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## Introduction

The Circulation Element provides an inventory of the existing and proposed transportation network and includes recommendations to address compatibility with future land uses. The primary emphasis of the Circulation Element will be the Township's roads and other modes of transportation. It should be noted that the major trouble spots in the Township with regard to overcapacity conditions and high accident rates are in fact under the jurisdiction of either the State NJDOT or Ocean County.

Stafford Township is approaching its build out population and as it does, the local traffic volumes will begin to level off. However, one of the major points of concern for the Township is the "through" traffic or the traffic from the surrounding communities entering Town to utilize its services and patronize its retail establishments. As the Township completes the development of its highway commercial retail areas along Route 72, as the Southern Ocean County Hospital expands and as the only access to/from Long Beach Island remain at the east end of Town, the "through" traffic is going to continue to increase.

Stafford Township has been extremely proactive with the NJDOT and Ocean County in identifying primary roadways and intersections which are vital to not only serve the local traffic but also keep the through traffic moving. Creation of the Route 72 Access Management Plan and participation in the Route 9 Corridor Coalition prove this initiative to stay ahead of the traffic demands of the Town. Continued planning will ensure that the completion of the development of the commercial areas of the Town as well as the redevelopment of the older areas of the Town will be accommodated with regard to vehicular and pedestrian movement.

## Roadway Characteristics and Functional Classification

### FUNCTIONAL CLASSIFICATIONS

Functional classification is the systematic organization of highways and roadways into separate classes or groups, based upon their intended service function. For a Township such as Stafford Township, there are four (4) major classes of street systems: principal arterial, minor arterial, collector, and local access. The four major classes of street systems are consistent with the Federal Functional Classification of highways which is based upon procedural guidelines established by the US Department of Transportation and the NJ Department of Transportation. Ocean County also utilizes these functional classification guidelines.

The roadway functional classifications are shown in Table 1.

<b>Principal Arterials (freeway/expressway)</b>	Principal arterials form an interconnected network of continuous routes serving corridor movements having the highest traffic volumes and the longest trip lengths. The principal arterial system is broken into two sub systems; interstate system and other principal arterials. The interstate system consists of the presently designated interstate routes. The other principal arterial highways may be freeways, expressways or land service highways (where abutting property owners do have a right of reasonable access to the system.
<b>Minor Arterial</b>	Minor arterials are the links between principal arterials and the collector roads. Minor arterials are very similar to principal arterials, but handle shorter length trips and lesser traffic volumes. The jurisdiction of minor arterials is typically part of the County road system; however state and municipal roads may also be minor arterials.
<b>Collector</b>	Collector roads “collect” traffic from local streets and may provide direct access to a major development. Typically, collector roads are under Municipal or County jurisdiction.
<b>Local Access</b>	Any street which does not meet any of the above classifications is a local access roadway. Such streets provide land access for circulation and easement for public utilities.

### **Principal Arterials**

Principal arterial highways form an inter-connected network of continuous routes serving corridor movements having the highest traffic volumes and the longest trip lengths. Principal arterials are inter-regional roadways that convey traffic between centers, and are usually excluded from residential areas. Some principal arterials are actually freeways/expressways which provide limited access to/from the roadway and no direct access to abutting properties. There are two principal arterial roadways running through the Township; the Garden State Parkway and NJ Route 72.

The Garden State Parkway is a freeway/expressway with a north/south orientation which extends from Bergen County in northern New Jersey to Cape May County in southern New Jersey. The Garden State Parkway provides direct access to a number of New Jersey municipalities, including many shore communities throughout the central corridor of the state. The Garden State Parkway provides a full movement interchange with NJ Route 72 at Interchange 63. There are approximately 5 miles of the Garden State Parkway within the Township.

NJ Route 72 is a principal arterial roadway with an east/west orientation which extends from Cherry Hill/Camden in the west to Long Beach Island in the east. NJ Route 72 does provide access to the abutting properties which is strictly regulated by the NJDOT and the NJ Route 72 Highway Access Management Plan. There are approximately 10 miles of NJ Route 72 within the Township.

### **Minor Arterials**

Minor arterial roadways distribute traffic between lower-order residential streets, arterials and expressways. They are designed to promote free traffic flow; therefore, parking should be prohibited and direct access to homes from minor arterials should be avoided.

US Route 9 is the only minor arterial within the Township. US Route 9 provides a north/south orientation which extends from Middlesex County in the north to Cape May

County in the south. There are approximately 5 miles of US Route 9 within the Township.

### **Collector Roads**

Collector roadways carry traffic of adjoining residential streets; they are not intended to interconnect adjoining neighborhoods or subdivisions and should not carry regional through-traffic. Travel speeds and traffic volumes are less than arterial roads but are still higher than local roads.

The collector roads in the Township primarily consist of the roadways which are under the jurisdiction of Ocean County. The one exception being McKinley Avenue. The following is a listing of the collector roads within the Township:

- Bay Avenue
- Ocean County Route 539
- Hilliard Boulevard
- Cedar Run Dock Road
- Nautilus Drive
- Lighthouse Drive
- McKinley Avenue
- Cedar Bridge Road
- Mill Creek Road

### **Local Access Roads**

Local roads constitute all roads not included in the higher classifications. Local roadways carry traffic having a destination or origin on the street itself. They carry the least amount of traffic at lowest speed.

All other roads within the Township are classified as local roads.

## **ROADWAY JURISDICTION**

The roadways within the Township are separated into three different jurisdictions; State (NJDOT & NJ Turnpike Authority/Garden State Parkway), Ocean County and Local.

There are approximately 20 miles of roadways under State jurisdiction within the Township. The NJDOT has jurisdiction over NJ Route 72 (10 miles) and US Route 9 (5 miles). The NJ Turnpike Authority/Garden State Parkway has jurisdiction over the Garden State Parkway (5 miles).

There are approximately 20 miles of roadways under Ocean County jurisdiction within the Township. The following is a listing of those roadways:

- Tuckerton-Warren Grove-Whiting Road
- Recovery Road
- Hay Road
- Mill Creek Road
- Mayetta Landing Road
- Stafford Avenue
- Cedar Bridge Road & Hilliard Boulevard
- Jennings Road
- Sim Place Road
- Cedar Run Dock Road
- Bay Avenue
- Warren Grove Road
- Lighthouse Drive
- Nautilus Drive

All other roadways within the Township are under Township jurisdiction. The Township owned roadways comprise approximately 100 miles. (Figure contained in Appendix)

## **New Jersey Department of Transportation – Access Code**

The NJDOT provides the regulation and design manual of access to/from the state highway system. The Township has two roadways for which access is regulated by the NJDOT: NJ Route 72 and US Route 9. The access code establishes uniform standards that are applicable to all state highways and provide for the consistent application of these standards. It enables all levels of government as well as developers and lot owners to readily determine how access will be managed on any given state highway and/or lot. The access code controls the number and location of driveways, street intersections, traffic signals and interchanges to the state highway in order to maximize traffic flow and capacity as well as safety.

### **NJ ROUTE 72 ACCESS MANAGEMENT PLAN**

In 1995, the Township requested that the NJDOT undertake the evaluation of Route 72 and preparation of an Access Management Plan (AMP). The development of the plan required the formation of a joint partnership made of local, state and county officials as well as environmental and planning agencies. The plan identified existing traffic and accident conditions, developed a model for future conditions and made recommendations for improvements and property access necessary to accommodate future traffic conditions. The plan was approved in 1997 by the Township and has been incorporated into the NJ Access Code for application to the portion of NJ Route 72 within the Township.

The AMP has since been amended in order to accommodate intersection improvement design changes and modifications to size/nature of future developments. Specifically, in 2001 the AMP was modified to include a design change to the Route 72/East Road intersection. In 2004, the AMP was modified to include another design change associated with the Route 72/East Road intersection improvement as well as to include a change to the access road locations for a senior residential development at the west end of Route 72. The NJDOT is currently implementing modifications to include another design change associated with the Route 72/East Road project, identification of a new

traffic signal location and the modification of a shared driveway scenario for several properties.

The NJ Route 72 AMP identified 15 roadway/intersection improvements which are in various stages of design, construction or have been completed. The following is a list of the improvements and their status:

**NJ Route 72 AMP Recommended Improvements – ALREADY COMPLETED**

- Completion of the Garden State Parkway Interchange
- Additional lane westbound between Route 9 and Garden State Parkway
- Right turn lane westbound into Nautilus Drive
- Far side jughandle for Route 72 eastbound traffic destined to Mill Creek Road northbound
- Widening McKinley Avenue to 4 lanes (2 per direction)
- Construct a roadway between Route 72 and McKinley Avenue (Captain Randolph Boulevard)

**NJ Route 72 AMP Recommended Improvements – CURRENTLY UNDERWAY**

- Route 72/East Road intersection reconstruction
- Widen Captain Randolph Boulevard to provide separate right turn and left turn lanes at McKinley Avenue
- Install traffic signal at Barnacle Drive
- Install traffic signal at Breakers Drive
- Install traffic signal at Neptune Drive

**NJ Route 72 AMP Recommended Improvements – FUTURE**

- Provide westbound right turn lane into Lighthouse Drive (environmentally constrained)
- Widen Route 72 to four lanes between Garden State Parkway and County Route 539
- Widen Route 72 to six lanes through Route 9 Interchange



As can be seen, the NJ Route 72 AMP provided a good basis for the traffic and roadway improvements along the Route 72 corridor. The majority of the recommendations have been implemented and the Township is working toward moving the remaining few forward with the NJDOT.

## **Route 9 Corridor Coalition**

The Route 9 Corridor Coalition was formed by NJDOT in order to develop a more holistic and sustainable transportation solutions in support of the State's Smart Growth agenda. Through the process of coordination, planning and public outreach, the communities of Southern Ocean County (including Stafford Township) together with the NJDOT and other regional and state agencies have developed a corridor wide Master Plan for Route 9. This Master plan is embodied in the following six guiding principles that set the transportation and land use goals of the corridor:

1. Balance regional mobility and local access needs
2. Focus on improving capacity where it counts
3. Reconnect and enhance the transportation network
4. Strengthen community character
5. Provide alternatives to the car
6. Match growth with infrastructure limitations

The Township is committed to work with the Corridor Coalition in an effort to reshape the Route 9 corridor through Town. Of particular concern is the preservation of the character, density and mix of land uses along the section of Route 9 south of McKinley Avenue; the creation of a "downtown" and a "sense of place" along Route 9 between Bay Avenue and Cedar Bridge Road/Hilliard Boulevard; and the minimization of development along the section of Route 9 north of Cedar Bridge/Hilliard Boulevard.

## **DESIRABLE TYPICAL SECTIONS AND ACCESS LEVELS**

The Access Code regulations directly affect existing and proposed access points to US Route 9 and NJ Route 72 (via the NJ Route 72 Access Management Plan which is adopted into the Access Code). The access code stipulates the type of access that can be provided to all highways under the jurisdiction of the NJDOT. The Access Levels (AL) describe whether direct access is permitted or whether left turn access must be gained via turn lanes or jughandles. The access code also details the long range configurations, Desirable Typical Section (DTS) for each section of state highway under State jurisdiction. The DTS indicates the recommended cross section or number of lanes and right-of-way width.

A review of the existing Access Levels and Desirable Typical Sections along both US Route 9 and NJ Route 72 has identified the need to make certain modifications in order to more properly align with the improvements recommended in the NJ Route 72 Access Management plan and the principles and goals of the Route 9 Corridor Coalition.

The following tables indicate the existing and proposed highway sections, access levels and desirable typical sections for US Route 9 and NJ Route 72. It remains for these modifications to be reviewed, approved and formally adopted into the NJ Access Code by the NJDOT.

**US Route 9  
Milepost, Access Level and Desirable Typical Section  
North to South**

**Existing**

**Milepost**

**73.30 Barnegat/Stafford border**

AL 3 Right turn access with provision for left turn access via jughandle  
DTS 4A 114 feet wide - 4 lanes divided with shoulders or parking

**71.08 Oxycocus Road**

AL 3 Right turn access with provision for left turn access via jughandle  
DTS 4A 114 feet wide - 4 lanes divided with shoulders or parking

**70.50 Centerline of Route 72**

AL 3 Right turn access with provision for left turn access via jughandle  
DTS 4B 90 feet wide - 4 lanes divided without shoulders

**70.20 South end of Route 72 Interchange**

AL 4 Driveway with provision for left turn access via left turn lane  
DTS 4F 116 feet wide - 4 lanes undivided w/ shoulders or parking, w/ 14 foot wide two-way left turn lane

**69.34 Cedar Creek (between Mayetta Landing Road and Cedar Run Dock Road)**

AL 4 Driveway with provision for left turn access via left turn lane  
DTS 4F 116 feet wide - 4 lanes undivided w/ shoulders or parking, w/ 14 foot wide two-way left turn lane

**68.42 Eagleswood/Stafford border**

**US Route 9**  
**Milepost, Access Level and Desirable Typical Section**  
**North to South**  
**Proposed**

**Milepost**

**73.30 Barnegat/Stafford border**

AL	4	Driveway with provision for left turn access via left turn lane
DTS	4F	116 feet wide – 4 lanes undivided with shoulders or parking, with 14 foot wide two-way left turn lane

**71.08 Oxycocus Road**

AL	4	Driveway with provision for left turn access via left turn lane
DTS	4F	116 feet wide – 4 lanes undivided with shoulders or parking, with 14 foot wide two-way left turn lane

**70.76 Beach Avenue**

AL	4	Driveway with provision for left turn access via left turn lane
DTS	4F	116 feet wide - 4 lanes undivided w/ shoulders or parking, w/ 14 foot wide two-way left turn lane

**70.50 Centerline of Route 72**

AL	3	Right turn access with provision for left turn access via jughandle
DTS	4B	90 feet wide - 4 lanes divided without shoulders

**70.20 South end of Route 72 Interchange**

AL	4	Driveway with provision for left turn access via left turn lane
DTS	4F	116 feet wide - 4 lanes undivided w/ shoulders or parking, w/ 14 foot wide two-way left turn lane

**69.34 Cedar Creek (between Mayetta Landing Road and Cedar Run Dock Road)**

AL	4	Driveway with provision for left turn access via left turn lane
DTS	4F	116 feet wide – 4 lanes undivided with shoulders or parking, with 14 foot wide two-way left turn lane

**68.42 Eagleswood/Stafford border**

*Note: Shading indicates a proposed modification*

**NJ Route 72  
Milepost, Access Level and Desirable Typical Section  
West to East**

**Existing**

**Milepost**

**18.06 Barnegat/Stafford border**

AL 3 Right turn access with provision for left turn access via jughandle  
DTS 4A 114 feet wide - 4 lanes divided with shoulders or parking

**21.00 SOCH**

AL 3 Right turn access with provision for left turn access via jughandle  
DTS 6A 148 feet wide - 6 lanes divided with shoulders or parking

**24.10 Between Jennings Road and Mill Creek Road**

AL 3 Right turn access with provision for left turn access via jughandle  
DTS 4A 114 feet wide - 4 lanes divided with shoulders or parking

**26.32 Causeway Bridge**

AL 2 Access along street or interchange only  
DTS 4A 114 feet wide - 4 lanes divided with shoulders or parking

**27.18 West end of Bonnet Island**

AL 2 Access along street or interchange only  
DTS 5A 131 feet wide - 5 lanes (2 lanes one direction + 3 lanes opposite direction)  
divided with shoulders

**27.40 Bonnet Island**

AL 2 Access along street or interchange only  
DTS 6A 148 feet wide - 6 lanes divided with shoulders or parking

**27.55 Bonnet Island**

AL 2 Access along street or interchange only  
DTS 4A 114 feet wide - 4 lanes divided with shoulders or parking

**28.18 Stafford/Ship Bottom border**

**NJ Route 72  
Milepost, Access Level and Desirable Typical Section  
West to East**

**Proposed**

**Milepost**

**18.06 Barnegat/Stafford border**

AL	4	Driveway with provision for left turn access via left turn lane
DTS	4A	114 feet wide - 4 lanes divided with shoulders or parking

**21.00 SOCH**

AL	4	Driveway with provision for left turn access via left turn lane
DTS	6A	148 feet wide - 6 lanes divided with shoulders or parking

**21.60 Garden State Parkway**

AL	3	Right turn access with provision for left turn access via jughandle
DTS	6A	148 feet wide - 6 lanes divided with shoulders or parking

**24.10 Between Jennings Road and Mill Creek Road**

AL	3	Right turn access with provision for left turn access via jughandle
DTS	6A	148 feet wide - 6 lanes divided with shoulders or parking

**26.32 Causeway Bridge**

AL	2	Access along street or interchange only
DTS	6A	148 feet wide - 6 lanes divided with shoulders or parking

**27.18 West end of Bonnet Island**

AL	2	Access along street or interchange only
DTS	6A	148 feet wide - 6 lanes divided with shoulders or parking

**27.40 Bonnet Island**

AL	2	Access along street or interchange only
DTS	6A	148 feet wide - 6 lanes divided with shoulders or parking

**27.55 Bonnet Island**

AL	2	Access along street or interchange only
DTS	6A	148 feet wide - 6 lanes divided with shoulders or parking

**28.18 Stafford/Ship Bottom border**

*Note: Shading indicates a proposed modification*

## **State Improvement Projects**

The NJDOT and the NJ Turnpike Authority (Garden State Parkway) have several projects underway within the Township. The NJDOT has four projects currently underway, all of which are along Route 72.

### **NJDOT PROJECTS**

#### **Route 72 / East Road Intersection**

This intersection is located just east of the Garden State Parkway and is the primary intersection for access to several shopping centers, Township schools, Township parks/play fields and a newly constructed church/school. This project will include roadway widening, construction of a farside jughandle, installation of two new traffic signals and construction of segments of roads which connect the project to the Township's roadway infrastructure. This project was identified within the Route 72 Access Management Plan.

The NJDOT has fully funded this project which has entered ROW acquisition and Final Design Phases. It is anticipated that the construction of this improvement will be completed by 2009. (Figure contained in Appendix)

#### **Route 72 / Mill Creek Road – Traffic Signal Improvement**

This intersection is located approximately 1.5 miles east of Route 9 and is a primary access road for the Beach Haven West residential community as well as an important connection to/from the commercial areas along Bay Avenue. This project will include a traffic signal redesign in order to accommodate Mill Creek Road roadway widening and lane additions being constructed by the County and Township. The traffic signal redesign will include all new equipment including video vehicle detection systems and pedestrian amenities. This project is an expansion of the improvement which was completed as part of the Route 72 Access Management Plan.

The NJDOT has plans to construct this traffic signal redesign through the NJDOT Maintenance Division and the project is anticipated to begin in the Fall of 2007. (Figure contained in Appendix)

### **Route 72 / Breakers Drive – Traffic Signal Installation**

This intersection is located approximately 1.5 miles west of the Garden State Parkway is a primary access road for the Ocean Acres residential community located to the north of Route 72. This project will include the installation of a traffic signal with the latest vehicle video detection systems and pedestrian amenities. This project was identified within the Route 72 Access Management Plan.

The NJDOT has committed to the Township that the design and installation of the traffic signal will be complete by June of 2008. This commitment is demonstrated in a letter from David J. Martin, Supervising Engineer of the NJDOT Traffic Engineering and Investigation Department dated August 28, 2006. (this letter is contained in the Appendix)

### **Route 72 / Marsha Drive**

This intersection is located just west of the Causeway Bridge between Stafford Township and Long Beach Island and is the last signalized intersection in the Township before the bridge. The project is to include roadway widening and intersection improvements necessary to facilitate the Causeway Bridge widening project.

The NJDOT is in Preliminary Design Phase with the construction of the improvement anticipated in approximately 5 years. (Figure contained in Appendix)

### **Route 9 / Route 72 / Bay Avenue**

This intersection is located at the heart of the Township and can be considered the Gateway to the downtown area along Route 9. This intersection has long been identified by the Township as an intersection in need of improvement and has recently been identified by the Route 9 Corridor Coalition as an intersection in need of improvement as



well. To date, concept plans have been developed which range from considering the installation of a two traffic signal system; turn restrictions at certain intersections; or a roundabout.

The Township is currently working with the NJDOT, Route 9 Corridor Coalition and Ocean County to develop a concept plan that takes into account the traffic needs, maintains the downtown character and provides pedestrian elements. (Figure contained in Appendix)

### **Route 9 / Beachview Avenue**

This intersection is located at the northern end of the Township along Route 9 and is a primary access road for the residential neighborhood located to the west of Route 9. A request has been made to the NJDOT to install a traffic signal at the intersection in order to improve the safety for vehicles turning into and out of Beachview Avenue. The NJDOT has reviewed the request and has indicated that the traffic volumes in at this intersection and in this area of Route 9 do not warrant a traffic signal at this time. The Township intends to continue to monitor the development and resulting traffic conditions in this area in order to resubmit to NJDOT in the future.

### **Route 9 / Oxycocus Road**

This intersection is located mid-way between Bay Avenue and Cedar Bridge Road/Hilliard Boulevard along Route 9 and provides access to a portion of the parking areas and the bus staging area for the Oxycocus Elementary School. An evaluation has been made of the traffic conditions at the intersection and in the surrounding area in order to determine if a traffic signal is warranted at the intersection. Based on a review of the conditions (during both school peak and roadway peak times) it has been determined that a traffic signal is not warranted at this time.

A recommendation has been made to the school to modify the front parking area and driveway access along Route 9 in order to provide additional parking and more efficient access to/from the front of the school. The implementation of these recommendations

will allow a crossing guard to assist and control the school intersection during the peak school period. Additionally, the school board is in the process of relocating the school bus parking area which is currently located off of Oxycocus Road to the McKinley Avenue school campus. The elimination of the school bus activity from this intersection will improve the situation during the school peak periods. The Township intends to continue to monitor the traffic conditions in this area.

### **Route 9 / Cedar Bridge Road North**

This intersection is located mid way between Route 72 and the north end of Town along Route 9 and provides access to the Southern Regional High School (SRHS) and Ocean County College campus buildings along Cedar Bridge Road. Additionally, the Township has recently connected Ridge Avenue which provides cross access for the residential neighborhood to the west of Route 9. It is intended to install a traffic signal at the intersection as well as a Route 9 northbound left turn lane in an attempt to redistribute the traffic (primarily school traffic and school buses from Southern Regional) more evenly across the two Cedar Bridge Road intersections. The NJDOT is willing to improve the Cedar Bridge North intersection as long as the traffic signal at Southern Regional High School is eliminated (in order to meet the traffic signal spacing requirements). Elimination of the traffic signal at SRHS will require the construction of connector roads within the school campus to provide improved connections to Cedar Bridge Road.

Ocean County is working with the Township, school board and the NJDOT in an attempt to facilitate this improvement. A timeframe for completion is unknown at this time. (Figure contained in Appendix)

## **NJ TURNPIKE AUTHORITY (GARDEN STATE PARKWAY)**

The NJ Turnpike Authority (Garden State Parkway) has two projects which will directly affect the way traffic moves through the Township.

### **Widening between Interchange 80 and Interchange 30**

This project consists of widening the Garden State Parkway to provide three (3) lanes in each direction between Interchange 80 and Interchange 30. This project may be broken into phases; however, it is anticipated that the widening between Interchange 80 and Interchange 63 (Route 72 in Stafford Township) will be included in the first phase. This widening is planned to occur in the median of the Parkway so there is minimal impact to the properties, Townships and Interchanges.

This project is currently being evaluated and the timeframe for completion is unknown.

### **Interchange 67 Improvements (Barnegat Township)**

This project consists of completing Interchange 67 in order to provide full movement access to/from Bay Avenue in the Township of Barnegat (currently Interchange 67 only provides access to/from the north). The project will include the construction of new ramps, installation of traffic signals, widening of existing roadways and bridge overpasses and the construction/extension of connector roads. It is anticipated that this project will reduce the traffic at Interchange 63 (NJ Route 72) by allowing the southbound Garden State Parkway movements to occur at Interchange 67. This will reduce or eliminate the cut through traffic between NJ Route 72 and Barnegat currently experienced along Lighthouse Drive and Nautilus Drive.

This project is currently being designed and is anticipated to be under construction in 2008.

## **Local Improvement Projects**

The Township has identified several projects which will improve the accessibility and safety along the Township roads.

### **McKinley Avenue Improvement**

This project consists of widening McKinley Avenue along its north side in order to provide a center left turn lane as well as installation of two (2) traffic signals at the intersections with the two connector roads (Captain Randolph Boulevard and General Grier Boulevard). McKinley Avenue operates as a local access road to serve the retail, school, park and residential developments to the south of Route 72. The traffic volume projections for this roadway indicate the need in the future to provide the center left turn lane for traffic turning off of McKinley Avenue and the traffic signals to allow safe exiting from the cross streets.

This improvement has been designed and is being reviewed by NJDEP. It is anticipated to be constructed in 2008. (Figure contained in Appendix)

### **Bishop Lane Extension**

Bishop Lane currently exists from McKinley Avenue (just east of Martin Truex Jr. Boulevard) to beyond the St Mary's church property. This project consists of extending Bishop Lane to form an intersection with Crystal Oak Lane (ultimately Oak Avenue). The road extension will allow the residents of the Oak Avenue neighborhoods to access McKinley Avenue while allowing Doc Cramer Boulevard to be utilized primarily for park/ball field traffic.

This improvement has been designed and the CAFRA permit has been issued. (Figure contained in Appendix)

### **Gaff Road Extension**

Gaff Road is located at the southwest end of the Ocean Acres residential development just north of Route 72 and is generally accessed via Neptune Drive. It is envisioned that the extension of Gaff Road will be necessary in the future to allow the residents of Atlantic Hills senior development to access a traffic signal at Route 72 and Neptune Drive. An evaluation has been conducted which indicates that a traffic signal would not be warranted at the intersection of Route 72 with Atlantic Hills Boulevard. Further, the Route 72 Access Management Plan does not indicate that Atlantic Hills Boulevard is an appropriate location to signalize based on NJDOT traffic signal spacing criteria. It has therefore been identified that the safest solution would be to restrict the turning movements at the intersection of Route 72 at Atlantic Hills Boulevard to right turns in/right turns out and allow the left turn movements to occur at the adjacent (future signalized intersection) of Neptune Drive. From Neptune Drive, residents of Atlantic Hills would utilize the extension of Gaff Road to access their community.

This project is currently being evaluated and the timeframe for completion is unknown. (Figure contained in Appendix)

### **Newell Street Extension**

The extension of Newell Street (aka Green Street) has been included in the Township Master Plan for the past several decades. The idea behind the improvement is to allow alternative access to the Colony Lakes/Village Harbor/Beach Haven West residential areas (south of Route 72 and west of Route 9). Currently, this residential area is only provided access via Route 72 and during the summer months (when traffic to/from Long Beach Island is heavy) the access to this residential area is strained. The extension of Newell Street would provide an alternative access to this area from the intersection of Route 9 with McKinley Avenue. This would provide residents with another alternative to utilizing Route 72.

There exists significant environmental constraints associated with the roadway extension and the possibility of permitting the roadway extension is unknown. (Figure contained in Appendix)

## **Developer Driven Improvement Projects**

As development occurs within the Township, the need arises for roadway/intersection improvements to support the traffic demands of specific land uses. These developer driven improvement projects are designed and constructed 100% by the developer in order to mitigate the traffic impacts associated with a certain project. The following is a listing of the developer driven projects currently considered.

### **Garden State Parkway (Interchange 63) / Stafford Park Boulevard / Route 72**

This improvement is being constructed as part of the Stafford Park project which is located along the south side of Route 72 just west of the Garden State Parkway. The improvement consists of lengthening of the GSP ramp system, installation of a traffic signal at the base of the ramps, redesign of the traffic signal at Route 72 and reconstruction of Recovery Road (now Stafford Park Boulevard) in order to effectively set up the traffic signals and ramp system.

The design plans for this improvement have been submitted to the NJDOT for their review and approval. It is anticipated that the improvements will be constructed within the year 2008. (Figure contained in Appendix)

### **Martin Truex Jr Boulevard/McKinley Avenue/Doc Cramer Boulevard**

This improvement is being constructed as part of the SP72 retail development located between Doc Cramer Boulevard and Martin Truex Jr Boulevard and is designed to connect with and complement the NJDOT Improvement at Route 72 and East Road. The improvement will generally consist of the construction of connector roads, the installation of several traffic signals and roadway and intersection widening to provide turn lanes.

This improvement is currently under construction. (Figure contained in Appendix)

### **Route 72 Improvements at Barnacle Drive**

This improvement is being constructed as part of the Southern Ocean County Hospital – Health Village project which is located along the south side of Route 72 just to the west of Barnacle Drive. The improvement consists of widening along Route 72 to provide turn lanes at Barnacle Drive and at Mermaid Drive as well as the installation of a traffic signal at the intersection of Barnacle Drive with Route 72.

The design plans for this improvement have been submitted to the NJDOT for their review and approval. It is anticipated that the improvements will be constructed by 2009. (Figure contained in Appendix)

### **Southern Ocean County Hospital (SOCH) Master Plan**

SOCH is currently updating their Master Plan in order to identify their needs for the future. Included in the SOCH Master Plan are roadway/intersection improvements surrounding the hospital property which are necessary to accommodate the activity and traffic generated. The improvements described above at the intersection of Route 72/Barnacle for the SOCH Health Village will form the base for the future improvements needed to support the hospital.

It is envisioned that the Beacon Avenue will be rerouted at its west end in order to provide a more direct connection to Barnacle Drive directly opposite Forecastle Avenue. This realignment will provide the hospital and other medical uses along Beacon Avenue a more direct access to the medical area. Additionally, it is envisioned that another access to the hospital is necessary to/from Barnacle Drive/Nautilus Drive. It is envisioned that a new driveway would be created to the hospital from Barnacle Drive in order to make use of the existing traffic signal at the intersection of Barnacle Drive and Nautilus Drive. This connection would allow a reduction and cleaning up of the multiple driveways along Nautilus Drive between Barnacle Drive and Route 72. (Figure contained in Appendix)

**Route 72 Improvements at Jennings Drive**

This improvement is being constructed as part of the Shore Community Bank project which is located in the northwest corner of the intersection of Route 72 and Jennings Drive. The improvement consists of modifying the lane usage of the southbound Jennings Drive approach to provide a shared left turn/through lane and a right turn lane, modifying the lane usage of the northbound Jennings Drive approach to provide a left turn lane and a shared left turn/through/right turn lane and modifying the traffic signal phasing and timing. It is anticipated that this improvement will be implemented in 2008.



## Accident Analysis

### TRAFFIC ACCIDENTS

Traffic accident data was obtained from the Stafford Township Police Department for the years 2001 through 2006. The following table indicates the total number of reported accidents and whether there were any associated injuries or fatalities.

Year	Total # of Crashes	# of Injuries	# of Fatalities
2006	1385	132	1
2005	1417	172	2
2004	1212	135	3
2003	1269	173	3
2002	906	139	4
2001	892	125	0

The following list is breakdown of the top 10 intersection locations within the Township by number of accidents within the above 6 year period (2001 through 2006).

#### **Top 10 Accident Locations (2001-2006)**

1. Route 72 and Marsha Drive
2. Route 72 and Mill Creek Road
3. Route 72 and Mermaid Drive
4. Route 9 and Hilliard Boulevard/Cedar Bridge Road
5. Route 72 Eastbound Offramp to Route 9 North
6. Route 72 Eastbound Offramp to Route 9 South
7. Route 72 and Barnacle Drive
8. Route 72 and Hull Drive
9. Neptune Drive and Breakers Drive
10. Route 72 and Jennings Road

Important to note is that 9 of the top ten accident locations are under the jurisdiction of the NJDOT (not the Township). Further, it is intended to improve the conditions at each one of the locations either directly or indirectly through the improvements already planned by the NJDOT and/or Township. The following list indicates the improvement which relates to each of the intersections.

**Related Improvements at Top 10 Accident Locations**

1. Route 72 and Marsha Drive – intersection improvement associated with Causeway Bridge project
2. Route 72 and Mill Creek Road – intersection improvement by NJDOT/County/Twp
3. Route 72 and Mermaid Drive – traffic signal installed May 2007
4. Route 9 and Hilliard Boulevard/Cedar Bridge Road – traffic demand lessened by future installation of traffic signal at Route 9 / Cedar Bridge Road North
5. Route 72 Eastbound Offramp to Route 9 North – interchange improvement associated with Route 9 / Bay Avenue intersection (identified by Route 9 Corridor Coalition)
6. Route 72 Eastbound Offramp to Route 9 South - interchange improvement associated with Route 9 / Bay Avenue intersection (identified by Route 9 Corridor Coalition)
7. Route 72 and Barnacle Drive – Southern Ocean County Hospital installing traffic signal
8. Route 72 and Hull Drive – traffic signals at Breakers Drive and Neptune Drive will provide safer alternatives to using Hull Drive
9. Neptune Drive and Breakers Drive – Township is currently evaluating
10. Route 72 and Jennings Road – intersection improvement associated with redevelopment of land use at corner.

## **Transit Opportunities**

### **BUS SERVICE**

#### **New Jersey Transit**

NJ Transit operates one bus route through the Township (559 – Lakewood-Atlantic City). This bus route provides service between Lakewood Terminal and Atlantic City Terminal with local service along Route 9 through the entire length of the Township.

#### **Ocean Ride**

The Ocean Ride transportation system provides 17 bus routes which operate throughout Ocean County. Five of the routes serve destinations within Stafford Township (OC 5A & 5B, OC 6, OC 9, LBI-North and LBI-South). The routes are designed to connect key residential developments areas with popular destinations such as local government facilities, healthcare, shopping, employment, social services and other transit connections. Within Stafford Township direct service is provided to several of the larger shopping centers and public destinations (Town Hall, Library, SOCH, etc.). The bus routes operate on fixed schedules which vary by route and by day.

#### **Stafford Township Dial-A-Ride**

Stafford Township Dial-A-Ride service provides complimentary transportation services for Stafford Township residents and visitors to destinations anywhere within Stafford Township. The service operates Monday through Saturday from 8:30 AM to 5:30 PM with the bus running every 90 minutes.

#### **Interfaith Health & Support Service of Southern Ocean County, Inc.**

Interfaith Health & Support Service of Southern Ocean County provides complimentary services for Southern Ocean County residents in need of non-emergency medical transportation. The service operates Monday through Friday from 9:15 AM to 3:30 PM. Appointments must be made three weeks in advance.

### **Ocean County Handicapped Elderly Transportation**

Ocean County Handicapped Elderly Transportation provides complimentary services for Ocean County residents to any destination in Ocean County. The service operates Monday through Friday from 9:15 AM to 3:30 PM. Appointments must be made three weeks in advance.

### **RAIL SERVICE**

Rail Service is currently not provided within the Township however, NJ Transit is considering an extension of their existing service to more fully support Monmouth, Ocean and Middlesex Counties.

### **Monmouth–Ocean–Middlesex (MOM) Rail Line**

NJ Transit is currently evaluating several options to extend the rail service into Ocean County. All three alternatives extend as far south as Lakehurst/Manchester in the vicinity of Route 37 and Route 70. At this point in time, routing alternatives are being evaluated, an Environmental Impact Statement is being prepared and funding opportunities are being investigated. It is unknown, if and when, this rail line extension would move forward to implementation.

### **Pedestrian Improvements**

The Township has become increasingly diligent regarding requiring pedestrian amenities to support each of the developer projects as well as with the local projects. Going forward the Township should ensure that sidewalks are provided throughout the residential areas, local business areas and areas which may tend to have a pedestrian element. Further, crosswalks must be appropriately marked at each intersection in order to make motorists aware that pedestrians could be present as well as to provide direction to pedestrians as to the appropriate locations for crossing. The sidewalks and crosswalks should be tied together with handicap accessible ramps with detectable warning surfaces.

At intersections controlled by a traffic signal the most current pedestrian amenities and equipment should be provided. Items such as pushbuttons, countdown pedestrian head indications and educational signs should be incorporated into the designs.

School routes should be identified and the intersections and major crossing locations within these routes should be appropriately signed. The designation of school routes will allow the Township to seek assistance for signage and other pedestrian amenities from the State.

## Recommendations

The following sets forth the action items recommended in order to fulfill the goals and objectives of the Circulation Element of the Master Plan:

- Implement roadway and intersection improvements along Route 72 and Route 9 in a manner consistent with improving the connectivity for local trips while minimizing the impact of through traffic.
- Implement strategies identified in the Route 9 Corridor Study to alleviate traffic congestion, reduce accident rates, improve traffic calming, support mixed-use commercial development and increase transit (bus) usage along the corridor.
- Review all future development or redevelopment applications for consistency with the guidelines of the NJ Access Code, the Route 72 Access Management Code, the NJDOT Mobility & Community Form and the principles set forth by the Route 9 Corridor Coalition.
- The majority of the Township's future growth will be located within Regional Growth Centers with the remaining development being redevelopment of existing parcels and businesses. The Township should continue to require a traffic impact study for each application in order to continually monitor and evaluate the appropriateness of the Township road system.
- Improve the pedestrian features and amenities throughout the Township, particularly in areas consisting of local business, residential, parks/schools, Township facilities and downtown corridors such as Route 9 and Bay Avenue.

- Continually evaluate the most frequent accident locations within the Township to ensure that the State and County roadway/intersection improvements focus on the issues. Any location or intersection under Township jurisdiction should be evaluated such that recommendations can be included in the Capital Improvement Program.
- The Township should consider the possibility of implementing other strategies to minimize the impact of its commuter traffic on the roadways within town. Strategies such as ridesharing, vanpooling and increased transit service should be considered.
- Continually evaluate the commercial and truck traffic through the Township. Currently, the commercial traffic utilizes the state and county road system with little to no impact on the local road system. Although it is not envisioned to be a problem, the future evaluation would consider the addition or elimination of certain roadways for use by commercial and truck traffic.
- Coordinate hazard mitigation and evacuation planning with Long Beach Island municipalities. This activity should include consideration of strategic improvements on Route 72 as well as appropriate land use planning along the corridor.