Background

The Township road network has been developing over 150 years when the first settlers constructed mere paths from homes and farms to the waterfront for receiving supplies and delivering farm products. During colonial times the Council of Proprietors representing the Crown established roads to land grants. These roads were usually established with widths of two (2) or three (3) rods (16.5 feet/rod) rights of way. This type of colonial road is presently found throughout the Township.

Roads that were serving the Township in 1870 are still major roadways today. Roads such as those noted below serviced the 3,625 residents of the Township in 1870.

- Tilton Road - established 1792
- English Creek Avenue - established 1855
- Zion Road - established 1814
- Steelmanville Road - established 1822
- Mill Road - established 1833
- Delaware Avenue - established 1793
- Ocean Heights Avenue - established 1793 and 1815

The narrow rights of way (33 feet) served the vehicles in Colonial days; however, those same narrow rights of way now cause traffic congestion in modern communities. A result of the Colonial practice of building homes close to the road to allow for large vegetable gardens and farm areas behind their properties has caused difficulties today to widen those same roads. Bargaintown Road is a perfect example of this type of situation.

The concept of zoning underwent a significant change in the early 1950's. The need for housing after World War II created the idea of large single use development. The separation of uses developed in these concepts left the residential use separated from the commercial use, dispersing services and making people dependent on their automobiles.

The road network of Egg Harbor Township was destined to be severely impacted when the New Jersey Pinelands Commission designated Egg Harbor Township as a Regional Growth Area. The concept used in the Pinelands Comprehensive Management Plan to preserve the central portion of the Pinelands area outside of Egg Harbor Township was to transfer that growth to areas designated as Regional Growth Areas.

The Comprehensive Management Plan for the Pinelands area set density standards that were to be implemented in each municipality. Those density standards varied according to the Pinelands designation of that community. Egg Harbor Township received the highest density allowed under the Plan.

Traffic congestion is the most obvious component of this type of growth management concept. These planning decisions directly impacted the transportation systems that citizens rely upon, without providing a method to fund needed improvements and the time needed to construct the required infrastructure.

2.0 Purpose

Traffic circulation plays an essential role in the viability of a community. Road networks provide access to both residential and commercial land uses as well as provide the area for the construction of utilities and services necessary to promote the development of these land uses.

The road network of Egg Harbor Township provides access to the neighborhoods

throughout the Township, linking the residents to their jobs, schools, medical facilities, commercial and recreational needs. The viability of this transportation network is critical to the health and safety of the residents of Egg Harbor Township, as well as the public that may be traveling to or through the Township.

The Traffic Circulation Plan will discuss existing facilities, existing traffic conditions, and proposed standards for development of the road network and recommendations for future needs.

The purpose of the Traffic Circulation Plan is to provide goals and standards that correlate the Township's transportation system with the Land Use Element of the Master Plan.

3.0 Authorization

The Municipal Land Use Law of the State of New Jersey defines the authority given to municipal governments in the field of planning and zoning. Article 3, entitled Master Plan, defines under Section 40:55D-28 the preparation and contents of a municipal master plan.

The purpose of the Act as defined in Article 40:55D-2 is set forth in 15 statements. Certain statements within this Article directly impact the development of traffic planning.

40:55D-2a: *To encourage municipal action to guide the appropriate use or development of all lands in this State, in a manner which will promote the public health, safety, morals and general welfare.*

40:55D-2e: *To promote the establishment of appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods, communities and regions and preservation of the environment.*

40:55D-2h: *To encourage the location and design of transportation routes which will promote the free flow of traffic while discouraging location of such facilities and routes which result in congestion or blight.*

40:55D-2m: *To encourage coordination of the various public and private procedures and activities shaping land development with a view of lessening the cost of such development and to the more efficient use of land.*

Each of these statements setting forth the purpose of the Act is accomplished through good traffic circulation planning.

Further, Section 40:55D-28b(4) defines the traffic circulation element as ***“a circulation plan element showing the location and types of facilities for all modes of transportation required for the efficient movement of people and goods into, about, and through the municipality, taking into account the functional highway classification system of the Federal Highway Administration and the types, locations, conditions and availability of existing and proposed transportation facilities, including air, water, road and rail.”***

This Plan has been developed to fulfill the requirements of the Municipal Land Use Law, under *Section 40:55D-28b(4)*.

The major emphasis of this Plan will be automotive traffic circulation. The planning requirements for the segment of air transport and rail transport fall under the jurisdiction of the South Jersey Transportation Authority. The development of the Atlantic City

Airport has a major influence on regional travel in Egg Harbor Township. The future development of operations at this Airport can influence land use decisions for hotels, convention centers and the air freight industry.

4.0 Atlantic County Master Plan

Atlantic County revisited their Master Plan in 2000. In that Plan it was recognized that the growth in the County has shifted to the Pinelands Regional Growth Areas, including Egg Harbor Township. It was acknowledged that these "...Townships have experienced tremendous growth in some part due to the impacts of the Pinelands Comprehensive Management Plan and Coastal Area Facilities Review Act (CAFRA)."¹

The Master Plan further concludes:

Undoubtedly, these demographic trends will have significant impacts on not only the physical infrastructure of the County such as roads, sewer, open space and recreation but also on the provision of a broad array of social services to meet the needs of Atlantic County's changing population.²

In the section of the County Master Plan devoted to the County Transportation System, the County Plan acknowledges the impact on traffic from the casinos by stating:

"The advent of the casino industry in Atlantic County and resulting growth in tourism and development throughout the County has resulted in a dynamic growth for the County. The industry's success has created

¹ Draft - Master Plan of Atlantic County, New Jersey, dated July 2000, page 32.

² IBID, page 32

problems along State highways, county arterials and local roads not designed for increased traffic volumes.”³

These statements acknowledge Atlantic County’s realization that State and regional policies have created the traffic concerns for Egg Harbor Township. While these State and regional policies have created the traffic concerns, it falls on Atlantic County and Egg Harbor Township to solve the problems.

5.0. Population

The Atlantic County Master Plan used population projections for the County provided by the South Jersey Transportation Planning Organization for each municipality with projections to the year 2018. The projections expected the population in Egg Harbor Township to grow from 30,726 persons in 2000 to 38,469 persons in 2018. This represents a growth of 430 persons per year or a 25 percent increase in 18 years.

Using the average household size as determined in the 2000 Census (2.81 persons/household), this represents an average of 153 housing units constructed per year.

The New Jersey Department of Labor provides statistics on the number of building permits issued by a municipality. The following number of single family units was issued in Egg Harbor Township since the 2000 Census.

YEAR	2000	2001	2002	TOTAL
Single Family Units	437	527	595*	1559
Estimated Population	1228	1481	1672	4381
* As of November 1, 2002				

³ IBID, page 66

This rate of construction would result in a population of 35,107 persons in 2002. The 2002 estimated population represents 91.3 percent of the projected 2018 population or a growth of 14.3% in two (2) years.

Obviously, the South Jersey Transportation Planning Organization's population projections are lower than will be realized. It is extremely difficult to project the trend in growth in Egg Harbor Township with any accuracy. A recent building moratorium temporarily postponed the issuance of building permits. National economic trends and State land use policies will also determine how long the current building boom will continue. The Governor's anti-sprawl campaign has not been defined enough to determine its impact on growth in Egg Harbor Township.

Currently, the Egg Harbor Township Planning Board has approved an additional 2,922 housing units. At the 2000 Census occupancy rate of 2.81 persons per dwelling, these additional housing units will produce an additional population of 8,211 persons if they are constructed.

At the current rate of construction, the population of Egg Harbor Township could be 43,300 persons by 2008.

6.0 Employment

Jobs impact the peak hour traffic because of their location and shift times. Locally generated traffic as well as inter-community generated traffic impact roads in the Township. The Atlantic County Master Plan noted the following largest employers with 500 or more employees:

Atlantic City:	Showboat Casino/Hotel
	Trump Taj Mahal Casino Resort
	Resorts Hotel/Casino

	Sands Hotel/Casino Harrah's Hotel/Casino Caesars Atlantic City Tropicana Hotel/Casino Bally Hotel/Casino Trump Plaza Hotel/Casino Trump Marina Hotel/Casino Claridge Hotel/Casino Atlantic City Hilton Borgata Hotel/Casino (under construction)
Egg Harbor Township	N.J. Air National Guard Federal Aviation Technical Center
Galloway Township	Atlantic City Medical Center - Mainland Richard Stockton College Lenox China
Hamilton Township	Conectiv Power Delivery
Somers Point	Shore Memorial Hospital
Hammonton	William B. Kessler Memorial Hospital

Each major employer becomes a destination for automotive or bus trips from neighborhoods in Egg Harbor Township. While only two (2) sites are located in the Township, a majority of the balance of the employers can be reached via roads and highways through Egg Harbor Township.

7.0 Existing Roadway Circulation

Elements of the existing road system have been taxed to capacity during the growth cycle that is occurring. Significant traffic backups occur along major collector roads where intersections have reached failure conditions. Morning and afternoon peak hour traffic has been further aggravated by the rapid residential expansion in the Township. The State, Township and the County have been working to correct inadequate geometric

conditions at intersections and to eliminate conditions that create unsafe roadways. Much more work needs to be accomplished.

8.0 Major Arterial Roadways

Egg Harbor Township is served by three main traffic arterial roadways which carry both local and through traffic. These roads are limited access highways managed by Authorities or are unlimited or controlled access highways managed by the New Jersey Department of Transportation. Each highway plays a significant role in the efficiency of traffic movement in Egg Harbor Township. Figure 1 illustrates the location of these major roadways in the Township.

8.1 Black Horse Pike US322-40: This 5.21 mile section of 4-lane local access highway services the main business district of the Township. Sections of the Black Horse Pike remain divided with either Jersey barriers or grass medians. Traffic signal controlled intersections exist at the following streets:

- English Creek Avenue
- Fernwood Avenue
- Spruce Avenue
- Tilton Road (east and west)
- Fire Road
- Tower Avenue

The Black Horse Pike is segregated into two (2) areas by the City of Pleasantville, which separates the mainland section and the West Atlantic City section of Egg Harbor Township.

The West Atlantic City section provides access to Atlantic City and the downbeach communities of Ventnor, Margate and Longport.

This facility is a 4-lane highway with signalized intersections at Verona Boulevard and Athens Avenue.

This State highway provides land access through Egg Harbor Township and to the shore communities to the east and to the regional malls in Hamilton Township. Residents in both Egg Harbor Township and Hamilton Township consider this highway essential to the movement of people, goods and services to their community.

Major intersections at English Creek Avenue, the realigned Tilton Road and Fire Road bring traffic from the residential areas in Egg Harbor Township to the commercial areas as well as the regional highways in the area.

8.2 Garden State Parkway: This major limited-access highway handles regional, interstate and local traffic. The 4-lane divided highway (currently planned for 6-lanes by the New Jersey Highway Authority) is of importance to Egg Harbor Township because it provides:

- Access for customers to businesses.
- Access for local residents to commute to business and employment opportunities in Atlantic City and other businesses in the east coast of New Jersey.

Access is obtained through interchanges at:

- Black Horse Pike (partial)
- Fire Road (full)

- Washington Avenue (Partial)
- Tilton Road (partial)

Access to this limited access road provides the easiest trip to employment in Atlantic City by its connection to the Atlantic City Expressway. Therefore, key intersections are:

- Fire Road and the Garden State Parkway Access
- Garden State Parkway and the Atlantic City Expressway
- Washington Avenue north “on” ramp and south “off” ramp
- Black Horse Pike north “on” ramp

Commuters must travel through the local road network to gain access to the Parkway since the access ramps are located in the northern portion of the Township. This has created congestion problems along Fire Road during morning and afternoon peak periods.

This major arterial roadway is under the jurisdiction of the Garden State Parkway Authority.

8.3 Atlantic City Expressway

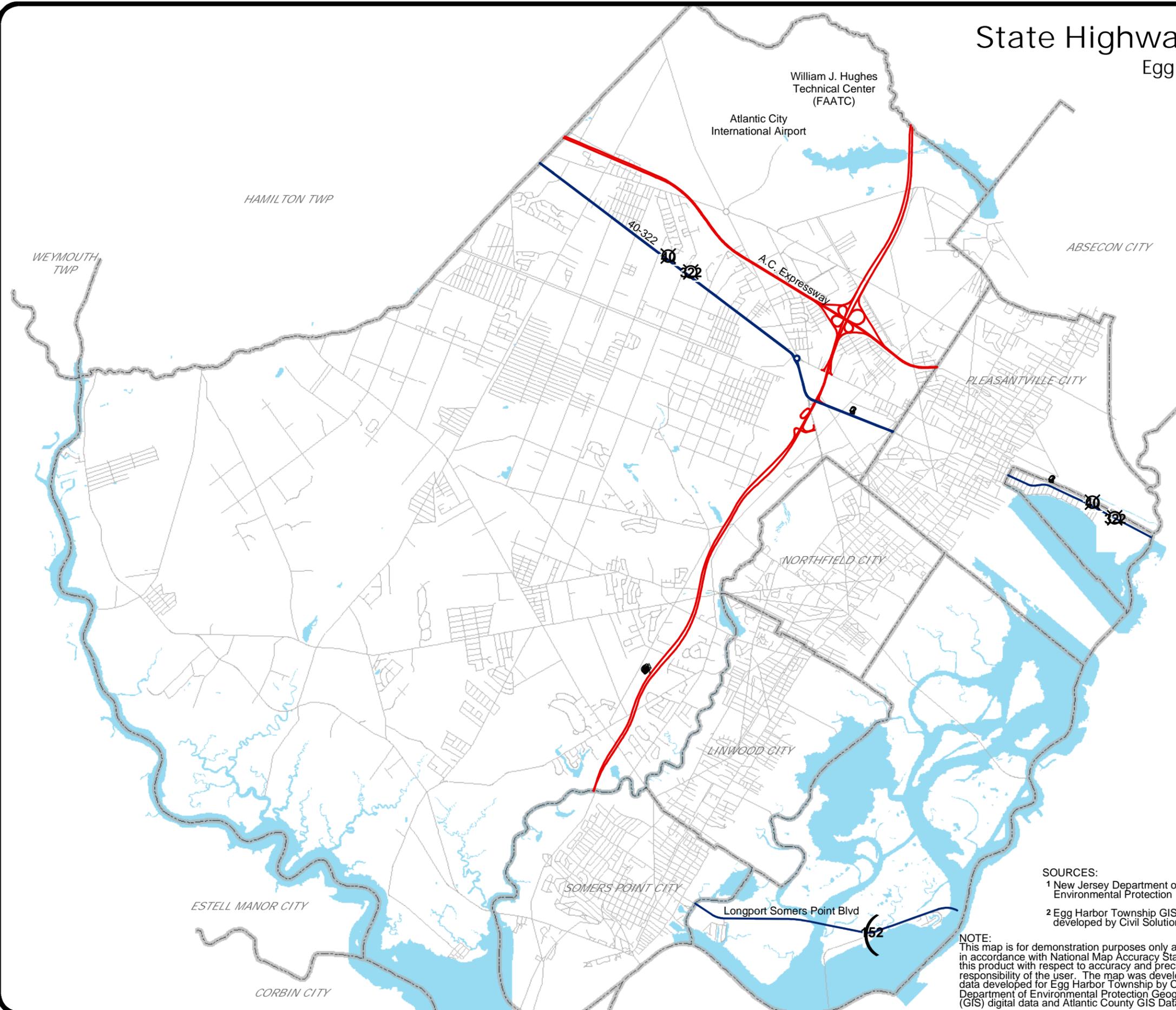
This major 5-lane limited access toll road services intrastate, regional and local traffic. The interconnection with the Garden State Parkway provides an excellent route to the businesses in Atlantic City without traveling along the congested Black Horse Pike. The Atlantic City Expressway also provides an excellent route to the businesses and employment opportunities in Hamilton Township and the westerly portions of southern New Jersey and Philadelphia.

Connection to this limited access highway occurs through the Garden State Parkway connection and at the Delilah Road interchange. East-West regional traffic utilizes this highway to gain access to the Atlantic County shore areas as well as the Cape May County resorts with the Garden State Parkway connector. The Delilah Road access point is convenient to Egg Harbor Township residents because of the availability of access from Delilah Road and the Black Horse Pike. A north-south major collector road connecting this interchange to the residential areas south of West Jersey Avenue would facilitate higher use of this vital link. This major arterial highway is under the jurisdiction of the South Jersey Transportation Authority.

- 8.4 New Jersey Route 152:** Access to the bay communities of Egg Harbor Township is supplied by this State Highway. The communities of Anchorage Pointe and Seaview Marina are connected to the mainland, the Garden State Parkway, and the barrier island communities through this 2-lane State Highway. This major arterial roadway is under the jurisdiction of the New Jersey Department of Transportation.

State Highways and Toll Roads Map

Egg Harbor Township Traffic Circulation Plan



LEGEND

-  Municipality¹ Boundaries
-  Toll Roadway²
-  State Highway²
-  Local Roadway²
-  Water Features¹

February 12, 2003 Scale: 1"=6000'
 6,000 3,000 0 6,000
 Feet

SOURCES:
 1 New Jersey Department of Environmental Protection
 2 Egg Harbor Township GIS data developed by Civil Solutions

NOTE:
 This map is for demonstration purposes only and was not developed in accordance with National Map Accuracy Standards. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user. The map was developed, in part, using GIS data developed for Egg Harbor Township by Civil Solutions, New Jersey Department of Environmental Protection Geographic Information Systems (GIS) digital data and Atlantic County GIS Data.

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FIGURE NO. 1

9.0. Atlantic County Road System

The major collector roads in Egg Harbor Township with the exception of the State Highway and Authority controlled roads are under the jurisdiction of Atlantic County. These roads serve a critical function for traffic circulation in Egg Harbor Township (Figure 2).

The County has established a functional classification system for the County road system based on a number of factors including access to major highway, growth and development potential and physical features.

The County defines their roadways into one of three functional classifications. Each classification defines the expectation for traffic use:

Arterial Roads: are intended for mobility (i.e., moving traffic at relatively high speeds over long distances) and serve to connect the collector system with County collector routes.

Collector Roads - connect the arterial system with the County minor collector and local municipal roads.

Minor Collector Roads - provide access to land uses and serve as connectors between the collector and municipal road system.

9.1 Major Arterial Roadways

The major north-south arterial roads in the Township are:

- Fire Road, CR #651
- English Creek Avenue, CR #575

The major east-west arterial roads in the Township are:

- Delilah Road, CR #646

- Tilton Road, CR #563
- Ocean Heights Avenue, CR Alt. #559
- Mays Landing-Somers Point Road, CR #559
- Mill Road, CR #662
- Washington Avenue, CR #608

Each of these roadways' north-south and east-west routes, is critical to the efficiency of the Township traffic circulation system. These are the links to the State Highway and the toll roads. These roadways generally require a 90-foot or 100-foot right-of-way.

9.2 Collector Roads

The collector roads link the Township roads to the County arterial system. These roadways reach into the Township road system to serve the residents and businesses.

The north-south collector roads in the Township are:

- English Creek Avenue, CR #575, south of Ocean Heights Avenue
- Spruce Avenue, CR #684
- Bargaintown Road, CR #651
- Wescoat Road, CR #685

The east-west collector roads in the Township are:

- Ocean Heights Avenue, Alt. #559, west of English Creek Avenue
- Washington Avenue, CR #608, Doughty Road to Fire Road
- Mill Road, CR #662
- Central Avenue, CR #661

These collector roadways generally require a 72-foot wide right-of-way.

9.3 Minor Collector Roads

The north-south minor connector roads in the Township are:

- English Creek Avenue, CR #604, north of the Atlantic City Expressway.
- English Creek Avenue, CR #603, south of the Atlantic City Expressway and north of Delilah Road.
- Jeffers Landing Road, CR #651

The east-west minor connector roads in the Township are:

- Zion Road, CR #615
- Old Tilton Road, CR #687
- Central Avenue, CR #659, west of the Parkway

These roadways require a 50 to 60-foot right-of-way.

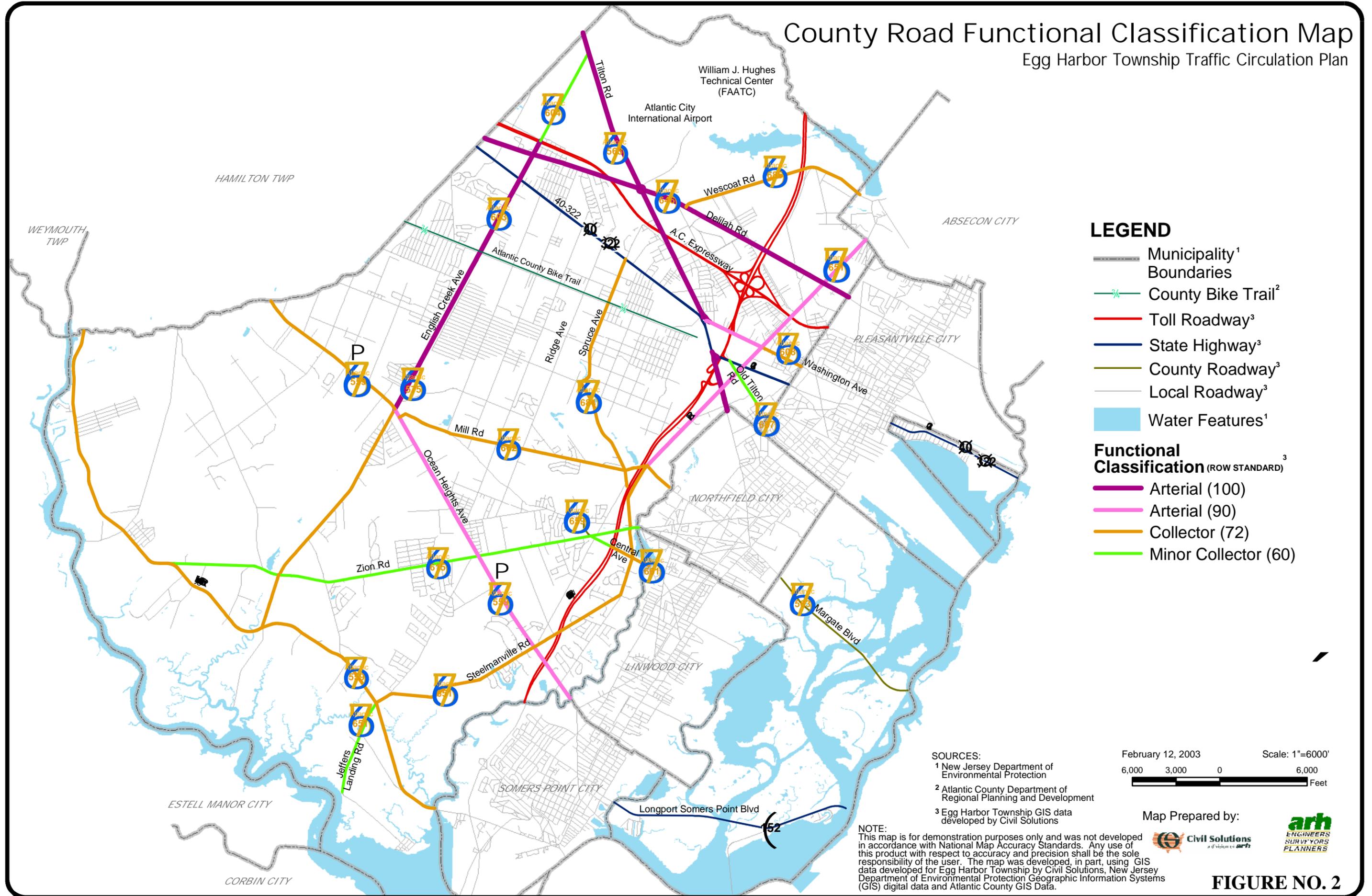
Table 1 lists the County roads in Egg Harbor Township, their functional classification and the right-of-way standard for each road.

Part of the development of any road system includes intersection control. As traffic increases the gaps necessary for vehicle movement at stop controlled intersections decrease to the point of long delays. Traffic signals provide safe movements on all legs of an intersection.

Currently, most traffic signal controlled intersections are on State or County roads. Three (3) intersections have a local road as one of the legs of a signal controlled intersection: English Creek and West Jersey Avenues; Fire Road and Doughty Road, and Tilton Road and Hingston Avenue. Figure 3 shows the location of the signalized intersections in the Township.

County Road Functional Classification Map

Egg Harbor Township Traffic Circulation Plan



LEGEND

- Municipality¹ Boundaries
 - County Bike Trail²
 - Toll Roadway³
 - State Highway³
 - County Roadway³
 - Local Roadway³
 - Water Features¹
- Functional Classification** (ROW STANDARD)³
- Arterial (100)
 - Arterial (90)
 - Collector (72)
 - Minor Collector (60)

SOURCES:
¹ New Jersey Department of Environmental Protection
² Atlantic County Department of Regional Planning and Development
³ Egg Harbor Township GIS data developed by Civil Solutions

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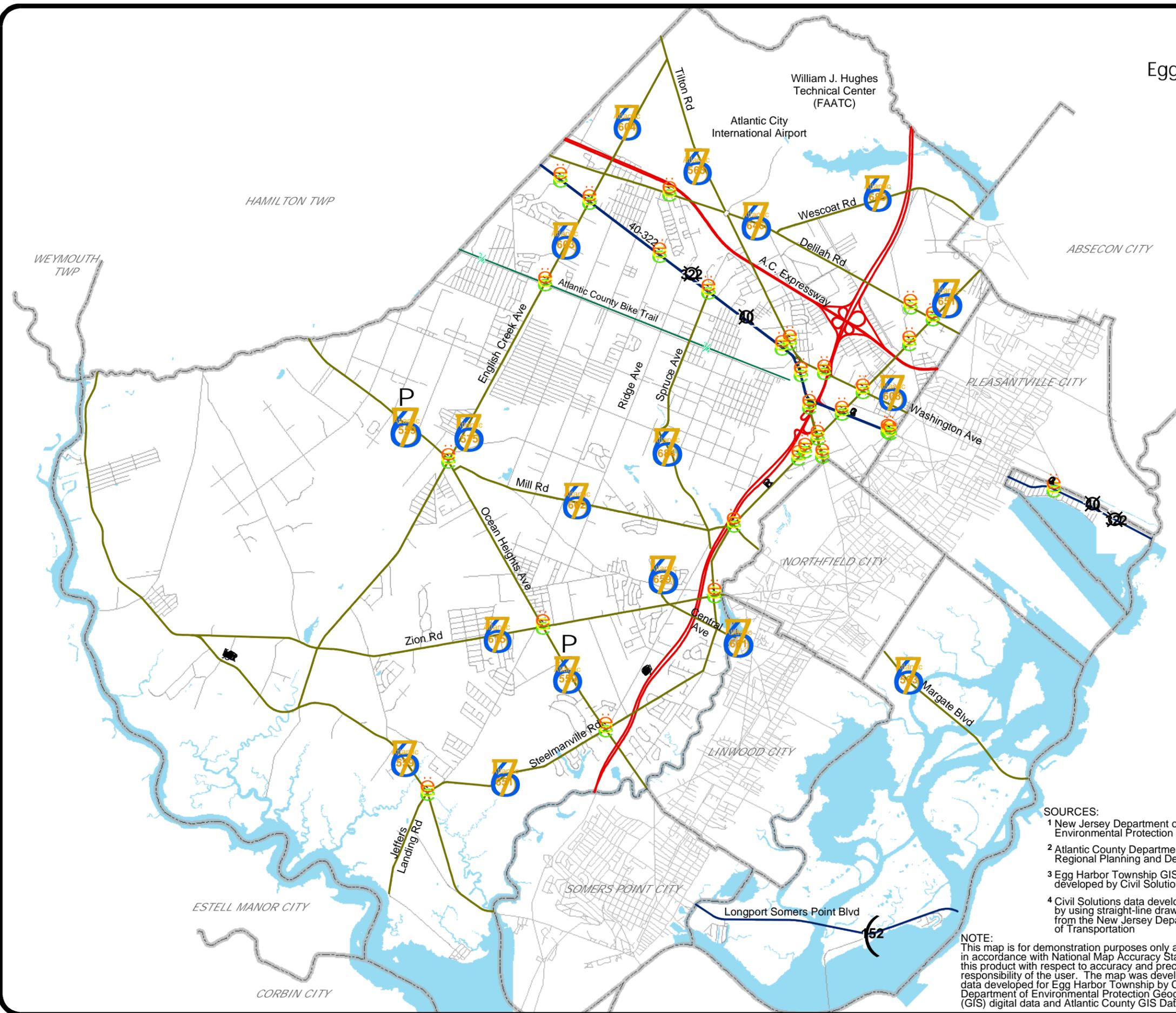
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Map Prepared by:
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FIGURE NO. 2

Facilities Map

Egg Harbor Township Traffic Circulation Plan



LEGEND

- Municipality¹ Boundaries
- County Bike Trail²
- Toll Roadway³
- State Highway³
- County Roadway³
- Local Roadway³
- Water Features¹
- Traffic Signals⁴

- SOURCES:**
- 1 New Jersey Department of Environmental Protection
 - 2 Atlantic County Department of Regional Planning and Development
 - 3 Egg Harbor Township GIS data developed by Civil Solutions
 - 4 Civil Solutions data developed by using straight-line drawings from the New Jersey Department of Transportation

February 12, 2003 Scale: 1"=6000'

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FIGURE NO. 3

TABLE 1

ATLANTIC COUNTY FUNCTIONAL CLASSIFICATION COUNTY ROADS - EGG HARBOR TOWNSHIP				
CR No.	COUNTY ROAD NAME	TERMINAL POINTS	FUNCTIONAL CLASSIFICATION	ROW* STANDARD
Alt. 559	Ocean Heights Avenue	Patcong Creek to CR 575	Arterial	90
Alt. 559	Ocean Heights Avenue	CR 575 to CR 559	Collector	72
563	Tilton Road	CR 585 to US 30	Arterial	96
575	English Creek Avenue	US 40/322 to CR 559 Alt.	Arterial	100
575	English Creek Avenue	CR 559 Alt. To CR 559	Collector	72
575	English Creek Avenue	US 40/322 to Expressway	Arterial	100
575	English Creek Avenue	CR 563 to Expressway	Minor Collector	60
608	Washington Avenue	Doughty Road to CR 651	Collector	72
608	Washington Avenue	CR 651 to US 40/322	Arterial	90
646	Delilah Road	US 30 to US 40/322	Arterial	100
662	Mill Road	CR 585 to CR 651	Collector	82
662	Mill Road	CR 651 to CR 559 Alt.	Collector	72
651	Fire Road	US 30 to CR 662	Arterial	90
651	Fire Road	CR 662 to CR 559 Alt.	Collector	72
651	Jeffers Landing Road	CR 559 to Jeffers Landing	Minor Collector	60
659	Central Avenue	Parkway to CR 615	Minor Collector	60
661	Central Avenue	Parkway to EHT/Linwood	Collector	72
684	Spruce Avenue	US 40/322 to Parkway	Collector	72
687	Old Tilton Road	US 9 to US 40/322	Minor Collector	60
685	Wescoat Road	CR 651 to CR 646	Collector	72
615	Zion Road	CR 585 to CR 559	Minor Collector	60
559	Mays Landing-Somers Point Rd	Hamilton to Somers Point	Collector	72
651	Steelmanville Road	CR Alt. 559 to CR 555	Collector	72

* ROW = Right of way

10.0 Township Road System

As the Township developed, the local road system connected those growing areas to the State and County road systems. Generally, these roads were developed with 50-foot rights of way with the intent to allow for two 12-foot travel lanes and two 6-foot wide shoulders. This configuration also allows for two 4-foot wide sidewalks one on each side of the road. Historically, only the travel lanes were constructed without paved shoulders. Certain Township roads connect neighborhoods to the County major roads. These roads generally handle trips to and from homes. The existing roads that are critical to the circulation in the Township include:

- West Jersey Avenue
- Doughty Road
- Ridge Avenue
- Delaware Avenue
- Robert Best Road

These roads are the access roads to homes and a few businesses in the Township. These roads serve neighborhoods throughout the Township. New roads in this category are now defined by the New Jersey Residential Site Improvement Standards (RSIS).

The existing local roads are narrow 2-lane roadways that are not improved and have little shoulder width. Some of these roads will remain narrow due to the location of existing homes and businesses adjacent to the existing rights of way.

11.0 Motor Vehicle Accidents

The number of traffic accidents/crashes is an indication of the severity of the congestion and delays experienced by a transportation system. Traffic congestion creates anxious drivers and anxious drivers make poor decisions resulting in accidents.

The Egg Harbor Township Police Department provided motor vehicle accident frequency data from January 1999 to May 2002. During this 3.5 year period, 2299 accidents were reported or a frequency of almost two (2) accidents per day.

Accidents can reflect a shortcoming in the driver-vehicle roadway system. For an accident to occur at least one or more factors must fail. Either the driver fails to operate the vehicle properly; the vehicle malfunctions or traffic volumes overwhelm roadway geometry. Only one of these components is fully under the control of the public agency roadways.

Table 2 lists the number of accidents occurring at intersections throughout the Township. These intersections are under different political jurisdictions. The agencies controlling these intersections are the New Jersey Department of Transportation, Atlantic County or Egg Harbor Township. Accidents on the Atlantic City Expressway and Garden State Parkway have been eliminated from this report because control is within the Agencies responsible for those roadways. Table 3 lists the number of motor vehicle accidents that occurred at five (5) locations in Egg Harbor Township. The Cardiff Circle has been eliminated by the reconstruction of the circle with a signal-controlled intersection with Tilton Road, Washington Avenue and the Black Horse Pike. The accidents listed under 3515 Bargaintown Road are accidents that have occurred elsewhere in the Township that

were reported at the Township Hall. Most of these “walk in” reported accidents were minor type accidents but are typical accidents indicating increasing congestion.

TABLE 2

**EGG HARBOR TOWNSHIP
MOTOR VEHICLE ACCIDENTS (MVA)
1/01/99 THRU 5/31/02**

INTERSECTION	MVA	JURISDICTION	SIGNALIZED
BARGAINTOWN RD/ZION RD	21	COUNTY/COUNTY	X
BLACK HORSE PIKE/DELANCY AVE	17	STATE/LOCAL	X
BLACK HORSE PIKE/ENGLISH CREEK AVE	176	STATE/COUNTY	X
BLACK HORSE PIKE/FERNWOOD AVE	19	STATE/LOCAL	X
BLACK HORSE PIKE/FIRE RD	155	STATE/COUNTY	X
DOGWOOD AVE/ENGLISH CREEK AVE	24	LOCAL/STATE	
ENGLISH CREEK AVE/DELILAH RD	24	COUNTY/COUNTY	
ENGLISH CREEK AVE/HIGH SCHOOL DR	11	COUNTY/LOCAL	
ENGLISH CREEK AVE/OCEAN HEIGHTS AVE	41	COUNTY/COUNTY	X
ENGLISH CREEK AVE/REEGA AVE	27	COUNTY/LOCAL	
ENGLISH CREEK AVE/WEST JERSEY AVE	80	COUNTY/LOCAL	X
MILL RD/SPRUCE AVE	55	COUNTY/COUNTY	
OCEAN HEIGHTS AVE/BLACKMAN RD	11	COUNTY/COUNTY	
OCEAN HEIGHTS AVE/LEAP ST	12	COUNTY/LOCAL	
OCEAN HEIGHTS AVE/STEELMANVILLE RD	27	COUNTY/COUNTY	X
OCEAN HEIGHTS AVE/ZION RD	97	COUNTY/COUNTY	X
RIDGE AVE/BLACK HORSE PIKE	43	LOCAL/STATE	
RIDGE AVE/MILL RD	12	LOCAL/COUNTY	
RIDGE AVE/WEST JERSEY AVE	11	LOCAL/LOCAL	
SPRUCE AVE/BLACK HORSE PIKE	32	COUNTY/STATE	X
SPRUCE AVE/WEST JERSEY AVE	40	COUNTY/LOCAL	
TILTON RD/BLACK HORSE PIKE	38	COUNTY/STATE	X
TILTON RD/FIRE RD	56	COUNTY/COUNTY	X
TILTON RD/GARDEN STATE PARKWAY	56	COUNTY/STATE	X
TILTON RD/HINGSTON RD	43	COUNTY/LOCAL	
TILTON RD/UIBEL AVE	57	COUNTY/LOCAL	X
TOWER AVE/BLACK HORSE PIKE	15	LOCAL/STATE	X
TREMONT AVE/BLACK HORSE PIKE	18	LOCAL/STATE	
WASHINGTON AVE/FIRE RD	23	COUNTY/COUNTY	X
WASHINGTON AVE/GARDEN STATE PARKWAY	46	COUNTY/STATE	X
WESTCOAT RD/DELILAH RD	11	COUNTY/COUNTY	
TOTAL MVA	1298		

COMMON PLACE	No. of MVA
3515 BARGAINTOWN RD. (MUNICIPAL BLDG.*)	178
CARDIFF CIRCLE	385
NAFEC CIRCLE	227
SHORE MALL	211
TOTAL MVA	1001

* Accidents reported to Police that occur at other locations.

TABLE 3

EGG HARBOR TOWNSHIP TRAFFIC ACCIDENTS AT SPECIFIC LOCATIONS JANUARY 1999 TO MAY 2002	
Location	Number of Accidents
Cardiff Circle	385
NAFEC Circle	227
Shore Mall	211
3515 Bargaintown Road	178
Home Depot	104

TABLE 4

HIGHEST ACCIDENT RATED LOCATIONS		
1	Cardiff Circle	385
2	NAFEC Circle	227
3	Shore Mall	211
4	Municipal Building	178
5	Black Horse Pike/English Creek Avenue	176
6	Black Horse Pike/Fire Road	155
7	Ocean Heights Ave./Zion Road	97
8	English Creek Ave./West Jersey Avenue	80
9	Tilton Road/Uibel Avenue	57
10	Tilton Road/Fire Road	56
11	Tilton Road/Garden State Parkway	56
	TOTAL	1678

These locations account for 73 percent of the accidents occurring in this 3.5 year period.

The intersections of concern that have local jurisdiction on one or both roads are shown in Table 2.

Table 4 lists the eleven (11) highest accident locations during this time period. The elimination of the Cardiff Circle and the installation of the traffic signal at English Creek and West Jersey Avenues address 28 percent of the accidents recorded.

The accidents occurring at an intersection with one or more local roads represent 429 crashes or 18.7 percent of the total accidents reported.

Figure 4, “Motor Vehicle Accident Location Map” illustrates the key intersections and areas of concern. While this is not an exhaustive study, it does indicate that:

- Four (4) locations have 43.5% of the accidents that occurred in the study period.
- The two (2) traffic circles had 26.6% of the accidents.
- The Black Horse Pike had 48.2% of the accidents reported in this time period.
- If the accidents along the Black Horse Pike and NAFEC circle are removed from the total, 530 accidents occurred at eight (8) intersections.
- Sixty-four (64) of the accidents occurred at signalized intersections, although Cardiff Circle accounted for 16.75% of those accidents.

Traffic congestion is a function of the rate of growth in a rural Township. Egg Harbor Township has experienced a tremendous growth rate. The number of single-family housing units approved during the last four (4) years was 4,832. The number of building permits shown in Table 5 represents 40% of the lots approved or an absorption rate of 477 homes per year.

TABLE 5

APPROVED BUILDING LOTS APPROVED SINGLE FAMILY BUILDING PERMITS EGG HARBOR TOWNSHIP		
YEAR	SUBDIVIDED LOTS	BUILDING PERMITS ISSUED
1999	694	351
2000	1438	437
2001	1238	527
2002	1462	595
TOTAL*	4832	1910
* Up to October 31, 2002		

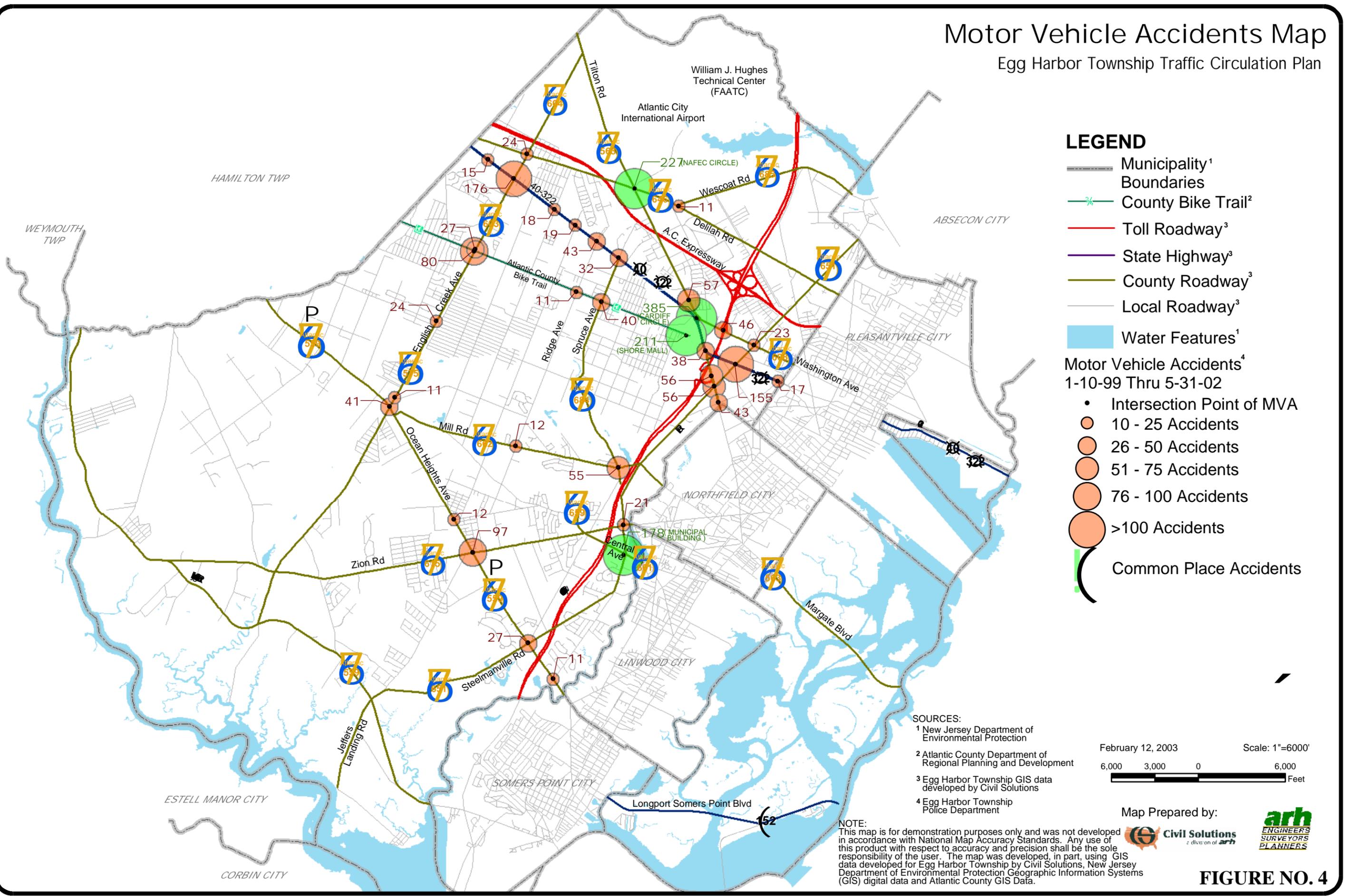
The number of building permits in the same time period has added another 5,367 people in the Township and approximately 19,100 new vehicle trips.

Congestion is a by-product of rapid growth. Strip development is one of the generators of congestion because of the number of entranceways to highways. Multiple access points on a roadway lead to points of congestion from turning movements, reducing capacity.

New standards to encourage “growth in depth” with regulated access to major highways will assist in the control of traffic congestion. Continued linear or strip development will create too many access points. These access points represent areas where accidents are more likely to occur.

Motor Vehicle Accidents Map

Egg Harbor Township Traffic Circulation Plan



LEGEND

- Municipality¹ Boundaries
- County Bike Trail²
- Toll Roadway³
- State Highway³
- County Roadway³
- Local Roadway³
- Water Features¹

Motor Vehicle Accidents⁴ 1-10-99 Thru 5-31-02

- Intersection Point of MVA
- 10 - 25 Accidents
- 26 - 50 Accidents
- 51 - 75 Accidents
- 76 - 100 Accidents
- >100 Accidents
- Common Place Accidents

SOURCES:

- ¹ New Jersey Department of Environmental Protection
- ² Atlantic County Department of Regional Planning and Development
- ³ Egg Harbor Township GIS data developed by Civil Solutions
- ⁴ Egg Harbor Township Police Department

February 12, 2003

Scale: 1"=6000'



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Map Prepared by:



FIGURE NO. 4

SECTION II

1.0 The Plan

The growth pressures imposed on Egg Harbor Township require a plan to enhance and preserve the safety of the roadways. Congestion has been building to the point where radical steps will be necessary to reverse the trend of crowded roadways, standing room only at intersections and a continuous stream of accidents.

The objectives of the Planning Board in developing this element of the Master Plan call for:

- 1.1 **The development of a safe and efficient road system.**
- 1.2 **The preservation of the reconstructed road system from deterioration.**
- 1.3 **The separation of pedestrian and motor vehicle traffic by an efficient sidewalk system.**
- 1.4 **The provision for alternate transportation elements within the Township.**

2.0 Transportation Goals

In order to achieve the objectives of the Township and the Planning Board, the following goals and policies are required:

- 2.1 **Goal: To provide for the safe and efficient movement of people and goods on the Township's primary roadway network.**

2.1.1 Policy: Establish and maintain a level of service "C" or better on all Township primary roadways.

2.1.2 Policy: Establish turning movement lanes at intersections where Township primary roads intersect the other primary and/or minor roads.

2.1.3 Policy: Reduce the number of access points on Township primary roadways and provide separate left-turn lanes for frequently used access points.

2.1.4 Policy: Establish Transportation Improvement Districts to allocate resources for the improvement of existing roadway infrastructure.

2.1.5 Policy: Prepare a bikeway master plan for the Township to coordinate with the Atlantic County Master Plan.

2.2 Goal: To provide for efficient, safe and pleasant circulation on local and collector roads throughout the Township.

2.2.1 Policy: To incorporate turning lanes to the primary access of new development to provide safe turning movements and minimize the impact of egress onto primary Township roads.

2.2.2 Policy: To provide reverse frontage in all new developments fronting on the Township primary road network.

2.2.3 Policy: Provide for sufficient parking on new lots to discourage on-street parking to provide clear and undisturbed access for emergency vehicles.

2.3. Goal: To enhance circulation to existing and proposed school facilities.

2.3.1 Policy: Provide pedestrian facilities for any new development within three (3) miles of a Township school or proposed school site.

2.3.2 Policy: Coordinate with the Egg Harbor Township Public School Transportation Department to provide safe and efficient transportation for students to school.

2.4 Goal: To enhance circulation within the Township and to eliminate congestion on the key commuter routes.

2.4.1 Policy: To establish a full interchange on the Garden State Parkway in the southern portion of the Township to provide access to the Parkway and the Atlantic City Expressway as major commuter routes while not traveling through residential sections of the Township.

2.4.2 Policy: To improve the intersection of Fire Road and Mill Road as a major element in the transportation system.

2.5. Goal: Encourage public and alternative transportation to alleviate pollution and congestion.

2.5.1 Policy: Coordinate with Atlantic County to develop effective public transportation to jobs and shopping centers.

3.0 Land Use Planning

Egg Harbor Township prepared a major revision to the Land Use Element of the Township Master Plan. The Pinelands Commission agreed to consider a reduction in the number of housing units proposed in the original Pinelands Comprehensive Master Plan. This density reduction agreement allowed the Township to reduce the ultimate density to 18,500 housing units.

In order to accomplish this reduction, the Zoning Schedule of Limitations for lot size along with the other bulk area requirements had to be reconsidered. Also, the type of housing units allowed in each zone had to be reviewed to determine the distribution of the housing units within the Township.

This type of housing and their distribution throughout the Township will impact the traffic circulation on the road network.

Figure 5 is the final version of the Township Zoning Map adopted by the Township. This was accomplished in primarily two (2) ordinances. Ordinance 38-2002 was adopted on June 12, 2002. This ordinance amended the Zoning Code for the Non-Pinelands area. Ordinance 29-2002 amended the Zoning Code for areas in the Pinelands Regional Growth Zone. This Ordinance was also adopted on June 12, 2002. The Pinelands Commission adopted the revised zoning on December 17, 2002.

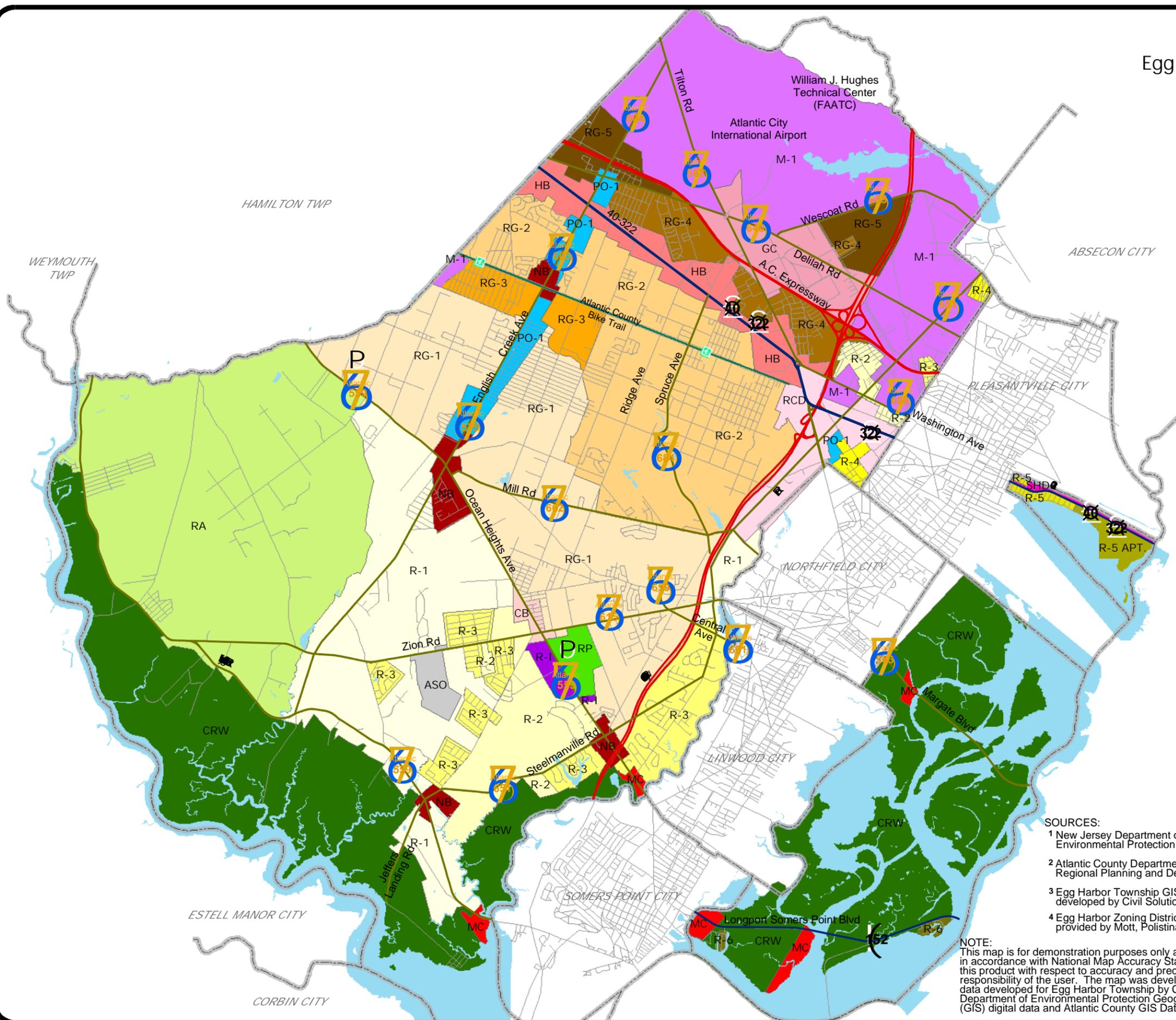
TABLE 6

PINELANDS COMMISSION HOUSING DENSITY FOR EGG HARBOR TOWNSHIP								
NEW ZONE	VACANT ACRES '02	DENSITIES BASE	PDC	MIN. LOT SIZE		UNIT BASE	PDC	TOTALS
				BASE	PDC			
RG-1	2,958	1	1.5	30,000	17,200	2,958	1,479	4,437
RG-2	2,537	2	3	16,000	10,000	5,074	2,537	7,611
RG-3	274	3	4.5	10,000	6,700	822	411	1,233
RG-4	276	4	6	7,000	3,500	1,104	552	1,656
RG-5	593	5	7.5	6,500	2,800		1,149	3,447
	6,638				2,298	12,256	6,128	18,384
				CMP Rx	4,938	12,345	6,173	18,518

* Assume 75% of the zone makes use of the 30% commercial option.
PDC = Pinelands Development Credits

Zoning Districts Map

Egg Harbor Township Traffic Circulation Plan



LEGEND

- Municipality¹ Boundaries
 - County Bike Trail²
 - Toll Roadway³
 - State Highway³
 - County Roadway³
 - Local Roadway³
 - Water Features¹
- Zoning Districts⁴**
- | | |
|------|----------|
| RCD | R-1 |
| CB | R-2 |
| GC | R-3 |
| HB | R-4 |
| MC | R-5 |
| NB | R-5 APT. |
| SHD | R-6 |
| M-1 | RG-1 |
| R-1 | RG-2 |
| ASO | RG-3 |
| PO-1 | RG-4 |
| RP | RG-5 |
| CRW | RA |

SOURCES:

- ¹ New Jersey Department of Environmental Protection
 - ² Atlantic County Department of Regional Planning and Development
 - ³ Egg Harbor Township GIS data developed by Civil Solutions
 - ⁴ Egg Harbor Zoning Districts CADD file provided by Mott, Polistina & Associates, LLC
- February 12, 2003 Scale: 1"=6000'
- 6,000 3,000 0 6,000
- Feet
- Map Prepared by:

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FIGURE NO. 5

Table 6 is the distribution of the required housing units by zoning district in the Township. The Table also lists the minimum lot sizes for each of the zoning districts.

According to the NJ Department of Labor in the last five (5) years, the Township has issued 2,056 building permits. The 1990 Census lists 10,018 housing units in the Township. The 2000 Census lists 12,067 housing units or a 20.45% growth over the last decade.

The number of building permits issued in 2000 (445) and 2001 (535) totals 980 units or is equivalent to 48% of the growth that occurred in the last ten (10) years. Table 7 illustrates the building permits issued in the growth area of Atlantic County in the past five (5) years.

TABLE 7

BUILDING PERMITS ATLANTIC COUNTY GROWTH AREA						
	2002 to Date	2001	2000	1999	1998	1997
Egg Harbor Township	400 (45%)	535 (31.75)	445 (27.38%)	351 (25.05%)	400 (32.79%)	325 (32.4%)
Galloway	177 (19.9%)	381 (22.61%)	518 (31.88%)	269 (19.3%)	233 (19.1%)	228 (22.8%)
Hamilton	147 (16.5%)	362 (21.48%)	224 (13.78%)	157 (11.2%)	127 (10.4)	111 (11.1%)
County Total	1,685	1,6254	1,625	1,401	1,220	1,003

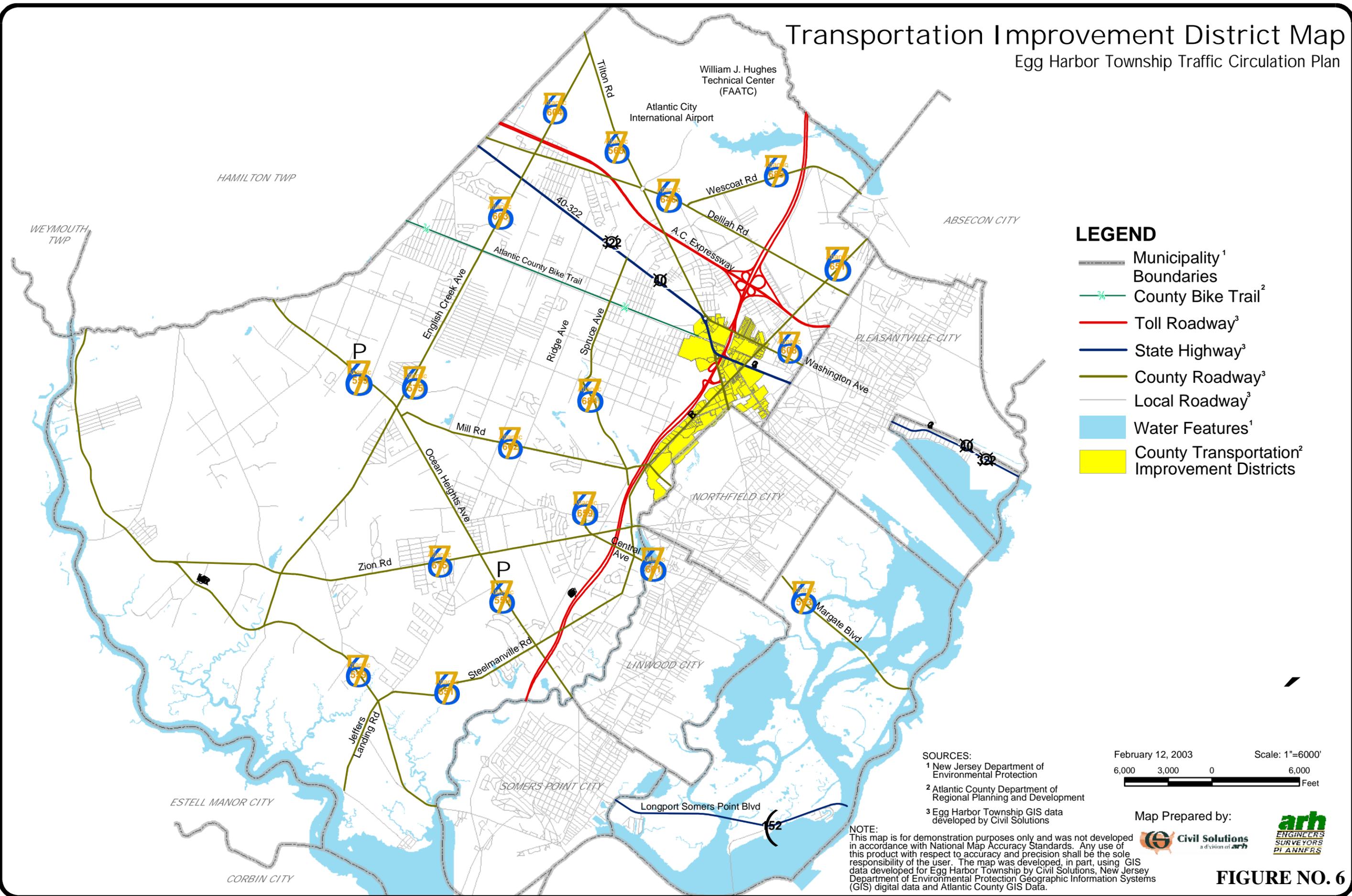
Egg Harbor Township has issued 400 building permits during the first six (6) months of 2002. This rate would translate to between 700 and 800 units for the year or between 7000 to 8000 new trips generated per year. It is this impact that requires the development

of a comprehensive traffic circulation plan to be developed and implemented in the Township.

The Planning Department of Atlantic County has already implemented a Transportation Improvement District in Egg Harbor Township. This planning tool has allowed for critical improvements on County roads in the Township. Figure 6 illustrates the properties included within the County Improvement District.

Transportation Improvement District Map

Egg Harbor Township Traffic Circulation Plan



LEGEND

- Municipality¹ Boundaries
- County Bike Trail²
- Toll Roadway³
- State Highway³
- County Roadway³
- Local Roadway³
- Water Features¹
- County Transportation² Improvement Districts

SOURCES:
 1 New Jersey Department of Environmental Protection
 2 Atlantic County Department of Regional Planning and Development
 3 Egg Harbor Township GIS data developed by Civil Solutions

February 12, 2003 Scale: 1"=6000'
 6,000 3,000 0 6,000
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Map Prepared by:
 Civil Solutions
 a division of arh
 ENGINEERS SURVEYORS PLANNERS

FIGURE NO. 6

4.0. Trip Generation Model

The State of New Jersey imposed certain standards on municipalities in New Jersey with the adoption of the Residential Site Improvement Standards, under Title 5, Chapter 21 of the Administrative Code. These standards set the parameters to evaluate development impacts as well as set the design standards for uniformity throughout the state of New Jersey.

Under Subchapter 4, Streets and Parking, the Residential Site Improvement Standards (RSIS) define their applicability to be streets that are residential in nature and not related to the streets defined under the Functional Classification of Highways as defined by the U. S. Department of Transportation. Subsection 5:21-4.1(b) further notes that trip generation rates are to be calculated from the Trip Generation by the Institute of Transportation Engineers. Table 4.1, entitled *Average Daily Motor Vehicle Traffic Trip Generation Per Dwelling Units*, establishes peak rates for various land uses. Table 8 is the reproduction of traffic generation factors for the relevant land uses from the RSIS Table 4.1.

TABLE 8

AVERAGE DAILY MOTOR VEHICLE TRAFFIC TRIP GENERATION PER DWELLING UNIT*	
LAND USE	PEAK RATE
Single-family detached housing	10.2
Townhouse	5.9
Low-rise apartment	7.2
Mid-rise apartment	5.5
High-rise apartment	5.0
Mobile home park	5.0
Retirement community	2.8
Recreational homes (owner occupied)	3.2

NOTE: The trip generation rates listed are guidelines only. The actual use of trip generation rates is derived by the use of regression analysis and should be computed only by professionals proficient in the use of the ITE *Trip Generation* manual. The "Land Use" definitions are based on the ITE manual with slight modifications to address inconsistencies contained within the ITE manual.

SOURCE: Institute of Transportation Engineers, *Trip Generation* (Washington, DC: ITE, 1982), 3rd Edition. The table was updated with data from the 6th Edition of the manual published by ITE in 1997. The peak ADT rates take into consideration Saturday and Sunday rates, as well as weekday rates.

* Table 4.1, page 31 - Residential Site Improvement Standards

Using these standards and applying them to the projected 18,518 housing units required by the New Jersey Pinelands Commission, gives an indication of the traffic impact to be experienced on the Township streets and roads.

5.0 Planning Period

The Municipal Land Use Law requires a re-examination of the Master Plan every six (6) years. The use of this period for the Traffic Circulation Plan was considered. However, certain critical elements must be considered for the full development of the Township. If they were not considered, the opportunity to build facilities in the future would be seriously hampered. The one element of an infrastructure plan that cannot be obtained in

the future is right-of-way. As demonstrated in the development of impacts from highway construction, relocation of residents and businesses is considered a serious impact. Planning should allow for the development of right-of-way for the future. Therefore, this Plan will examine the right-of-way needs for build-out conditions.

6.0 Township Street Area

The residential growth in Egg Harbor Township is the key element in the development of infrastructure planning for the traffic circulation element. The zoning scheme in the Township projects the commercial and the manufacturing/warehousing growth to occur in the northeasterly portion of the Township. The portion of the Township south of the Black Horse Pike, US 322-40 is destined for residential growth with the small exception of neighborhood businesses that will generate most of their traffic from the “pass by” traffic already on the road or by local traffic only.

Egg Harbor Township is unique in that two (2) areas of the Township are separated from the mainland area. The communities of Seaview Harbor, Anchorage Point and West Atlantic City are important elements comprising the diverse nature of the Township. West Atlantic City is focused along Verona Boulevard, US 40/322. The traffic circulation elements of this community are fixed by the southerly boundary formed by Lakes Bay. The New Jersey Department of Transportation has considered plans to reconstruct portions of Route 40/322 to improve the entrance to Atlantic City. Frequent spring-fall tidal flooding also cuts off access to portions of this roadway.

The communities located along the Longport-Somers Point Boulevard, NJ Route 152, are also relatively isolated from the major growth in the mainland portion of the Township.

Access to and from these communities is controlled by the New Jersey Department of Transportation.

These areas of Egg Harbor Township will not be the major focus of this Traffic Circulation Plan.

7.0 Classification of Township Roads

The configuration of the residential growth areas in relation to the Garden State Parkway creates a problem for traffic circulation. In the area south of the Black Horse Pike, there are only four (4) roads that cross the Parkway: Mill Road, Zion Road, Steelmanville Road and Ocean Heights Avenue. The Mays Landing-Somers Point Road also penetrates the Garden State Parkway, but at a point beyond the Township circulation needs.

Mill Road is the major roadway that borders the residential growth zones and also provides access eastwardly to the employment opportunity in Atlantic City. Another east-west road is critical to relieve the strain on the Mill Road-Fire Road intersection and the Fire Road corridor.

The current road system in Egg Harbor Township has varying right-of-way widths. These widths vary from 33-foot to 50-foot rights-of-way. These roads are generally paved 20 to 24 feet wide. Traffic capacities for this cross section are limited by lane width, roadside obstructions, limited vehicle speed and no passing zones. As a community develops, more and more people seek speed limit reductions that slow traffic, reduce lane capacities and cause congestion.

The County has developed a comprehensive functional classification system for the roads under their jurisdiction. It is recommended that the Township adopt a similar functional classification for the Township roads.

7.1 Classification System: The following functional classifications are recommended for adoption:

7.1.1 Township Arterial Roads: These roads are the internal network to move traffic through the Township and connect to the County arterial, County collector roads and State roadways.

7.1.2 Township Collector Roads: These roads are designated to connect the Township arterial roads with the connector roads.

7.1.3 Township Connector Roads: These roads are designated to connect multiple neighborhoods to the Township collector and arterial roads.

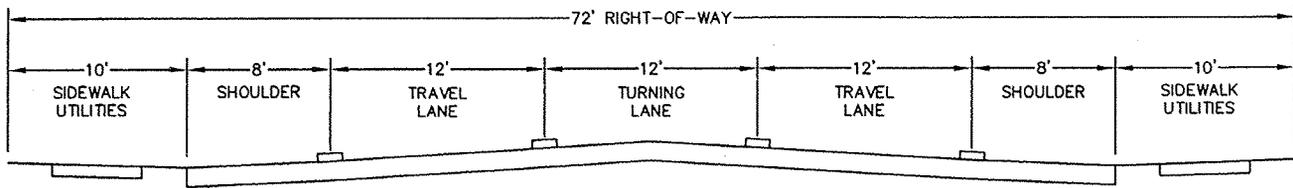
7.2 Roadway Elements: Each classification is defined by the number and widths of the elements composing the roadway. Figure 7 diagrams each classification cross-section.

7.2.1 Township Arterial Roads: These roadways will have to carry traffic volumes requiring multiple lanes. The right-of-way must be preserved for three 12-foot wide travel and turning lanes, two 8-foot shoulders and two 10-foot areas for utilities and sidewalks. The turning lane would be for left turns into neighborhoods and at major intersections. Required right-of-way would be 72-feet.

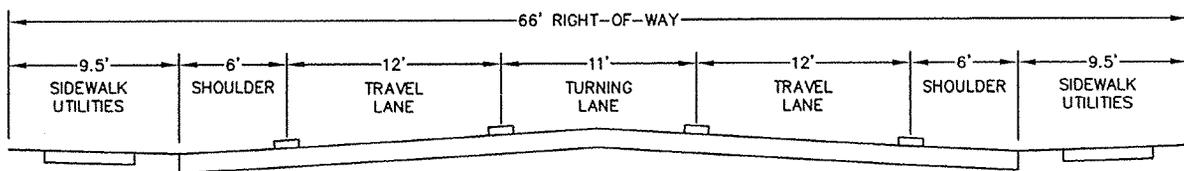
7.2.2 Township Collector Roads: This roadway would provide for two 12-foot travel lanes, an 11-foot wide turning lane at intersections and neighborhood access road; two 6-foot wide shoulders and two 9 ½ foot sidewalk and utility areas. Required right-of-way would be 66-feet.

FIGURE 7

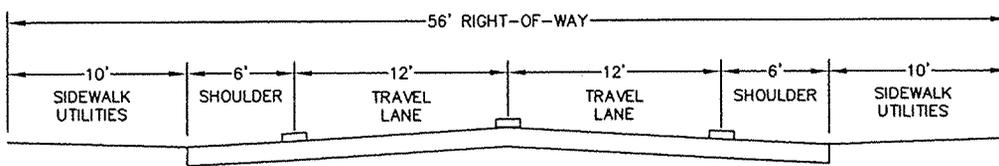
ROADWAY CROSS SECTION TRAFFIC CIRCULATION PLAN



TOWNSHIP ARTERIAL ROADWAY



TOWNSHIP COLLECTOR ROADWAY



TOWNSHIP CONNECTOR ROADWAY

7.2.3 Township Connector Roads: This roadway would provide for two 12-foot travel lanes, two 6-foot shoulders and two 10-foot wide sidewalk and utility areas.

7.3 Roadway Classification: After reviewing the information provided in the US 40/322 Corridor Study and the revised County Master Plan, an analysis was undertaken to determine the build-out traffic volumes to be experienced on the Township system. An analysis using the Township Geographic Information System was undertaken to calculate the trips generated by the revised zoning. Vacant lands were located using the tax assessment data. This was augmented by analyzing all residential properties of 5-acres or greater. A reserve parcel of 2-acres was left with the existing dwelling and the balance of the land was considered vacant.

The zoning districts were overlaid on the vacant land parcels. Areas were calculated for each sub-zone of the district. These areas were then multiplied by the zoning density for the particular zone to obtain the number of housing units. Trip generation factors were applied by using the factors contained in the Residential Site Improvement Standards, reproduced in Table 8 of the Plan. In zones RG-3, RG-4 and RG-5 the type of housing units were assumed to be 75% single family and 25% attached housing. This was also applied to the R-4 zone.

A modifying factor was applied to the Non-Pinelands areas. This factor attempted to take into account the undevelopable portion of lands, especially in the Conservation-Recreation-Wetlands (CRW) and Rural Agriculture Districts

(RA). Figure 8 is an illustration of the various zones and sub-zones that were used to develop the trip generation model.

Tables 9 and 10 show the results of the trip generation model. The potential trips calculated by the model indicate the severity of the issue. It must be remembered that the number of trips represents “build-out” conditions.

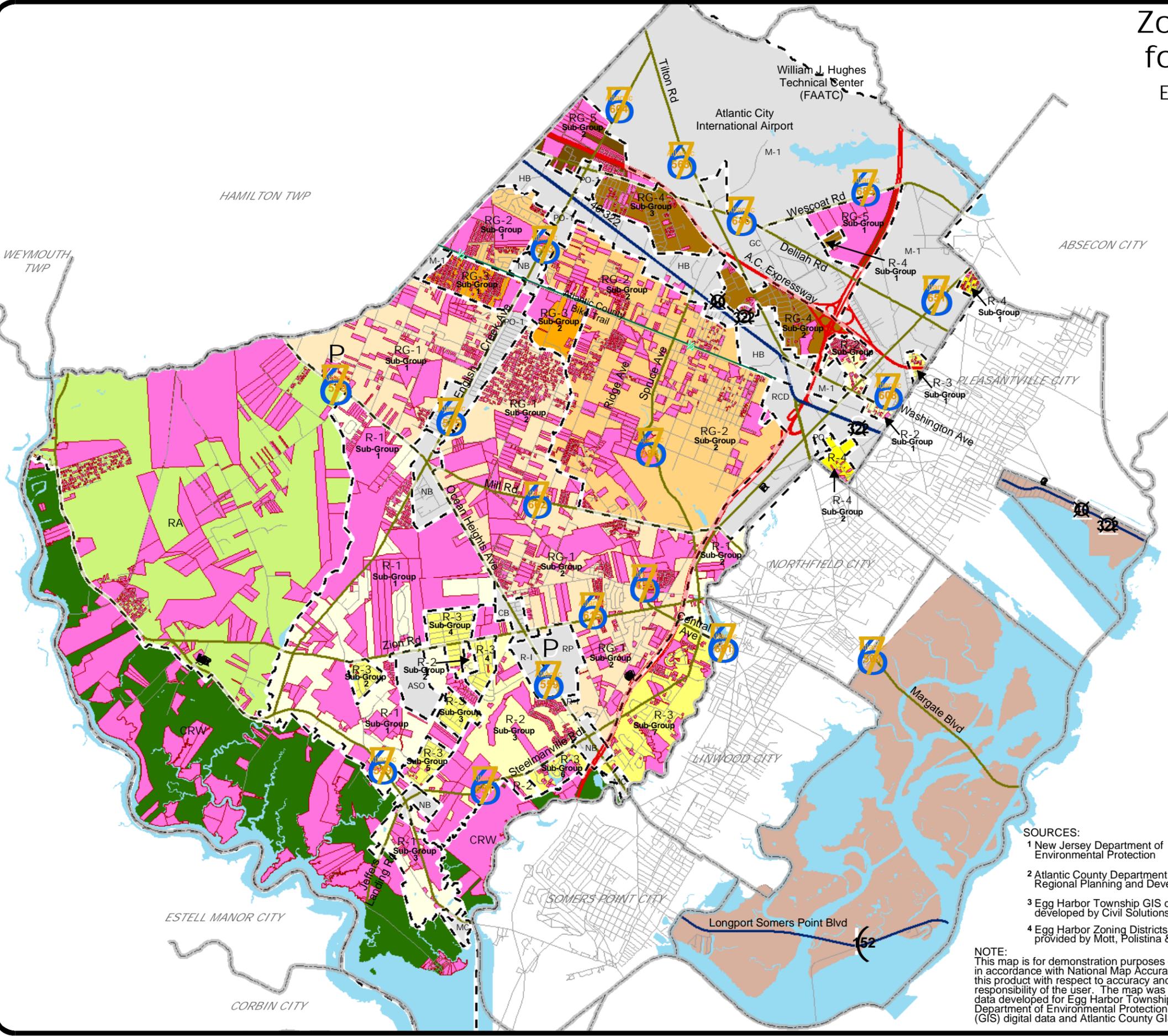
However, consider that at the present rate of housing construction there will be 4,500 to 5,000 new trips added to the transportation system each year.

TABLE 9

NON-PINELANDS AREA TRAFFIC GENERATION MODEL								
ZONE	SUB ZONE	VACANT LAND AREA	DENSITY	MODIFYING FACTOR	AREA	HOUSING UNITS	TRAFFIC FACTOR	ESTIMATED TRIPS
R-1	1	1956	1.1	0.75	1467	1614	10.2	16,463
	2	80	1.1	0.75	609	66	10.2	673
	3	150	1.1	0.75	112	124	10.2	1275
R-2	1	55	1.45	0.70	39	56	10.2	571
	2	4	1.45	0.70	3	4	10.2	41
	3	555	1.45	0.70	388	563	10.2	5743
R-3	1	5	3.1	0.75	4	12	10.2	122
	2	2	3.1	0.75	2	3	10.2	31
	3	2	3.1	0.75	2	3	10.2	31
	4	5	3.1	0.75	4	12	10.2	122
	5	13	3.1	0.75	10	31	10.2	316
	6	39	3.1	0.75	29	90	10.2	918
	7	172	3.1	0.75	129	400	10.2	4080
R-3	1	14	4.35	0.70	10	44	10.2/5.9	397
	2	10	4.35	0.70	7	30	10.2/5.9	278
RA	1	2314	0.43	0.50	1157	500	10.2	5100
CRW	1	1873	0.20	0.20	375	75	10.2	765
TOTAL		7429			4347	3627		36,916

Zoning and Sub Zone Area for Trip Generation Model

Egg Harbor Township Traffic Circulation Plan



LEGEND

- Municipality¹ Boundaries
 - County Bike Trail²
 - Toll Roadway³
 - State Highway³
 - County Roadway³
 - Local Roadway³
 - Water Features¹
 - Vacant Parcels located within³ Residential Zoning Districts
- Zoning Districts⁴
- R-1 - Residential District
 - R-2 - Residential District
 - R-3 - Residential District
 - R-4 - Residential District
 - RG-1 - (Regional Growth Area) 1 DU/Ac and 1.5 DU/Ac w/PDC Residential District
 - RG-2 - (Regional Growth Area) 2 DU/Ac and 3 DU/Ac w/PDC Residential District
 - RG-3 - (Regional Growth Area) 4.5 DU/Ac Residential District
 - RG-4 - (Regional Growth Area) 4-6 DU/Ac Residential District
 - RG-5 - (Regional Growth Area) 5-7.5 DU/Ac Residential District
 - RA - Rural Agriculture District
 - CRW - Conservation Recreation Wetland District
 - All other Zoning Districts
 - Area out of Project Scope

SOURCES:
 1 New Jersey Department of Environmental Protection
 2 Atlantic County Department of Regional Planning and Development
 3 Egg Harbor Township GIS data developed by Civil Solutions
 4 Egg Harbor Zoning Districts CADD file provided by Mott, Polistina & Associates, LLC

February 12, 2003 Scale: 1"=6000'
 6,000 3,000 0 6,000 Feet

Map Prepared by:
 Civil Solutions
 arh ENGINEERS SURVEYORS PLANNERS

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FIGURE NO. 8

TABLE 10

PINELANDS AREA TRAFFIC GENERATION MODEL						
ZONE	SUB ZONE	VACANT LAND AREA	DENSITY	HOUSING UNITS	TRAFFIC FACTOR	ESTIMATED TRIPS
RG-1	1	668	1.0	668	10.2	6,814
	2	2,290	1.0	2,290	10.2	23,358
	1	668	1.0	1,002	10.2	10,220
	2	2,290	1.5	3,435	10.2	35,037
RG-2	1	544	2	1,088	10.2	11,098
	2	1,993	2	3,986	10.2	40,657
	1	544	3	1,632	10.2	16,646
	2	1,993	3	5,979	10.2	60,985
RG-3	1	146	3	438	10.2/5.9	3,997
	2	128	3	384	10.2/5.9	3,504
	1	146	4.5	657	10.2/5.9	5,995
	2	128	4.5	576	10.2/5.9	5,256
RG-4	1	1	4	4	10.2/5.9	40
	2	125	4	500	10.2/5.9	4,562
	3	150	4	600	10.2/5.9	5,475
	1	1	6	6	10.2/5.9	60
	2	125	6	750	10.2/5.9	6,844
	3	150	6	900	10.2/5.9	8,212
RG-5*	1	338	5	1,310	10.2/5.9	11,953
	2	255	5	990	10.2/5.9	9,033
	1	338	7.5	1,965	10.2/5.9	17,930
	2	255	7.5	1,485	10.2/5.9	13,550
TOTAL		6,638		12,258/ 18,387		120,491
* Assume 75% of the zone uses 30% commercial option.						180,735

The Township road system was evaluated to take into account:

- `Traffic signal locations on State and County roads
- `Location of Township schools
- `Classification of County roads

- Potential new vehicle trips
- Access points to the limited access highways.

Also, the location of schools, shopping centers, public buildings and approved residential projects were evaluated. Figure 8 indicates the points of destination that were considered during the road classification process.

7.4 Arterial Roads: Two roads were chosen as the future major roads to handle the large volumes of traffic.

7.4.1 Ridge Avenue South: The proposed new traffic signal on US 40/322 focused this roadway as the major north-south road to convey traffic to the Black Horse Pike, Delilah Road and the Atlantic City Expressway. Ridge Avenue reaches all the way into the residential growth area where collection and connector roads can channel traffic.

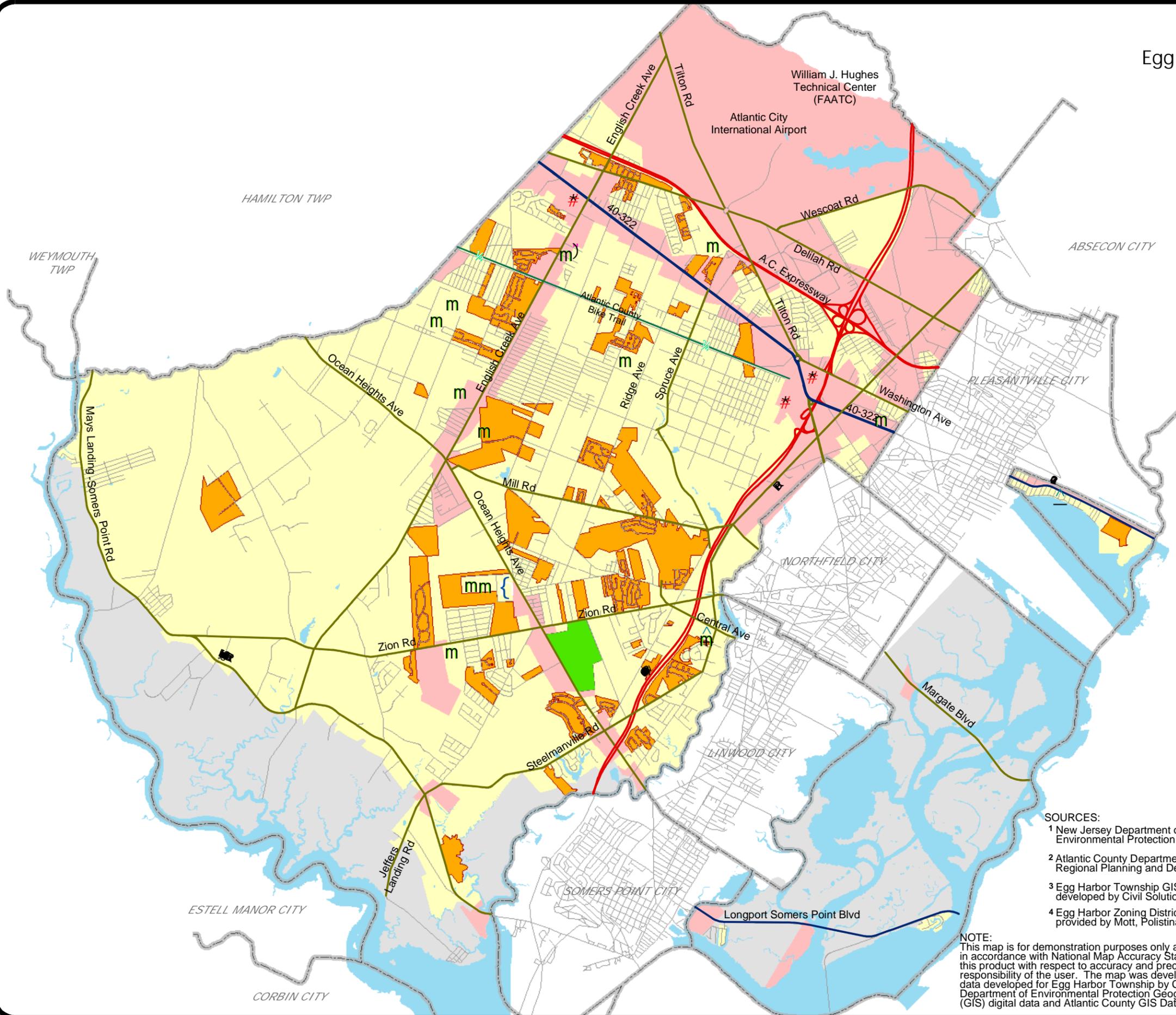
7.4.2 West Jersey Avenue: This east-west Township road is an inter-community road connecting Hamilton Township and Egg Harbor Township. West Jersey Avenue ends abruptly in the parking lot of the Shore Mall. A direct connection to either the Black Horse Pike or Tilton Road is needed to distribute traffic from the job corridor into the residential areas.

7.4.3 Reega Avenue: This intercommunity roadway has become a major access through Egg Harbor Township. This would provide a significant access point to English Creek Avenue.

7.5 Collector Roads: These roads are located where major destinations such as schools, recreation or businesses are located.

Destintation Map

Egg Harbor Township Traffic Circulation Plan



LEGEND

- Municipality¹ Boundaries
- County Bike Trail²
- Toll Roadway³
- State Highway³
- County Roadway³
- Local Roadway³
- Water Features¹
- Shopping Centers³
- Town Hall and School Administrative Office³
- Civic Center³
- Atlantic Co Library³
Egg Harbor Township Branch
- Schools³
- Subdivisions³
- Residential Zoning⁴
- Commercial and Industrial Zoning⁴
- Recreation Park Zoning⁴
- Conservation Recreation⁴ Wetlands Zoning

SOURCES:
¹ New Jersey Department of Environmental Protection
² Atlantic County Department of Regional Planning and Development
³ Egg Harbor Township GIS data developed by Civil Solutions
⁴ Egg Harbor Zoning Districts CADD file provided by Mott, Polistina & Associates, LLC

February 12, 2003
 Scale: 1"=6000'
 6,000 3,000 0 6,000 Feet

NOTE:
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FIGURE NO. 9

7.5.1 Ridge Avenue North: The portion north of the Black Horse Pike to Delilah Road is defined as a collector road. It should be an arterial road but existing development would preclude widening to that extent.

7.5.2 Fernwood Avenue: The portion between the Black Horse Pike and Main Avenue provides access to the existing traffic signal on the Pike. There is a portion of Fernwood Avenue between Main Avenue to Ninth Avenue that must be opened to provide proper traffic circulation in this area. This also provides access to the school at Fernwood and Main Avenues.

7.5.3 Tremont Avenue: This roadway has access from West Jersey Avenue to Delilah Road. Concern about the availability of another traffic signal at the Black Horse Pike kept this road from classification as an arterial road.

7.5.4 Ivins Avenue: Access to the Black Horse Pike and West Jersey Avenue required the extra width for this roadway.

7.5.5 Dogwood Avenue: This east-west roadway provides access to the two (2) schools on Alder Avenue. The portion of Dogwood east of English Creek Avenue is also classified as a collector road. Access to transition to Ninth Avenue needs study.

7.5.6 Ninth Avenue: The large residential (R-2) zone will generate significant traffic. Environmental concerns will prevent the continuation of Ninth Avenue to connect to Spruce.

7.5.7 Ridge Avenue: The portion of Ridge Avenue between Mill Road and Leap Street has existing development that will limit full expansion of this road to an arterial road.

7.5.8 Delaware Avenue: This roadway will be subject to development pressure from the amount of vacant land in the area.

7.5.9 Robert Best Road: The existing residential development on this road along with the potential development areas require a collector road to connect to two County roads.

7.5.10 Atlas Lane Road: This is an intercommunity road that also connects development in Egg Harbor Township.

7.6 Connector Roads: These roads are located where large blocks of land are available for less intense development.

7.6.1 Fernwood Avenue: This road is not open all the way through to Mill Road. The location of the existing right-of-way and the connection from the Black Horse Pike to Mill Road make it an ideal connector road for internal travel.

7.6.2 Winnipeg and Alder Avenues: These roads are in similar areas as Tremont and Ivins Avenues although the intensity of development is not as high.

7.6.3 Pine Avenue and Asbury Avenue: This road takes the westerly end of the Township and conveys traffic to the rural section of the Township. The connection with Asbury Avenue provides a connection to the southern areas of the Township.

7.6.4 Schoolhouse Lane: This roadway connects English Creek Avenue with Zion Road and the Mays Landing-Somers Point Road, three (3) County roads.

The preservation of these rights-of-way will insure adequate areas to build needed highways while not disturbing properties.

7.6.5 High School Drive: This roadway connects English Creek Avenue to the high school as well as major developments in the Tremont Avenue section of the Township. Taking this roadway through to Ridge Avenue makes an additional east-west access road.

7.6.6 Sycamore Avenue: This roadway completes the connection between Atlas Lane Road, West Jersey Avenue and Dogwood Avenue.

7.6.7 Blackman Road: This road passes through existing residential development but provides access to Ocean Heights Avenue where a major interchange with the Garden State Parkway is proposed. This will become an important link in the traffic circulation in the Township.

Based on these “built out” volumes and specific destinations in the Township, a system-wide classification is proposed. Table 11 lists the proposed road classifications and proposed rights-of-way widths. The various street classifications are shown on Figure 10.

TABLE 11

TOWNSHIP ROADWAY FUNCTIONAL CLASSIFICATION SYSTEM				
ROAD NAME	TERMINAL POINTS	CLASSIFICATION	EXISTING ROW (FT.)	PROPOSED ROW (FT.)
Ridge Avenue	Black Horse Pike to Mill Road, CR #662	Arterial	50	72
West Jersey Avenue	Black Horse Pike to Hamilton Township	Arterial	50, 64	72
Reega Avenue	Hamilton Township tp English Creek Avenue	Arterial	50	72
Ridge Avenue	Black Horse Pike to Dellilah Road, CR #646	Collector	50	66
Ridge Avenue	Mill Road, CR #662 To Leap Street	Collector	50	66
Leap Street	Ocean Heights Avenue, CR #Alt. 559 To Delaware Avenue	Collector	50, 61	66
Delaware Avenue	Mill Road, CR #662 to Old Zion Road	Collector	50	66
Robert Best Road	Zion Road, CR #615 to Steelmanville Road, CR #651	Collector	50	66
Fernwood Avenue	Black Horse Pike to Main Street	Collector	50	66
Tremont Avenue	Dellilah Road to West Jersey Avenue	Collector	50	66
Ivins Avenue	Black Horse Pike to West Jersey Avenue	Collector	50	66
Doughty Road	Pleasantville to Westcoat Road, CR #685	Collector	50	66
Dogwood Avenue	Hamilton Township to Tremont Avenue	Collector	50	66
Ninth Avenue	Tremont Avenue to Ridge Avenue	Collector	50	66
Atlas Lane Road	Hamilton Township to Sycamore Avenue	Collector	50	66
Spruce Avenue Goldenrod Lane	Black Horse Pike to Tilton Road	Connector	50	56
Fernwood Avenue	Main Avenue to Delaware Avenue	Connector	50	56
Tremont Avenue	West Jersey Avenue to Delaware Avenue	Connector	50	56
Ivins Avenue	West Jersey Avenue to Mill Road, CR #662	Connector	50	56
Winnipeg Avenue	Dogwood Avenue to Ocean Heights Ave., CR #Alt. 559	Connector	50	56
Alder Avenue	Dogwood Avenue to Ocean Heights Ave., CR# Alt. 559	Connector	50	56

TOWNSHIP ROADWAY - con't.
FUNCTIONAL CLASSIFICATION SYSTEM

ROAD NAME	TERMINAL POINTS	CLASSIFICATION	EXISTING ROW (FT.)	PROPOSED ROW (FT.)
Pine Avenue	Dogwood Avenue to Asbury Road	Connector	50	56
Asbury Avenue	Pine Avenue to Zion Road, CR #615	Connector	50	56
Schoolhouse Road	English Creek Ave. CR #575 to Mays Landing-Somers Point Rd. CR #559	Connector	50	56
High School Drive	English Creek Avenue to Ridge Avenue	Connector	50	56
Blackman Road	Poplar Avenue to Ocean Heights Avenue	Connector	33	56
Sycamore Avenue	West Jersey Avenue to Dogwood Avenue	Connector	50	56

ROW = Right-of-way

8.0 Infrastructure Requirements

The dilemma facing Egg Harbor Township is to determine where resources are available to fund the needed improvements for the development of the Traffic Circulation Plan. Current funding for road improvements from the State Transportation Trust Fund will not be anywhere near adequate for infrastructure required.

The Township faces the dilemma that the large regional growth area established by the New Jersey Pinelands Commission does not allow for a managed growth plan. There are hundreds of existing intersections where growth could occur, leaving the allocation of resources as a reaction to a developer's choice of a site.

The dilemma becomes more ambiguous when you add the length of time needed to fund a project, the time to design and receive permits for a project, as well as the construction period for the improvement. This cycle could last three (3) to five (5) years.

The New Jersey State Statutes set forth the criteria for municipalities to receive contributions for the construction of off-tract improvements. The Statutes are clear that the only way a developer must pay for an off-tract improvement is there must be a reasonable connection between the improvement that is needed and the development. Also, the developer can only be assessed their fair share contribution for the project.

While the Statutes may be clear on when and to what extent a developer must pay, nowhere does it take into account the balance of the revenue needed for completion of the improvement. This must be raised by the municipality in some form of bond, grant or taxation.

There are two (2) ways to develop funding for road improvements. Each one requires a substantial investment in time and funds to establish.

8.1 Intersection Improvements

The delays occurring at intersections are the cause of most complaints to the Township. Most accident locations also occur at intersections.

The accident analysis has pointed to certain intersections that must be evaluated for improvements. Those critical intersections are:

8.1.1 English Creek Avenue and Dogwood Avenue: A traffic signal analysis and intersection improvement is needed for this critical intersection. Accidents have been high at this location. Action is needed.

8.1.2 Ridge Avenue and Black Horse Pike: The NJDOT has recommended a traffic signal at this location. Ridge Avenue is a major north-south collector in the Township. This traffic signal will be critical to traffic safety.

8.1.3 Mill Road and Fire Road: The County is urged to provide a solution to the excessive delays that occur at this intersection.

8.1.4 Fire Road and Hingston Avenue: The elimination of the left turn at Tilton Road and Fire Road has increased traffic on Hingston Avenue. Long delays are experienced at this intersection for persons attempting to travel south on Fire Road from Hingston Avenue. An interim solution would be to provide a right turn lane to move some of the traffic.

8.1.15 Mill Road and Spruce Avenue: This intersection has an increasing accident rate with the development along Mill Road. The County is urged to realign this intersection for better sight distances as well as determine if a signal is warranted.

8.1.16 Swift Avenue and Ocean Heights Avenue: This intersection is critical to the recreation-education systems in the Township. An investigation into the warrants for a traffic signal is recommended.

8.2 Transportation Development Districts

The New Jersey Legislature established the local power to enact Transportation Development Districts under NJSA 27:1C-1 in 1989. The Act specifically allows municipalities to petition to the County for the establishment of a District in areas where it is evident that growth would justify the establishment of such a District.

Once a District is designated, the County must submit the plan to the New Jersey Department of Transportation to establish the District. The County as an agent for the municipality would then have to establish a *District Improvement Plan* and a *District Financial Program*.

Once the plan and the financial program are approved, ordinances would have to be enacted assessing the development fee and establishing a trust fund. Since the County does not have Transportation Development Districts within the residential area of the Township, it would appear that the Township may develop its own Improvement District and establish the necessary plan and financial program for that District.

8.3 Off-Tract Improvement Ordinance

The Municipal Land Use Law provides under NJSA 40:55D-42 to allow a municipality to enact an ordinance setting forth regulations for a developer to pay their pro-rata share of the costs of improvements required by the development

proposed. Egg Harbor Township should consider the adoption of an ordinance whereby developers should contribute to street and road improvements.

The use of existing levels of service for the portion of roadway impacted by the development, along with trip generation models of the development could be used to assess contribution costs.

Certain criteria should be established to insure the safe passage of individuals on roadway. These criteria should be indicated in the Land Management Code of the Township.

- All major subdivisions or Township Arterial or Collector roads must have reverse frontage.
- All minor subdivision on Township Arterial or Collector roads must use shared driveway access.
- Where existing or projected levels of service for the two closest intersections exceed level of service “D” improvements must be made to the intersections to reach level of service “C” or the development must be phased over five (5) years to allow the Township and/or County to fund the improvements needed. The developer could make the improvements to speed the process.

9.0 Recommendations

The following recommendations are based on the policies detailed in this Plan. These recommendations will require approval by the Planning Board members, recommendation for consideration by the Township Committee members and adoption of ordinance amendments by the Township Committee.

- In concert with Atlantic County, petition the Garden State Parkway for the construction of a full interchange at Ocean Heights Avenue.
- Adopt the Township Roadway Classification System and implement the requirements in the Land Management Code.
- Establish new traffic control standards for intersections, reverse frontage and left turn lanes to improve traffic capacity levels.
- Consider the preparation of Transportation Improvement Districts to fund needed roadway improvements or the establishment of an Off-Tract Improvement Ordinance for adoption.
- Encourage the Commissioner of the New Jersey Department of Transportation to speed the improvements recommended in the US 40-322 Corridor Study.
- Encourage the County of Atlantic to reconstruct the Fire Road and Mill Road intersection to improve the lane capacity under the Garden State Parkway.
- Investigate each intersection with a Township controlled road that is noted in the Accident Location Map for realignment.
- Open Fernwood Avenue for a continuous roadway from the Black Horse Pike to Mill Road.
- Petition the Commissioner of the New Jersey Department of Transportation to increase allotments to the Pinelands Regional Growth Zone to \$500,000 from the Transportation Trust Fund.
- Implement the intersection improvements recommended and petition Atlantic County to concentrate efforts in the critical intersections noted.

~

Township Roadway Functional Classification Map

Egg Harbor Township Circulation Plan



LEGEND

- Municipality¹ Boundaries
- County Bike Trail²
- State & Toll Roadways³
- County Roadway³
- Local Roadway³
- Water Features¹
- Intersection Improvements³

Functional Classification (ROW STANDARD)³

- Township Arterial (72)
- Township Collector (66)
- Township Connector (56)

SOURCES:

- ¹ New Jersey Department of Environmental Protection
- ² Atlantic County Department of Regional Planning and Development
- ³ Egg Harbor Township GIS data developed by Civil Solutions

February 12, 2003 Scale: 1"=3000'
 3,000 1,500 0 3,000
 Feet

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Map Prepared by:
Civil Solutions
 a division of arh

