

Lewes Scenic and Historic Byway

Gateway to the Nation Appendix 1: Existing Travel Conditions and Byway Map



Cape May - Lewes Ferry



Lightship Overfalls



Delaware Breakwater Lighthouse



Canary Creek



Hazzell Smith House



Pre-War Savannah Road



Zwaanendael Museum



Fort Miles

Prepared for:

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**CITY OF LEWES
SUSSEX COUNTY
DELAWARE DEPARTMENT OF TRANSPORTATION**

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INTRODUCTION

The purpose of this report is to examine and establish the existing transportation context of the roadways of the Lewes Historic Byway: Gateway to the Nation.

As an Appendix to the Corridor Management Plan, this report will inform the comprehensive evaluations of the Corridor Management Plan and as such will not contain recommendations.

TRANSPORTATION INFRASTRUCTURE

The historic nature of the City makes it a special place. A tight grid system of streets, closely spaced historic buildings, and unique neighborhoods along with its beaches and scenery make the city and its surroundings special. Given the size of the community—a year-around population of 2,800 that swells to almost 50,000 in the summer—and its special qualities, it is very unlikely that increases to the capacity of the transportation system are feasible or acceptable. However, there are sections of the Byway that may face development pressures and may change in character where capacity improvements not only are feasible but will most likely be required of developers.

DESCRIPTION OF THE BYWAY ROADWAYS

The Lewes Historic Byway includes six roadways with very different transportation characteristics, all contained within the City of Lewes and surrounding Sussex County, Delaware. As such the six roadways pass through very different character areas ranging from the downtown area of Lewes, through turn of the century residential areas to modern subdivisions and through environmentally sensitive open spaces. Roadway travel conditions range from light traffic to severely congested, conditions typically found in a resort where traffic conditions change dramatically from season to season. The roadways of the Byway are as follows:

- Pilottown Road/Front Street between the Great Marsh at Roosevelt Inlet and Savannah Road
- New Road between Nassau Road and Pilottown Road
- Savannah Road between the State Route 1 and Lewes Beach
- Kings Highway between State Route 1 and Savannah Road
- Gills Neck Road between Kings Highway and Savannah Road
- Cape Henlopen Drive between Savannah Road and Cape Henlopen State Park

Figure 1 shows the Byway roadways:



FIGURE 1: ROADWAYS OF THE LEWES HISTORIC BYWAY

The following paragraphs describe the transportation characteristics of the six roadways comprising the Byway.

PILOTTOWN ROAD/FRONT STREET

Pilottown Road/Front Street extends between the Boat Ramp at Roosevelt Inlet and Savannah Road. Along its Route, between Roosevelt Inlet and Harborview Road, serves the Hugh R. Sharp campus of the University of Delaware and several industries. Between Harborview Road and Shipcarpenter Street, it has residents in the south side and open space on the north side, including Canalfront Park. East of Shipcarpenter Street, the buildings are closely spaced, typical of a downtown area. Pilottown Road has two 10 foot travel lanes and sidewalks for most of its length on its south side and on its north side along Canalfront Park. Between Shipcarpenter Street and Savannah Road, there are sidewalks on both sides of the street. Throughout its length, bicyclists must ride with traffic.

NEW ROAD

New Road extends from Nassau Road to Pilottown Road. It is a two lane roadway. Between Nassau and Canary Creek, it is rural in nature with scattered subdivisions on the west side and agricultural uses and open space on the east side. North of Canary Creek, the subdivisions are more common and take on a more urban nature as New Road approached Fourth Street. Between Fourth Street and Pilottown Road, New Road takes on a more urban character with businesses in the west side



and single family homes on the east side. New Road has one 10 foot travel lane in each direction and shoulders are present at the more recent subdivisions. For its entire length, bicyclists must ride with traffic and there are no facilities for pedestrians.

SAVANNAH ROAD

Savannah Road extends from State Route 1 to the Lewes Beach. It changes character several times throughout its length. From State Route 1 to the Georgetown-Lewes Running Track, it is a two lane road with 11 foot lane. There are two 11 foot travel lanes and 8 foot shoulders. There are some sections with curbs but most of this section there are none. From the Georgetown Running Track to Third Street/Kings Highway, there are two travel lanes with two parking lanes. Curb and sidewalks are present for most of this section. Between Third Street/Kings Highway and Front Street/Gills Neck Road, Savannah Road is has one travel lane in each direction and a center left turn lane. In this section, which comprises the downtown area, there numerous crosswalks. Between Front Street/Gills Neck Road, Savannah Road consists of one 11 foot travel lane in each direction with a shoulder on the east side and curb and sidewalks on the west side. Parking is permitted on the west side. Bicyclists heading to the beach can use the shoulder as a bicycle lane but the return trip must be made with traffic in a shared lane. Savannah Road is an evacuation route in the event of a disaster.

KINGS HIGHWAY

Kings Highway extends from State Route 1 and Savannah Road. It is comprised of two sections: The first section extends from State Route 1 to the intersection with the Freeman Highway and includes a spur which divides the turning movements among two intersections on State Route 1. The second section begins at the intersection with the Freeman Highway and Third Street/Savannah Road.

The section from State Route 1 and Freeman Highway operates with two 12 foot travel lanes and two eight foot shoulders. There are no sidewalks. Bicycles can use the shoulders and avoid the travel lanes. Most of the land uses along this section are rural. There are active development projects proposed for most of the farmland along this section of Kings Highway which, if acted upon will change the character of this section of Kings Highway from rural to suburban.

The section between the Freeman Highway and Third Street/Savannah Road is two lanes wide with parking permitted on the west side. Sidewalks are provided on both sides of the roadway. Bicyclists must share the roadway with automobiles. Lining this section are single family houses, many of which are historic.

Like Savannah Road, Kings Highway is an evacuation Route.

GILLS NECK ROAD

Gills Neck Road extends between Kings Highway and Savannah Road, travelling east from Kings Highway and then looping back to the west under the Freeman Highway to Savannah Road at Front Street. Gills Neck Road is a two lane roadway.

Recent development activity has widened the formerly two lane roadway with 10 foot lanes and no shoulders to 11 foot travel lanes and five foot shoulders in the vicinity of the residential developments along its route. Because shoulders are not consistent along its route, bicyclists must navigate its sharp curves in the travel lanes. There are no sidewalks although the Junction and Breakwater Trail parallels Gills neck road as it approaches Kings Highway.

CAPE HENLOPEN DRIVE

Cape Henlopen Drive extends for the entrance to Cape Henlopen State Park to Savannah Road. It is a two lane road with 12 foot travel lanes and eight foot shoulders except in the area from the Freeman Highway to the entrance to the Cape May-Lewes Ferry where it widens to four lanes. Bicyclists can use the shoulders to avoid travelling with vehicles. There are no sidewalks. Land uses along Cape Henlopen Drive comprise of several condominium developments and several small industrial firms. Mostly, it passes through open space and serves the beaches.

LENGTH OF THE BYWAY ROADWAYS

The length of the byway roadways are shown in Table 1.

Table 1: Lengths of the Byway Roadways.

Roadway	From	To	Total Length	Length (mi)	City of Lewes Length (mi)	Sussex Co. Length (mi)
New Road	Nassau Road	Kansas Court	2.77	0.54		0.54
	Kansas Court	Old Orchard Road		0.35		0.35
	Old Orchard Road	Canary Creek		0.98		0.98
	Canary Creek	Park Road		0.33	0.33	
	Park Road	Fourth Street		0.43	0.43	
	Fourth Street	Pilottown Road		0.15	0.15	
Pilottown Road/Front Street	Boat Ramp Driveway	Park Road	1.55	0.31	0.31	
	University Loop Road	Rodney Avenue		0.40	0.40	
	Rodney Avenue	New Road		0.29	0.29	
	New Road	Ocean View Boulevard		0.14	0.14	
	Ocean View Boulevard	Ship Carpenter Street		0.18	0.18	
	Ship Carpenter Street	Savannah Road		0.25	0.25	
Savannah Road	City Limits	Third Street	2.56	0.96	0.96	
	Georgetown Lewes RR	City Limits		0.03		0.03
	Third Street	Front Street		0.10	0.10	
	Georgetown Lewes RR	Road 268A		0.31		0.31
	Road 268A	DE Route 1		0.63		0.63
	Front Street	Beach Parking Lot		0.54	0.54	
Cape Henlopen Drive	Savannah Road	Freeman Highway	1.53	0.32	0.32	
	Freeman Highway	Ferry Parking Lot		0.38	0.38	
	Ferry Parking Lot	Cape Henlopen State Park		0.83	0.83	
Gills Neck Road	Kings Highway	City Limits	2.17	1.75		1.75
	City Limits	Savannah Road		0.42	0.42	
Spur to Rt. 1	Kings Highway	DE Route 1	0.15	0.15		0.15
Kings Highway	DE Route 1	Gills Neck Road	2.35	0.94		0.94
	Gills Neck Road	Henlopen Gardens		0.40		0.40
	Henlopen Gardens	Freeman Highway		0.23	0.23	
	Freeman Highway	Georgetown Lewes RR		0.14	0.14	
	Georgetown Lewes RR	Savannah Road		0.64	0.64	
Total Length of Byway Roadways			13.10	13.10	7.03	6.07

As can be seen, about half of the Lewes Historic Byway lies outside the City of Lewes in an unincorporated area of Sussex County. Within the incorporated City of Lewes, the City administers land use and zoning. Outside the City, Sussex County government administers land use and zoning. All of the Byway roadways except for Gills Neck Road in the city are state maintained roadways. The city maintains the section of Gills Neck Road inside the city limits.

THE EXISTING TRANSPORTATION SITUATION

Traffic volumes and conditions along the Byway roadways are typical of a summer resort area. During the high season, June, July and August, traffic volumes are twice as high as they are in the winter months. Figure 2 illustrates the summertime average daily traffic volumes for the byway

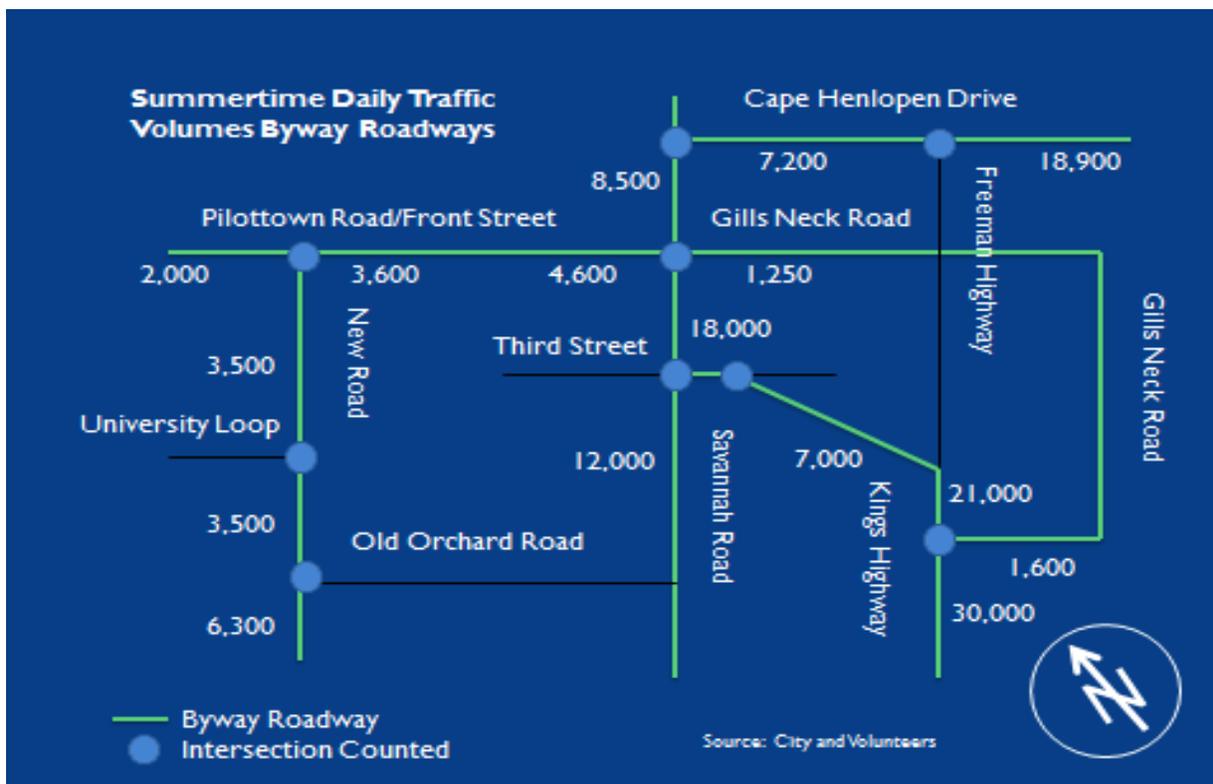


FIGURE 2: AVERAGE SUMMERTIME DAILY TRAFFIC FOR THE BYWAY ROADWAYS

roadways. As shown in the figure, Kings Highway between State Route 1 and Gills Neck Road carries 30,000 vehicles per day. Of that number, about one third continues on Kings Highway towards the downtown area. In the downtown area, Savannah Road carries 18,000 vehicles per day in the downtown area and less on either side. The other byway roadways carry substantially less traffic.

THE SAFETY SITUATION

Crash data was provided by the Delaware Department of Transportation for the period beginning January 1, 2005 until July 31, 2013, an analysis period of eight years and seven months. During that

period 266 crashes occurred on the Byway Roadways which include Cape Henlopen Drive, Pilottown Road/Front Street, Gills Neck Road, Kings Highway, New Road and Savannah Road.

Figures 3 and 4 are maps that highlight the crash locations. Figure 1 shows all of the crashes by location and Figure 2 show the pedestrian and bicycle crashes. The pedestrian and bicycle crashes include only those in which the first harmful event or collision regardless of fault was a pedestrian or bicycle.

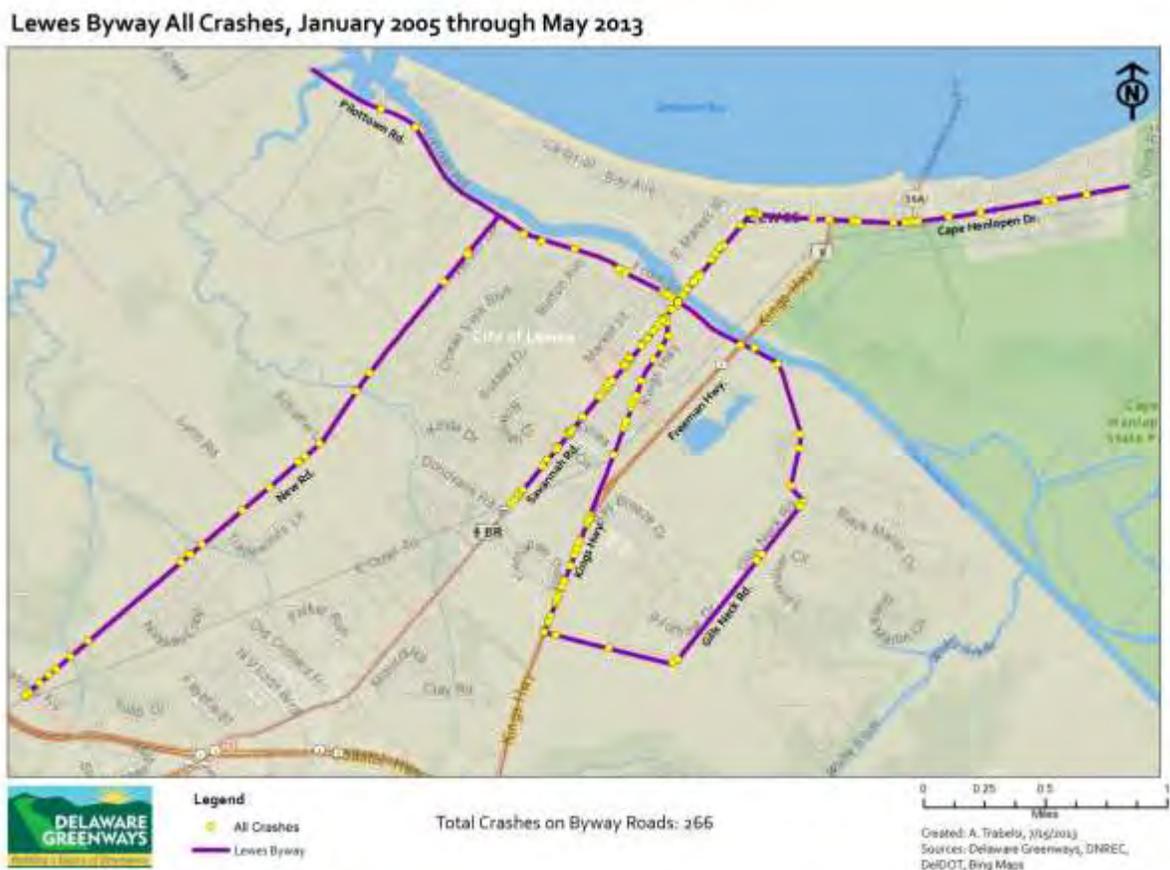


FIGURE 3: LEWES BYWAY CRASHES

Review of Figure 1 reveals a cluster of crashes in the center of Lewes on Savannah Road and Kings Highway. The closely spaced intersections, high pedestrian concentrations and high level of activities indicate a need to review safety in this area.

A second area of concern is the cluster on Kings Highway between the Freeman Highway and Gills Neck Road. The concentration of activities at the High School and pedestrians and bicyclists accessing the Junction and Breakwater Trail represents a concern.

Two pedestrian and six bicycle crashes occurred on the Byway roadways during the analysis period. Although there are no clusters, the pedestrian and bicycle crashes on Savannah Road and on Cape Henlopen Drive indicate attention should be given to the safety of those modes on these Byway roadways.

Table 2 illustrates the number of crashes by roadway.

As shown in the table, Kings Highway has 43% of the crashes along the Byway roadways with Savannah Road at 21%.

Table 2: Crashes By Road

Road Name	No. Crashes	Pct.
Cape Henlopen Drive	21	8%
Gills Neck Road	14	5%
Kings Highway	115	43%
New Road	28	11%
Pilottown Road/Front Street	32	12%
Savannah Road	56	21%
Total	266	100%

Lewes Byway Bicycle and Pedestrian Crashes, January 2005 through May 2013



FIGURE 4: LEWES BYWAY PEDESTRIAN AND BICYCLE CRASHES



There were 54 injuries and two fatalities during the reporting period. Three of the injuries were pedestrians and eight were bicyclists. There were no pedestrian or bicyclist fatalities reported. According to police reports, 9% of the crashes involved alcohol.

Forty-five percent of the crashes occurred during four month period of June, July August and September as might be expected in a summertime resort area. Poor weather and night time conditions did not produce a spike in crashes on any of the Byway roadways.

The results of the crash analysis indicate that when considering transportation related recommendations, careful attention should be given to the crash clusters on Kings Highway and on Savannah Road.

PUBLIC TRANSPORTATION

Public transportation in Lewes consists of the Cape May-Lewes Ferry, the shuttle service it operates and a single bus route operated by DART-First State.

The Delaware River and Bay Authority operates a popular ferry service between Cape May, New Jersey and Lewes, Delaware. During the summer months, it carries between 1,800 and 2,400 vehicles per day, both ways. It also carries both bicyclists and pedestrians. The ferry operates between 12 and 14 trips in each direction during summer weekend days depending upon demand. The schedule varies but the trips average about one per hour throughout much of the day. Tables 3 and 4 illustrate the schedule and patronage for the ferry operation on August 17, 2013, also the count day for the volunteers.

Table 3: Cape May-Lewes Ferry Schedule and Patronage for Saturday, August 17, 2013, Arriving Ferries

Source: Delaware River and Bay Authority

Cape May to Lewes	Depart Cape May	Arrive Lewes	Finish Unloading	Vehicles
1	6:30 AM	7:55 AM	8:15 AM	86
2	7:30 AM	8:55 AM	9:15 AM	105
3	8:30 AM	9:55 AM	10:15 AM	85
4	9:30 AM	10:55 AM	11:15 AM	91
5	10:15 AM	11:40 AM	Noon	92
6	11:00 AM	12:25 PM	12:45 PM	105
7	Noon	1:25 PM	1:45 PM	85
8	1:00 PM	2:25 PM	2:24 PM	87
9	1:45 PM	3:10 PM	3:30 PM	94
10	2:30 AM	3:55 PM	4:15 PM	93
11	3:30 PM	4:55 PM	5:15 PM	86
12	4:30 PM	5:55 PM	6:15 PM	94
13	6:00 PM	7:25 PM	7:45 PM	104
14	9:00 PM	9:25 PM	9:45 PM	69

Table 4: Cape May-Lewes Ferry Schedule and Patronage for Saturday, August 17, 2013, Departing Ferries

Source: Delaware River and Bay Authority

Lewes to Cape May	Begin Loading	Depart Lewes	Vehicles
1	7:40 AM	8:00 AM	93
2	8:55 AM	9:15 AM	101
3	9:55 AM	10:15 AM	91
4	10:55 AM	11:15 AM	94
5	11:35 AM	Noon	96
6	12:25 PM	12:45 PM	92
7	1:25 PM	1:45 PM	87
8	2:25 PM	2:45 PM	85
9	3:10 PM	3:30 PM	86
10	3:55 PM	4:15 PM	92
11	4:55 PM	5:15 PM	95
12	5:55 PM	6:15 PM	58
13	6:55 PM	7:25 PM	58
14	9:10 PM	9:30 PM	29

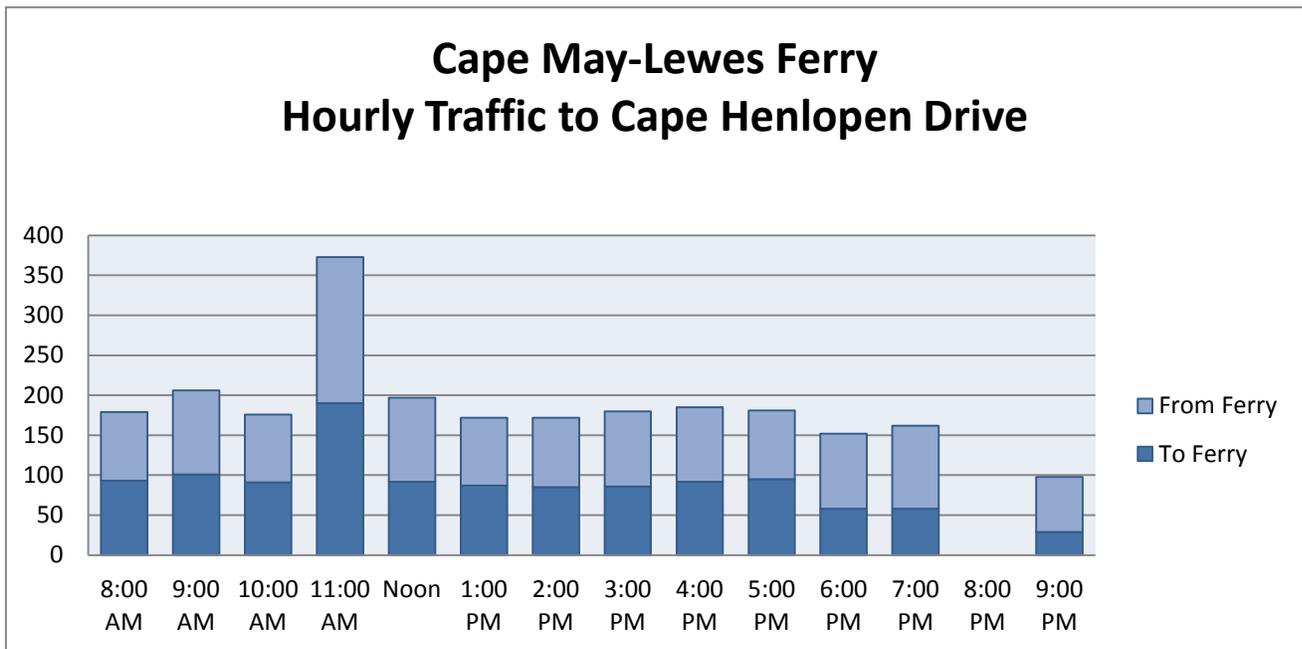


FIGURE 5: HOURLY TRAFFIC PATTERNS OF THE CAPE MAY-LEWES FERRY FOR AUGUST 17, 2013

While the schedule varies due to both conditions on the Bay and demand, the data can be analyzed to understand the impact of traffic on Cape Henlopen Drive and on the Freeman Highway. Figure 5 illustrates the traffic entering the ferry parking lot and the traffic leaving it. As can be seen, the schedule keeps it fairly level throughout the day by spacing one arriving and one departing trip per hour except for the 11:00 AM hour where the schedule overlaps with two arriving and departing trips in the same hour.

DART First State operates Bus Route 206 between Georgetown, the Rehoboth Park and Ride Facility and Lewes. Additionally, the Delaware River and Bay Authority operates two shuttle routes, the first between the Ferry Terminal on Cape Henlopen Drive and the second between the Ferry Terminal and the Outlet Shopping Centers on State Route 1. Figure 6 illustrates the routes of the transit services.

THE TRAIL NETWORK

An extensive trail network is emerging in the Lewes Area. Figure 7 illustrates the trail network that parallels or intersects the Byway. The existing trails are shown in red on the map and the proposed trail extensions are shown in blue. There are three major trails that serve the Lewes area. Two of the trails connect Lewes and Rehoboth Beach. The Gordon's Pond Trail traverses through Cape Henlopen State Park towards Lewes. The Junction and Breakwater Trail also connects Rehoboth Beach and Lewes but travels along a route that parallels State Route 1. Both trails will connect to a proposed trail head at the new library proposed to be located at Monroe Avenue near Freeman Highway. Plans are underway to construct a rail with trail along the existing state-owned

Georgetown Running Track. As sections of trails are completed, the number of bicyclists and pedestrians continue to increase.



FIGURE 2: PUBLIC TRANSPORTATION MAP



FIGURE 7: OFF ROAD TRAILS MAP