Town of Hilton Head Island
Planning Commission Meeting
Wednesday, January 20, 2016
3:00p.m. Benjamin M. Racusin Council Chambers
AGENDA

As a Courtesy to Others Please Turn Off All Cell Phones and Pagers during the Meeting.

1. **Call to Order**

2. **Pledge of Allegiance to the Flag**

3. **Roll Call**

4. **Freedom of Information Act Compliance**
   Public notification of this meeting has been published, posted, and mailed in compliance with the Freedom of Information Act and the Town of Hilton Head Island requirements.

5. **Approval of Agenda**

6. **Approval of Minutes** Regular Planning Commission Meeting – December 16, 2015

7. **Appearance by Citizens on Items Unrelated to Today's Agenda**

8. **Unfinished Business**
   None

9. **New Business**
   Annual Traffic Report *Presented by: Darrin Shoemaker*

10. **Commission Business**

11. **Chairman's Report**

12. **Committee Report**

13. **Staff Reports**
    Quarterly Report – *Jayme Lopko*

14. **Adjournment**

Please note that a quorum of Town Council may result if four or more of their members attend this meeting.

TOWN OF HILTON HEAD ISLAND
Planning Commission Meeting
Wednesday, December 16, 2015
3:00p.m. – Benjamin M. Racusin Council Chambers

Commissioners Present: Chairman Alex Brown, Vice Chairman Peter Kristian, Jim Gant, Judd Carstens, Bryan Hughes, Caroline McVitty, Lavon Stevens, Barry Taylor and Todd Theodore

Commissioners Absent: None

Town Council Present: Tom Lennox

Town Staff Present: Jayme Lopko, Senior Planner & Planning Commission Coordinator
Brian Hulbert, Staff Attorney
Jennifer Ray, Urban Designer
Jill Foster, Deputy Director of Community Development
Shawn Colin, Deputy Director of Community Development
Steve Riley, Jennifer Lyle, Jeff Buckalew, Darrin Shoemaker

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1. Call to Order

2. Pledge of Allegiance to the Flag

3. Roll Call

4. Freedom of Information Act Compliance
Public notification of this meeting has been published, posted, and mailed in compliance with the Freedom of Information Act and the Town of Hilton Head Island requirements.

5. Approval of Agenda
The Planning Commission **approved** the agenda as submitted by general consent.

Vice Chairman Kristian requested to speak in regard to a recent Town staff change. Mr. Kristian said that Kathleen Carlin, the long standing recording secretary for this body and several others has chosen to retire. Kathleen over the years has served the Town in various committees and commissions of the Town very, very well. Before he was appointed as a Commissioner, he spent ten years on the Board of Zoning Appeals and Kathleen served as the recording secretary for the Board of Zoning Appeals. Mr. Kristian indicated that he found her to be an extremely efficient public servant, with attention to detail and customer service beyond compare and just excellent work ethic. She is going to be sorely missed and our new recording secretary has some serious shoes to fill. We wish her every success but he wanted to state for the record how much Kathleen has meant to him and hopefully the other commissioners on other public bodies she has served at the Town over the years. Chairman Brown thanked Mr. Kristian and the Commission thanks Kathleen for her efforts.

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6. Approval of Minutes

The Planning Commission **approved** the minutes of the December 2, 2015 meeting as presented by general consent.

7. Appearance by Citizens on Items Unrelated to Today's Agenda

None

8. Unfinished Business - None

9. New Business

Public Hearing

PPR-2127-2015 - Application for Public Project Review from the Town of Hilton Head Island for the construction of a new education facility for University of South Carolina Beaufort (USCB) Hospitality Management and Osher Lifelong Learning Institute (OLLI) in the Office Park Road area. The plans include an academic building, an OLLI building, a student café, parking, leisure trail network, and outdoor gathering spaces.

Mr. Shawn Colin made the presentation on behalf of staff. Mr. Colin presented an in-depth review of the application including the location of the proposed project and plan for the project. The staff recommended that the Planning Commission find this application to be compatible with the Town's Comprehensive Plan for location, character and extent based on those Findings of Facts and Conclusions of Law as determined by the LMO Official and enclosed in the Staff Report.

The current site consists of 57,000 sq. ft. of development. This site is located in the Sea Pines Commercial District and per the LMO could be redeveloped to approximately 90,000 sq. ft. This proposed project is 47,000 sq. ft. of development - a reduction of what is currently there.

In 2003, USCB and Technical College of the Lowcountry (TCL) had 523 students attending classes at that location. Projected attendance for the August 2018 USCB opening is 200 students with a potential expansion over time to 395 students.

Mr. Colin reported on the traffic impact comparisons and traffic counts. In addition, he made the following points:

- Sea Pines Circle does not currently meet the LMO's operational goals which are designed to handle the 45th busiest day (which is a weekday in June).
- The Circle to Circle Committee, along with staff and consultant support, are working to develop recommendations to improve operational conditions of Sea Pines Circle.
- The USCB/OLLI project is designed for off-season use, counter-cyclical to the visitor season. The USCB academic calendar is August 20, 2015 – April 25, 2016.

This project is a result of partnerships with:

- Town of Hilton Head Island
- University of South Carolina- Beaufort
- Beaufort County
- Beaufort County School District
- Hilton Head Public Service District 1

The actual Town tax contribution with Tax Increment Financing monies (TIF) is $4.4 million to produce a $24.5 million investment.

Mr. Colin continued the presentation with the following statements that support being compatible with the Comprehensive Plan:

- The proposed project provides more on-island opportunities for higher education and enhances continuing and adult education for Island citizens consistent with the Community Facilities Element.
- The location of the proposed facility will enable a more direct contribution to the Island's largest industry consistent with the Community Facilities and Economic Development Elements.
- The proposed facility will be designed to face Pope Avenue in an effort to control the access point to the property. The intersection of Pope Avenue and Office Park Road will be modified to improve access to the property for vehicle, bicycles, and pedestrians consistent with the Transportation Element.
- Locating the proposed project in the area will eliminate obsolete or run down commercial buildings that have been identified for redevelopment consistent with the Economic Development Element.
- The proposed project is a redevelopment and infill development which is a focus for the Land Use Element.
- The project location contains aging structures making it a prime site for redevelopment as called for in the Land Use Element.
- The project proposes a redevelopment to a less intense use, which will provide a reduction of development potential and decrease potential traffic generation consistent with the Transportation Element.
- The proposed project will bring programs and education opportunities to the Island to meet the needs of the diverse populations and age groups consistent with the Population and Community Facilities Elements.
- The proposed project will provide adult education, higher education, and off-season continuing educational opportunities on-island consistent with the Community Facilities and Economic Development Elements.
- The proposed project will contribute to a workforce that has appropriate education and training to support a sustainable workforce in the largest industry on the Island consistent with the Economic Development Element.
- The proposed facility will attract and retain retirees by providing lifelong learning opportunities through OLLI consistent with the Economic Development Element.
- The proposed project will redevelop an existing site. Redevelopment is a focus for future development on the Island as it reaches build-out consistent with the Land Use and Priority Investment Elements.
- The proposed project will provide a catalyst to encourage redevelopment of other aging structures in the area consistent with the Economic Development, Land Use, and Priority Investment Elements.

Mr. Colin reminded the Commissioners of a previous Planning Commission action in which they recommended that Town Council include USCB in the 2015 Targets for Action; that USCB be included in the Town's 2015 Capital Improvement Program; and then again in the Town's 2016 Capital Improvement Program.

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Mr. Colin concluded the presentation by stating that based on a thorough review of the Comprehensive Plan and the previous action by the Planning Commission, this project is compatible with the Town's Comprehensive Plan for location, character and extent based on those Findings of Facts and Conclusions of Law as determined by the LMO Official.

Dr. Al Panu, Chancellor of USCB, thanked the Planning Commission for the opportunity to discuss this proposed project. Dr. Panu stated that he has such an appreciation of the value of higher education. Higher education is incredibly helpful with enhancing the quality of life, it has an impact on economic development, and develops the workforce as well as attracts investments in the area. Dr. Panu stated how pleased he is for the opportunity to refresh a long standing relationship. There is an opportunity to bring authentic programs here that will resonate in ways unimaginable. It will provide the chance to create flagship programs and programs that are beneficial to all ages. Dr. Panu stated that he is very excited about the opportunities that lie ahead.

Dr. Charles Calvert, Professor of Hospitality Management, introduced several USCB students. Dr. Calvert stated that 62% of interns do their internships on the Island. The opportunities for local students include a duel credit course for high school students. Dr. Calvert expressed his appreciation to partner with Hilton Head Island.

Dr. Calvert stated that the impact of the traffic at the Sea Pines Circle is all day long. Traffic generated by USCB will be opposite of the tourist season. If USCB didn't go at this location, it could be a hotel which would bring in a constant flow of traffic. He believes this project will spur economic development. Students can ride their bikes to school. Our goal is to be a good neighbor.

Chairman Brown reminded everyone that it is the Commissioner's charge to consider if the matter is compatible with Comprehensive Plan. **He then asked for Public Comment.**

Public Comment - See attached.

5:00 p.m.: Chairman Brown closed the public portion of meeting.

Chairman Brown then asked for Commissioner's comments. He stated that a lot of money is being spent and we need to be certain to enhance the service industry for Hilton Head Island and be sustainable. Retaining a workforce that is trained in this area is important. Chairman Brown emphasized that as the Town moves forward with this process; updates do need to be provided to the Commissioners.

All the Commissioners were in support of this project and agreed on these issues:

- The aging, dilapidated buildings and infrastructure in that location will be redeveloped. There will be positive reinvestment on Hilton Head Island.
- Most issues centered on negative impacts of traffic but the benefits outweigh the concerns and it is not fair to place all traffic blame on this project.
- The project will add to quality of life
- The redevelopment and higher education is critical for Hilton Head Island.
- Hospitality program enhances our largest industry on Hilton Head Island.

- USCB will complement that area, provide sustainability, and create a strong and skilled workforce.

Mr. Taylor made a **motion** to **approve** application **PPR-2127-2015** as presented. The application is compatible with the Town's Comprehensive Plan for location, character and extent based on the Findings of Facts and Conclusions of Law contained in the staff's report. Mr. Stevens **seconded** the motion and the motion **passed** with a vote of 9-0-0.

Public Hearing

PPR-2118-2015 - Application for Public Project Review from the Town of Hilton Head Island for improvements at the intersection of Office Park Road, Pope Avenue, and New Orleans Road. These improvements include an expanded, signalized intersection that will widen all three roads.

Mrs. Jayme Lopko made the presentation on behalf of staff. Mrs. Lopko presented an in-depth review of the application including the location of the proposed project and plan for the project. The staff recommended that the Planning Commission find this application to be compatible with the Town's Comprehensive Plan for location, character and extent based on those Findings of Facts and Conclusions of Law as determined by the LMO Official and enclosed in the Staff Report.

The objectives of the project are to improve vehicular traffic and pedestrian conveyance and safety; to minimize costs, environmental impacts, private property impacts, and disruption during construction; and to enhance aesthetics and provide a gateway designation to the new USCB facility. The recommended improvements include an expanded, signalized intersection, which shall include widening New Orleans Road approach from 4 lanes to 5 lanes, widening Office Park Road from 3 lanes to 4 lanes, widening south (beach) bound Pope Avenue from 5 lanes to 6 lanes and retaining the north (mainland) bound Pope Avenue section at its current 6 lane configuration.

After a brief discussion, the Planning Commissioners made the following suggestions:

- Consider using more landscape medians
- Refuges are important – don't over asphalt
- Leisure paths could be wider
- Consider a no turn on red due to so much pedestrian and bike traffic
- Can New Orleans Road have a more sweeping curve over to Pope Avenue?

Mr. Jeff Buckalew stated that New Orleans is a County-owned road but staff will do what they can to flatten the curve. There will be a monument sign for USCB on the corner. Mr. Buckalew stated that they will not make lanes any wider than required for the turning radius and that all suggestions will be taken under consideration.

Mr. Babel stated that he was concerned that this is a car-centric culture vs. bike-friendly culture and asked that staff try to balance this for the safety of pedestrians and bikers.

Mr. Gant made a **motion** to **approve** application **PPR-2118-2015** as presented, as the application is compatible with the Town's Comprehensive Plan for location, character and extent based on the Findings of Facts and Conclusions of Law contained in the staff's report. Mr. Kristian **seconded** the motion and the motion **passed** with a vote of 9-0-0.

10. Chairman's Report - None

11. Committee Report - None

12. Staff Reports

The January 6, 2016 Planning Commission meeting is cancelled due to lack of agenda items. Mrs. Lopko stated that the traffic report will be presented at the January 20, 2016 Planning Commission meeting.

The meeting was adjourned at 6:23 p.m.

Submitted By:	Approved By:
_____	_____
Eileen Wilson Secretary	Alex Brown Chairman

DRAFT

Planning Commission, December 16, 2015
Public Comments for
PPR-2127-2015: USCB Facility

SUPPORT	AGAINST
Andy Twisdale: hospitality offers every person the opportunity to grow; best industry in America for growth; tourism destination best economic development; our front line for dealing with visitors, residents; invest in hospital industry; better employees attract people from across the world; this is our future. Wish I had this opportunity as a young person.	**Gail Quick**: I support the return of USCB. Cannot make a recommendation on location. Concerned about safety and that intersection. I recommend that Planning Commission recommends that an executive summary be attached to this project that spells out the rationale for this project and outlines funding sources. Background how County came to this would be helpful to say where we are on this project now and as it goes through every process.
Hannah Horne, Chamber of Commerce: Overwhelming support this truly transformative economic investment; great opportunity will bring energy; worn down properties will be replaced with a beautiful higher education facility for hospitality students; this will spur growth and create jobs; provide specialized skill sets; young spending professionals who will study, work, shop and play here.	**Dr. Carl Engelman**: This presentation is based on faulty evidence. Traffic problems adversely impact lifestyle and property values of Sea Pines and Coligny taxpayers. Don't make a decision that will damage value of our homes and cherished lifestyle.
Cindy Creamer: Strongly support the multi-use management program; enhances town's future; positive impact in real estate market; will spur reinvestment and adds to quality of life.	**Tom Hennessey**: Traffic volumes and trends are not addressed. This project introduces new traffic to an already over loaded area. Defer approval until addressed and fully comply with comprehensive plan.
Don Kirkman, Economic Development Corporation: This project helps existing and future businesses and employers. This is ideally suited; having this facility and OLLI are very attractive assets to position the island in a very competitive market. The business workforce is # 1 to attract and keep skilled professionals.	**George Paleta**: This building is stuck in a corner. A moratorium is needed. Brick and mortar going away – there are online programs for students. This is a tremendous cost to us; we need sewer systems and affordable housing for teachers.
Othel Plowden: The facility and location is awesome, International destination for all walks of life. Substantial impact for this area.	**Larry Meyers**: Good idea but wrong location. Do not accept or approve until Town staff and Town Manager start enforcing rules that are in effect.
Lynn McGee: Think broadly about the future of the island. Build academic programs through leadership of our faculty. Impact on students. Creativity to take program forward.	**Paul Cruklton**: Fundamental problem is our overburdened infrastructure; most traffic goes through Sea Pines Circle; we cannot continue to build and not look at infrastructure.
Catherine Moorman, a student at USCB. This is a great addition to Hilton Head Island.	**Joe Kernan**: We need better management. Traffic not getting any better and it is affecting quality of life. We need a single authority.

Susan Lee Probst: Education is very important. Hands on learning is better than on-line.	**Kate Keep**: Sea Pines Circle does not meet the Town's traffic level of service. Enforce LMO – Town is not complying with its own law. I urge denial.
Frank Babel: Encourage USCB to be bike friendly.	

Memo

To: Planning Commission

From: Darrin Shoemaker, Traffic and Transportation Engineer (Voice (843)341-4774)
(Cell (843)384-5021)

Via: Teri Lewis, LMO Official

cc: Town Council

Date: 01/13/2016

Re: 2015 Traffic Monitoring & Evaluation Report

Recommendation: It is recommended that the Commission review and consider the subject annual report, elicit comment at a public meeting, and formally endorse the report. It is further recommended that the Planning Commission provide its comments on the report and any supplemental recommendations to Town Council in accordance with Section 16-2-103.J.10.c.ii of the Land Management Ordinance (LMO).

Summary: This report and recommendation are prepared and respectfully submitted to the Commission in accordance with the requirements outlined in Section 16-2-103.J.10 of the Town's Land Management Ordinance (LMO). The report summarizes trends relating to traffic demand within the Town, includes analyses of all of the Town's signalized intersections and Sea Pines Circle relative to the Town's operational goals, and includes mitigation recommendations for those instances where intersections are found to be deficient relative to the goals. The intersections of William Hilton Parkway with Squire Pope Road/Chamberlin Drive and Sea Pines Circle were found to be operating out of compliance with the identified goals.

Background: Section 16-2-103.J.10 of the LMO provides that this report will be prepared and submitted annually by the LMO Official to the Planning Commission for their review, consideration, and discussion at a public meeting. The report is based on traffic counts that are collected annually by the Engineering Division each June on a typical weekday that is intended to approximate the 45th-highest traffic volume day of the calendar year, the Town's benchmark for design purposes. The traffic counts collected annually and summarized herein also become the Town's background (or "existing") dataset for use by staff and consultants in preparing Traffic Impact Analysis Plan studies that are required as a result of development for submission to the Town in accordance with the LMO.

To: Hilton Head Island Planning Commission

From: Darrin A. Shoemaker, Traffic and Transportation Engineer

Via: Teri Lewis, LMO Official

Cc: Town Council
Steve Riley, Town Manager
Charles Cousins, Director of Community Development
Scott Liggett, Director of Public Projects & Facilities/Chief Engineer
Jeff Buckalew, Town Engineer
Shawn Colin, Deputy Director of Community Development

Date: December 17th, 2015

Re: 2015 TRAFFIC MONITORING AND EVALUATION REPORT

PART ONE – EXECUTIVE SUMMARY

Based on three-day 24-hour bi-directional traffic counts, composite volume demands recorded within the Town in June 2015 increased 6.1 percent over those recorded in June 2014, which represented a 3.4% increase over those recorded in June 2013. While based on a relatively small sample of midweek mid-June numbers, this is nonetheless indicative of a ten percent increase in total demand in a two-year period that has focused attention anew on the performance of the Town's transportation infrastructure. South Carolina Department of Transportation and Federal Highway Administration figures indicate regional annual rates of growth in the two to five percent range since 2013. While visitor season traffic demands have not fully rebounded to pre-recession levels, aggregate volume counted in June 2015 represents the third-highest level of demand recorded to date within the Town, with only comparable demand surveys in 2005 and 2006 resulting in higher counts.

Despite this significant increase, operational performance at the Town's traffic signals has generally improved significantly within the past decade, a fact attributable to ongoing efforts to improve the performance of the Town's transportation infrastructure through capital roadway improvement projects, more manageable demands during much of the previous decade, implementation of advances in traffic control capabilities, and ongoing efforts to ensure optimal operation of the Town's signals. It is also notable that as demands increase, peak hour demands tend to spread out and be distributed over a longer period as more motorists attempt to avoid peak demand conditions.

The only intersections found to be non-compliant with the Town's operational goals as outlined in the LMO in June of 2015 were the intersections of William Hilton Parkway / Squire Pope Road / Chamberlin Drive and Sea Pines Circle. The former may be mitigated with widening improvements to William Hilton Parkway to the west of the intersection that may extend as far west as Blue Heron Point Road. Beaufort County is also examining the feasibility of constructing widening improvements to US 278 in this vicinity, so coordination between the Town, County and State in both design and funding identification efforts will be imperative to operationally mitigate this area.

Major upgrades or revisions to the Sea Pines Circle roundabout are being examined by a private consultant under contract with the Town in association with the Town's Circle-to-Circle committee charged with developing recommendations for review by Town Council. Numerous improvements that can be implemented on the approaches to and in the vicinity of Sea Pines Circle are outlined in Part Seven of this report, including motorist guidance, signing, and marking improvements that can be implemented in the short term at relatively low cost.

PART TWO – INTRODUCTION

As required by Section 16-2-103.J.10 of the Town's Land Management Ordinance (LMO), this report will summarize 2015 traffic volume demand on the Town's primary roadway network and recommend improvements to mitigate any operating conditions identified as being non-compliant with the Town's adopted operational goals as outlined in Section 16-5-106.C of the LMO. The minimum requirements of the report are also outlined in Section 16-2-103.J.10 of the LMO, and are outlined as follow: 1) Summary of June 2015 weekday morning and afternoon peak hour turning movement counts for all signalized intersections within the Town 2) Summary of twenty-four hour volume demand on the Town's major arterials 3) Historical trends during the previous five years for twenty-four hour traffic demand on the Town's major arterials 4) Description of existing operating conditions as compared with the adopted traffic goals by utilizing the methodology outlined in the current (2010) edition of the Transportation Research Board's *Highway Capacity Manual*, and how these conditions have changed since the preparation of the 2014 Traffic Monitoring and Evaluation Report, and 5) Recommendations on improvements to mitigate any existing conditions found to be non-compliant with the Town's goals.

The Town's adopted traffic goals may be summarized as requiring a volume-to-capacity ratio of 0.9 or lower <u>and</u> an average total delay-per-vehicle of 55 seconds or less at each signalized intersection during both the morning and afternoon peak hours of an average June weekday. The Town's LMO requires that each signalized intersection be analyzed annually, and that Sea Pines Circle be analyzed in calendar years that are evenly divisible by five. Since this calendar year is evenly divisible by

five, this report will include peak hour traffic volumes broken down by individual turning movements and analyses of the operation of Sea Pines Circle based on these counts. The current roundabout operational goal is identified by the LMO as an average delay not exceeding 150 seconds per vehicle on any individual *approach* to Sea Pines Circle, a figure that approximates the longest duration red traffic signal displayed at any time at any signalized intersection within the Town. It should be noted that this differs from the dual goals for the Town's signalized intersections, which are only applicable to the overall intersection's performance.

This report will examine both morning and afternoon weekday peak hour demand at signalized intersections within the Town in accordance with the definition of "peak hour" offered in Section 16-10-105 of the LMO. The LMO requires that this report be based on data collected on a typical June weekday in order to avoid identifying deficiencies based on atypically high traffic volume days such as major summer holiday weekends or major traffic-generating events such as the RBC Heritage Presented by Boeing golf tournament or Concours D'Elegance. The Town retained a traffic counting consultant to collect the data during the first, second, and third weeks of June, days selected to approximate the 45th highest volume day of the year. The counts summarized in this report were collected only on Tuesdays, Wednesdays, or Thursdays, eliminating Mondays and Fridays and thereby ensuring that the results reflect conditions on a typical June weekday. All of the morning and afternoon peak hour turning movement count data summarized in Appendix A was counted on either Tuesday, June 9th, or Wednesday, June 10th, 2015. The 24-hour count data summarized in Table One of this report on page seven was collected by pneumatic tube mechanical counters on Tuesday, June 9th, Wednesday, June 10th, and Thursday, June 11th, 2015, and represents an average of 24-hour counts tallied on each of these three days. The Town's Engineering Division monitored traffic conditions on these dates to ensure that the data collected accurately reflected the typical June weekday conditions required by the LMO that were not unduly influenced by factors such as adverse weather, vehicle collisions or road construction. As required by the LMO, this report includes historical data for the 24-hour counts that enable the reader to draw conclusions based on five-year volume trends in addition to the spot morning and afternoon peak hour data collected each June. All of the traffic counts collected in June 2015 were judged by staff to be consistent with expectations based on previous counts, and none of the collected data was found to be aberrant or unsuitable for analysis purposes.

The operational goals for all signalized intersections as outlined in Section 16-5-106(C) of the LMO are based on the volume-to-capacity (v/c) ratio and the average total delay experienced by motorists based on operating conditions during the weekday morning and afternoon peak traffic volume hour. The volume-to-capacity ratio is essentially a percentage of the intersection's capacity to discharge traffic that is being demanded by motorized and non-motorized traffic. The denominator in this ratio ("c"),

the signalized intersection's capacity, is dependent to a large extent on the lanes available at the intersection and their width, the manner in which they are assigned to specific movements of traffic ("lane-use"), and the manner in which the signal is operated, or "timed." Other factors affecting capacity are more subtle, such as the physical widths of lanes, the radial dimensions of turning movement paths, and the durations of traffic signal clearance (yellow and all-red) intervals. The numerator in the ratio ("v") is the intersection's hourly vehicular demand adjusted to account for a variety of factors such as variability in flow over the course of the peak hour, heavy vehicle percentage estimates, and pedestrian and bicycle crossing demands.

The Town's operational goals are a v/c ratio that does not exceed 0.9 during these peak hours, or ninety percent of the intersection's theoretical hourly capacity based on the signal's current timing plan, and an average total delay of 55 seconds or less experienced by motorists when passing through the intersection during peak volume hours. The 55-second delay figure is the maximum average delay at the overall intersection that corresponds with Level-of-Service "D," a measure of operational effectiveness frequently cited by professional traffic engineers as a practical operational goal for peak volume, or "rush" hours. Total delay experienced by a motorist at a traffic signal is greater than the actual time that they are completely stopped. When approaching a traffic signal, a motorist must often slow their vehicle in response to stopped traffic ahead. The motorist may or may not have to come to a complete stop at the signal. When traffic begins to flow again, a period of time is required for the motorist to accelerate to normal travel speed and free themselves from the restrictions imposed by surrounding stopped vehicles. Therefore, the average total delay experienced by motorists at a traffic signal is the sum of the time required for a vehicle operator to complete all of these actions and pass through the intersection less the time that would've been required to pass through the area if there was no intersection present to impede flow. Total delay, therefore, may be experienced by motorists that are confronted entirely with green traffic signals if traffic congestion resulting from a previous signal change causes the motorist to slow. Total delay may be experienced by motorists at intersections that do not come to a complete stop. It is notable that at roundabouts and other rotary intersections such as Sea Pines Circle, a certain amount of total delay results from the time required to travel around the circle to the desired departure, regardless of the presence or absence of conflicting traffic.

Capacity can typically be maximized at a signalized intersection by ensuring that the signal changes as infrequently as is practical. Each time a traffic signal changes, one group of motorists must come to a stop while flow must be reestablished on a different group of traffic lanes. There are routinely a couple of seconds where no one at all is moving. Therefore, a signalized intersection's capacity can theoretically be increased by changing traffic signals less frequently, thereby keeping traffic flowing to the extent practicable and reducing signal changes with their associated starts and stops. Traffic signals within the Town change somewhat infrequently (usually every two

to three minutes) during peak volume hours in order to help ensure that capacity is increased and the Town's capacity-based goals are met. Changing signals less frequently, however, means that motorists may be delayed for relatively long periods of time, however, and this can cause the average delay experienced by motorists to increase. The Town's operational goals simultaneously ensure that our traffic signals are operated in a manner that does not artificially increase capacity in a manner that results in inordinately long delays for some motorists, or to artificially reduce delay in a manner that reduces the intersection's capacity to lower than that which is required due to demands. The successful balancing of each of these two competing operational goals tends to ensure a signal operation that serves all motorists equitably without generating inordinate delays or backups. It is worthy to note that the successful timing of high-volume intersections typically requires relatively infrequent signal changes in order to afford the required capacity to move traffic, while lighter-demand intersections that do not experience capacity issues may have signals that change more frequently in order to reduce delays to motorists. It should also be noted that successful signal coordination typically requires that traffic signals within a certain geographic area employ a common signal cycle, the length of time required for the signal to complete a full sequence of indications, in order to maintain desirable coordinated operation and optimal arterial traffic flow.

The current version of the software package that performs the intersection analysis methodology as outlined in the *Highway Capacity Manual* produces average delay per vehicle quantifications but does not calculate intersection volume-to-capacity ratio. The steering committee that develops and periodically updates the *Highway Capacity Manual* no longer endorses the use of intersection v/c ratio as an operational measure of effectiveness. The current version of the manual itself continues to include instructions for calculating this ratio by hand, however, and this was done for all forty-six signalized intersection analyses summarized in Tables Four and Five of this report on pages 11 and 12, respectively.

PART THREE – TURNING MOVEMENT COUNTS AT SIGNALIZED INTERSECTIONS – JUNE 2014 PEAK VOLUME HOURS

Turning movement counts for all signalized intersections during the intersection's morning and afternoon peak volume hours were conducted on Tuesday, June 9th and Wednesday, June 10th, 2015. These forty-six turning movement counts are summarized in diagrammatic form in Appendix A. Each turning movement diagram includes a total peak hour intersection demand and a total peak hour demand for each traffic "movement." At a conventional four-way cross-type intersection, motorists may typically turn left, proceed straight through the intersection, or turn right, generating three possible traffic "movements" from each intersection approach. U-turns are also a fourth possible movement, but are typically infrequent at signalized intersections and

can be combined with left-turn movements for analysis purposes. Pedestrians or bicyclists *crossing* that intersection approach constitute a fourth and fifth movement that are counted separately for analysis purposes, however, and the turning movement counts in Appendix A include crossing volumes for both bicyclists and pedestrians. On each of the diagrams, the percentage change in the June 2015 motor-vehicle turning movement volume relative to the comparable June 2014 figure is rounded to the nearest whole percent, except in instances where the hourly volume demand on the movement did not reach fifty vehicles in either 2015 or 2014. The percentage change in the total intersection volume demand is shown rounded to the nearest tenth of one percent in the center of the diagram, and is also summarized in Table Three on page eight of this report. Where pedestrian or bicycle crossing activity was observed, these demands are shown adjacent to the vehicular volume data for each approach. Therefore, the bicycle and pedestrian volume data reflects total number of crossings, regardless of the direction in which the crossing took place. For purposes of consistency, the off-island (westbound) direction is shown to the right of each diagram and the on-island direction toward Sea Pines Circle is shown to the left on each diagram for intersections on William Hilton Parkway. The diagrams for Palmetto Bay Road, Pope Avenue, and Sea Pines Circle show the off-island direction toward the Charles Fraser toll bridge at the top of the diagram, and the on-island direction toward Coligny Circle at the bottom of the diagram.

The diagrams for Sea Pines Circle on pages A-47 through A-49 include comparable figures for this intersection's previous counts in 2010 and 2005, as well as a ten-year effective rate of change in demand for each movement and the intersection as a whole.

PART FOUR – AVERAGE DAILY DEMAND ON MAJOR TOWN ARTERIALS

Average twenty-four hour traffic demand at strategic locations on major arterials within the Town as counted on Tuesday, June 9th, through Thursday, June 11th, 2015 is shown in Table One on the following page. Comparable figures are shown for each of the ten count locations throughout the Town for each year from 2010 through 2014. The 2010 column is included in order to enable five-year change comparisons as required by the LMO. The *average annual rate of change* during the previous five years for each location is shown in the far right column. When reviewing Table One, it is important to note that the word east or south may also be read as "on-island side of" and the word west may be read as "off-island side of" in each instance. A map showing the exact location of each count location shown in Table One is included as Appendix B to this report.

Table Two on the page eight shows similar data supplied by the South Carolina Department of Transportation (SCDOT) for average daily traffic demand on US 278 on

Jenkins Island near the J. Wilton Graves (Skull Creek) bridge, for the years 2010 through 2014. Being a calendar year average, the 2015 SCDOT figure has not been released at the time of this report. Since these figures purport to be average demand over the course of a calendar year, the Town's June count collection typically results in figures that are roughly ten percent higher than the annual averages released by SCDOT. It is notable that the total traffic volume counted in June 2015 as summarized in Table One was the highest recorded since 2006, but did not surpass that collected in that year or in 2005, the highest total-volume year recorded to date.

TABLE ONE

24-HOUR BI-DIRECTIONAL TRAFFIC DEMAND – JUNE 2010-2015

Map Ref.	Location	2010	2011	2012	2013	2014	2015	5-year %change/yr.
1)	Wm. Hilton Pkwy. at J. Wilton Graves Br.	55,275	52,080	54,343	56,079	58,355	65,445	+3.4
2)	Wm. Hilton Pkwy. west of Cross Is. Pkwy.	53,946	48,519	52,386	46,177	48,042	62,797	+3.1
3)	Wm. Hilton Pkwy. east of Whooping Crane	45,444	43,750	52,994	43,794	44,009	45,554	+0.0
4)	Wm. Hilton Pkwy. east of Coggins Pt. Rd.	32,578	29,920	33,033	31,249	32,264	32,920	+0.2
5)	Wm. Hilton Pkwy. west of Queens Folly Rd	39,699	34,805	36,773	39,182	39,460	41,637	+1.0
6)	Wm. Hilton Pkwy. west of Arrow Road	31,036	27,868	28,418	31,214	29,190	25,496	-3.9
7)	Pope Avenue south of New Orleans Rd.	30,700	30,871	30,252	29,544	33,361	31,999	+0.8
8)	Palmetto Bay Rd. south of Pt. Comfort Rd.	23,678	22,814	23,207	24,941	24,850	22,431	-1.1
9)	Sol Blatt Jr. XIP south of W.Hilton Pkwy.	14,412	14,171	14,712	13,273	15,833	17,194	+3.6
10)	Sol Blatt Jr. Cross-Is. at Toll Plaza	23,446	23,314	23,010	22,489	24,034	25,151	+1.4
	TOTAL OF ALL TEN STATIONS	350,214	328,112	349,128	337,942	349,398	370,624	

Town-Wide Rate of Change – 2014-2015 = +6.1 % *

Town-Wide Rate of Change – 2013-2014 = +3.4% *

Effective Town–Wide *Annual* Rate of Change – 2010-2015 = +1.1 % *

***All three rates based *exclusively* on data in Table One**

Note: A map showing the location of these count locations is included as Appendix B to this report.

TABLE TWO

SCDOT 24-HOUR AVERAGE BI-DIRECTIONAL DEMAND ON HHI BRIDGES
(calendar year average – AADT)

2010 - 49600	**% change 2013 vs. 2012:**	**+3.0%**
2011 - 49900	**% change 2014 vs. 2013:**	**+1.9%**
2012 - 50700	**Avg. annual rate of change 2010 – 2014:**	**+1.8%**
2013 - 52200		
2014 - 53200		

Based exclusively on the 24-hour counts summarized in Table One, overall traffic volume in June of 2015 increased 6.1% over that recorded in June 2014, which represented a 3.4% increase over that recorded in June 2013, representative of a two-year increase of approximately ten percent. A map showing the locations of the 24-hour bi-directional counts summarized in Table One is included as Appendix B.

Appendix C contains a report released by the *Federal Highway Administration* in July 2015 on trends in the amount of motorized vehicle travel nationwide. The report indicates that nationally, vehicle-miles traveled have increased at an annual effective rate of 1.50% in the most recent 25-year period. There has been an average annual increase of 0.38% and 1.00% nationally for the most recent 10-year and 5-year periods, respectively. The report indicates a 4.1% increase in travel demand on highways in SC in June 2015 compared with June 2014, which follows a 3.6% increase reported for June 2014 as compared with June 2013. The South Atlantic region, comprised of all coastal states from Delaware to Florida and including West Virginia, experienced a 4.3% increase in total vehicle-miles traveled in June 2015 compared with June 2014, which follows a 2.0% increase in June 2014 versus June 2013. The 5.0% increase indicated graphically for the southeast region on the first page of the report is the change from July 2014 to July 2015.

Table Three on the following page shows the total combined vehicular, bicycle, and pedestrian morning and peak hour demand on each of the Town's twenty-three signalized intersections in June 2015, and the percentage change from the comparable June 2014 figure. Based exclusively on the data contained in Table Three below, aggregate peak hour traffic volume at signalized intersections in June 2015 increased 1.45 percent over that recorded in June 2014. It is notable that the morning peak hour demand was lower than that recorded in June 2014 at all signalized intersections on the island except for the intersections of William Hilton Parkway with Squire Pope Road/Chamberlin Drive and Spanish Wells/Wild Horse Roads, and the two signals on Palmetto Bay Road. The afternoon peak hour demands were higher than those

recorded in June 2014 at all signals except for those on William Hilton Parkway at the Gum Tree Road and Wilborn Road/Jarvis Park Road intersections.

TABLE THREE

PEAK HOUR SIGNALIZED INTERSECTION VOLUME – June 2014

	AM		PM	
	Vol.	%Chg.'15-'14	Vol.	%Chg.'15-'14
William Hilton Pkwy. / Squire Pope Rd.	4470	+3.8	5208	+1.0
William Hilton Pkwy. / Spanish Wells Rd.	4398	+2.9	5264	+1.1
William Hilton Pkwy. / Gumtree Rd.	3462	-5.2	4291	-1.7
William Hilton Pkwy. / Wilborn Rd.	3175	-13.1	3903	-0.8
William Hilton Pkwy. / Pembroke Dr.	3073	-11.1	3775	+1.6
William Hilton Pkwy. / Whooping Crane Way	3180	-4.8	3986	+1.2
William Hilton Pkwy. / Beach City Rd.	3077	-1.7	3817	+3.6
William Hilton Pkwy. / Mathews Dr. (north)	2764	-6.0	3839	+2.7
William Hilton Pkwy. / Dillon Rd.	2278	-10.5	3257	+6.4
William Hilton Pkwy. / Coggins Point Rd.	2088	-3.5	2902	+6.0
William Hilton Pkwy. / Beachwood Dr.	1743	-6.6	2552	+5.1
William Hilton Pkwy. / Mathews / Folly Field	2569	-0.7	3743	+15.2
William Hilton Pkwy. / Singleton Beach Rd.	2262	-1.7	3358	+8.7
William Hilton Pkwy. / Shelter Cove Lane	2201	-4.4	3401	+7.0
William Hilton Pkwy. / Queens Folly Rd.	2470	-0.6	4082	+13.9
William Hilton Pkwy. / Queens Way	1823	-6.1	3207	+10.5
William Hilton Pkwy. / Shipyard / Wexford	1937	-7.0	3381	+13.4
William Hilton Pkwy. / New Orleans Rd.	1696	-7.8	2994	+12.0
William Hilton Pkwy. / Arrow Rd.	1689	-5.1	2751	+10.2
Pope Ave. / New Orleans / Office Park	1794	-3.4	3106	+13.4
Pope Ave. / Cordillo Pkwy.	1582	-7.5	2776	+9.2
Palmetto Bay Rd. / Target Rd.	2023	+3.6	2769	+6.6
Palmetto Bay Rd. / Arrow / Point Comfort	2164	+1.6	2797	+5.6

PART FIVE – DESCRIPTION OF OPERATING CONDITIONS RELATIVE TO ADOPTED SERVICE GOALS

This analysis of the Town's signalized intersections is based on the traffic volume data collected during the morning and afternoon peak volume hours counted on Tuesday, June 9th, 2015 and Wednesday, June 10th, 2015. The analysis was conducted in accordance with the current 2010 edition of the Transportation Research Board's *Highway Capacity Manual* as required by the LMO. It should be noted that the methodology effectively isolates the peak 15-minute volume period within the peak hour being analyzed, and bases the analysis results on conditions specific to this peak one-quarter hour period.

The LMO requires this report to recommend improvements to address instances where the analyses results identify intersections operating during the weekday morning or afternoon peak hour with an intersection volume-to-capacity ratio exceeding 0.90 (ninety percent of theoretical capacity), or with an overall average delay exceeding 55.0 seconds per motorist. A summary of existing volume-to-capacity ratios and average total delay per vehicle resulting from analyses conducted of morning peak hour conditions in June 2015 is shown in Table Four on page eleven. Table Four also includes comparable results for June 2014, June 2010, and June 2005 for comparison purposes. The same information for the afternoon peak hour is summarized in Table Five on page twelve. Values that are non-compliant with the Town's operational goals are shown in bold. The actual analyses used to develop the results summarized in Tables Four and Five are on file in the Traffic and Transportation Engineer's office and are available for inspection.

TABLE FOUR – MORNING PEAK HOUR
INTERSECTION VOLUME-TO-CAPACITY RATIOS AND AVERAGE TOTAL DELAY PER VEHICLE – JUNE 2015 AND COMPARABLE 2014, 2010 AND 2005 FIGURES

	2015		2014		2010		2005	
	v/c	dpv	v/c	dpv	v/c	dpv	v/c	dpv
WHP w/ Squire Pope Rd/Chamberlin Drive	**0.92**	19.1	0.86	18.3	0.84	53.6	**1.08**	54.7
WHP w/ Spanish Wells Rd./Wild Horse Road	0.71	12.3	0.65	12.4	0.76	16.8	0.72	17.9
WHP w/ Gumtree Road/XIP Ramps	0.80	23.7	0.78	26.4	0.79	42.6	0.83	47.4
WHP w/ Wilborn Road/Jarvis Park Road	0.73	4.2	0.81	13.4	0.81	26.5	0.63	18.2
WHP w/ Pembroke Dr./Museum Street	0.61	11.2	0.65	29.6	0.74	19.1	0.64	15.1
WHP w/ Whooping Crane Way/Indigo Run Dr.	0.64	18.7	0.59	19.7	0.70	32.2	0.73	25.5
WHP w/ Beach City Rd./Gardner Dr.	0.61	19.2	0.57	16.7	0.58	24.1	0.80	22.7
WHP w/ Mathews Drive (north)	0.50	19.7	0.49	19.8	0.53	38.5	0.65	45.8
WHP w/ Dillon Road	0.46	12.7	0.52	20.0	0.56	20.0	0.52	28.0
WHP w/ Coggins Point Rd.	0.36	12.9	0.37	27.5	0.53	38.2	0.60	44.1
WHP w/ Beachwood Dr.	0.32	1.4	0.33	1.6	0.34	8.5	0.36	9.8
WHP w/ Folly Field Rd./Mathews Dr.	0.39	22.5	0.39	22.4	0.42	27.6	0.49	29.1
WHP w/ Singleton Beach Rd.	0.46	2.7	0.43	1.9	0.54	4.3	0.68	8.4
WHP w/ Shelter Cove Lane	0.48	6.5	0.46	7.1	0.52	24.4	0.49	22.9
WHP w/ Queens Folly Rd./King Neptune Dr.	0.54	20.0	0.49	17.1	0.56	29.5	0.56	31.7
WHP w/ Queens Way	0.36	4.3	0.35	5.2		*Not signalized*		
WHP w/ Shipyard Dr./Wexford Dr.	0.37*	10.2*	0.41	10.4	0.46	23.4	0.53	31.0
WHP w/ New Orleans Rd.	0.30*	13.8*	0.48	8.2	0.36	12.8	0.43	21.0
WHP w/ Arrow Road	0.30*	17.7*	0.44	14.5	0.47	22.2	0.53	27.2
Pope Ave. w/ New Orleans Rd./Office Park Rd.	0.36*	18.2*	0.36	20.9	0.51	34.2	0.62	34.5
Pope Ave. w/ Cordillo Parkway	0.30*	19.6*	0.42	27.0	0.48	28.7	0.60	33.8
Palmetto Bay Road w/ Target Road	0.49*	14.3*	0.45	13.2	0.52	22.7	0.53	27.9
Palmetto Bay Road w/ Arrow Road/Point Comfort Road	0.49*	16.6*	0.53	14.0	0.61	27.0	0.54	18.7

v/c – volume-to-capacity ratio
dpv – average total delay per vehicle in **seconds**
WHP-William Hilton Parkway

*Results derived and provided by SRS Engineering, LLC in conjunction with their current South Island Traffic Study

TABLE FIVE – AFTERNOON PEAK HOUR
INTERSECTION VOLUME-TO-CAPACITY RATIOS AND AVERAGE TOTAL DELAY PER VEHICLE – JUNE 2015 AND COMPARABLE 2014, 2010 AND 2005 FIGURES

	2015		2014		2010		2005	
	v/c	dpv	v/c	dpv	v/c	dpv	v/c	dpv
WHP w/ Squire Pope Rd/Chamberlin Drive	**1.10**	**58.5**	**1.10**	**59.3**	**1.19**	**69.4**	**1.02**	54.8
WHP w/ Spanish Wells Rd./Wild Horse Road	0.79	25.2	0.74	21.5	0.71	22.2	0.62	17.2
WHP w/ Gumtree Road/XIP Ramps	0.88	26.1	0.82	28.4	0.82	46.5	0.84	51.5
WHP w/ Wilborn Road/Jarvis Park Road	0.75	6.4	0.74	7.3	0.78	14.4	0.73	16.8
WHP w/ Pembroke Dr./Museum Street	0.73	26.2	0.67	30.0	0.90	28.0	0.74	24.1
WHP w/ Whooping Crane Way/Indigo Run Dr.	0.82	19.4	0.67	19.0	0.89	29.6	**0.92**	28.2
WHP w/ Beach City Rd./Gardner Dr.	0.71	12.2	0.64	11.9	0.72	23.2	**1.04**	**56.5**
WHP w/ Mathews Drive (north)	0.68	28.8	0.62	26.0	0.77	42.9	0.84	43.1
WHP w/ Dillon Road	0.67	14.1	0.63	21.0	0.73	19.4	0.61	21.0
WHP w/ Coggins Point Rd.	0.59	16.7	0.60	14.8	0.78	29.0	0.83	32.0
WHP w/ Beachwood Dr.	0.48	1.8	0.44	2.4	0.51	7.9	0.51	7.4
WHP w/ Folly Field Rd./Mathews Dr.	0.65	26.3	0.58	24.9	0.78	43.2	0.69	39.6
WHP w/ Singleton Beach Rd.	0.46	4.0	0.50	2.9	0.62	5.9	**0.94**	27.0
WHP w/ Shelter Cove Lane	0.64	16.0	0.55	27.3	0.90	45.2	0.67	30.4
WHP w/ Queens Folly Rd./King Neptune Dr.	0.81	44.7	0.62	30.0	0.88	39.4	**1.00**	**59.6**
WHP w/ Queens Way	0.56	7.7	0.46	6.8		*Not Signalized*		
WHP w/ Shipyard Dr./Wexford Dr.	0.56*	15.4*	0.51	10.6	0.74	20.9	0.72	20.8
WHP w/ New Orleans Rd.	0.57*	27.8*	0.66	18.0	0.54	19.2	0.60	24.4
WHP w/ Arrow Road	0.48*	22.3*	0.52	24.1	0.74	36.6	0.80	32.8
Pope Ave. w/ New Orleans Rd./Office Park Rd.	0.62*	29.6*	0.62	28.8	0.83	41.8	**1.06**	**66.2**
Pope Ave. w/ Cordillo Parkway	0.61*	24.1*	0.49	34.1	0.79	46.9	0.85	40.2
Palmetto Bay Road w/ Target Road	0.59*	23.5*	0.55	16.7	0.67	26.6	0.74	31.4
Palmetto Bay Road w/ Arrow Road/Point Comfort Road	0.72*	26.1*	0.62	21.8	0.82	36.3	0.74	21.8

v/c – volume-to-capacity ratio
dpv – average total delay per vehicle in seconds
WHP-William Hilton Parkway

*Results derived and provided by SRS Engineering, LLC in conjunction with their current South Island Traffic Study

As shown in bold in Table Four, the intersection of William Hilton Parkway with Squire Pope Road/Chamberlin Drive is the only signalized intersection identified as failing to meet Town operational goals during the morning peak hour in June 2015, due to its 0.92 intersection volume-to-capacity ratio. Table Five indicates that this is also the only signalized intersection failing to meet the Town's operational goals during the afternoon peak hour in June 2015, based on a volume-to-capacity ratio of 1.10 and an average delay per vehicle of 58.5 seconds. It is notable that the average total delay at signalized intersections during the morning peak hour, with each signalized intersection weighted equally, has declined 48 percent since 2005 and 45 percent since 2010. Similarly, the average total delay at signalized intersections within the Town during the afternoon peak hour has declined 33 percent since 2005 and 28 percent since 2010. These percentage declines in the average delay experienced by motorists at signalized intersections are attributable to a combination of higher traffic volumes recorded in 2005 as indicated in Part Three of this report and the Town's ongoing efforts to mitigate operationally deficient intersections with roadway improvements accomplished within the Town's Capital Improvements Program. It should also be kept in mind that as traffic volume approaches capacity linearly, delay tends to increase exponentially, and that the 2010 and 2005 results summarized in Tables Four and Five were developed using the then-current and now superseded *Highway Capacity Manual 2000 Edition* methodology.

PART SIX – SEA PINES CIRCLE

The LMO requires that Sea Pines Circle traffic demands be surveyed and resulting morning and afternoon peak hour analyses be conducted in calendar years evenly divisible by five. Due to the fact that Sea Pines Circle historically experiences a substantial amount of backups and delays during the midday peak hour, and that this peak hour may overlap the morning and afternoon periods, the Town has traditionally surveyed traffic demands during this midday peak hour in addition to those corresponding with traditional morning and afternoon peak volume hours. All three peak hour volume surveys are summarized in Appendix A on pages A-47 through A-49. The total volume demand on Sea Pines Circle during all three peak volume hours counted in June 2015, June 2010, and June 2005 is shown in Table Six on page fourteen.

TABLE SIX – SEA PINES CIRCLE TOTAL INTERSECTION VOLUME – JUNE 2015, JUNE 2010, JUNE 2005

	JUNE 2015	JUNE 2010	JUNE 2005
Morning Peak Volume Hour	**2791**	**2493**	**3264**
Midday Peak Volume Hour	**3748**	**3508**	**4026**
Afternoon Peak Volume Hour	**3930**	**3525**	**4199**

As shown in Table Six, total demand on the circle during the morning peak hour was measured to be fourteen percent lower in June 2015 than a decade earlier in June 2005. The midday peak hour total demand is seven percent lower in June 2015 than in June 2005, and the afternoon peak hour total demand is six percent lower than a decade earlier.

The LMO states that the operational goal at Sea Pines Circle during the morning and afternoon peak volume hours is a maximum of 150.0 seconds in average total delay on each individual approach to the circle. It bears repeating that total delay takes into account all delay experienced in decelerating and accelerating and traveling around the circle over the travel time that would be required under free-flow conditions with no circle present. Therefore, this total delay referenced by the LMO is a different quantity and typically much greater than the stopped delay experienced in queues awaiting entry to the circle, or the time spent waiting in a vehicle queue to enter. A new 2010 edition of the *Highway Capacity Manual* was released in 2011 that included significant improvements to the analysis methodology employed to evaluate roundabouts. The analysis results for each approach of Sea Pines Circle based on this methodology are summarized in Table Seven below, with results failing to meet the Town's operational goal shown in bold.

TABLE SEVEN – SEA PINES CIRCLE AVERAGE TOTAL DELAY PER VEHICLE BY APPROACH – JUNE 2015*

	Peak Hour Average Delay-Per-Vehicle		
	Morning	Midday	Afternoon
Greenwood Drive	**184.1**	**156.9**	**174.9**
Palmetto Bay Road	**164.9**	**179.5**	98.7
Pope Avenue	21.7	84.8	129.6
William Hilton Parkway	88.5	**190.2**	**183.6**

*Results derived and provided by SRS Engineering, LLC in conjunction with their current South Island Traffic Study

However, even the improved roundabout analysis methodology included in the 2010 Edition of the *Highway Capacity Manual* analyzes roundabout intersections as if they were the typical modern roundabout intersection employed at numerous locations throughout the Town, including Arrow Road with Dunnagans Alley, Mathews Drive with Marshland Road, and Squire Pope Road with Gum Tree Road. The analysis methodology is limited by the fact that the input data does not include geometric data such as the roundabout's diameter or circumference, lane widths, angles of approach entry, etc. The methodology's input data does include the number of circulating lanes, the number of approach lanes, whether any right-turn movements are served by bypass lanes such as those serving all possible right-turn movements at Sea Pines Circle, and whether these bypass lanes are controlled by a YIELD sign or are afforded free-flow conditions on their downstream end. The limitations of the methodology in accurately modeling a large roundabout like Sea Pines Circle are significant and must be noted. For this reason, both Town staff and a private consultant conducted independent field measurements of the total delay experienced on each approach to Sea Pines Circle during the morning, midday, and afternoon peak hours. These field-measured results were conducted coincident with the intersection's turning movement counts summarized on pages A-47 through A-49, and are summarized in Table Eight below, with measurements indicating non-compliance with the Town's adopted operational goal shown in bold.

TABLE EIGHT – SEA PINES CIRCLE AVERAGE TOTAL DELAY PER VEHICLE BY APPROACH – FIELD MEASURED - JUNE 2015

	Peak Hour Average Delay-Per-Vehicle		
As Measured by Town Staff	**Morning**	**Midday**	**Afternoon**
Greenwood Drive	89.2	91.1	95.9
Palmetto Bay Road	27.5	66.1	39.8.
Pope Avenue	18.9	49.6	78.2
William Hilton Parkway	25.9	**151.7**	**179.1**
	Peak Hour Average Delay-Per-Vehicle		
As Measured by Consultant	**Morning**	**Midday**	**Afternoon**
Greenwood Drive	34.9	110.9	121.4
Palmetto Bay Road	22.9	59.2	22.9
Pope Avenue	18.2	41.8	147.2
William Hilton Parkway	20.6	113.9	**195.9**

Therefore, in applying the methodology outlined in the current edition of the *Highway Capacity Manual* as outlined in the LMO, the approach of Greenwood Drive to Sea Pines Circle is non-compliant with the Town's operational goal during all three weekday peak volume hours. The approach of Palmetto Bay Road is non-compliant

during the morning and midday peak volume hours, and the William Hilton Parkway approach to Sea Pines Circle is non-compliant during the midday and afternoon peak volume hours. Field measurements indicate that only the William Hilton Parkway approach is non-compliant, with deficiencies observed and measured during both the midday and afternoon peak volume hours. Both the *Highway Capacity Manual* methodology and the field measurements taken are in agreement that the Pope Avenue approach is operating in compliance with the Town's operational goal during all three weekday peak volume hours. Based on both the analysis methodology as well as the field measurements, it can be concluded that the Sea Pines Circle rotary intersection joins the intersection of William Hilton Parkway with Squire Pope Road and Chamberlin Drive as the only two intersections found to be operating out of compliance with the Town's operational goals as outlined in the LMO in June of 2015. A discussion on options for mitigating both of these intersections is included in Part Seven below.

PART SEVEN – INTERSECTIONS OPERATING OUT OF COMPLIANCE WITH TOWN OPERATIONAL GOALS IN JUNE 2015

INTERSECTION OF WM. HILTON PARKWAY WITH SQUIRE POPE ROAD AND CHAMBERLIN DRIVE

As noted in Tables Four and Five, the intersection of William Hilton Parkway with Squire Pope Road and Chamberlin Drive is the only signalized intersection that was found to be failing to meet the Town's operational goals outlined in the LMO in June 2015. This intersection has been analyzed as deficient during either the morning peak hour and/or afternoon peak hour in each analysis year since 1999, if not longer. The volume-to-capacity goal of a ratio of 0.90 or less is not satisfied during either the morning or afternoon peak volume hour, and the maximum average delay-per-vehicle goal of 55.0 seconds or less is not satisfied during the afternoon peak volume hour. The intersection was found to be operating with a 0.92 volume-to-capacity ratio during the morning peak volume hour, an increase from the 0.86 ratio calculated for the intersection's morning peak hour a year earlier in June 2014. The intersection was found to be operating with a volume-to-capacity ratio of 1.10 during the afternoon peak period, which is unchanged from its comparable June 2014 figure. The average delay per vehicle of 58.5 seconds represented a slight decrease over the 59.3 seconds per vehicle indicated by the June 2014 analysis.

The deficiencies at this intersection are due primarily to this intersection's proximity to the bridges to the mainland and the high directional demand on William Hilton Parkway associated with eastbound motor vehicle traffic entering the Town from the mainland during the morning peak hour and the westbound demand from the Town

toward the mainland during the afternoon peak volume hour. Annual analyses have historically indicated that this deficiency cannot be mitigated without providing a third westbound through lane on William Hilton Parkway. Currently, a third westbound lane terminates as an exclusive right-turn lane onto Squire Pope Road.

The results of the 2015 operational analyses indicate that the intersection can be successfully mitigated during the morning peak hour by providing a free-flowing right turn and acceleration lane to serve motorists turning right onto westbound William Hilton Parkway from Squire Pope Road, but not by extending a third westbound through lane through the intersection. The afternoon peak hour deficiency can be mitigated by extending the third westbound lane through the intersection and extending the lane to terminate as a right-turn lane at Jenkins Road, but not by simply building the aforementioned acceleration lane. Hence, the results of the 2015 analyses mirror those developed in the 2014 Traffic Monitoring & Evaluation report that both of these improvements are required to fully mitigate this intersection.

It also should be noted that the Town constructed a third eastbound through lane on William Hilton Parkway through the intersection of Squire Pope Road in 2008. This lane begins only a short distance in advance of the Squire Pope Road signal, however. The beginning of the lane had to be located fairly close to the signal within the 2008 improvement project to avoid impacts to residences located very close to the roadway on the southern side of William Hilton Parkway. The residences have since been removed from this area and the parcel subsequently acquired by the Town. Relocating the beginning of the third eastbound through lane upstream to a point just east of Cora Lee Lane in order to encourage increased utilization of this third lane by eastbound motorists during the morning peak volume period would also greatly benefit operations at this intersection, and would potentially mitigate the intersection's morning peak hour operational deficiency as a stand-alone project.

The Town is currently in the preliminary design phase of a Capital Improvements Project to fully mitigate the intersection by accomplishing both the extension of the third westbound through lane and the provision of an adjacent acceleration lane. Further, a private consultant retained by Beaufort County has developed a recommendation to remedy access difficulties at the three median crossovers on Jenkins Island that would necessarily include significant widening to William Hilton Parkway between Blue Heron Point Road and Jenkins Road, a recommendation that will necessarily be entertained by Town Council when it is finalized. Coordination between the Town and County to combine resources into a project that addresses the operational deficiencies at Squire Pope Road and on Jenkins Island will be crucial to effectively mitigating longstanding operational issues in this high-demand corridor, which continues to constitute a bottleneck for motorists commuting eastbound and westbound across the Karl V. Bowers and J. Wilton Graves Bridges spanning Mackay and Skull Creeks, respectively. These peak hour directional

flows continue to generate undesirable levels-of-service and citizen complaints regarding conditions in the four-lane segment of William Hilton Parkway from Fording Island Road Extended to Squire Pope Road. A private consultant retained by Beaufort County has recently conducted an access management study of conditions along US 278 on Jenkins Island and developed a recommendation to improve flow that includes widening a portion of US 278 from four to six lanes.

SEA PINES CIRCLE

The Town has retained a consultant to study current and projected future traffic conditions on the Island's south end in the "Circle-to-Circle" corridor, and the consultant is working closely with the Town's Circle-to-Circle Advisory Committee to develop a master plan for mitigating traffic concerns in this area. Existing and projected deficiencies at Sea Pines Circle are a focus of this effort. While a number of options such as increasing the size and/or shape of Sea Pines Circle, grade-separated crossings, multi-laning the circle, and replacing it with a large multi-laned at-grade signalized intersection are among the alternatives being evaluated that have the potential to successfully mitigate this rotary intersection today and into the future, it is felt by many that the basic layout of Sea Pines Circle is iconic in nature and should be retained in lieu of replacement by a grade-separated or signalized intersection. The intersection's circulating roadway was multi-lane, consisting of three adjacent lanes in each quadrant, prior to 2001. Early in 2001, this design was revised to a single-lane roundabout with right-turn bypass lanes in each quadrant, a redesign that improved safety by reducing collision frequency by approximately 30 percent. The redesign also resulted in immediate reductions to previously existing queue lengths and very positive reviews from the motoring public. It is notable that regionally, a large majority of complaints regarding roundabout operations are generated by multi-lane roundabouts.

In advance of or in lieu of a major geometric improvement to the Sea Pines Circle intersection, it is recommended that interim efforts focus on reducing traffic demand entering the intersection. Despite the analysis results indicating operational deficiencies on the Palmetto Bay Road approach to the circle, it is suggested that based on actual field conditions, operational problems on this approach are minor when compared with those that periodically develop on the William Hilton Parkway and Greenwood Drive approaches. Strategies to lessen traffic demand on the circle should focus on these approaches, and more specifically, left-turn movements from these approaches that have a greater tendency to generate vehicle conflicts and adversely impact overall operations.

Strategies that may be considered to reduce the left-turn demand on the William Hilton Parkway approach to the circle include the placement of signage serving on-island motorists in advance of the New Orleans Road signal directing motorists to

Pope Avenue and "Beaches" via New Orleans Road. During the visitor season months when most operational deficiencies at the circle are evident, many motorists using the circle to proceed from William Hilton Parkway onto Pope Avenue are visitors from out of the area that may not be familiar with the availability of New Orleans Road as an alternate route. Additional directional signage should be posted at the intersection of New Orleans Road and Arrow Road and on New Orleans Road's approach to Pope Avenue. The Town's upcoming intersection improvement at Pope Avenue with New Orleans and Office Park Road will also serve to make this a more attractive alternate route for visitors on William Hilton Parkway to access the Coligny and Forest Beach areas.

A number of access points on the northern side of William Hilton Parkway between Sea Pines Circle and Arrow Road generate ingress and egress left-turn maneuvers that result in frequent collisions and inordinately impede queued motorists on William Hilton Parkway awaiting entry into the circle. This paved two-way-left-turn median should be replaced with a raised and landscaped in a manner that limits the aforementioned access points to right-only ingress and egress maneuvers. Dunnagans Alley runs parallel to William Hilton Parkway to the north of the properties served by these accesses, does not currently experience any capacity or congestion issues, and provides convenient access to the affected properties. Opportunities also exist to improve overhead and shoulder-mounted guide signage on William Hilton Parkway approaching the circle in a manner that will reduce motorist confusion and last-minute lane-change maneuvers that increase the length of vehicle queues awaiting entry into the circle.

Two sets of overhead mast-arm mounted signs guide motorists on William Hilton Parkway approaching Sea Pines Circle. The first set is located approximately ½ mile in advance of the circle and contains a pair of destinations accompanied by a downward-pointing arrow atop each of the two approach lanes. The second set is located approximately 500 feet in advance of the circle and displays lane-use arrows indicating that the right approach lane is dedicated exclusively to right-turn movements at the circle while all movements are available to motorists in the left lane. Consideration should be given to improving the prominence of these signs by increasing their size, their font size, and/or their retroreflectivity. There is a large shoulder-mounted sign approximately 700 feet in advance that displays a diagrammatic layout of the circle with destinations listed at the top and to both sides of the circle. This sign is in poor condition and is nearing the end of its useful service life. The Town should consider possible improvements to this sign's legend and request the South Carolina Department of Transportation to replace it. Relocation into a raised landscaped median area to increase its prominence may be considered if the improvement described in the previous paragraph is implemented. Beginning at least 250 feet in advance of Sea Pines Circle, exclusive right-turn-only pavement marking arrows and "ONLY" markings should be installed in the right-hand approach lane.

Opportunities to implement similar signing and marking improvements exist on the approaches of Greenwood Drive, Palmetto Bay Road, and Pope Avenue as well.

Much discussion has taken place recently regarding the need for a roadway connection between Greenwood Drive and Palmetto Bay Road through the privately-owned Island Crossings Shopping Center area. The benefits of such a connection are obvious, but the maximum benefit with respect to operations at Sea Pines Circle may be realized by considering the extension of this proposed connector to the south of Greenwood Drive along the existing Office Park Road alignment and traversing the environmentally-sensitive Boggy Gut wetland area to connect to Cordillo Parkway opposite Deallyon Avenue. This new roadway was proposed as far back as the early 1990's, and would afford a direct connection between Palmetto Bay Road and the South Forest Beach area in the form of a parallel route to Pope Avenue that bypasses Sea Pines Circle. Under this scenario, the intersection of Greenwood Drive with this new roadway would require signalization or retrofitting with a roundabout.

On an interim basis, shoulder-mounted signage has existed for approximately a decade now on the right shoulder of eastbound Greenwood Drive in advance of Office Park Road advising motorists of the availability of Office Park Road as an alternate route to access William Hilton Parkway and Palmetto Bay Road. An examination should be undertaken to determine if this signage should be refurbished or can be improved to be more noticeable to motorists, particularly visitors that may not be familiar with the area roadway network. Geometric improvements to Greenwood Drive's right-turn lane serving Office Park Road may be warranted in conjunction with this effort to better emphasize the availability of this alternate route, along with improvements to guide signage on Office Park Road at Pope Avenue and New Orleans Road at Arrow Road. The Town's planned improvement of the Pope Avenue / New Orleans Road / Office Park Road intersection will also make this a more attractive alternate route, and affords a convenient opportunity to design and ultimately implement these improvements. An effective access management strategy to consolidate and align access points on Greenwood Drive between the Sea Pines security gate and Sea Pines Circle is warranted as well, an effort being undertaken by the Town's traffic and planning consultant in coordination with the Circle-to-Circle advisory committee.

Public concerns have been raised over the issue of available sight lines for motorists approaching Sea Pines Circle. As of the time of this report's preparation, all landscaping in the median here is neatly trimmed and well-maintained, and no recommendations for improvements are currently offered. Generally, care should be taken to ensure that landscaping in the medians adjacent to approaches to Sea Pines Circle does not exceed a height of 2.5 feet within 25' of the outer edge of Sea Pines Circle. A recommended policy regarding maintenance of adequate sight lines on

approaches to roundabouts and traffic circles has been submitted to the Town Engineer for his consideration.

Alternate mass transportation options that take motor vehicles off of the road that would otherwise pass through Sea Pines Circle represent an opportunity to relieve pressure on the south island's arterial hub, and should be considered within long-range master planning efforts.

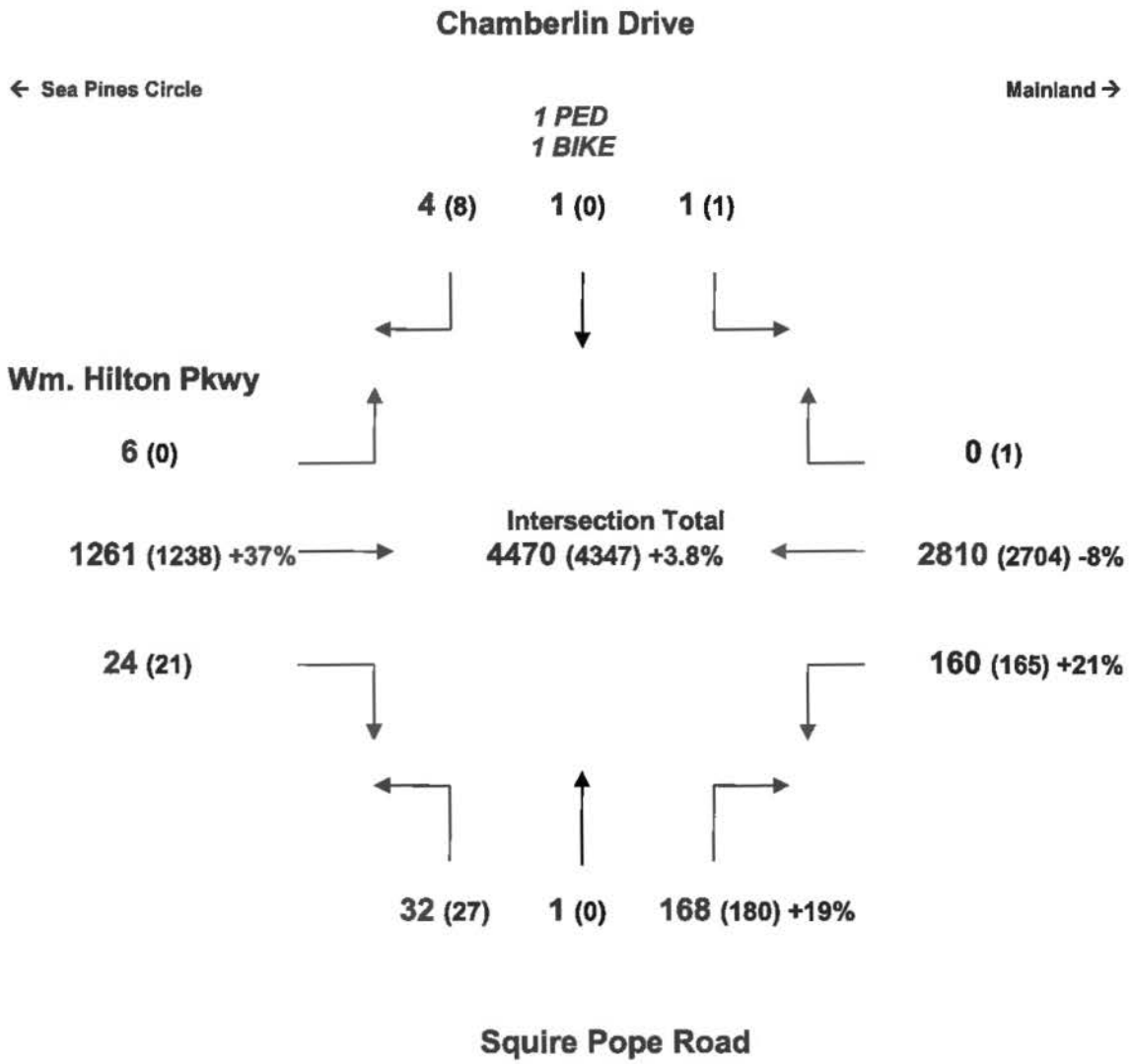
APPENDIX A

PEAK HOUR TURNING MOVEMENT DIAGRAMS
FOR EACH SIGNALIZED
INTERSECTION WITHIN THE TOWN

JUNE 2015

William Hilton Parkway with Squire Pope Road and Chamberlin Drive

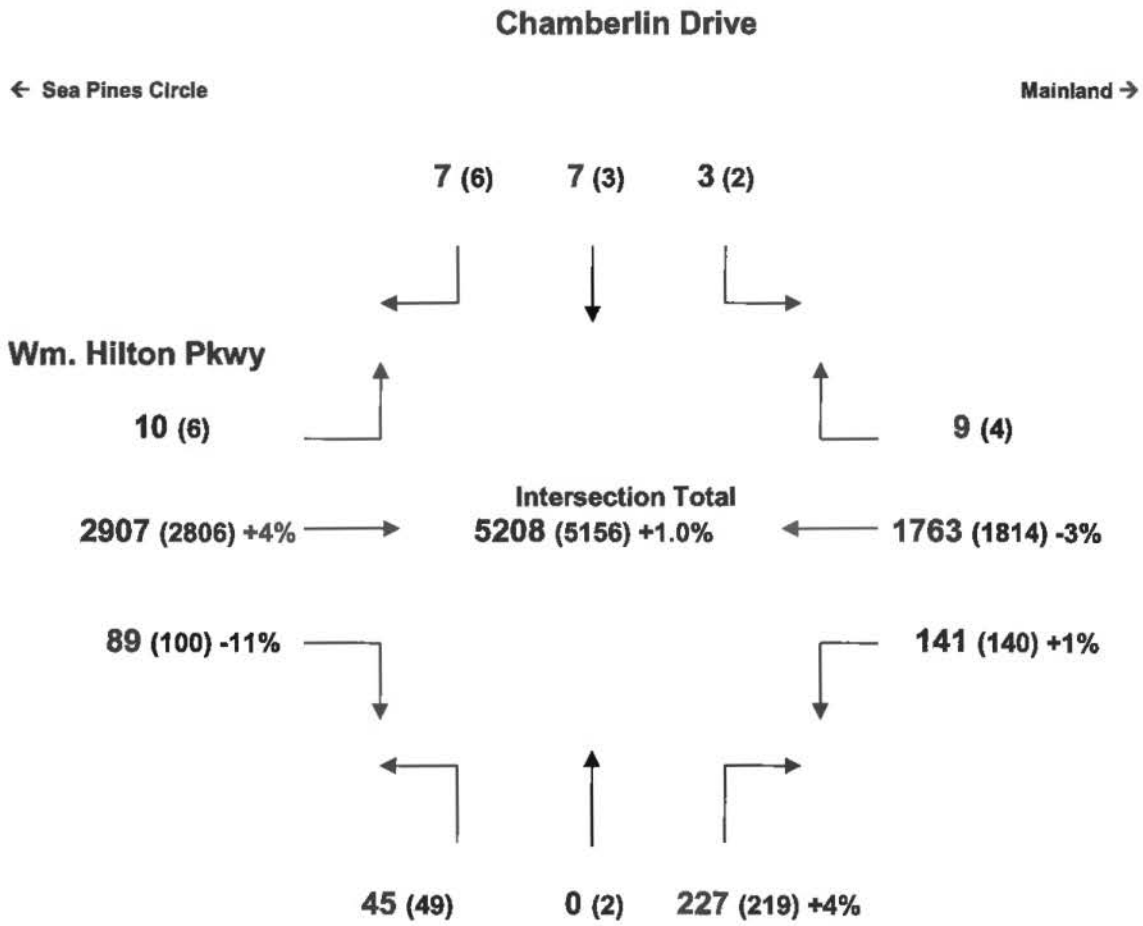
A.M. PEAK HOUR (7:30 to 8:30 a.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Squire Pope Road and Chamberlin Drive

P.M. PEAK HOUR (4:45 to 5:45 p.m. – Tue. 6/9/15)

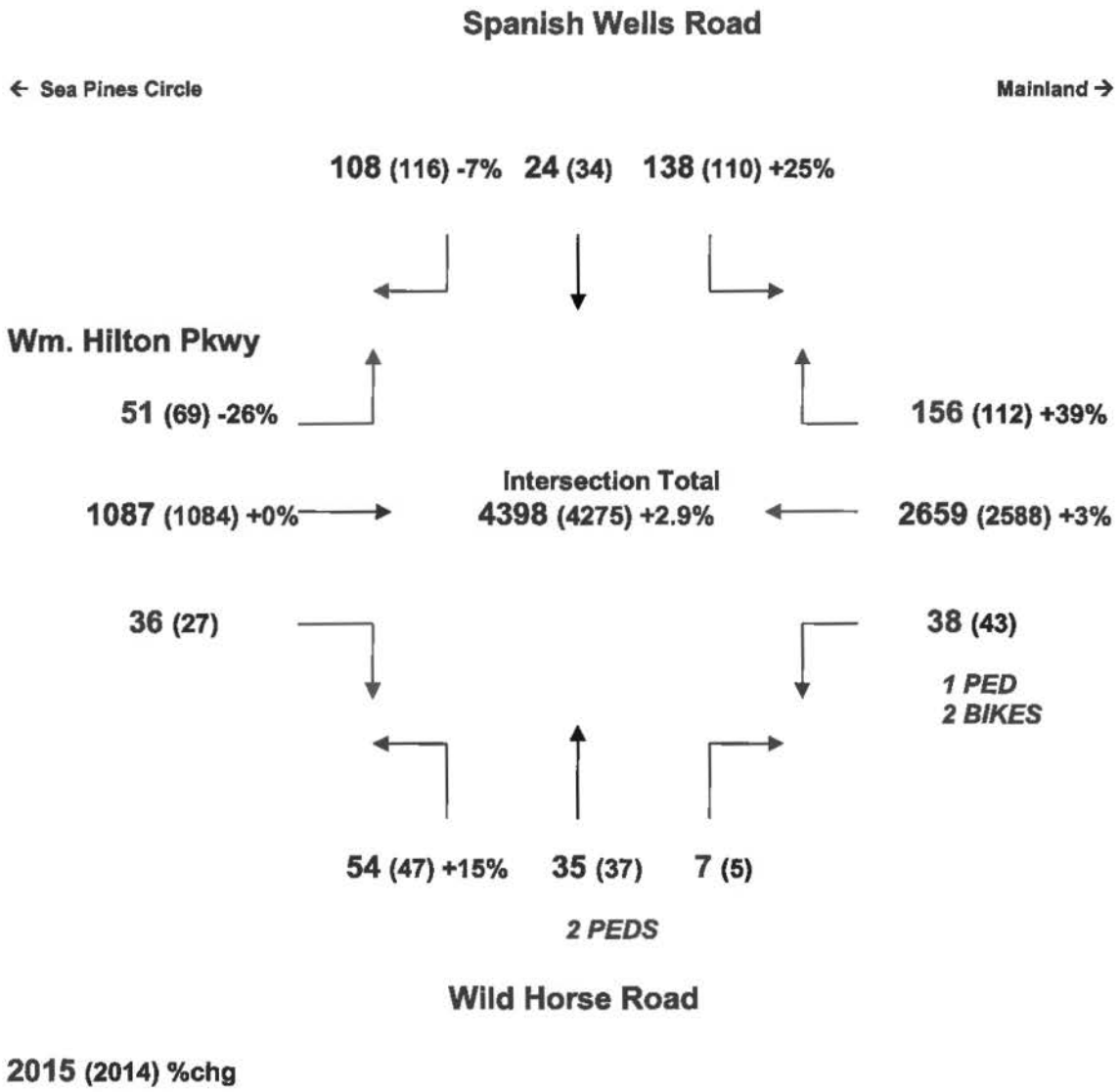


NO BIKES OR PEDS RECORDED

2015 (2014) %chg

William Hilton Parkway with Spanish Wells Road and Wild Horse Road

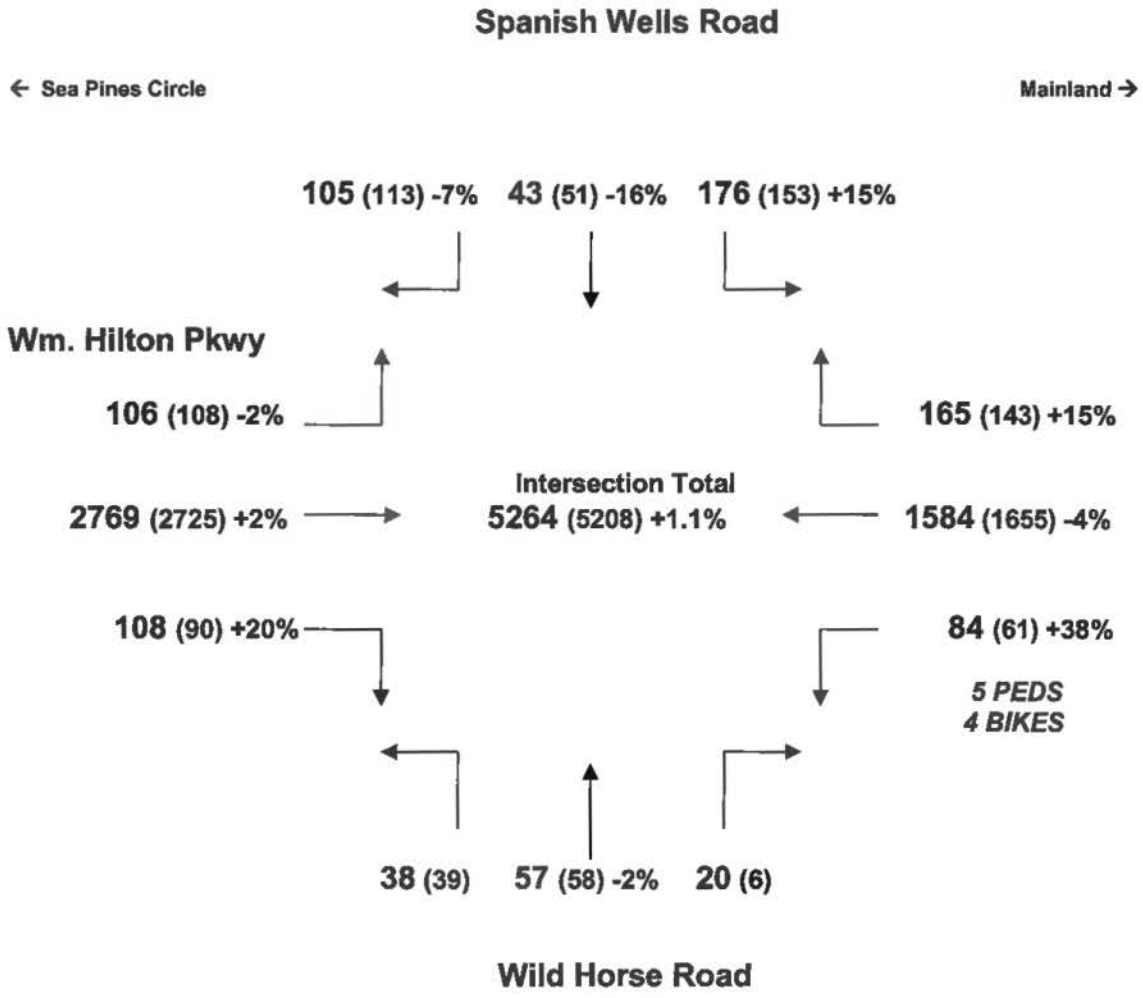
A.M. PEAK HOUR (7:30 to 8:30 a.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Spanish Wells Road and Wild Horse Road

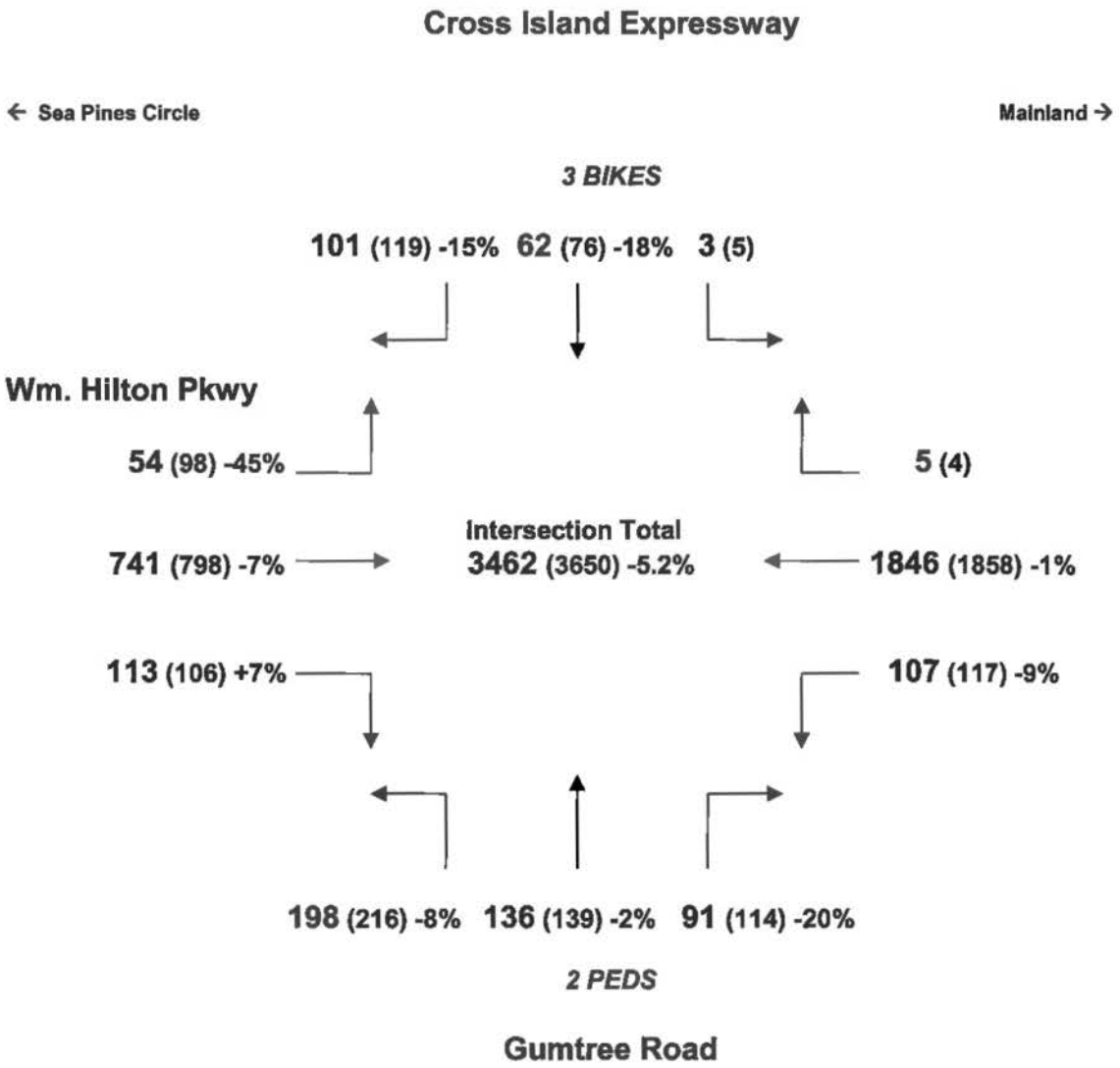
P.M. PEAK HOUR (4:45 to 5:45 p.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Gum Tree Road and Cross Island Parkway

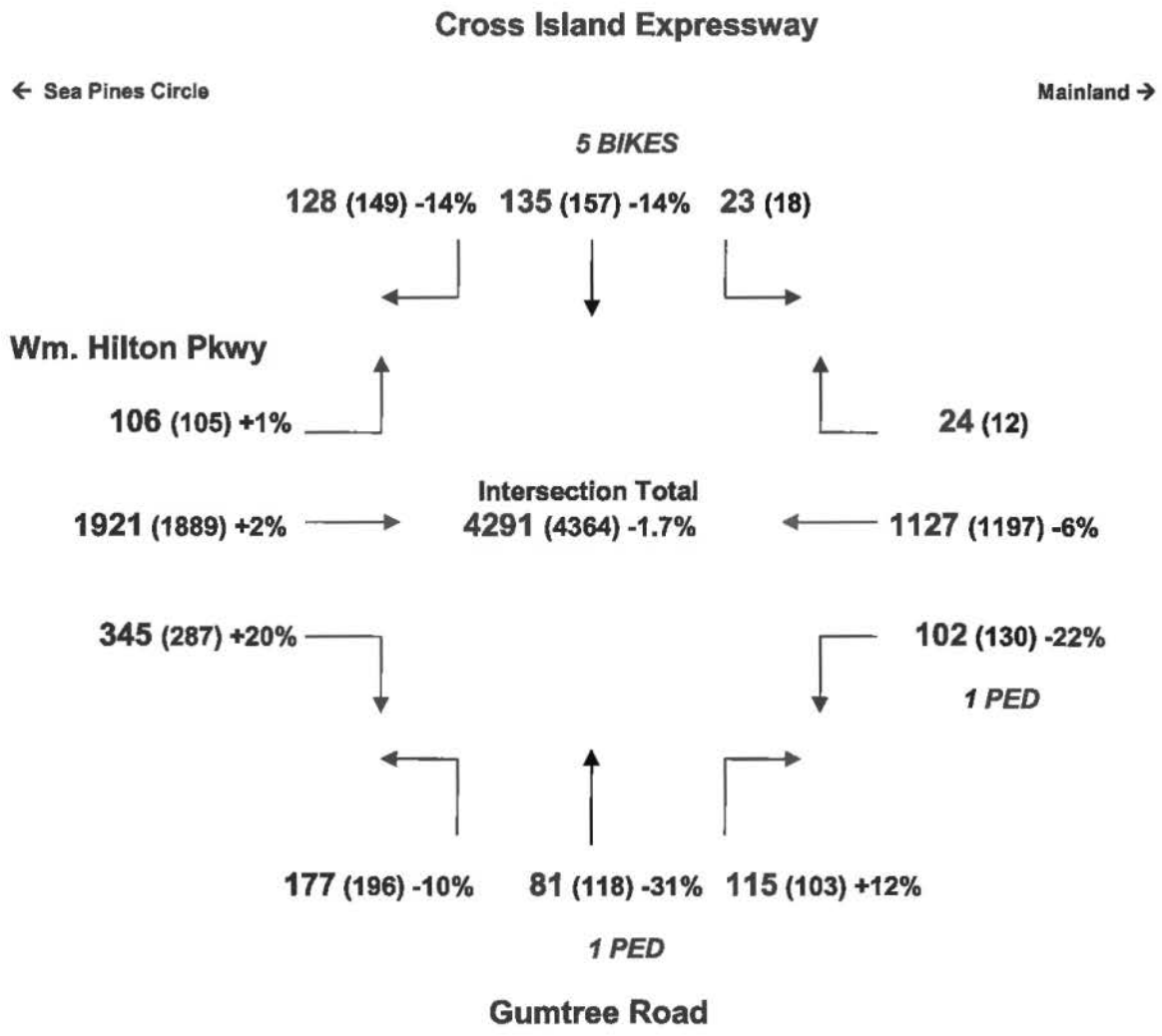
A.M. PEAK HOUR (7:30 to 8:30 a.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Gum Tree Road and Cross Island Parkway

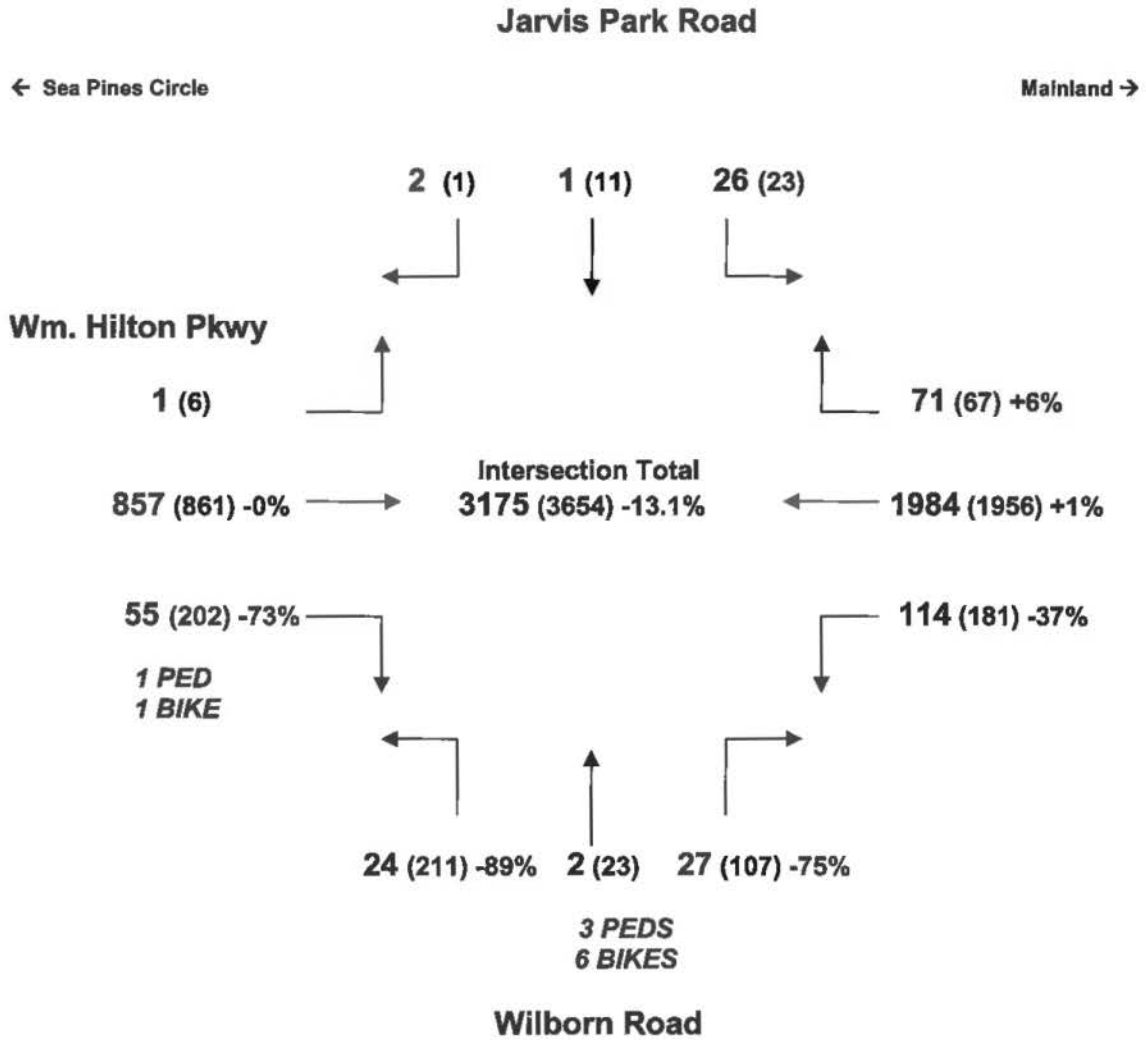
P.M. PEAK HOUR (4:30 to 5:30 p.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Wilborn Road and Jarvis Park Road

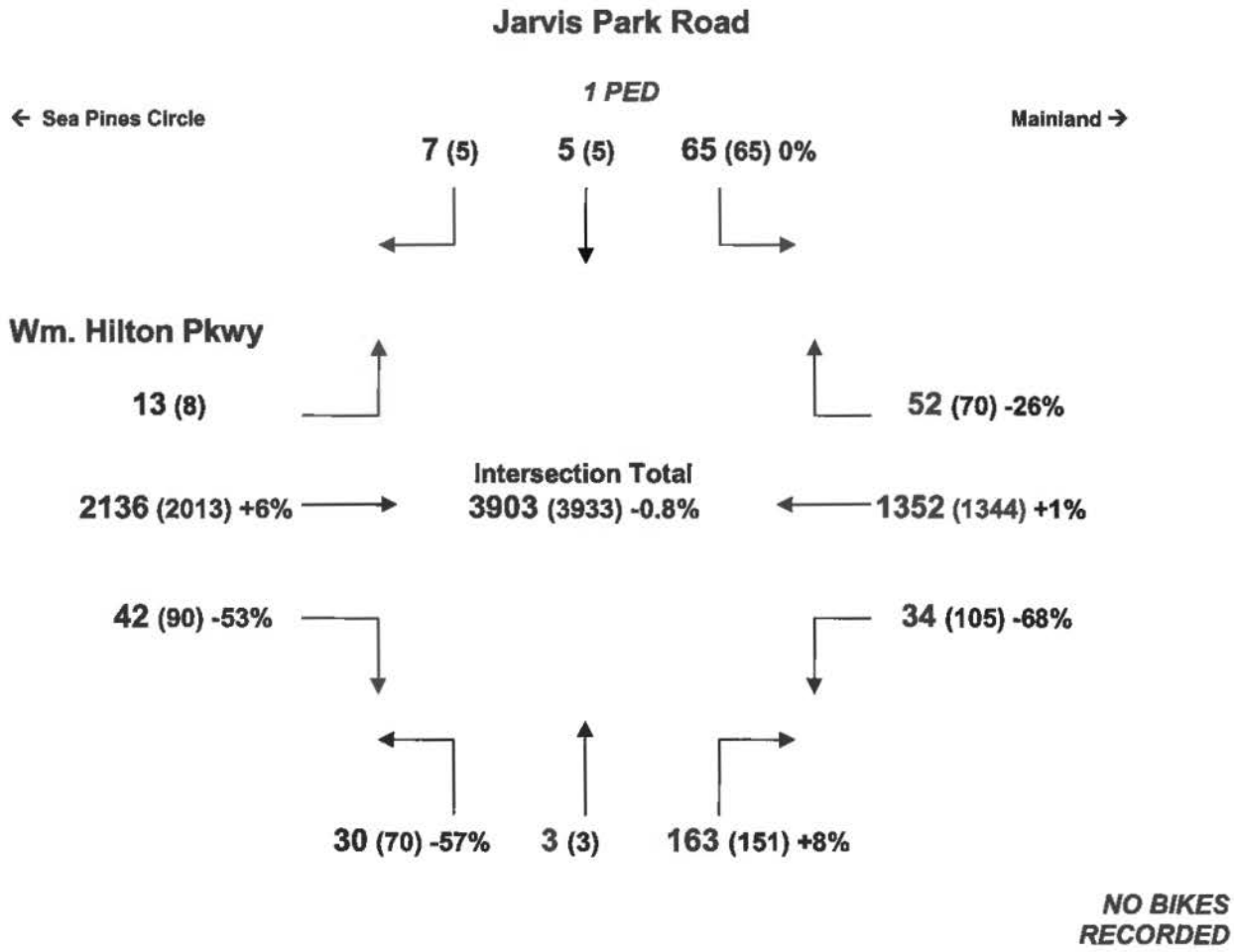
A.M. PEAK HOUR (7:30 to 8:30 a.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Wilborn Road and Jarvis Park Road

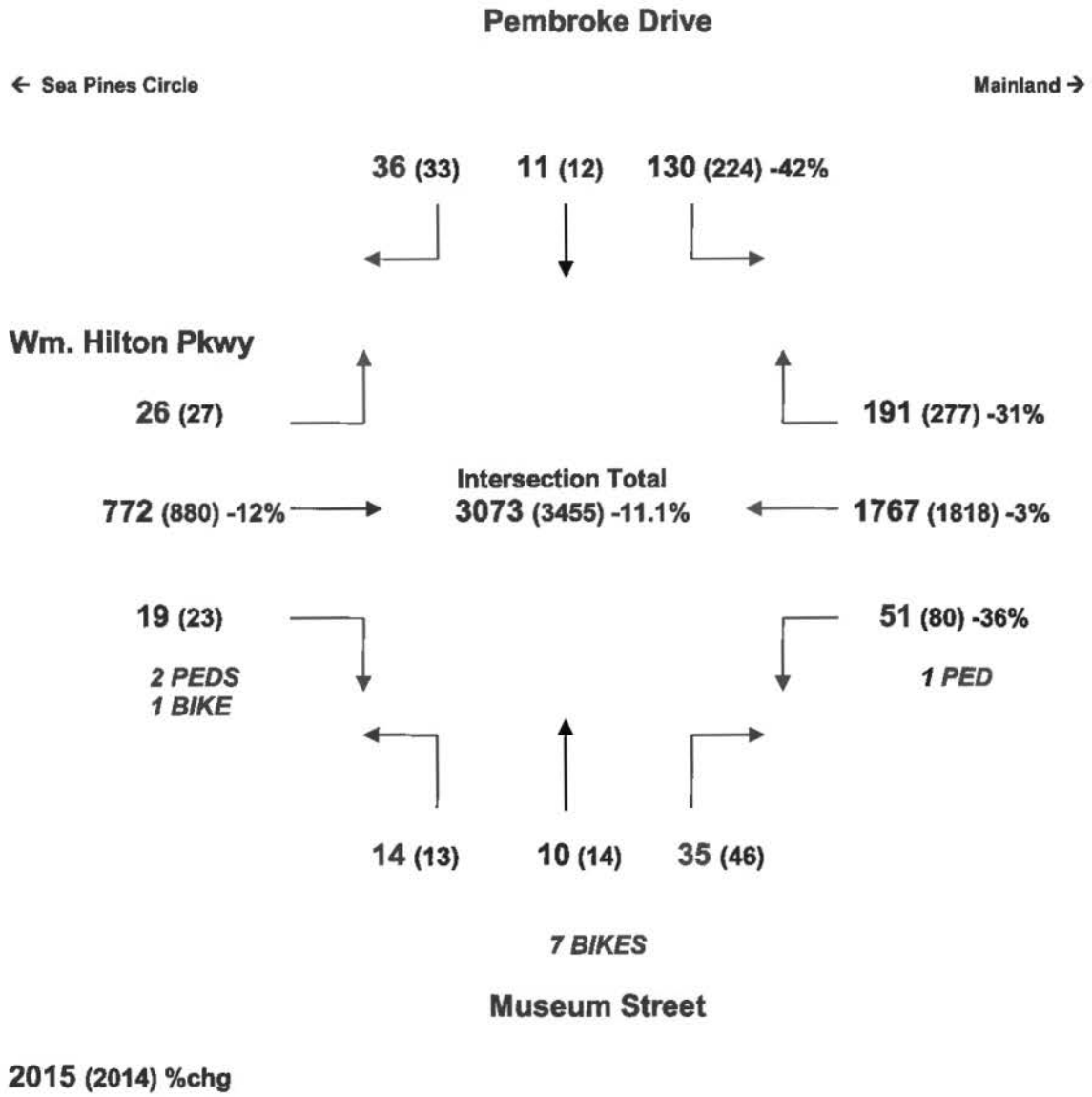
P.M. PEAK HOUR (4:30 to 5:30 p.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Pembroke Drive and Museum Street

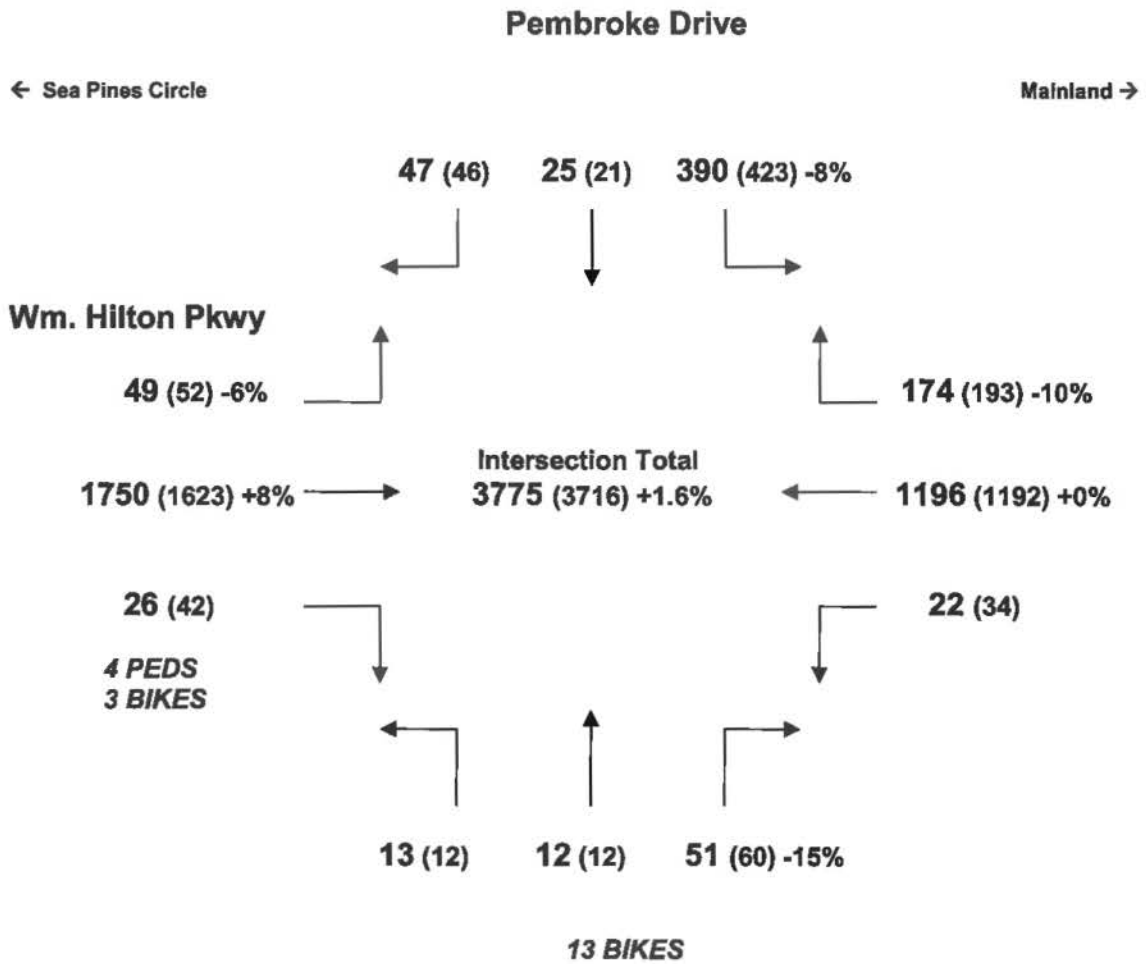
A.M. PEAK HOUR (7:30 to 8:30 a.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Pembroke Drive and Museum Street

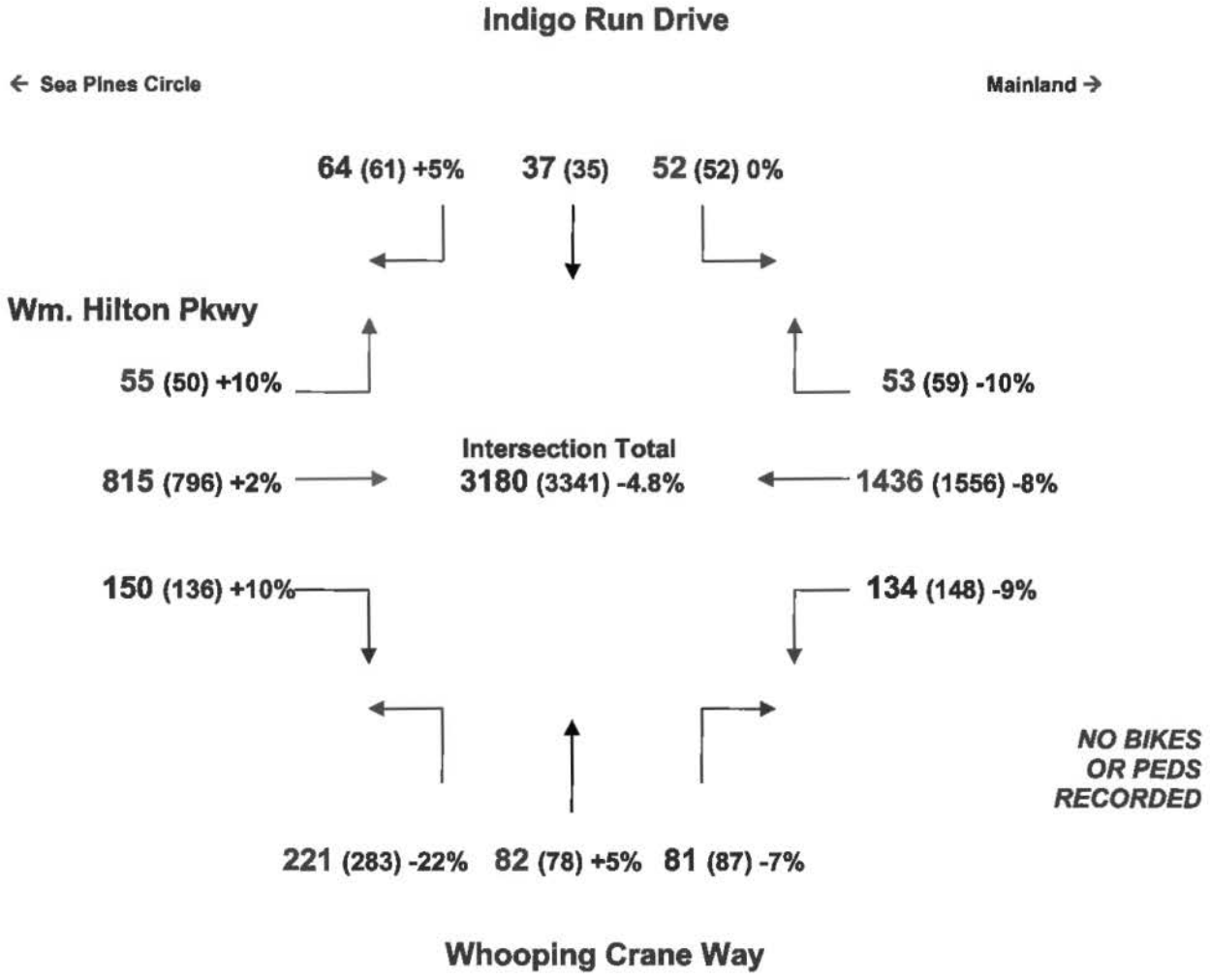
P.M. PEAK HOUR (4:30 to 5:30 p.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Indigo Run Drive and Whooping Crane Way

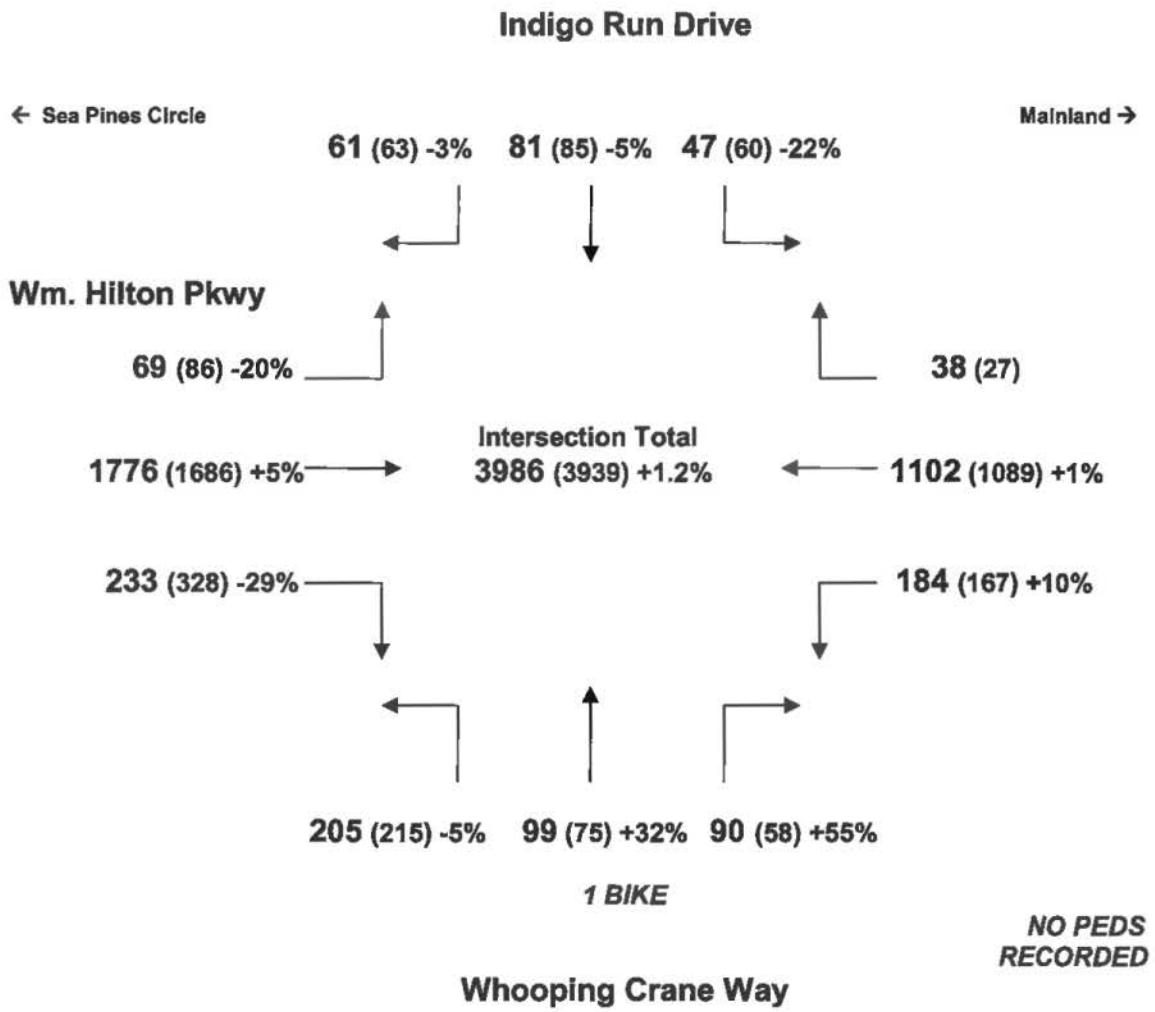
A.M. PEAK HOUR (8:00 to 9:00 a.m. – Wed. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Indigo Run Drive and Whooping Crane Way

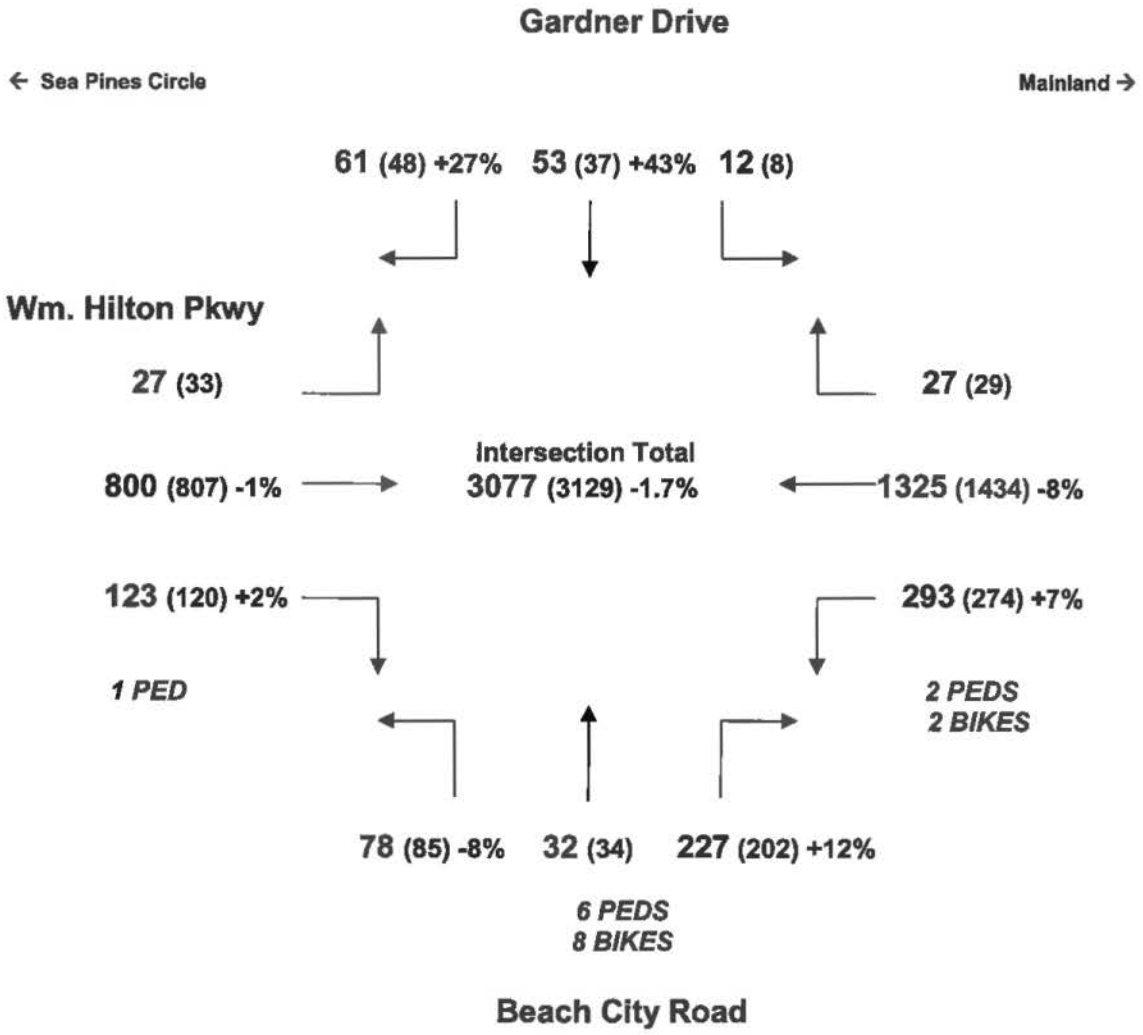
P.M. PEAK HOUR (4:30 to 5:30 p.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Beach City Road and Gardner Drive

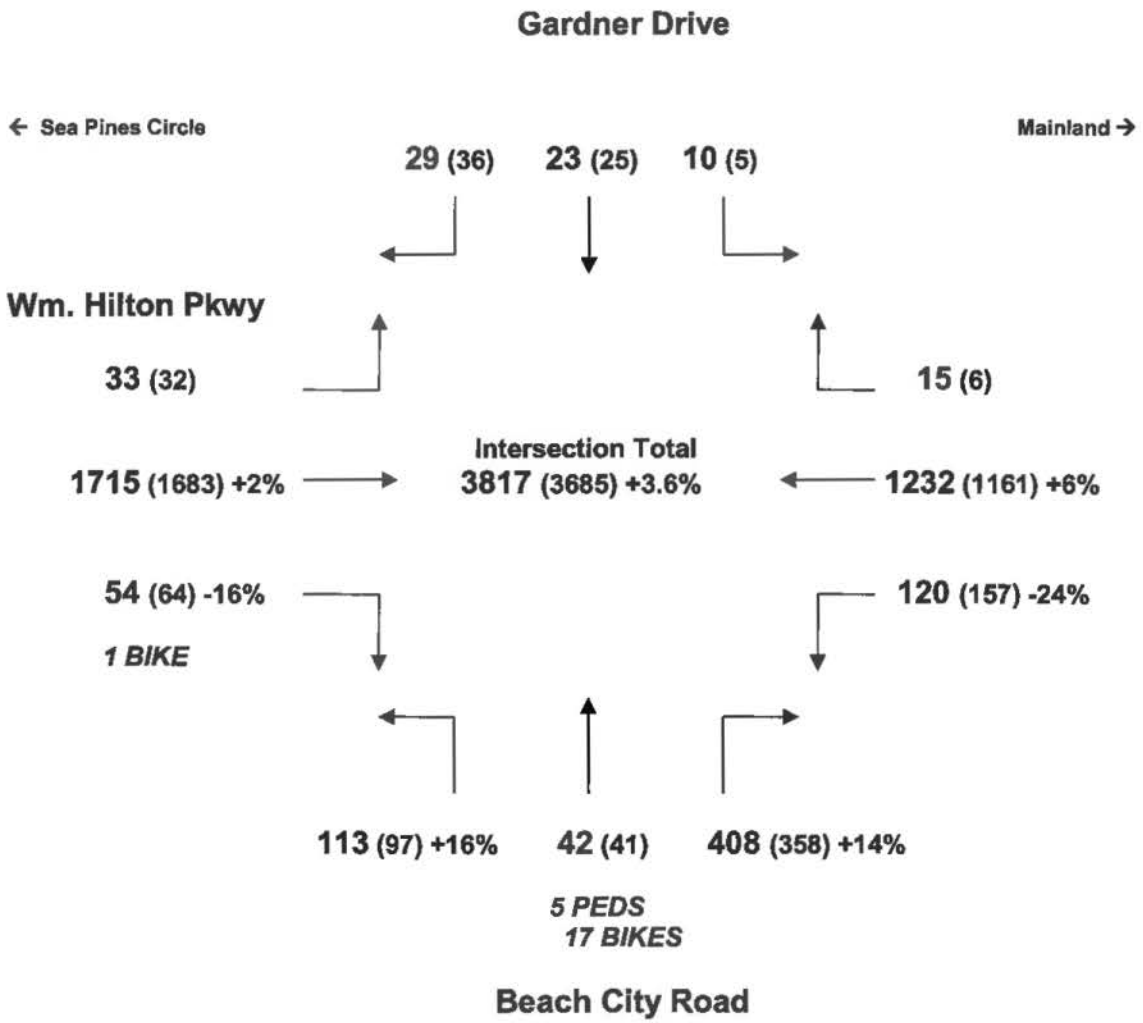
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Wed. 6/9/15)



2015 (2014) %chg

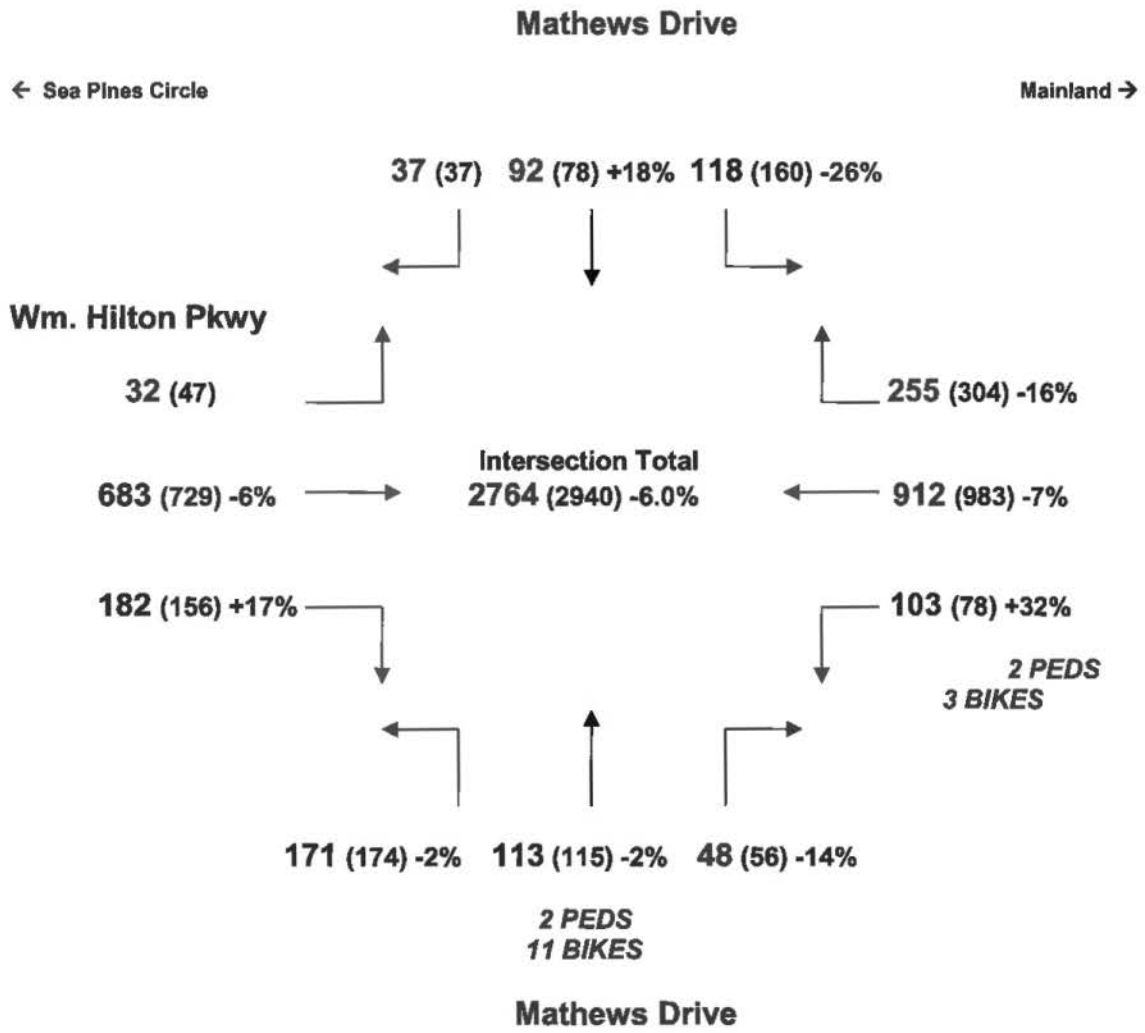
William Hilton Parkway with Beach City Road and Gardner Drive

P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Tue. 6/9/15)



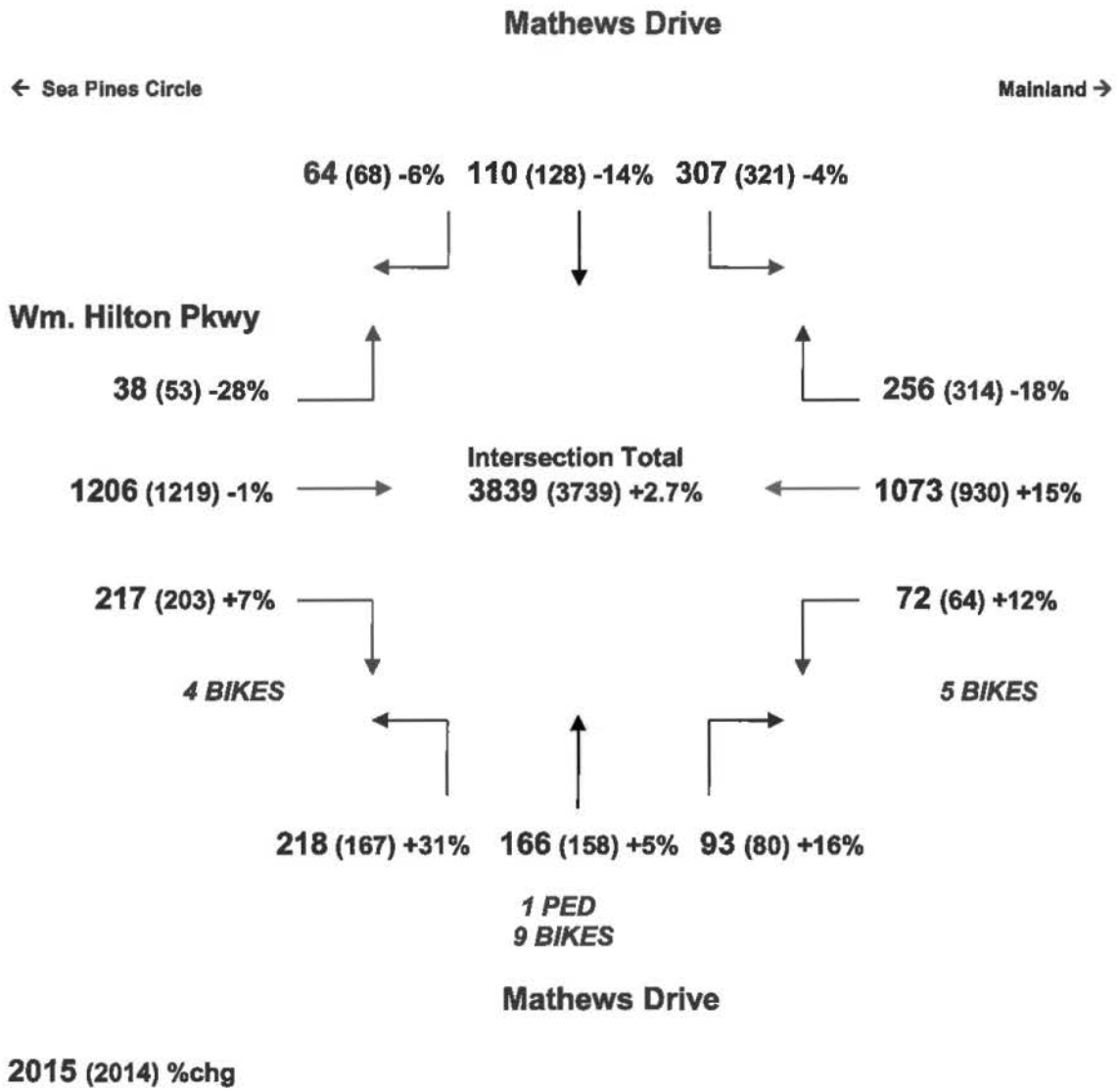
2015 (2014) %chg

William Hilton Parkway with Mathews Drive
(NORTHERN INTERSECTION)
A.M. PEAK HOUR - (7:45 to 8:45 a.m. – Tue. 6/9/15)



2015 (2014) %chg

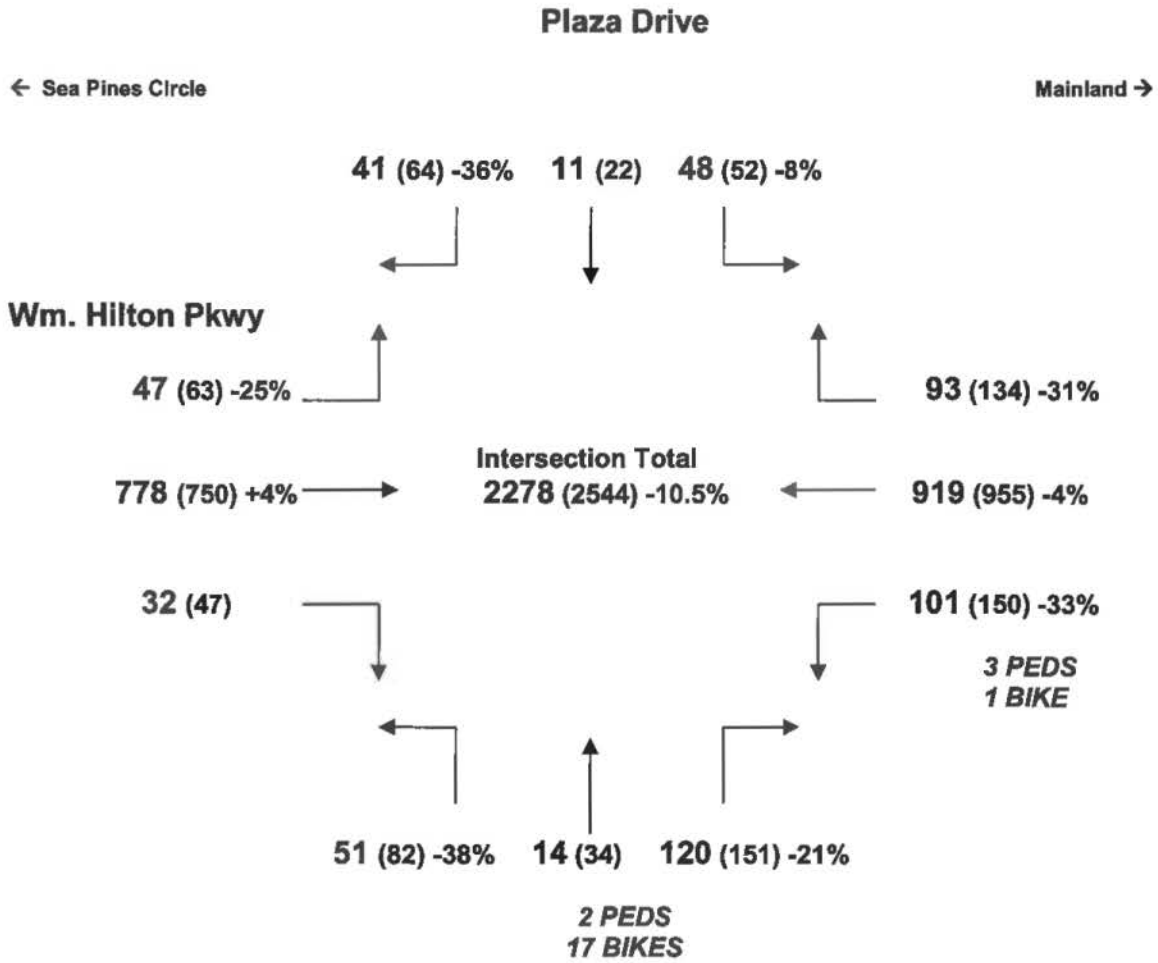
William Hilton Parkway with Mathews Drive
(NORTHERN INTERSECTION)
P.M. PEAK HOUR - (4:00 to 5:00 p.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Dillon Road and Port Royal Plaza

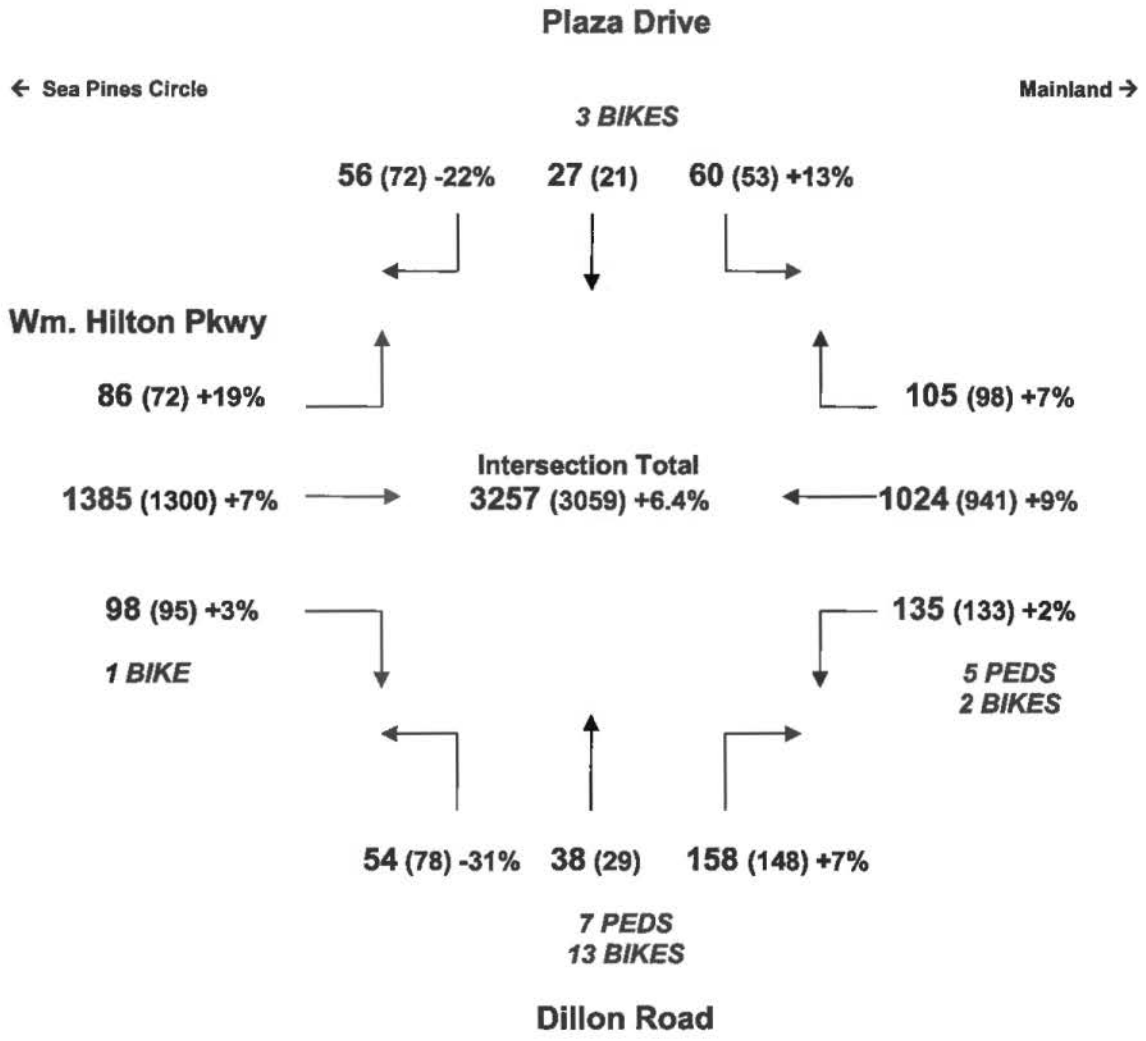
A.M. PEAK HOUR - (7:45 to 8:45 a.m. – Wed. 6/9/15)



2015 (2014)%chg

William Hilton Parkway with Dillon Road and Port Royal Plaza

P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Coggins Point Road

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/9/15)

← Sea Pines Circle

Mainland →

Wm. Hilton Pkwy

Intersection Total
2088 (2164) -3.5%

713 (690) +3% →

← **922** (993) -7%

49 (59) -17% ↓

↓ **169** (174) -3%

← **59** (93) -37%

→ **176** (155) +14%

NO PEDS OR BIKES RECORDED

Coggins Point Road

2015 (2014) %chg

William Hilton Parkway with Coggins Point Road

P.M. PEAK HOUR - (4:00 to 5:00 p.m. – Tue. 6/9/15)

← Sea Pines Circle

Mainland →

Wm. Hilton Pkwy

Intersection Total

1241 (1297) -4% →

2902 (2738) +6.0%

← **997** (946) +5%

109 (94) +16%

226 (180) +26%

NO PEDS OR BIKES RECORDED

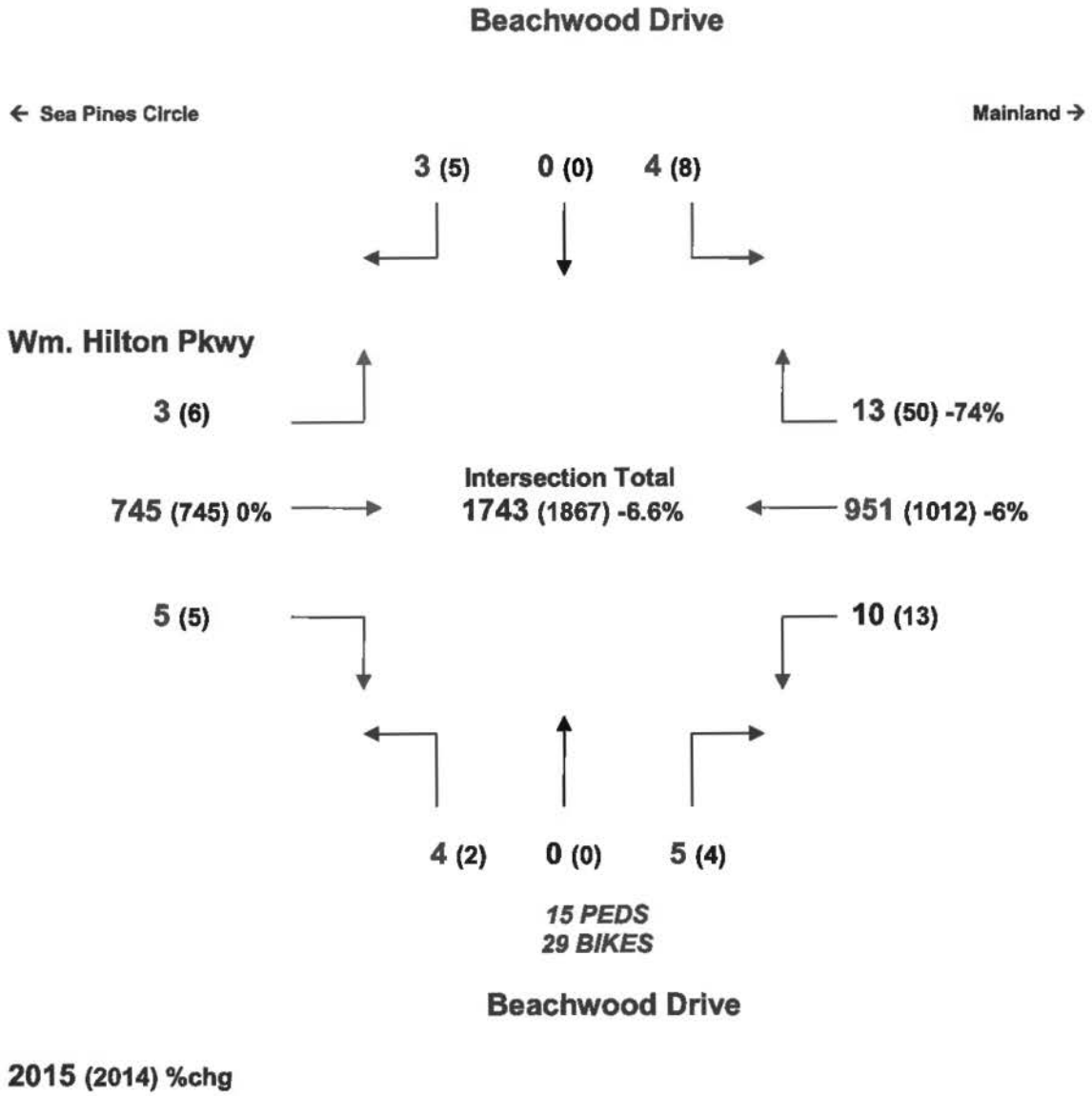
92 (100) -8%

237 (234) +1%

Coggins Point Road

2015 (2014) %chg

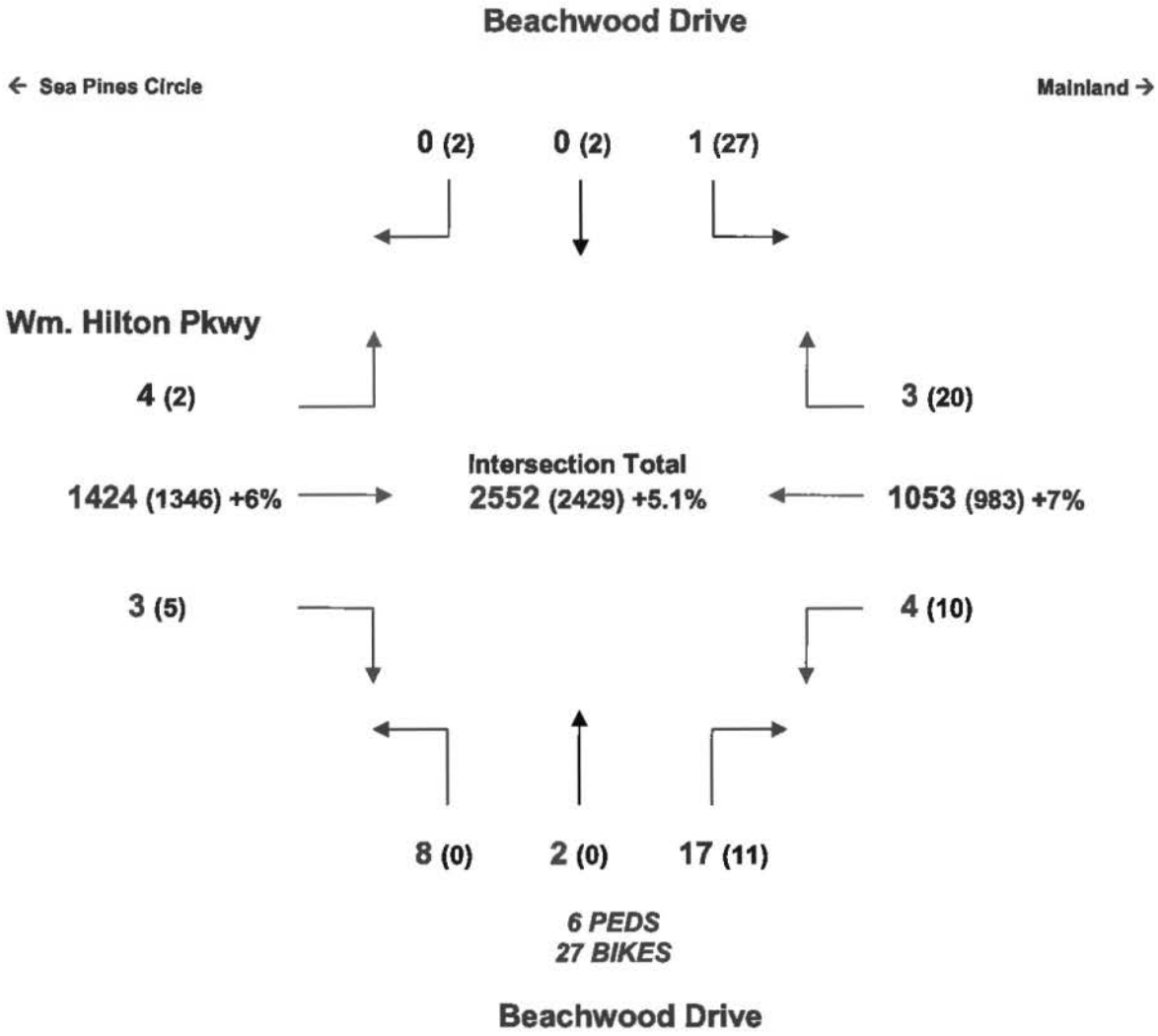
William Hilton Parkway with Beachwood Drive
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Beachwood Drive

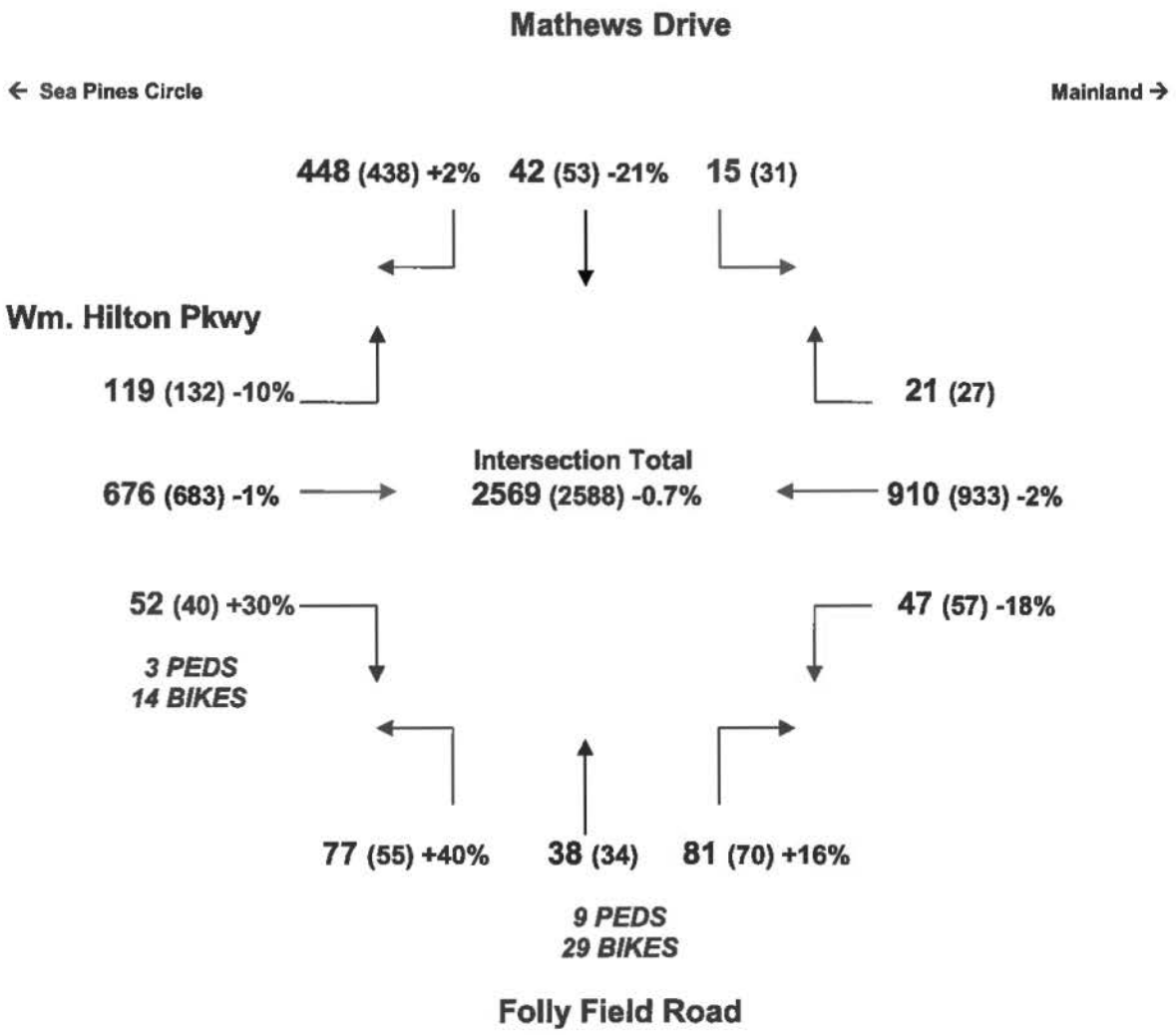
P.M. PEAK HOUR - (4:45 to 5:45 p.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Mathews Drive and Folly Field Road

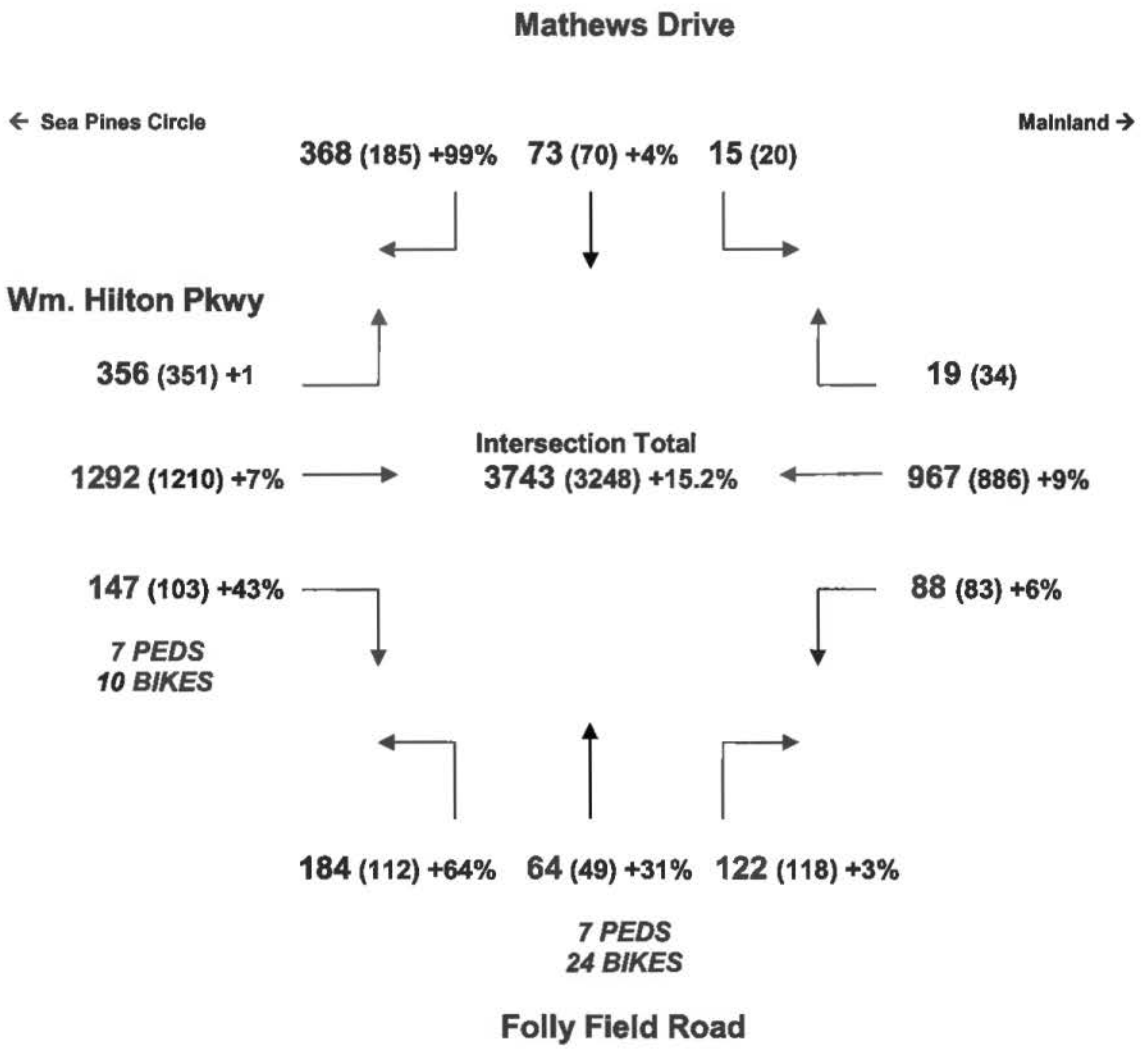
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Mathews Drive and Folly Field Road

P.M. PEAK HOUR - (4:45 to 5:45 p.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Singleton Beach Road

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/9/15)

← Sea Pines Circle

Mainland →

Wm. Hilton Pkwy

806 (835) -3% →

Intersection Total
2262 (2300) -1.7%

← **1312** (1357) -3%

14 (18)

29 (29)

2 BIKES

22 (16)

25 (19)

10 PEDS
42 BIKES

Singleton Beach Road

2015 (2014) %chg

William Hilton Parkway with Singleton Beach Road

P.M. PEAK HOUR - (4:45 to 5:45 p.m. – Tue. 6/9/15)

← Sea Pines Circle

Mainland →

4 BIKES

Wm. Hilton Pkwy

Intersection Total

1712 (1553) +10% → **3358** (3089) +8.7% ← **1469** (1400) +5%

26 (20)

22 (21)

3 BIKES

43 (29)

32 (20)

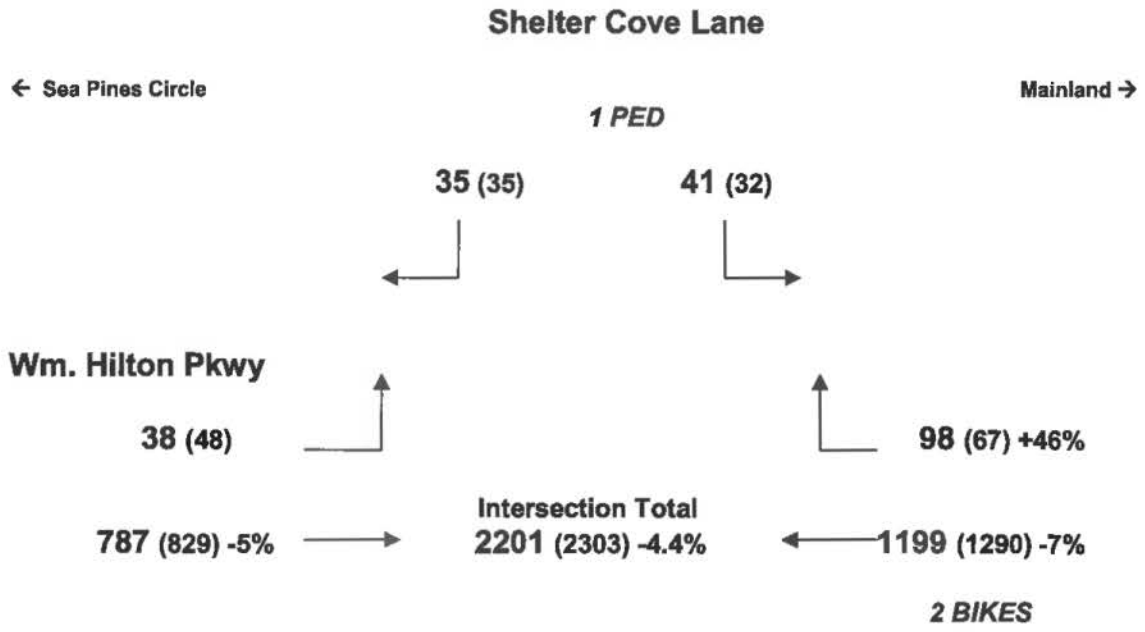
2 PEDS
45 BIKES

Singleton Beach Road

2015 (2014) %chg

William Hilton Parkway with Shelter Cove Lane

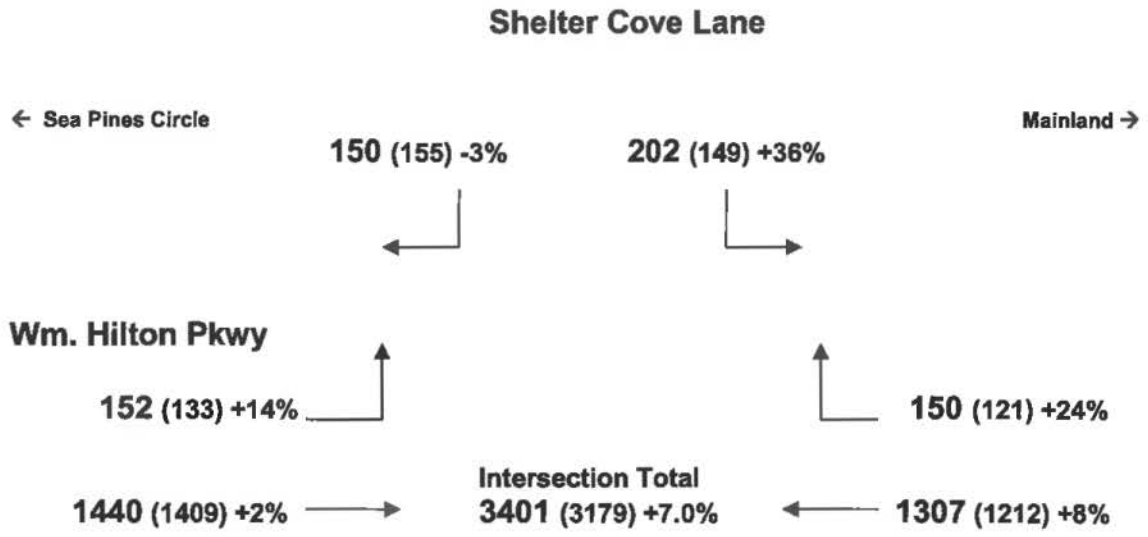
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/9/15)



2015 (2014) %chg

William Hilton Parkway with Shelter Cove Lane

P.M. PEAK HOUR - (4:45 to 5:45 p.m. – Tue. 6/9/15)

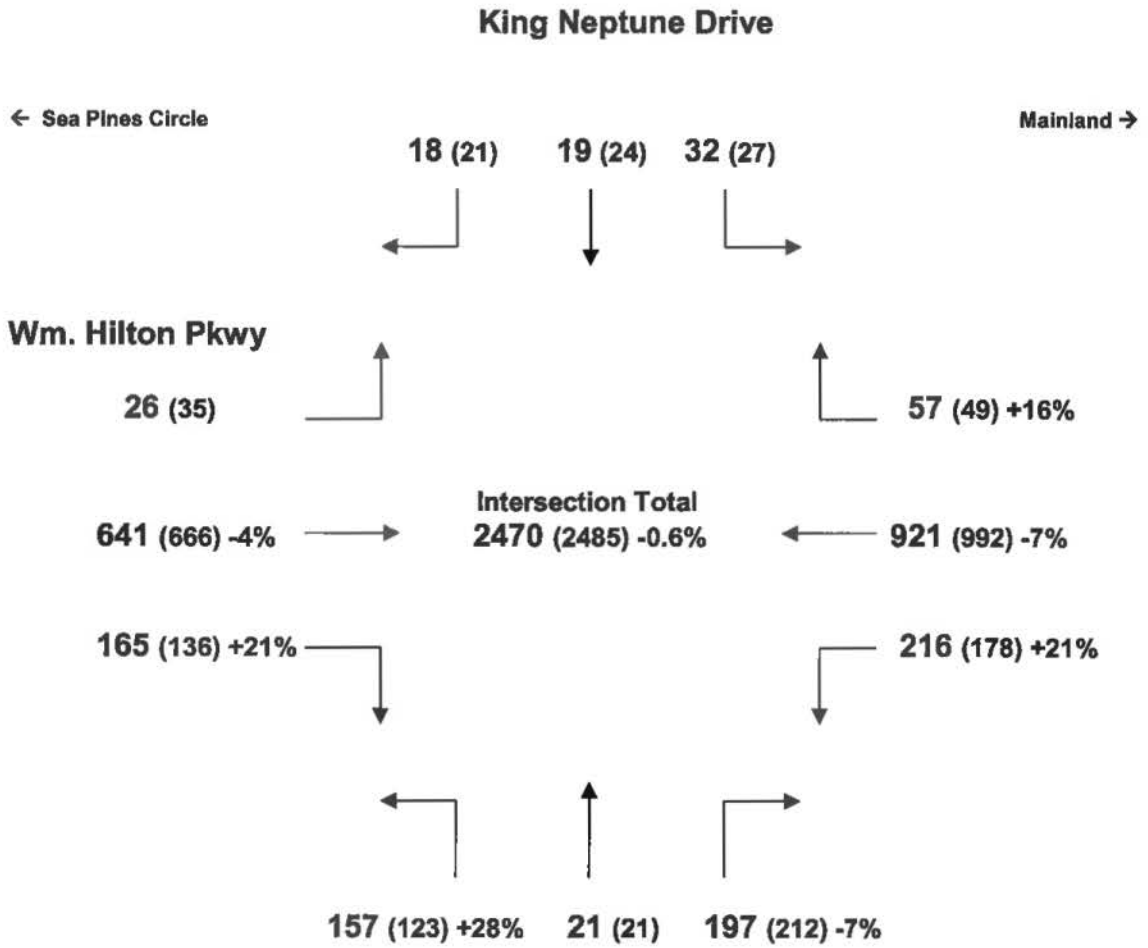


NO PEDS OR BIKES RECORDED

2015 (2014) %chg

William Hilton Parkway with Queens Folly Road and King Neptune Drive

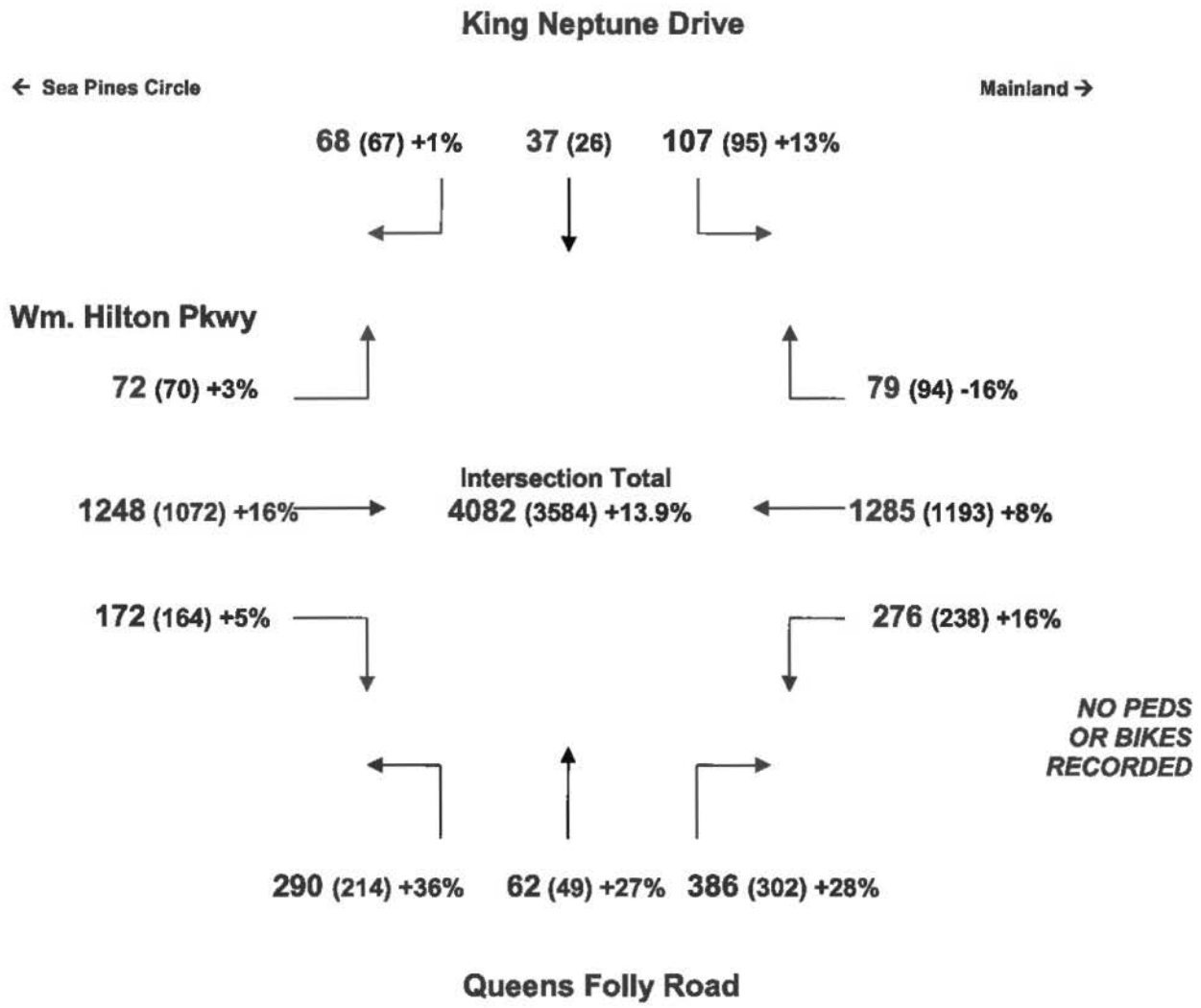
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Wed. 6/10/15)



2015 (2014) %chg

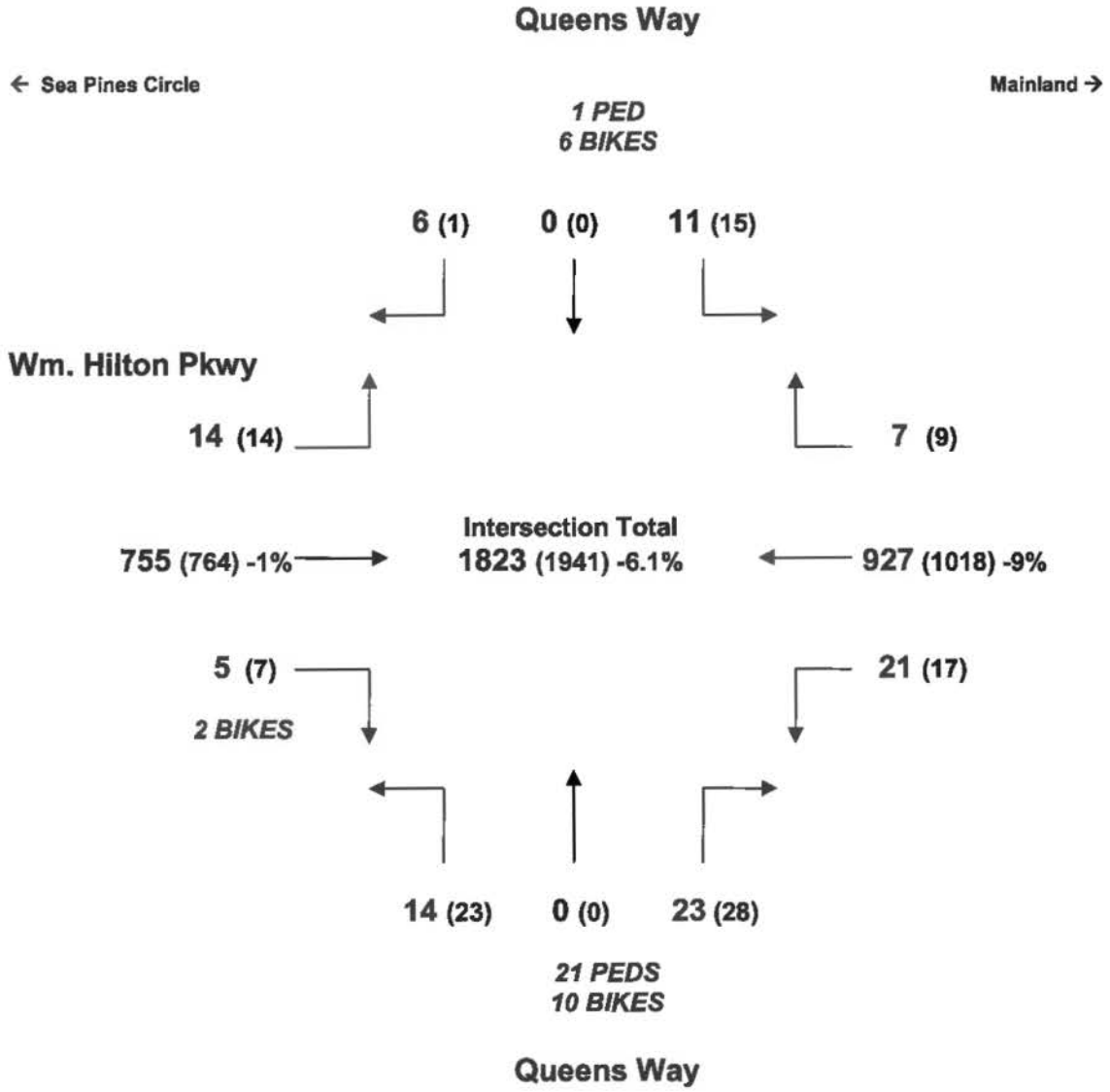
William Hilton Parkway with Queens Folly Road and King Neptune Drive

P.M. PEAK HOUR - (4:45 to 5:45 p.m. – Wed. 6/10/15)



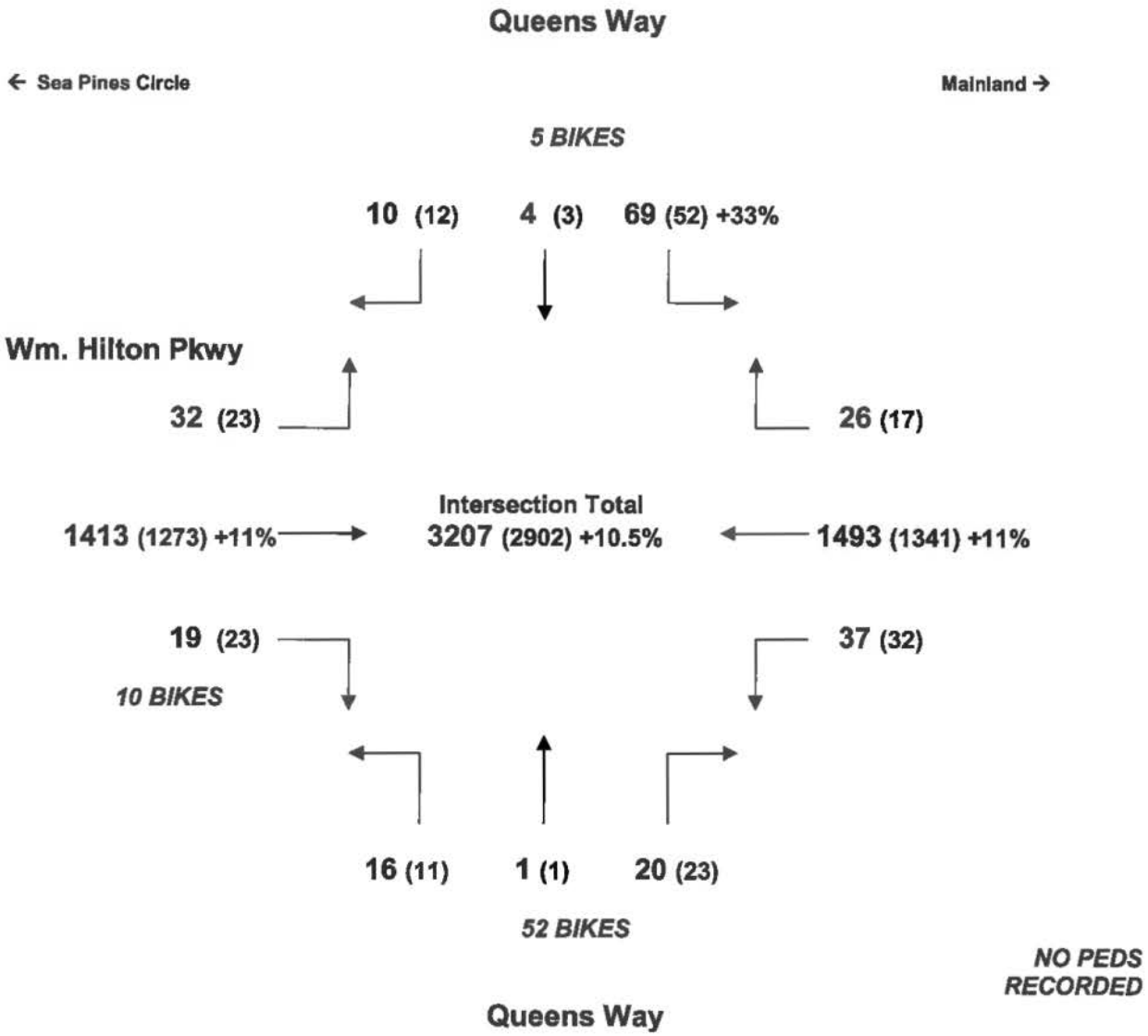
2015 (2014) %chg

William Hilton Parkway with Queens Way
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Wed. 6/10/15)



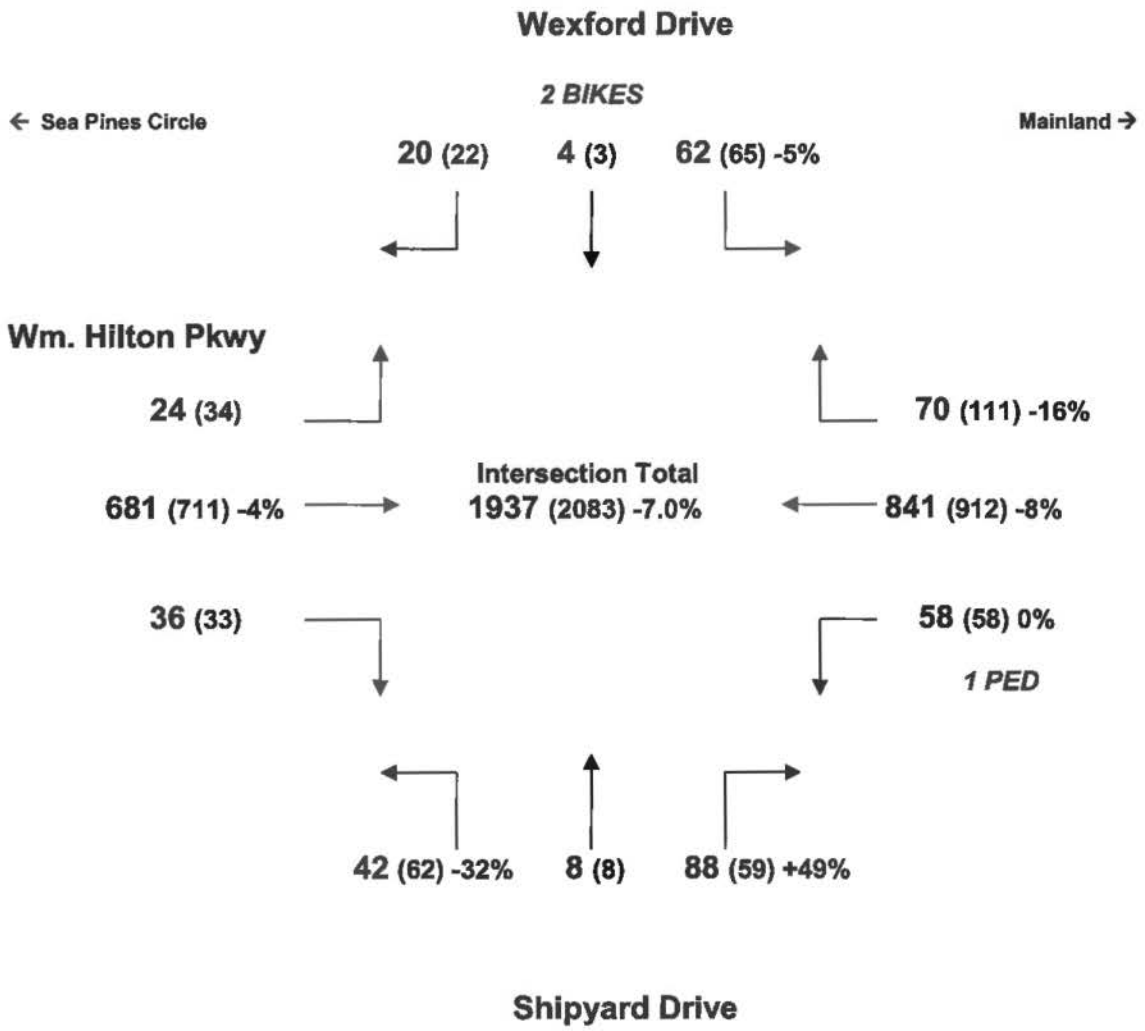
2015 (2014) %chg

William Hilton Parkway with Queens Way
P.M. PEAK HOUR - (4:45 to 5:45 p.m. – Wed. 6/10/15)



William Hilton Parkway with Shipyard Drive and Wexford Drive

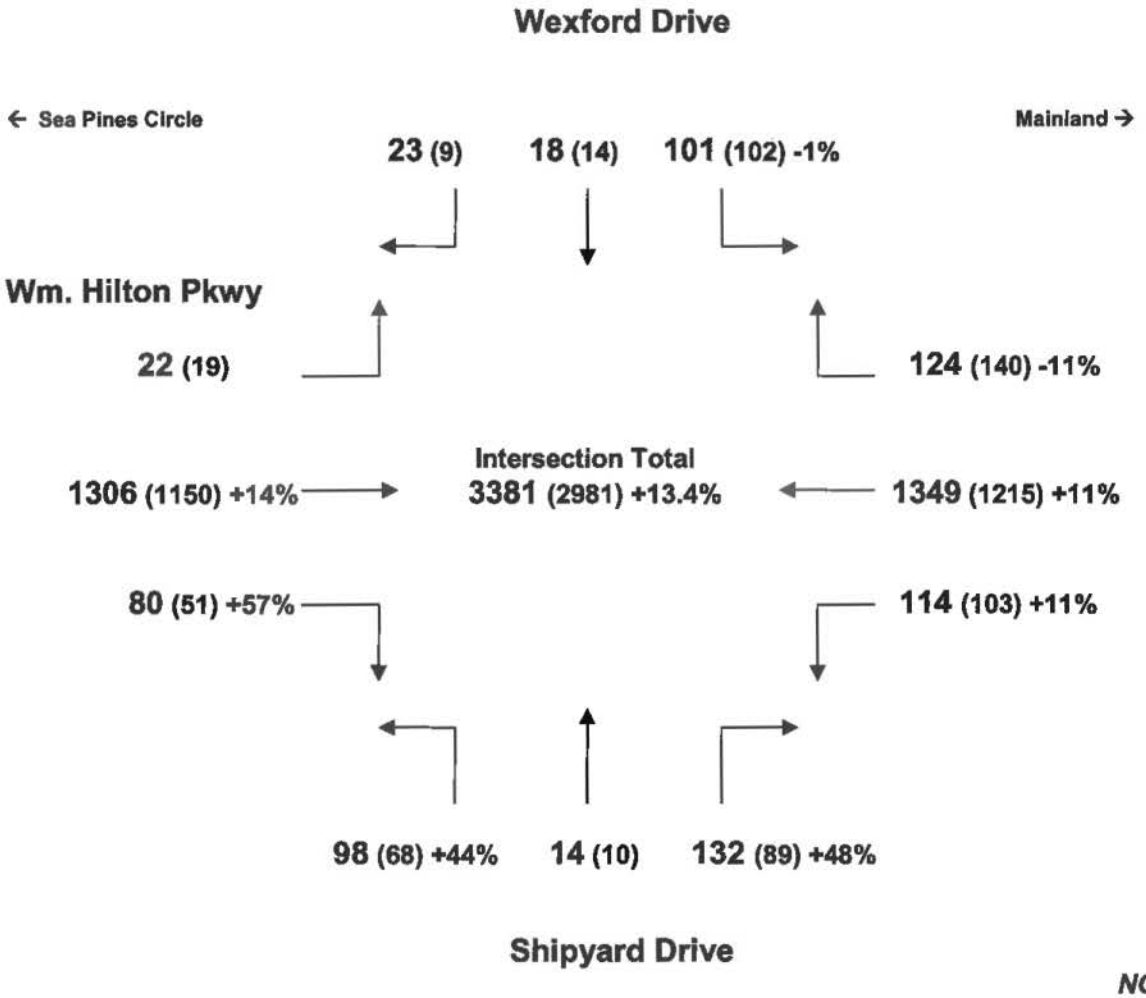
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Wed. 6/10/15)



2015 (2014) %chg

William Hilton Parkway with Shipyard Drive and Wexford Drive

P.M. PEAK HOUR - (5:00 to 6:00 p.m. – Wed. 6/10/15)

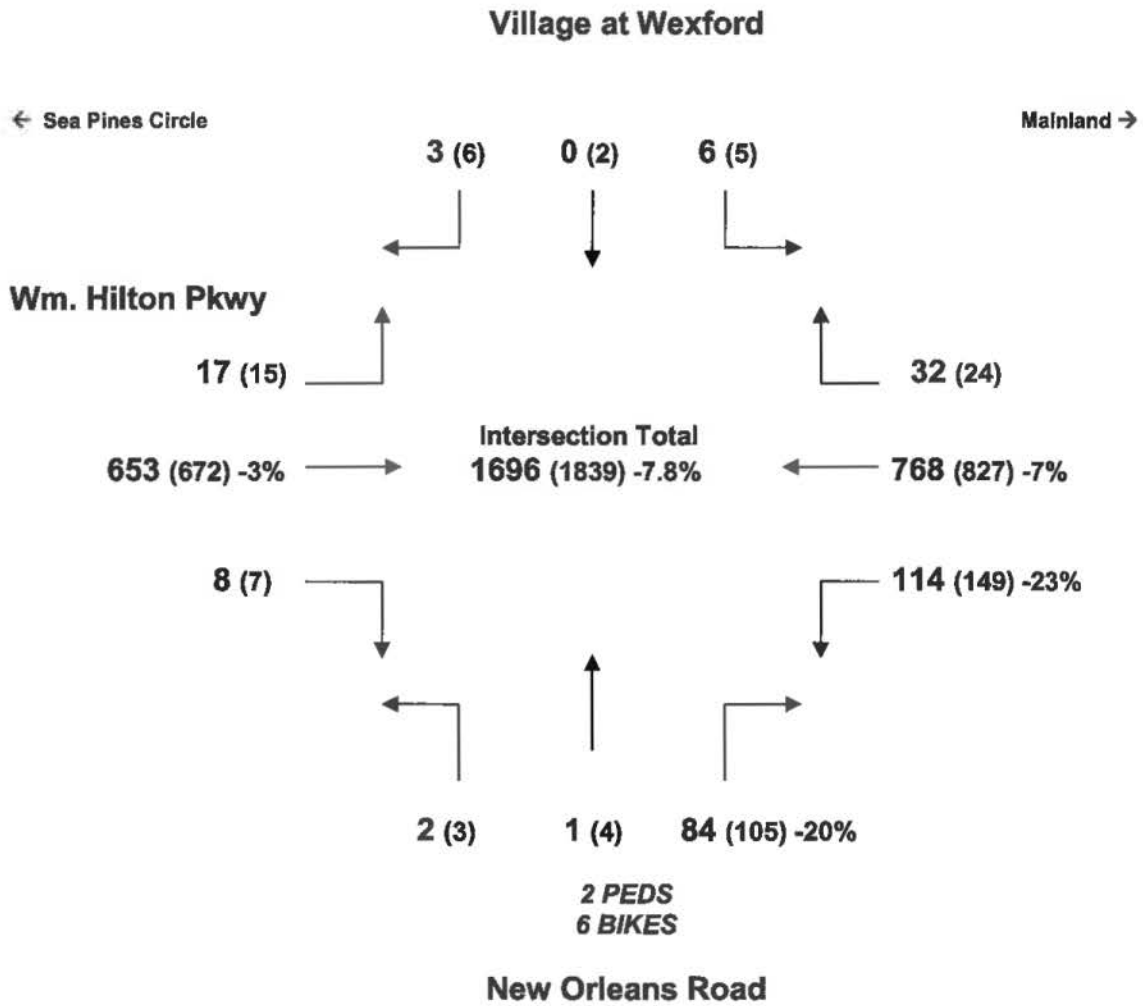


NO PEDS OR BIKES RECORDED

2015 (2014) %chg

William Hilton Parkway with New Orleans Road and Village at Wexford

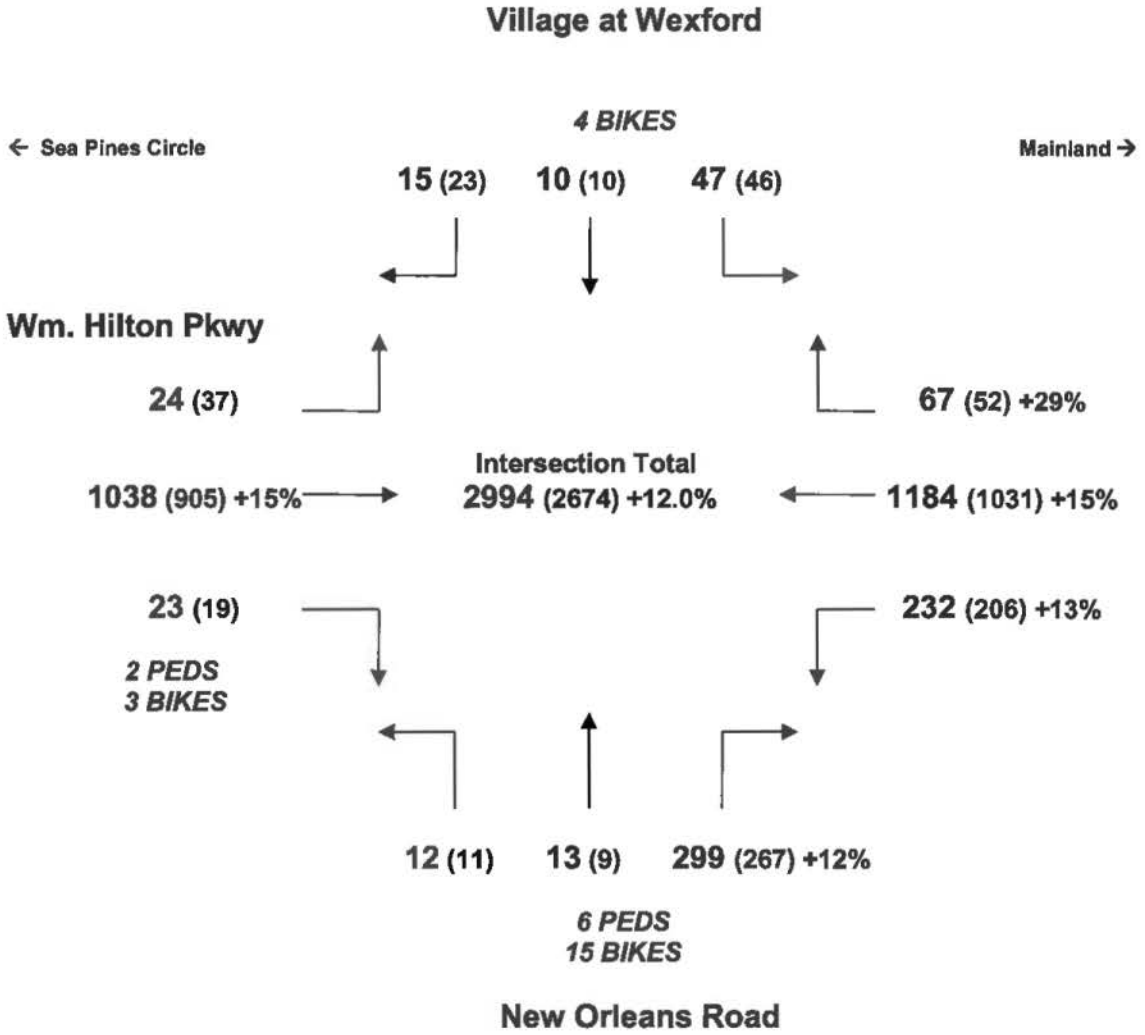
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Wed. 6/10/15)



2015 (2014) %chg

William Hilton Parkway with New Orleans Road and Village at Wexford

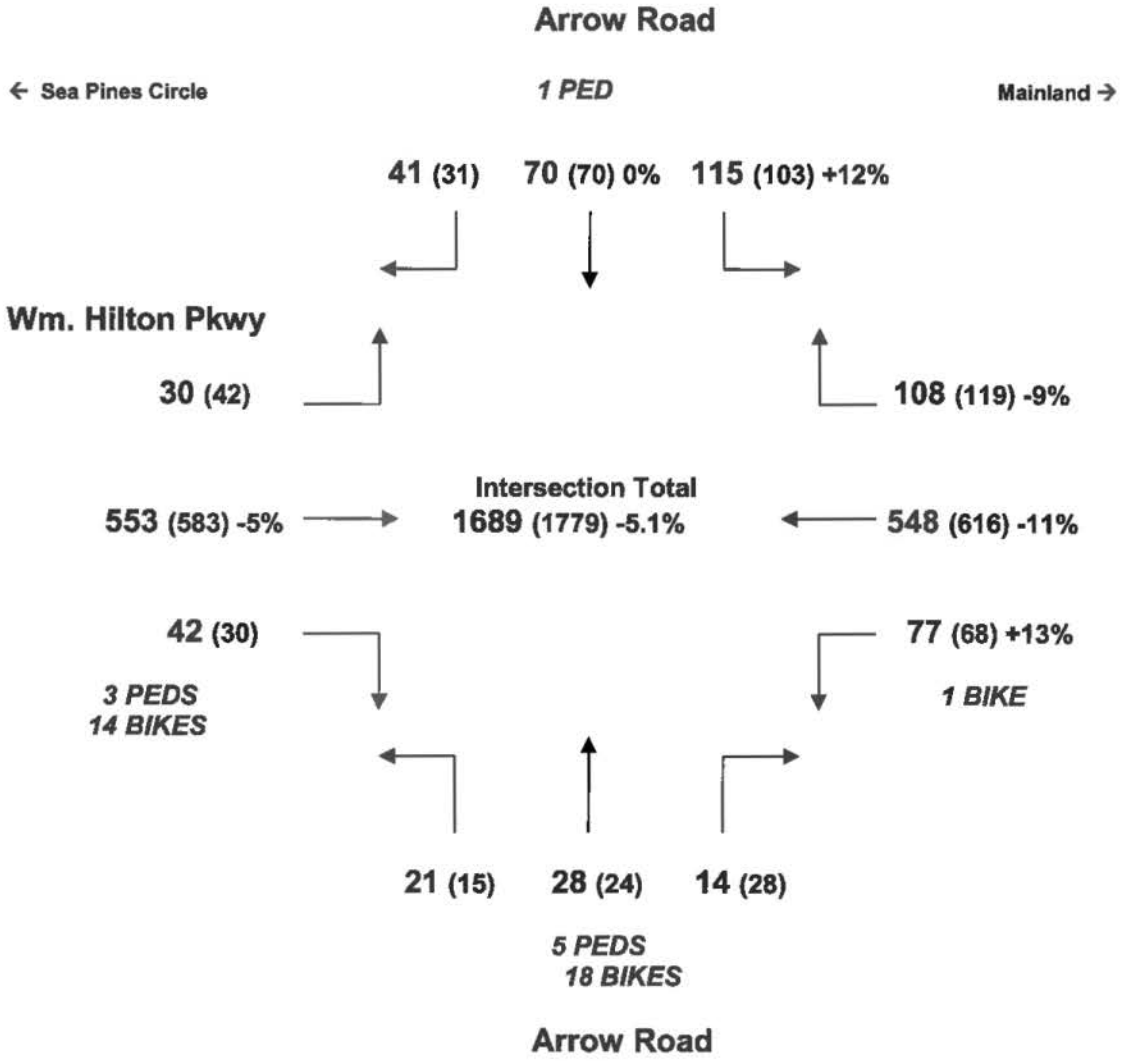
P.M. PEAK HOUR - (5:00 to 6:00 p.m. – Wed. 6/10/15)



2015 (2014) %chg

William Hilton Parkway with Arrow Road

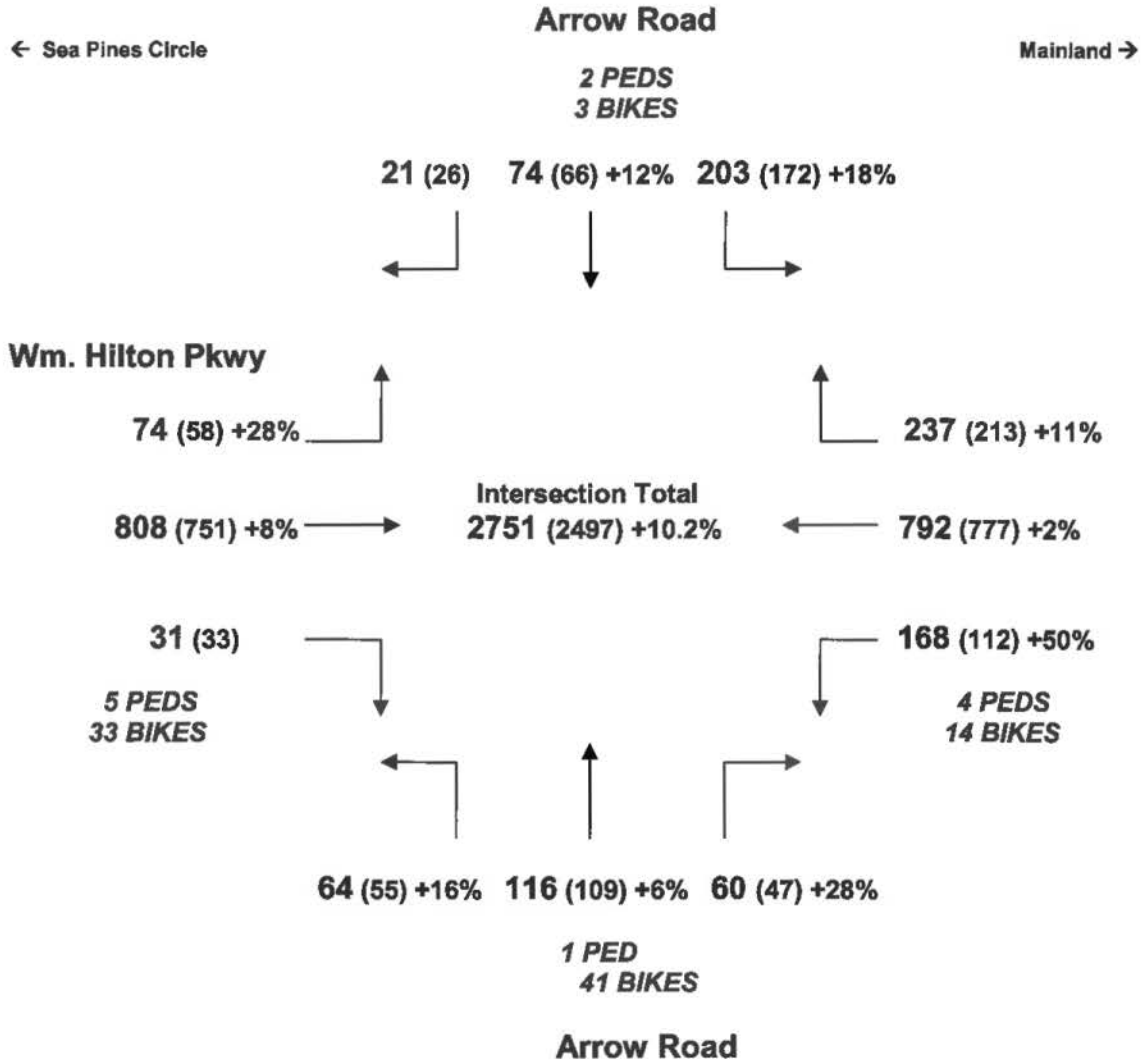
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Wed. 6/10/15)



2015 (2014) %chg

William Hilton Parkway with Arrow Road

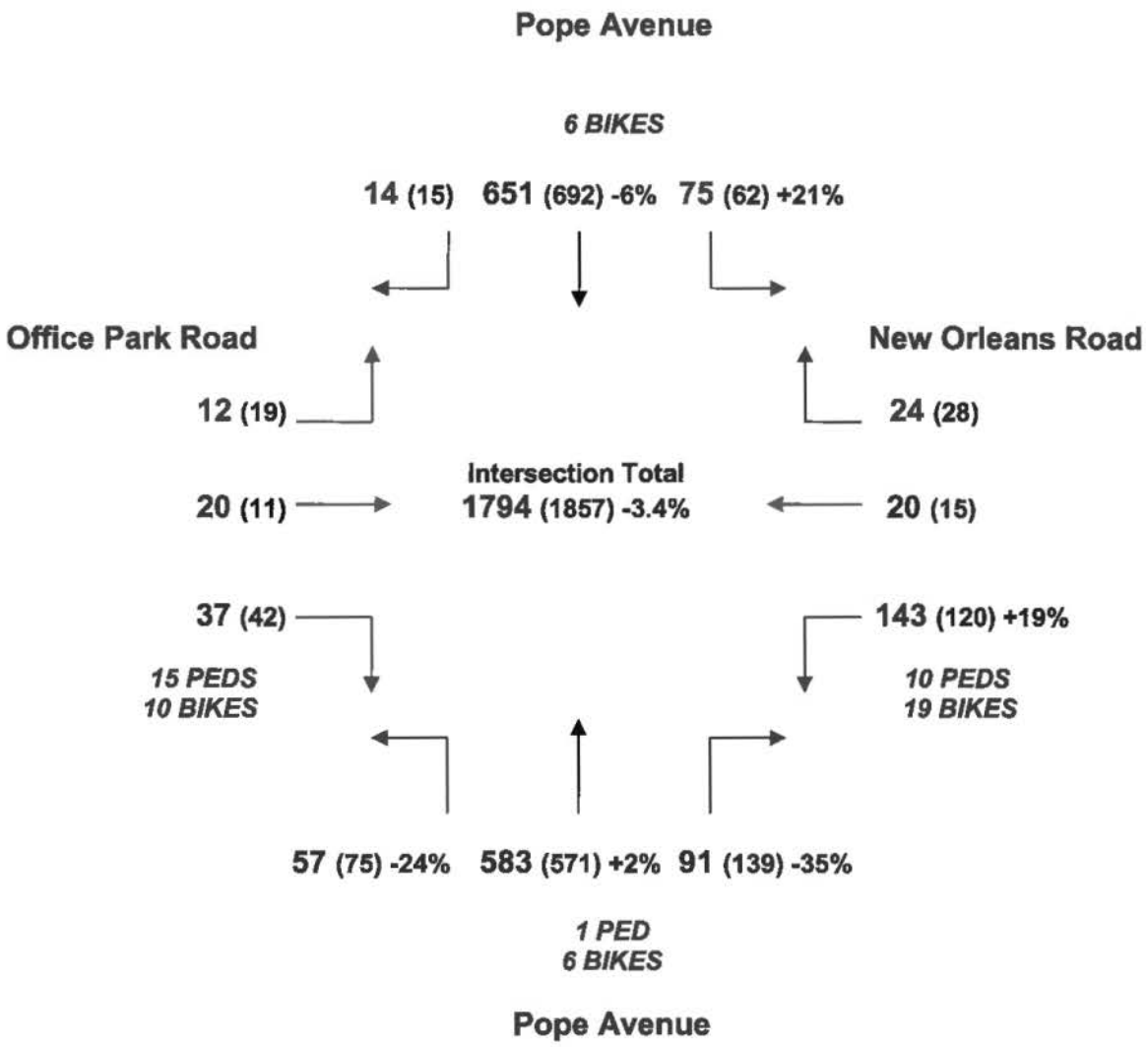
P.M. PEAK HOUR - (4:45 to 5:45 p.m. – Wed. 6/10/15)



2015 (2014) %chg

Pope Avenue with New Orleans Road and Office Park Road

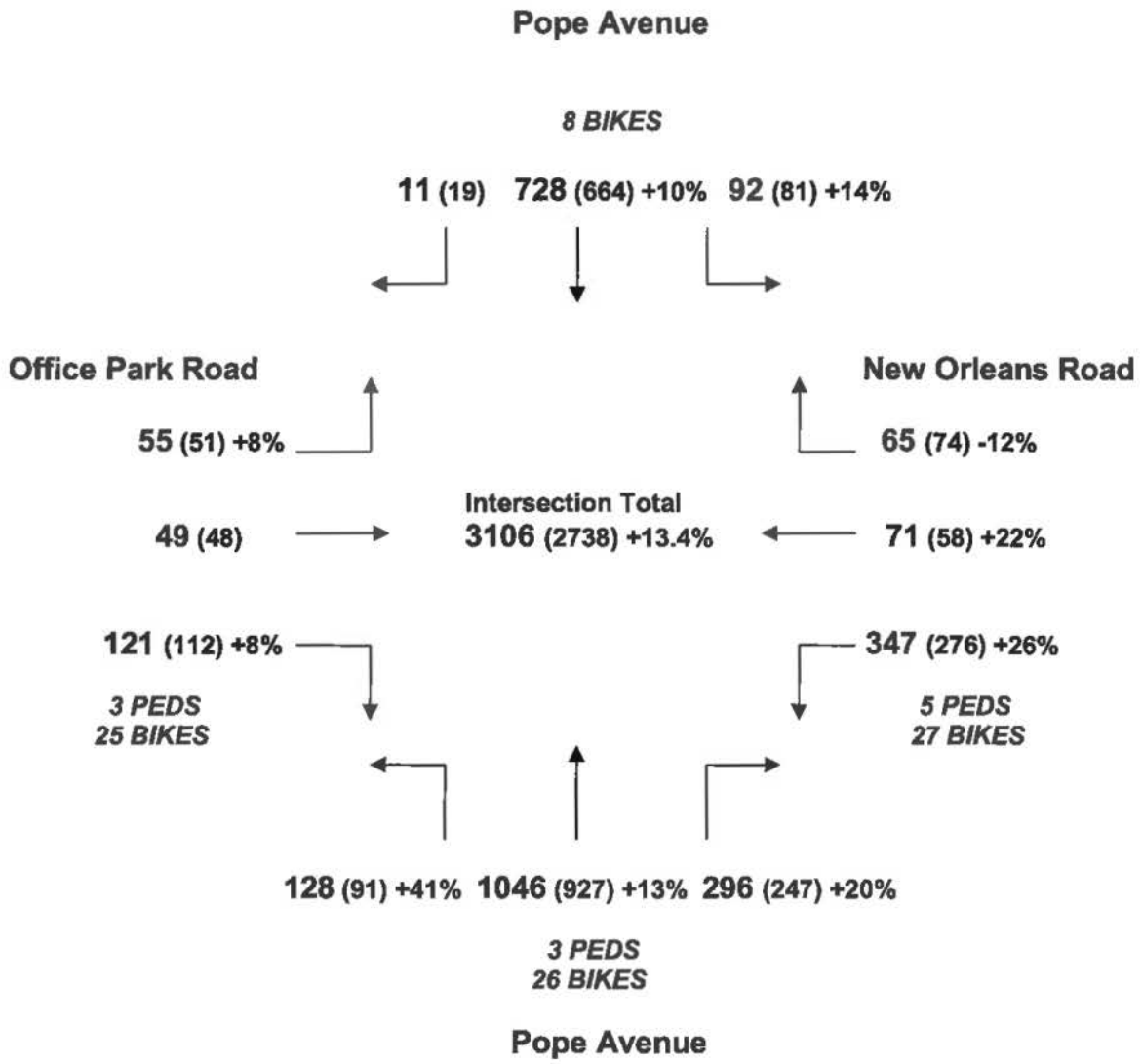
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Wed. 6/10/15)



2015 (2014) %chg

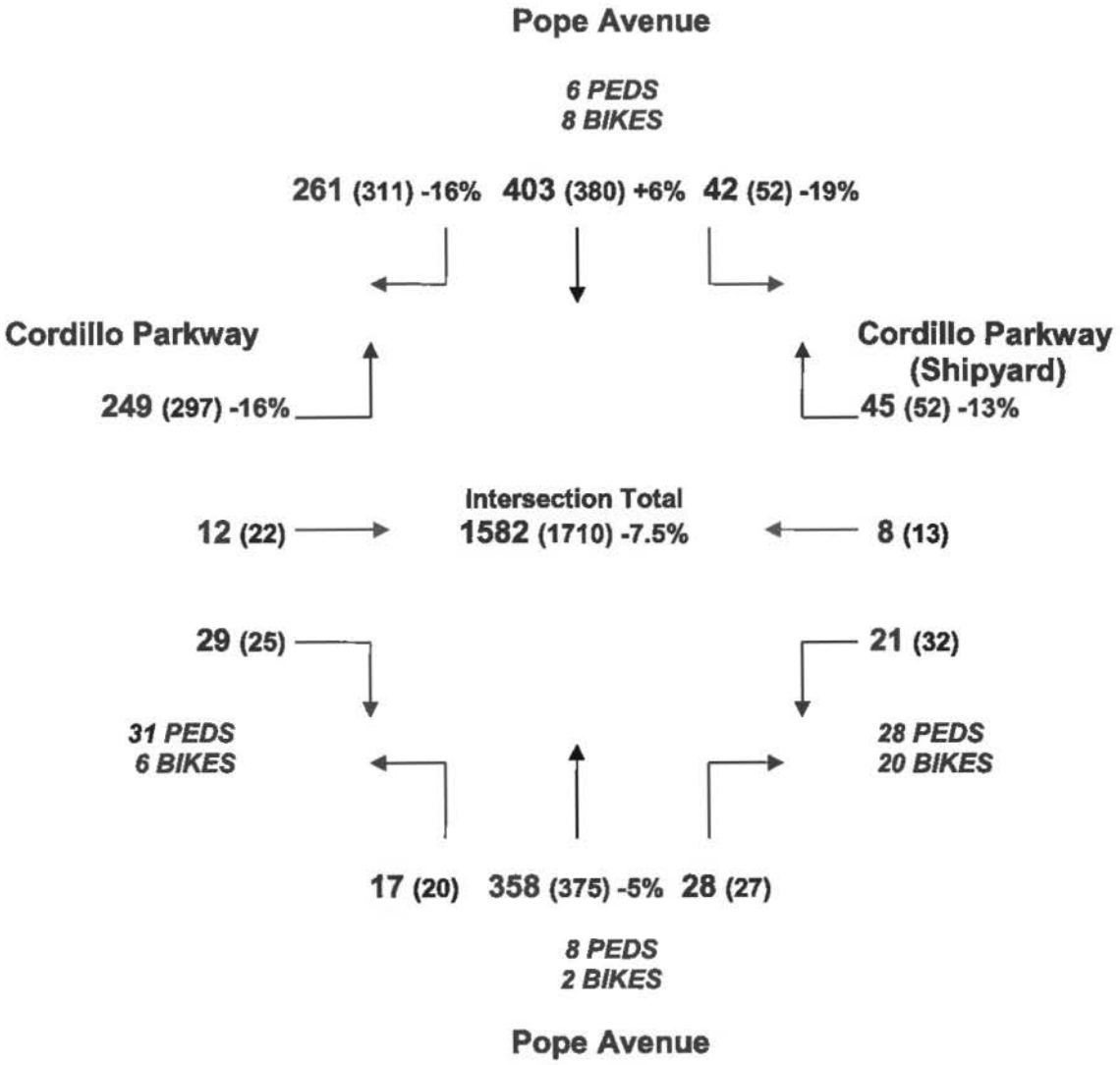
Pope Avenue with New Orleans Road and Office Park Road

P.M. PEAK HOUR - (4:45 to 5:45 p.m. – Wed. 6/10/15)



2015 (2014) %chg

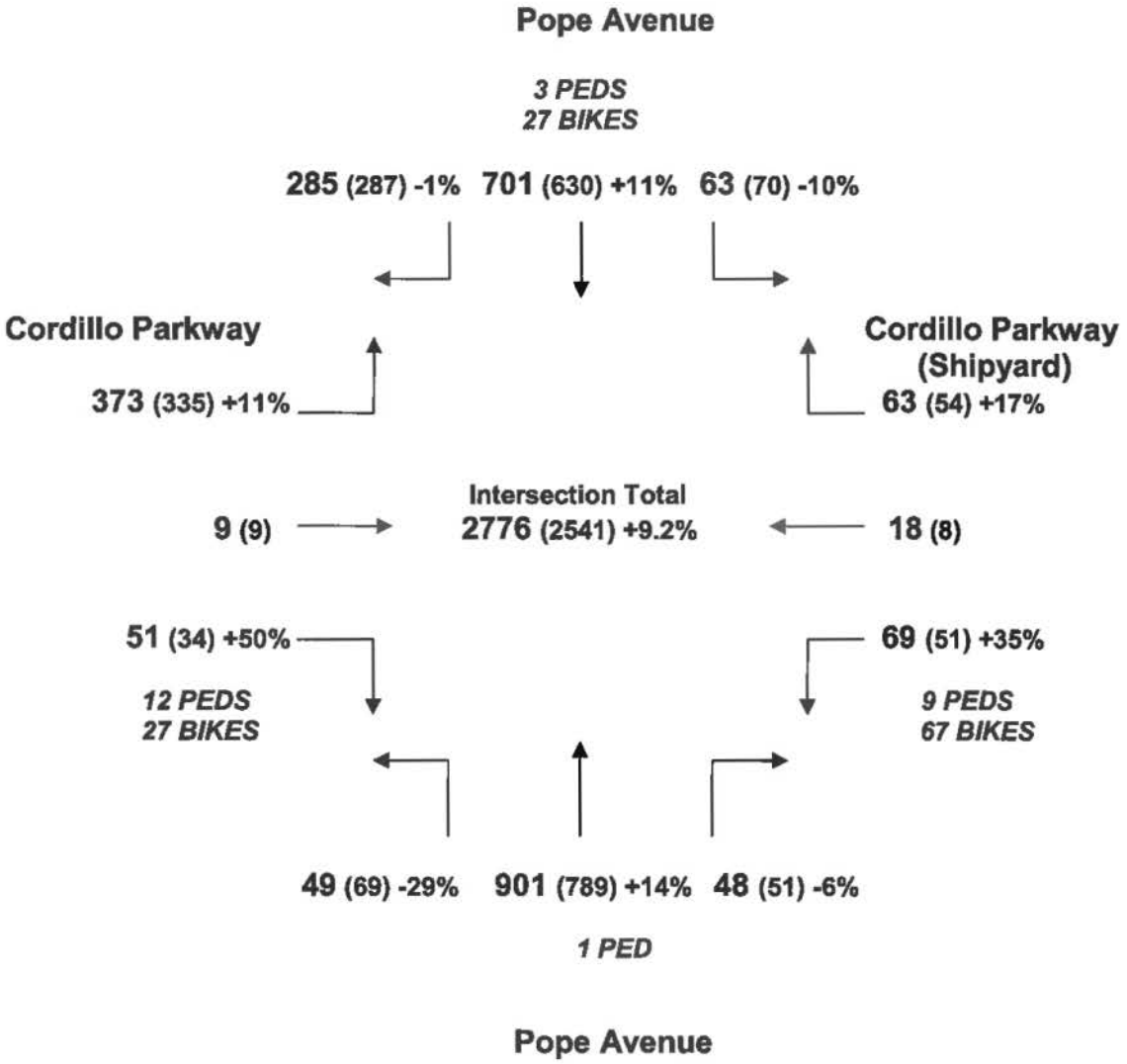
Pope Avenue with Cordillo Parkway
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/9/15)



2015 (2014) %chg

Pope Avenue with Cordillo Parkway

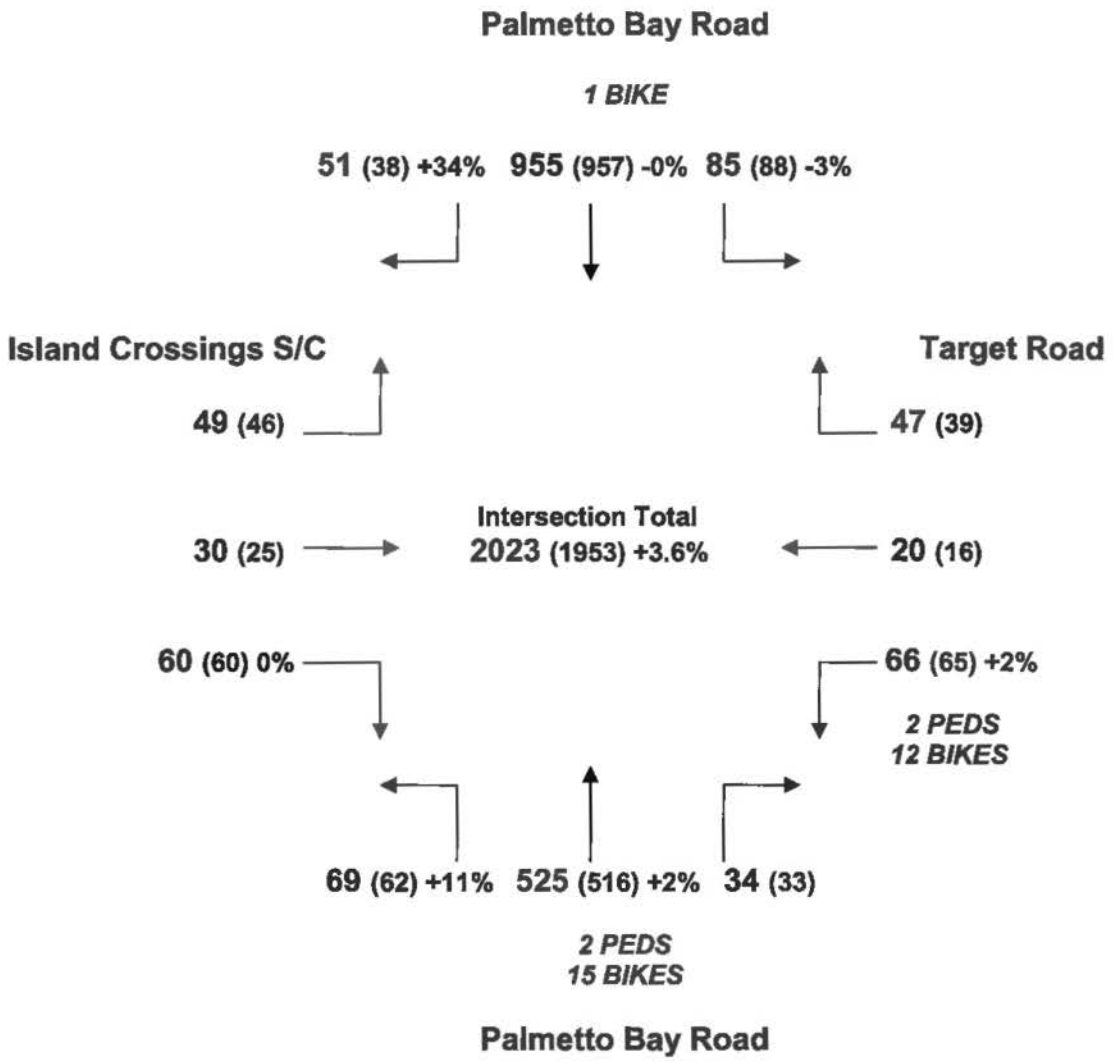
P.M. PEAK HOUR - (4:45 to 5:45 p.m. – Wed. 6/10/15)



2015 (2014) %chg

Palmetto Bay Road with Target Road and Entrance to Island Crossings S/C

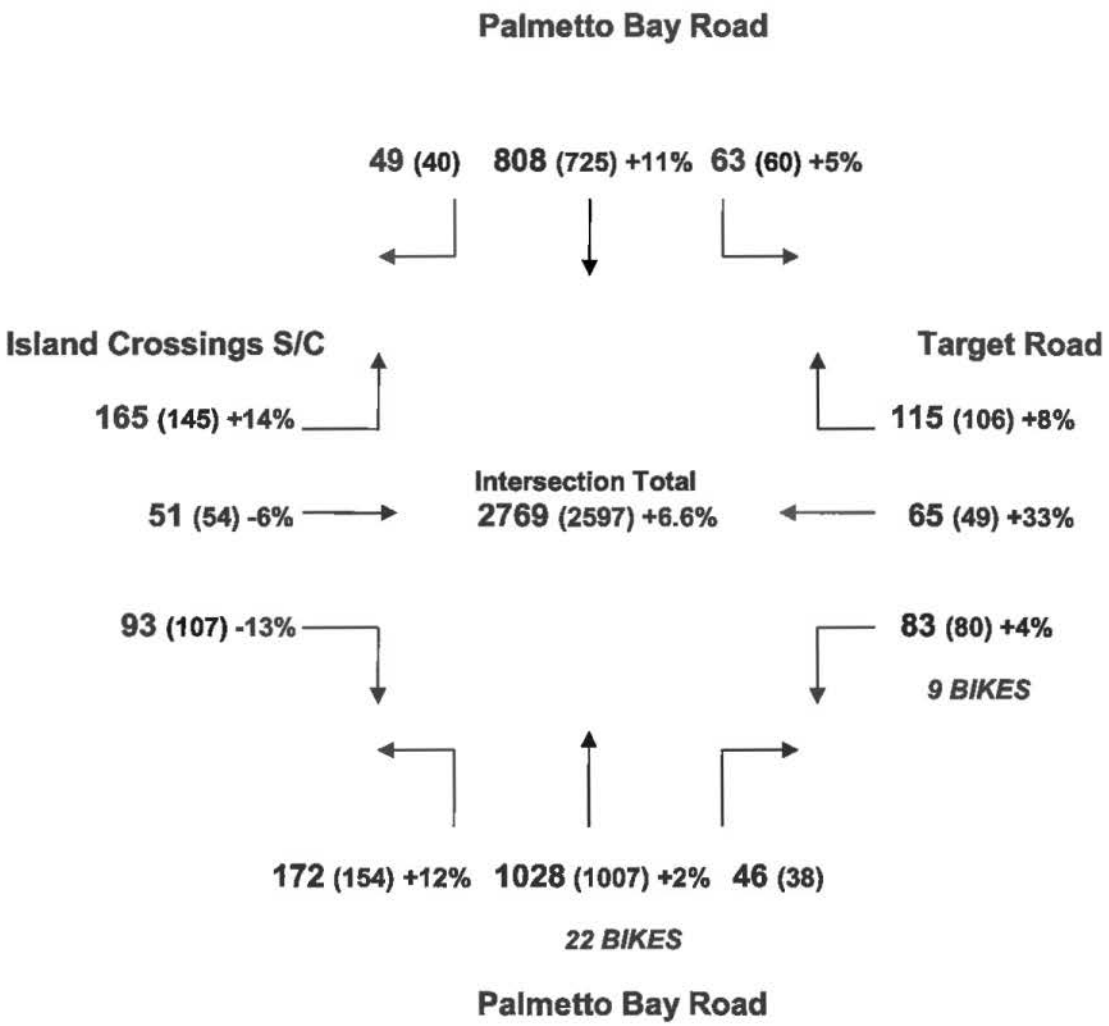
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Wed. 6/10/15)



2015 (2014) %chg

Palmetto Bay Road with Target Road and Entrance to Island Crossings S/C

P.M. PEAK HOUR - (4:45 to 5:45 p.m. – Wed. 6/10/15)

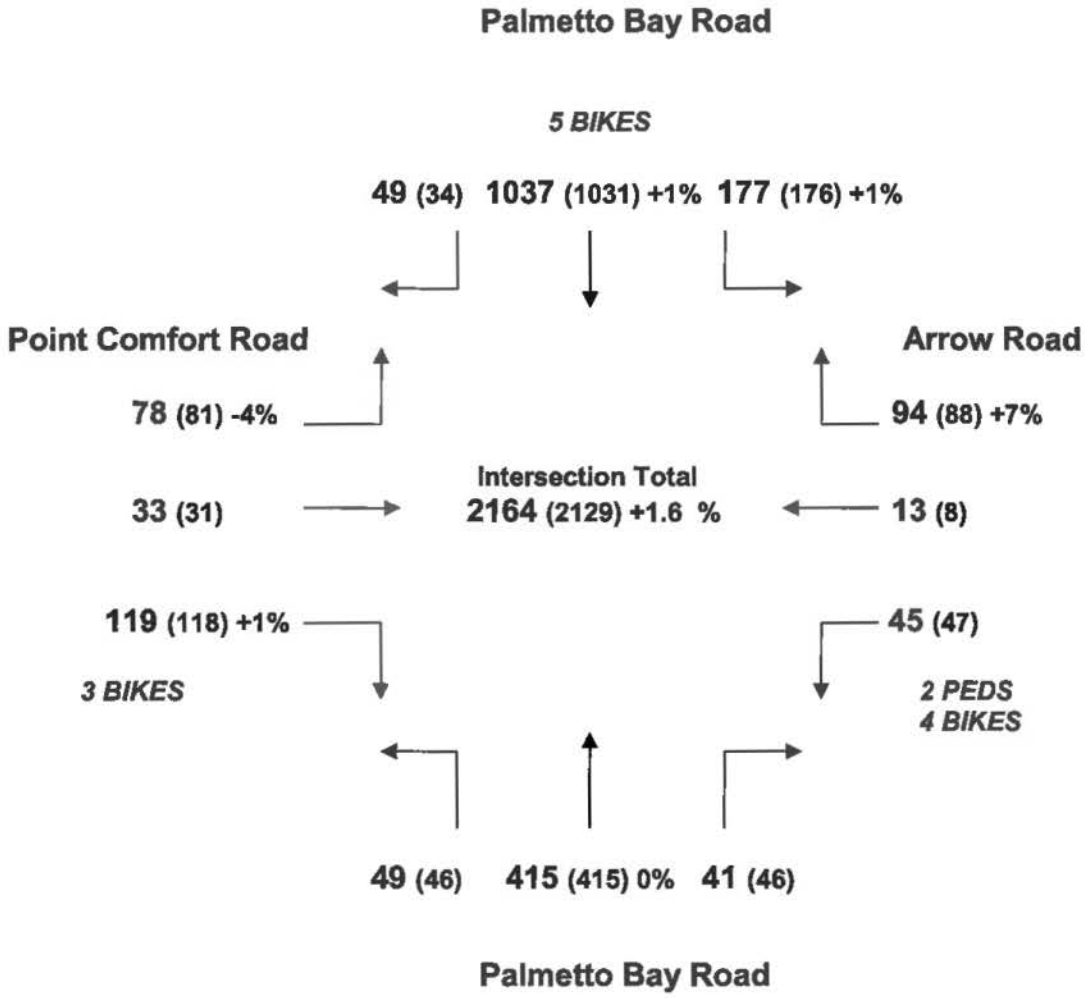


NO PEDS RECORDED

2015 (2014) %chg

Palmetto Bay Road with Arrow Road and Point Comfort Road

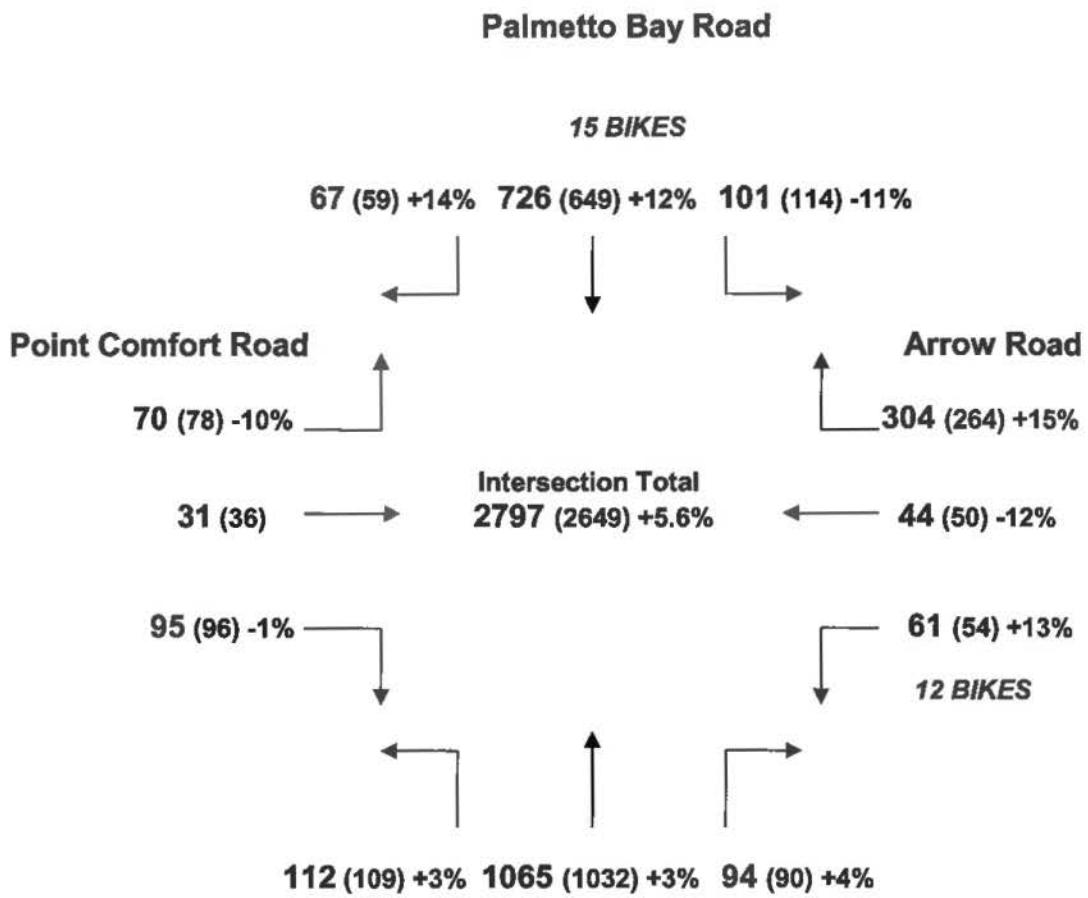
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Wed. 6/10/15)



2015 (2014) %chg

Palmetto Bay Road with Arrow Road and Point Comfort Road

P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Wed. 6/10/15)

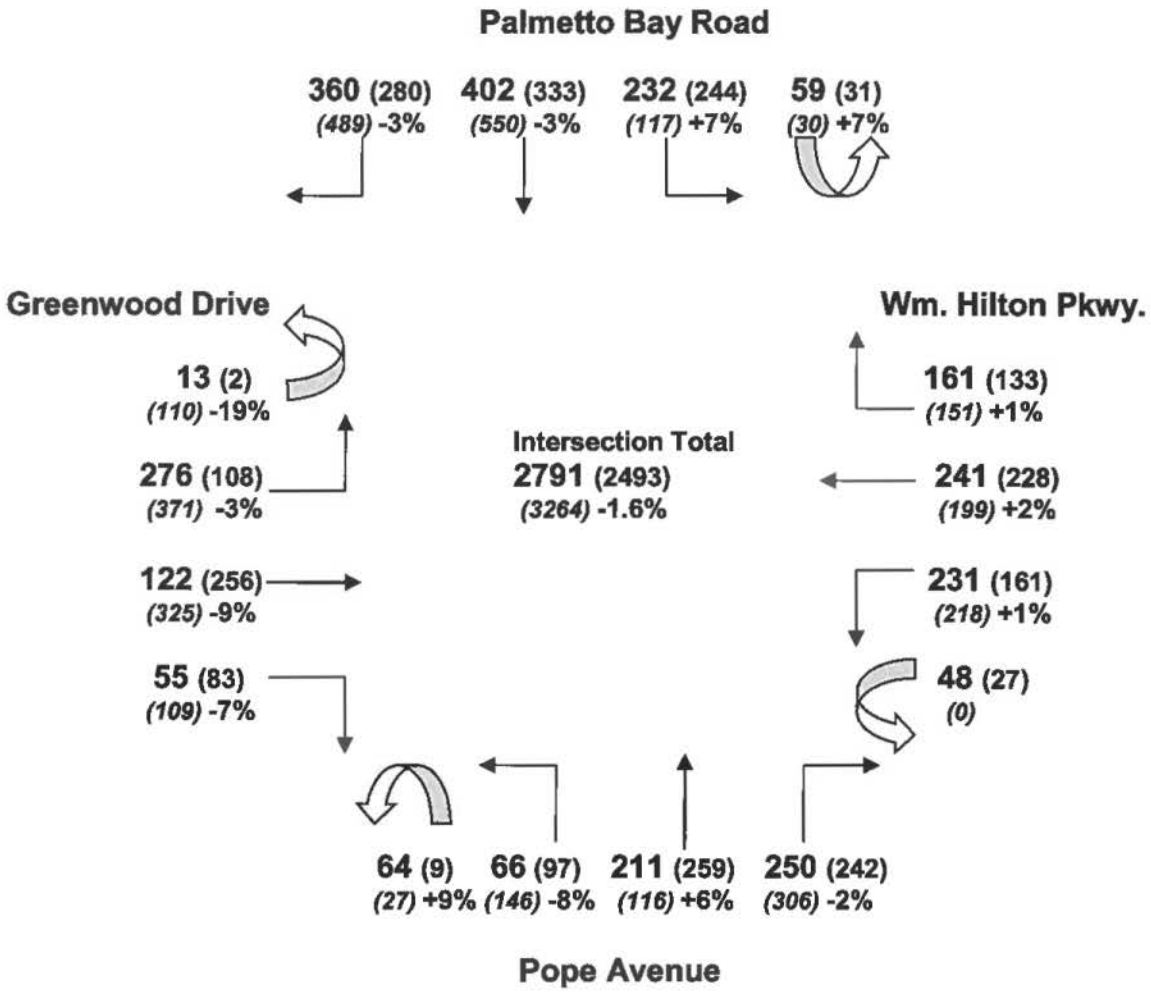


NO PEDS RECORDED

2015 (2014) %chg

Sea Pines Circle

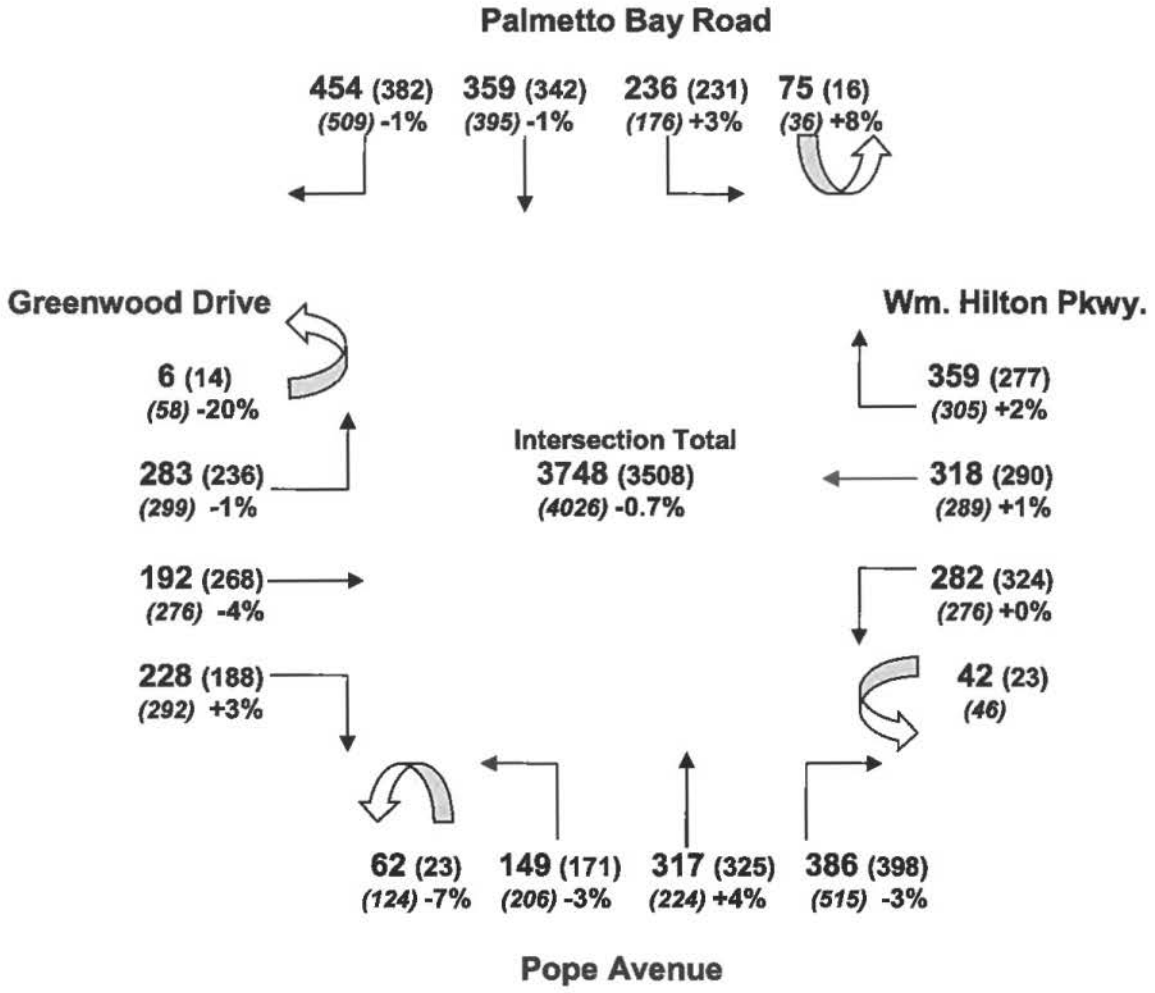
A.M. PEAK HOUR (8:00 to 9:00 a.m. – Wed. 6/17/15)



2015 (2010)
(2005) **10-Yr. Effective Annual Change**

Sea Pines Circle

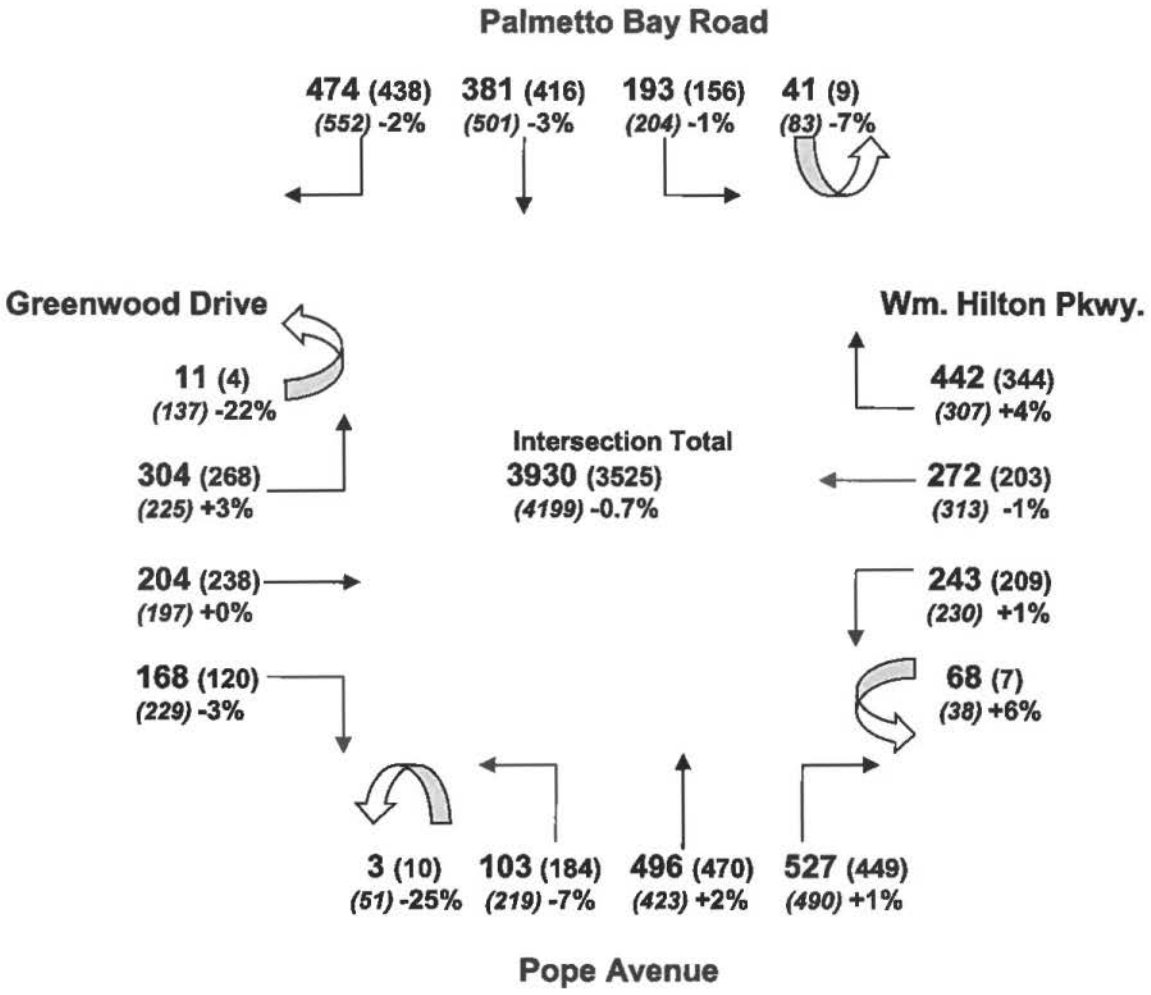
MIDDAY PEAK HOUR (12:00 to 1:00 p.m. – Wed. 6/17/15)



2015 (2010)
(2005) **10-yr Effective Annual Change**

Sea Pines Circle

P.M. PEAK HOUR (5:00 p.m. to 6:00 p.m. – Wed. 6/17/15)



2015 (2010)
(2005) **10-yr Effective Annual Change**

APPENDIX B

MAP SHOWING
LOCATIONS OF 24-HOUR BI-DIRECTIONAL COUNTS
SUMMARIZED IN TABLE ONE

JUNE 2015

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BUS.
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APPENDIX C

FEDERAL HIGHWAY ADMINISTRATION REPORT

"TRAFFIC VOLUME TRENDS"

JULY 2015

U. S. Department
of Transportation

**Federal Highway
Administration**

Office of Highway
Policy Information

TRAFFIC VOLUME TRENDS

July 2015

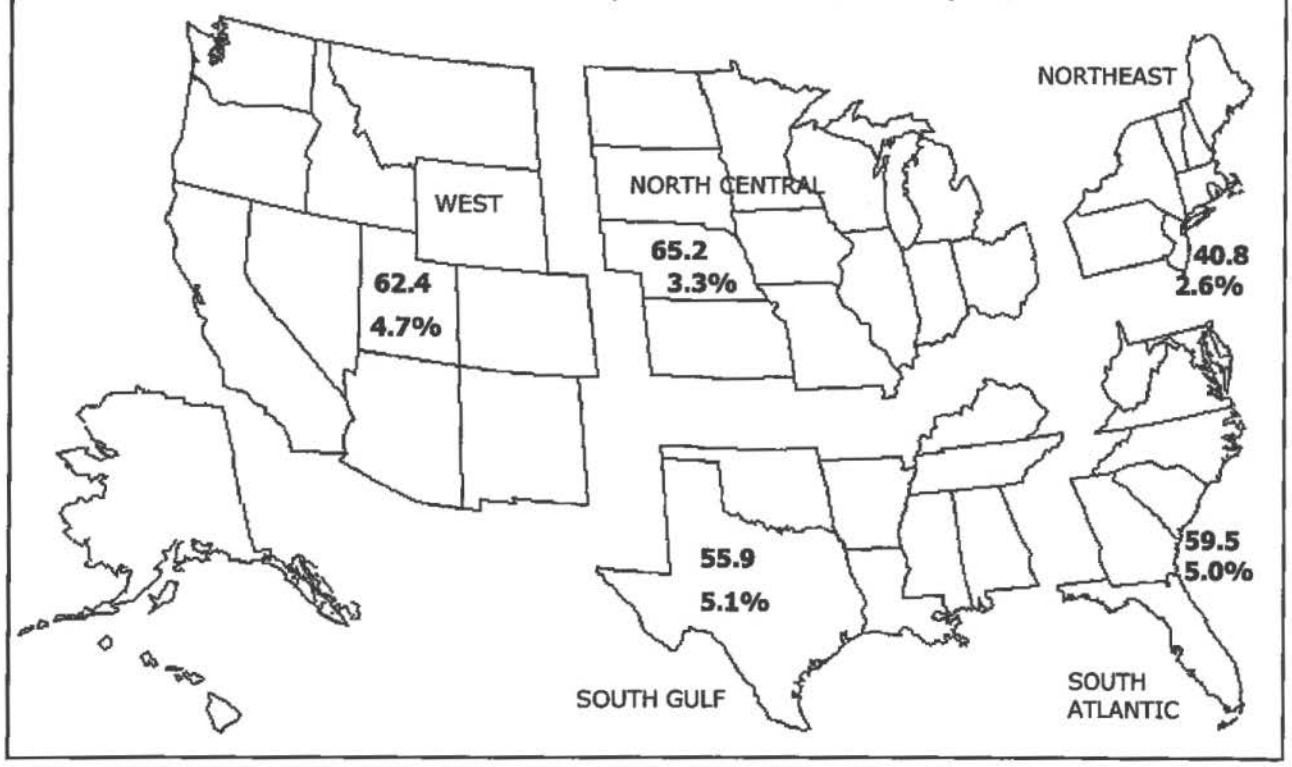
Travel on all roads and streets changed by **+4.2%** (+11.4 billion vehicle miles) for July 2015 as compared with July 2014. Travel for the month is estimated to be 283.7 billion vehicle miles.

The seasonally adjusted vehicle miles traveled for July 2015 is 264.4 billion miles, a 3.9% (9.9 billion vehicle miles) increase over July 2014. It also represents a 0.8% change (2.1 billion vehicle miles) compared with June 2015.

Cumulative Travel for 2015 changed by **+3.6%** (+63.4 billion vehicle miles). The Cumulative estimate for the year is 1,820.3 billion vehicle miles of travel.

Estimated Vehicle-Miles of Travel by Region - July 2015 - (In Billions)

Change in Traffic as compared to same month last year.



Note: All data for this month are preliminary. Revised values for the previous month are shown in Tables 1 and 2.

All vehicle-miles of travel computed with Highway Statistics 2013 Table VM-2 as a base.

Compiled with data on hand as of September 10, 2015.

Some historical data were revised based on HPMS and amended TVT data as of December 2013.

For information on total licensed drivers in the U.S. visit http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm.
Select the year of interest then Section III (Driver Licensing).

For information on total registered motor vehicles in the U.S., visit http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm
Select the year of interest and Section II (Motor Vehicles).

Seasonally adjusted vehicle miles traveled removes seasonal changes allowing month-to-month, year-to-year trend comparisons.

Traffic Volume Trends - July 2015

Based on preliminary reports from the State Highway Agencies, travel during July 2015 on all roads and streets in the nation changed by **+4.2%** (+11.4 billion vehicle miles) resulting in estimated travel for the month at **283.7**** billion vehicle-miles.

This total includes **95.9** billion vehicle-miles on rural roads and **187.9** billion vehicle-miles on urban roads and streets.

Cumulative Travel changed by **+3.6%** (+63.4 billion vehicle miles).

The larger changes to rural and urban travel are primarily because of the expansion in urban boundaries reflected in the 2000 census. Travel estimates for 2004 and beyond will also reflect this adjustment.

Travel for the current month, the cumulative yearly total, as well as the moving 12-month total on all roads and streets is shown below. Similar totals for each year since 1990 are also included.

Travel in Millions of Vehicle Miles

All Roads and Streets

Year	July	Year to Date	Moving 12-Month
1990	195,470	1,249,210	2,140,555
1991	198,387	1,253,637	2,151,928
1992	206,616	1,298,275	2,216,853
1993	209,838	1,326,364	2,275,240
1994	214,778	1,356,007	2,326,348
1995	217,188	1,405,475	2,407,055
1996	225,109	1,428,788	2,446,088
1997	236,713	1,482,368	2,535,782
1998	239,944	1,512,756	2,590,760
1999	243,116	1,536,698	2,649,305
2000	245,140	1,593,494	2,736,255
2001	250,363	1,614,880	2,768,312
2002	256,392	1,652,755	2,833,486
2003	262,105	1,665,799	2,868,554
2004	265,969	1,719,117	2,943,540
2005	267,025	1,741,605	2,987,277
2006	263,442	1,751,981	2,999,806
2007	267,179	1,765,795	3,028,185
2008	262,152	1,740,862	3,006,191
2009	265,026	1,724,091	2,959,757
2010	265,861	1,720,438	2,953,109
2011	260,317	1,708,478	2,955,002
2012	260,880	1,731,669	2,969,006
2013	264,570	1,736,041	2,973,804
2014	272,335	1,756,924	3,008,907
2015	283,749	1,820,274	3,104,037

Traffic Volume Trends is a monthly report based on hourly traffic count data. These data, collected at approximately 4,000 continuous traffic counting locations nationwide, are used to determine the percent change in traffic for the current month compared to the same month in the previous year. This percent change is applied to the travel for the same month of the previous year to obtain an estimate of travel for the current month.Because of the limited sample sizes, caution should be used with these estimates. The Highway Performance Monitoring System provides more accurate information on an annual basis.

** System entries may not add to give "All Systems" total due to rounding for Page 2 to 8.

Table - 1. Estimated Individual Monthly Motor Vehicle Travel in the United States**

System	Month											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2014 Individual Monthly Vehicle-Miles of Travel in Billions												
Rural Interstate	16.9	15.8	19.4	20.0	21.3	21.6	23.2	22.9	19.5	21.0	19.4	19.9
Rural Other Arterial	25.6	25.0	29.7	30.1	32.4	32.6	34.6	34.0	30.8	32.6	29.0	29.4
Other Rural	25.5	24.1	28.9	30.1	32.2	31.9	33.7	32.8	29.6	31.6	27.4	27.9
Urban Interstate	38.9	36.6	43.1	43.6	45.7	45.8	44.5	45.2	42.4	44.6	41.9	43.7
Urban Other Arterial	83.3	79.1	91.1	93.0	94.4	91.8	94.1	94.8	88.1	96.1	86.8	91.4
Other Urban	36.3	34.6	39.9	41.1	42.1	41.2	42.3	41.3	38.6	41.3	38.3	41.3
All Systems	226.4	215.2	252.1	257.9	268.1	264.9	272.3	271.0	249.1	267.2	242.8	253.6
2015 Individual Monthly Vehicle-Miles of Travel in Billions												
Rural Interstate	18.0	16.6	20.4	21.1	22.3	22.4	24.7					
Rural Other Arterial	27.0	25.7	30.9	31.4	33.3	33.9	36.1					
Other Rural	26.7	24.6	29.9	31.3	32.9	33.0	35.0					
Urban Interstate	40.8	37.6	44.7	45.1	46.8	47.6	46.1					
Urban Other Arterial	86.5	81.0	94.4	95.9	96.8	95.5	97.8					
Other Urban	38.0	35.4	41.2	42.4	43.0	42.6	43.9					
All Systems	236.9	220.8	261.4	267.2	275.1	275.1	283.7					
* Percent Change In Individual Monthly Travel 2014 vs. 2015												
Rural Interstate	6.9	4.7	5.1	5.2	4.9	4.1	6.5					
Rural Other Arterial	5.2	2.7	4.1	4.1	2.6	4.1	4.4					
Other Rural	4.8	1.8	3.4	3.9	2.3	3.4	3.9					
Urban Interstate	4.9	2.8	3.8	3.6	2.4	4.0	3.8					
Urban Other Arterial	3.8	2.5	3.6	3.1	2.6	4.0	4.0					
Other Urban	4.6	2.4	3.2	3.2	2.2	3.3	3.9					
All Systems	4.6	2.6	3.7	3.6	2.6	3.8	4.2					

Table - 2. Estimated Cumulative Monthly Motor Vehicle Travel in the United States**

System	Month											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2014 Cumulative Monthly Vehicle-Miles of Travel in Billions												
Rural Interstate	16.9	32.7	52.1	72.1	93.4	115.0	138.2	161.1	180.6	201.5	220.9	240.9
Rural Other Arterial	25.6	50.7	80.3	110.5	142.9	175.5	210.1	244.1	274.9	307.6	336.6	366.0
Other Rural	25.5	49.6	78.5	108.6	140.8	172.7	206.4	239.2	268.8	300.4	327.8	355.7
Urban Interstate	38.9	75.5	118.6	162.1	207.9	253.7	298.1	343.4	385.8	430.4	472.3	516.1
Urban Other Arterial	83.3	162.3	253.5	346.5	440.8	532.6	626.7	721.5	809.6	905.7	992.5	1083.9
Other Urban	36.3	70.9	110.8	151.9	193.9	235.1	277.4	318.7	357.3	398.6	436.9	478.2
All Systems	226.4	441.6	693.7	951.6	1219.7	1484.6	1756.9	2027.9	2277.1	2544.3	2787.1	3040.7
2015 Cumulative Monthly Vehicle-Miles of Travel in Billions												
Rural Interstate	18.0	34.6	55.0	76.1	98.4	120.8	145.5					
Rural Other Arterial	27.0	52.7	83.5	114.9	148.2	182.1	218.2					
Other Rural	26.7	51.2	81.1	112.4	145.3	178.3	213.4					
Urban Interstate	40.8	78.4	123.1	168.2	215.1	262.7	308.8					
Urban Other Arterial	86.5	167.5	261.9	357.8	454.6	550.1	647.9					
Other Urban	38.0	73.4	114.5	156.9	199.9	242.5	286.4					
All Systems	236.9	457.7	719.1	986.3	1261.5	1536.5	1820.3					
* Percent Change In Cumulative Monthly Travel 2014 vs. 2015												
Rural Interstate	6.9	5.8	5.6	5.5	5.3	5.1	5.3					
Rural Other Arterial	5.2	3.9	4.0	4.0	3.7	3.8	3.9					
Other Rural	4.8	3.3	3.4	3.5	3.2	3.3	3.4					
Urban Interstate	4.9	3.8	3.8	3.8	3.5	3.6	3.6					
Urban Other Arterial	3.8	3.2	3.3	3.3	3.1	3.3	3.4					
Other Urban	4.6	3.5	3.4	3.4	3.1	3.1	3.2					
All Systems	4.6	3.6	3.7	3.6	3.4	3.5	3.6					

* Percent change is based on vehicle travel in millions of miles.

Table - 3. Changes on Rural Arterial Roads by Region and State**

Region and State	July				June			
	Number of Stations	Vehicle-Miles (Millions) 2015 (Preliminary)	Vehicle-Miles (Millions) 2014	Percent Change	Number of Stations	Vehicle-Miles (Millions) 2015 (Revised)	Vehicle-Miles (Millions) 2014	Percent Change
Northeast								
Connecticut	9	199	194	2.5	9	185	181	2.1
Maine	55	598	577	3.6	56	543	529	2.7
Massachusetts	6	158	153	3.6	9	143	141	1.7
New Hampshire	82	337	324	4.0	80	306	303	1.0
New Jersey	5	270	269	0.3	4	235	236	-0.4
New York	49	1,650	1,546	6.8	50	1,436	1,416	1.4
Pennsylvania	24	2,285	2,198	4.0	26	2,060	2,027	1.6
Rhode Island	3	66	62	6.9	2	56	54	3.7
Vermont	28	312	303	3.3	23	265	259	2.3
Subtotal		**5,875**	**5,626**	**4.4**		**5,229**	**5,146**	**1.6**
South Atlantic								
Delaware	23	286	271	5.3	29	260	251	3.3
District of Columbia	-	0	0	0.0	-	0	0	0.0
Florida	98	2,185	2,007	8.9	96	2,123	1,990	6.7
Georgia	50	1,665	1,567	6.3	52	1,387	1,306	6.3
Maryland	21	610	592	3.0	21	566	564	0.4
North Carolina	19	1,922	1,801	6.7	19	1,809	1,735	4.3
South Carolina	64	1,685	1,584	6.4	60	1,551	1,474	5.2
Virginia	308	2,108	2,026	4.1	311	1,969	1,916	2.8
West Virginia	-	693	664	4.5	-	559	545	2.6
Subtotal		**11,154**	**10,512**	**6.1**		**10,224**	**9,781**	**4.5**
North Central								
Illinois	14	1,688	1,644	2.6	23	1,769	1,744	1.5
Indiana	-	1,981	1,886	5.0	-	1,448	1,406	3.0
Iowa	84	1,297	1,255	3.4	86	1,232	1,180	4.4
Kansas	63	933	905	3.1	62	920	890	3.5
Michigan	63	1,824	1,725	5.7	63	1,623	1,561	4.0
Minnesota	20	1,469	1,463	0.4	28	1,556	1,503	3.5
Missouri	85	1,990	1,855	7.3	82	1,648	1,579	4.4
Nebraska	34	881	838	5.0	35	821	781	5.1
North Dakota	1	512	515	-0.6	1	462	456	1.5
Ohio	51	1,792	1,690	6.0	51	1,668	1,615	3.3
South Dakota	37	528	497	6.2	36	505	480	5.3
Wisconsin	72	1,853	1,763	5.1	35	1,710	1,646	3.9
Subtotal		**16,748**	**16,036**	**4.4**		**15,362**	**14,841**	**3.5**
South Gulf								
Alabama	45	1,733	1,643	5.5	42	1,672	1,588	5.3
Arkansas	24	1,058	1,025	3.2	23	988	948	4.2
Kentucky	18	1,453	1,387	4.7	24	1,710	1,658	3.2
Louisiana	10	1,220	1,174	4.0	12	1,151	1,137	1.2
Mississippi	42	1,226	1,164	5.4	41	1,136	1,077	5.5
Oklahoma	43	1,186	1,155	2.7	43	1,107	1,083	2.2
Tennessee	9	1,993	1,843	8.1	10	1,797	1,729	4.0
Texas	97	5,041	4,798	5.1	102	4,811	4,619	4.2
Subtotal		**14,910**	**14,189**	**5.1**		**14,372**	**13,839**	**3.9**
West								
Alaska	32	179	177	1.2	35	168	161	4.7
Arizona	37	958	898	6.7	36	975	913	6.8
California	72	3,878	3,638	6.6	71	3,413	3,251	5.0
Colorado	51	1,126	1,042	8.0	56	1,074	993	8.1
Hawaii	8	91	87	5.0	9	73	69	5.9
Idaho	99	614	575	6.9	100	556	512	8.5
Montana	63	722	689	4.8	59	645	602	7.2
Nevada	36	441	415	6.2	36	406	385	5.3
New Mexico	36	885	839	5.5	32	795	758	4.8
Oregon	101	1,168	1,110	5.2	100	1,088	1,011	7.6
Utah	38	578	535	8.2	38	521	492	6.0
Washington	72	983	944	4.2	74	992	941	5.4
Wyoming	94	514	492	4.6	91	457	440	3.8
Subtotal		**12,137**	**11,441**	**6.1**		**11,163**	**10,528**	**6.0**
TOTALS	**2,395**	**60,825**	**57,803**	**5.2**	**2,383**	**56,350**	**54,132**	**4.1**

Note: Where Number of Stations are shown as dashes, the values for the Vehicle-Miles and Percent Change are derived from the estimated VMT based on data from surrounding States or the nationwide average VMT.

Table - 4. Changes on Urban Arterial Roads by Region and State**

Region and State	July				June			
	Number of Stations	Vehicle-Miles (Millions) 2015 (Preliminary)	Vehicle-Miles (Millions) 2014	Percent Change	Number of Stations	Vehicle-Miles (Millions) 2015 (Revised)	Vehicle-Miles (Millions) 2014	Percent Change
Northeast								
Connecticut	19	2,048	2,005	2.2	20	1,949	1,934	0.8
Maine	9	250	237	5.5	10	230	224	2.5
Massachusetts	52	3,977	3,901	1.9	55	3,779	3,720	1.6
New Hampshire	80	573	554	3.5	80	573	564	1.7
New Jersey	45	4,527	4,442	1.9	50	4,587	4,591	-0.1
New York	73	7,503	7,243	3.6	74	7,422	7,218	2.8
Pennsylvania	23	4,377	4,284	2.2	23	4,170	4,093	1.9
Rhode Island	64	558	549	1.7	68	513	513	-0.1
Vermont	14	117	116	1.4	12	105	103	1.4
Subtotal		**23,930**	**23,331**	**2.6**		**23,328**	**22,960**	**1.6**
South Atlantic								
Delaware	12	425	413	3.0	11	425	417	1.9
District of Columbia	-	179	173	3.3	1	242	235	2.7
Florida	127	9,526	8,898	7.1	127	9,212	8,659	6.4
Georgia	101	4,878	4,655	4.8	100	5,046	4,814	4.8
Maryland	25	3,829	3,704	3.4	27	3,585	3,508	2.2
North Carolina	23	4,444	4,305	3.2	24	4,328	4,163	4.0
South Carolina	41	1,801	1,728	4.2	39	1,835	1,771	3.6
Virginia	343	3,804	3,689	3.1	349	3,688	3,590	2.7
West Virginia	-	647	627	3.1	-	583	570	2.2
Subtotal		**29,533**	**28,192**	**4.8**		**28,944**	**27,727**	**4.4**
North Central								
Illinois	29	5,113	5,004	2.2	39	5,996	5,898	1.7
Indiana	-	3,095	3,017	2.6	-	2,800	2,746	2.0
Iowa	23	883	871	1.4	21	869	853	1.9
Kansas	19	1,040	1,012	2.8	19	1,037	993	4.4
Michigan	52	4,837	4,764	1.5	53	4,564	4,470	2.1
Minnesota	23	2,421	2,371	2.1	24	2,330	2,219	5.0
Missouri	64	2,682	2,641	1.6	64	2,636	2,567	2.7
Nebraska	14	576	560	3.0	14	575	546	5.2
North Dakota	4	173	176	-1.5	4	167	165	1.7
Ohio	82	5,072	4,866	4.2	80	4,884	4,746	2.9
South Dakota	6	198	196	1.1	6	197	193	2.0
Wisconsin	82	2,366	2,273	4.1	23	2,178	2,085	4.4
Subtotal		**28,456**	**27,751**	**2.5**		**28,233**	**27,481**	**2.7**
South Gulf								
Alabama	49	1,956	1,916	2.1	46	2,042	1,981	3.1
Arkansas	3	1,368	1,286	6.4	3	1,292	1,191	8.6
Kentucky	6	1,304	1,276	2.2	6	1,396	1,390	0.4
Louisiana	7	2,088	2,042	2.3	10	2,162	2,093	3.3
Mississippi	22	1,105	1,064	3.8	24	1,091	1,065	2.4
Oklahoma	26	1,797	1,755	2.4	26	1,644	1,593	3.2
Tennessee	7	3,200	3,043	5.2	6	3,211	2,993	7.3
Texas	75	12,723	11,884	7.1	76	12,170	11,498	5.8
Subtotal		**25,541**	**24,266**	**5.3**		**25,008**	**23,804**	**5.1**
West								
Alaska	40	183	182	0.7	43	177	172	3.3
Arizona	10	2,940	2,844	3.4	10	3,426	3,257	5.2
California	118	21,890	21,021	4.1	117	22,806	21,618	5.5
Colorado	30	2,285	2,161	5.7	33	2,231	2,052	8.7
Hawaii	47	588	528	11.4	46	561	501	12.1
Idaho	77	490	478	2.5	75	482	460	4.8
Montana	2	326	313	4.1	2	278	261	6.3
Nevada	34	1,077	1,051	2.5	35	1,005	977	2.8
New Mexico	32	752	739	1.7	33	668	651	2.5
Oregon	46	1,359	1,308	3.9	44	1,299	1,229	5.7
Utah	52	1,312	1,252	4.8	49	1,235	1,171	5.5
Washington	68	3,145	2,969	5.9	61	3,263	3,110	4.9
Wyoming	34	158	156	1.4	38	147	144	1.6
Subtotal		**36,505**	**35,002**	**4.3**		**37,578**	**35,603**	**5.5**
TOTALS	**2,234**	**143,967**	**138,544**	**3.9**	**2,200**	**143,089**	**137,575**	**4.0**

Note: Where Number of Stations are shown as dashes, the values for the Vehicle-Miles and Percent Change are derived from the estimated VMT based on data from surrounding States or the nationwide average VMT.

Table - 5. Changes on ALL* Estimated Roads by Region and State**

Region and State	July				June			
	Number of Stations	Vehicle-Miles (Millions)		Percent Change	Number of Stations	Vehicle-Miles (Millions)		Percent Change
		2015 (Preliminary)	2014			2015 (Revised)	2014	
Northeast								
Connecticut	29	2,880	2,815	2.3	30	2,738	2,713	0.9
Maine	88	1,382	1,333	3.7	91	1,295	1,286	0.7
Massachusetts	58	5,280	5,176	2.0	64	5,028	4,949	1.6
New Hampshire	174	1,252	1,211	3.4	172	1,201	1,189	1.0
New Jersey	54	6,297	6,224	1.2	58	6,308	6,308	0.0
New York	140	12,850	12,461	3.1	143	12,190	12,007	1.5
Pennsylvania	57	9,349	9,093	2.8	59	8,774	8,658	1.3
Rhode Island	67	769	752	2.2	70	684	682	0.2
Vermont	53	744	724	2.7	47	621	611	1.7
Subtotal		**40,803**	**39,789**	**2.5**		**38,839**	**38,403**	**1.1**
South Atlantic								
Delaware	51	1,016	980	3.6	56	973	950	2.4
District of Columbia	-	251	244	3.1	1	341	332	2.7
Florida	232	17,525	16,407	6.8	230	17,198	16,234	5.9
Georgia	181	10,421	9,825	6.1	182	9,887	9,350	5.7
Maryland	47	6,307	6,106	3.3	49	5,227	5,127	1.9
North Carolina	59	9,825	9,437	4.1	60	9,508	9,150	3.9
South Carolina	112	4,760	4,520	5.3	106	4,584	4,403	4.1
Virginia	665	7,557	7,366	2.6	674	7,207	7,091	1.6
West Virginia	-	1,790	1,730	3.5	-	1,544	1,513	2.0
Subtotal		**59,452**	**56,615**	**5.0**		**56,469**	**54,150**	**4.3**
North Central								
Illinois	49	9,383	9,199	2.0	67	10,465	10,354	1.1
Indiana	-	8,718	8,427	3.5	-	7,173	7,024	2.1
Iowa	129	3,001	2,942	2.0	128	2,935	2,863	2.5
Kansas	92	2,799	2,737	2.3	91	2,761	2,655	4.0
Michigan	116	8,798	8,560	2.8	117	8,707	8,479	2.7
Minnesota	53	5,270	5,135	2.6	63	5,359	5,136	4.4
Missouri	161	6,723	6,510	3.3	158	6,270	6,077	3.2
Nebraska	58	1,926	1,848	4.2	59	1,851	1,757	5.4
North Dakota	8	988	988	-0.1	8	925	912	1.4
Ohio	147	10,641	10,142	4.9	146	10,114	9,845	2.7
South Dakota	50	1,011	960	5.3	48	917	875	4.7
Wisconsin	159	5,952	5,700	4.4	59	5,632	5,420	3.9
Subtotal		**65,210**	**63,148**	**3.3**		**63,109**	**61,397**	**2.8**
South Gulf								
Alabama	98	6,047	5,795	4.3	90	6,155	5,908	4.2
Arkansas	32	3,372	3,224	4.6	31	3,204	3,017	6.2
Kentucky	37	3,840	3,727	3.0	42	4,354	4,268	2.0
Louisiana	19	4,500	4,369	3.0	26	4,509	4,398	2.5
Mississippi	74	3,843	3,678	4.5	75	3,680	3,546	3.8
Oklahoma	80	4,414	4,322	2.1	79	4,133	4,022	2.8
Tennessee	21	7,072	6,696	5.6	20	6,768	6,367	6.3
Texas	201	22,762	21,346	6.6	207	21,862	20,721	5.5
Subtotal		**55,850**	**53,157**	**5.1**		**54,665**	**52,247**	**4.6**
West								
Alaska	79	485	479	1.2	85	466	448	4.0
Arizona	56	5,142	4,933	4.2	54	5,812	5,525	5.2
California	190	30,757	29,434	4.5	188	31,137	29,532	5.4
Colorado	83	4,331	4,069	6.4	91	4,187	3,884	7.8
Hawaii	63	1,124	1,022	10.0	63	1,018	918	10.8
Idaho	183	1,669	1,587	5.1	184	1,564	1,464	6.8
Montana	75	1,558	1,490	4.5	70	1,345	1,251	7.5
Nevada	82	2,273	2,192	3.7	84	2,126	2,052	3.6
New Mexico	77	2,464	2,385	3.3	73	2,156	2,085	3.4
Oregon	154	3,496	3,358	4.1	151	3,268	3,051	7.1
Utah	95	2,612	2,472	5.6	92	2,452	2,323	5.5
Washington	143	5,526	5,233	5.6	137	5,570	5,287	5.4
Wyoming	151	996	970	2.7	152	880	852	3.3
Subtotal		**62,433**	**59,624**	**4.7**		**61,981**	**58,672**	**5.6**
TOTALS	**5,082**	**283,749**	**272,335**	**4.2**	**5,030**	**275,060**	**264,868**	**3.8**

Note: Where Number of Stations are shown as dashes, the values for the Vehicle-Miles and Percent Change are derived from the estimated VMT based on data from surrounding States or the nationwide average VMT.
*** All Estimated roads include travel from Table 3 and 4 plus remaining roads.**

Table - 6. Estimated Rural Vehicle Miles (Millions) and Percent Change from Same Period Previous Year**

Year - 2014

	Rural Interstate	%		Rural Other Arter	%		Other Rural	%		Total Rural	%		All Systems	%
Jan	16,879	-0.3	Jan	25,640	-1.2	Jan	25,460	-1.3	Jan	67,978	-1.0	Jan	226,444	-0.9
Feb	15,813	-0.6	Feb	25,012	-0.3	Feb	24,126	-0.9	Feb	64,951	-0.6	Feb	215,166	-0.5
Mar	19,378	0.0	Mar	29,678	0.3	Mar	28,887	0.1	Mar	77,943	0.2	Mar	252,089	0.6
Q1	*52,070*	*-0.3*	Q1	*80,330*	*-0.3*	Q1	*78,473*	*-0.7*	Q1	*210,873*	*-0.4*	Q1	*693,699*	*-0.2*
Apr	20,047	4.7	Apr	30,127	3.0	Apr	30,139	2.6	Apr	80,313	3.3	Apr	257,947	2.3
May	21,282	2.0	May	32,448	2.1	May	32,172	2.4	May	85,901	2.2	May	268,075	1.6
Jun	21,554	2.3	Jun	32,578	2.0	Jun	31,939	2.4	Jun	86,071	2.2	Jun	264,868	1.9
Q2	*62,882*	*3.0*	Q2	*95,153*	*2.3*	Q2	*94,250*	*2.5*	Q2	*252,285*	*2.5*	Q2	*790,890*	*1.9*
1st Half	114,953	1.5	1st Half	175,482	1.1	1st Half	172,723	1.0	1st Half	463,158	1.2	1st Half	1,484,589	0.9
Jul	23,205	4.1	Jul	34,598	2.6	Jul	33,713	4.3	Jul	91,516	3.6	Jul	272,335	2.9
Aug	22,927	2.4	Aug	34,004	1.2	Aug	32,768	0.9	Aug	89,698	1.4	Aug	271,018	0.9
Sep	19,478	2.9	Sep	30,849	2.5	Sep	29,593	2.0	Sep	79,921	2.4	Sep	249,125	2.7
Q3	*65,610*	*3.2*	Q3	*99,451*	*2.1*	Q3	*96,074*	*2.4*	Q3	*261,135*	*2.5*	Q3	*792,478*	*2.2*
Oct	20,982	5.1	Oct	32,641	3.5	Oct	31,573	3.3	Oct	85,197	3.8	Oct	267,185	3.0
Nov	19,397	4.2	Nov	29,005	1.0	Nov	27,387	0.6	Nov	75,789	1.6	Nov	242,816	1.1
Dec	19,949	5.1	Dec	29,394	5.4	Dec	27,901	5.8	Dec	77,244	5.5	Dec	253,618	5.1
Q4	*60,328*	*4.8*	Q4	*91,040*	*3.3*	Q4	*86,861*	*3.2*	Q4	*238,230*	*3.6*	Q4	*763,619*	*3.1*
2nd Half	125,939	3.9	2nd Half	190,491	2.7	2nd Half	182,935	2.8	2nd Half	499,365	3.0	2nd Half	1,556,097	2.6
Year	***240,891***	***2.8***	***Year***	***365,974***	***1.9***	***Year***	***355,657***	***1.9***	***Year***	***962,522***	***2.1***	***Year***	***3,040,686***	***1.8***

Year - 2015

	Rural Interstate	%		Rural Other Arter	%		Other Rural	%		Total Rural	%		All Systems	%
Jan	18,041	6.9	Jan	26,975	5.2	Jan	26,685	4.8	Jan	71,701	5.5	Jan	236,918	4.6
Feb	16,551	4.7	Feb	25,676	2.7	Feb	24,559	1.8	Feb	66,785	2.8	Feb	220,787	2.6
Mar	20,375	5.1	Mar	30,886	4.1	Mar	29,867	3.4	Mar	81,129	4.1	Mar	261,445	3.7
Q1	*54,968*	*5.6*	Q1	*83,538*	*4.0*	Q1	*81,110*	*3.4*	Q1	*219,615*	*4.1*	Q1	*719,150*	*3.7*
Apr	21,086	5.2	Apr	31,351	4.1	Apr	31,304	3.9	Apr	83,741	4.3	Apr	267,189	3.6
May	22,314	4.9	May	33,304	2.6	May	32,910	2.3	May	88,528	3.1	May	275,125	2.6
Jun	22,428	4.1	Jun	33,923	4.1	Jun	33,023	3.4	Jun	89,374	3.8	Jun	275,060	3.8
Q2	*65,828*	*4.7*	Q2	*98,578*	*3.6*	Q2	*97,237*	*3.2*	Q2	*261,642*	*3.7*	Q2	*817,375*	*3.3*
1st Half	120,795	5.1	1st Half	182,115	3.8	1st Half	178,347	3.3	1st Half	481,257	3.9	1st Half	1,536,525	3.5
Jul	24,716	6.5	Jul	36,110	4.4	Jul	35,041	3.9	Jul	95,866	4.8	Jul	283,749	4.2
Aug			Aug			Aug			Aug			Aug		
Sep			Sep			Sep			Sep			Sep		
Q3	*24,716*	*6.5*	Q3	*36,110*	*4.4*	Q3	*35,041*	*3.9*	Q3	*95,866*	*4.8*	Q3	*283,749*	*4.2*
Oct			Oct			Oct			Oct			Oct		
Nov			Nov			Nov			Nov			Nov		
Dec			Dec			Dec			Dec			Dec		
Q4		0.0	Q4		0.0	Q4		0.0	Q4		0.0	Q4		0.0
2nd Half	24,716	6.5	2nd Half	36,110	4.4	2nd Half	35,041	3.9	2nd Half	95,866	4.8	2nd Half	283,749	4.2
Year	***145,511***	***5.3***	***Year***	***218,225***	***3.9***	***Year***	***213,388***	***3.4***	***Year***	***577,124***	***4.0***	***Year***	***1,820,274***	***3.6***

Table - 7. Estimated Urban Vehicle Miles (Millions) and Percent Change from Same Period Previous Year**

Year - 2014

	Urban Interstate	%		Urban Other Arte	%		Other Urban	%		Total Urban	%		All Systems	%
Jan	38,907	-0.2	Jan	83,260	-0.7	Jan	36,300	-2.1	Jan	158,466	-0.9	Jan	226,444	-0.9
Feb	36,554	-0.7	Feb	79,068	-0.2	Feb	34,593	-1.0	Feb	150,215	-0.5	Feb	215,166	-0.5
Mar	43,112	1.7	Mar	91,139	0.5	Mar	39,895	0.6	Mar	174,145	0.8	Mar	252,089	0.6
Q1	*118,573*	*0.3*	Q1	*253,466*	*-0.1*	Q1	*110,787*	*-0.8*	Q1	*482,826*	*-0.2*	Q1	*693,699*	*-0.2*
Apr	43,573	2.8	Apr	92,991	1.8	Apr	41,070	1.2	Apr	177,634	1.9	Apr	257,947	2.3
May	45,732	2.0	May	94,374	1.3	May	42,068	0.6	May	182,174	1.3	May	268,075	1.6
Jun	45,777	2.9	Jun	91,798	1.1	Jun	41,222	1.7	Jun	178,797	1.7	Jun	264,868	1.9
Q2	*135,081*	*2.6*	Q2	*279,164*	*1.4*	Q2	*124,360*	*1.1*	Q2	*538,605*	*1.6*	Q2	*790,890*	*1.9*
1st Half	253,654	1.5	1st Half	532,630	0.7	1st Half	235,148	0.2	1st Half	1,021,431	0.8	1st Half	1,484,589	0.9
Jul	44,461	3.6	Jul	94,083	2.0	Jul	42,275	2.8	Jul	180,819	2.6	Jul	272,335	2.9
Aug	45,249	1.0	Aug	94,801	0.6	Aug	41,270	0.5	Aug	181,320	0.7	Aug	271,018	0.9
Sep	42,424	2.2	Sep	88,133	3.2	Sep	38,647	2.6	Sep	169,204	2.8	Sep	249,125	2.7
Q3	*132,134*	*2.3*	Q3	*277,017*	*1.9*	Q3	*122,192*	*2.0*	Q3	*531,343*	*2.0*	Q3	*792,478*	*2.2*
Oct	44,637	2.7	Oct	96,084	2.8	Oct	41,268	2.4	Oct	181,989	2.7	Oct	267,185	3.0
Nov	41,917	1.8	Nov	86,781	0.4	Nov	38,330	1.0	Nov	167,027	0.9	Nov	242,816	1.1
Dec	43,742	5.5	Dec	91,355	4.5	Dec	41,276	5.2	Dec	176,374	4.9	Dec	253,618	5.1
Q4	*130,297*	*3.3*	Q4	*274,219*	*2.6*	Q4	*120,874*	*2.9*	Q4	*525,390*	*2.8*	Q4	*763,619*	*3.1*
2nd Half	262,431	2.8	2nd Half	551,236	2.2	2nd Half	243,066	2.4	2nd Half	1,056,733	2.4	2nd Half	1,556,097	2.6
Year	***516,084***	***2.2***	***Year***	***1,083,866***	***1.5***	***Year***	***478,214***	***1.3***	***Year***	***2,078,164***	***1.6***	***Year***	***3,040,686***	***1.8***

Year - 2015

	Urban Interstate	%		Urban Other Arte	%		Other Urban	%		Total Urban	%		All Systems	%
Jan	40,794	4.9	Jan	86,453	3.8	Jan	37,970	4.6	Jan	165,217	4.3	Jan	236,918	4.6
Feb	37,566	2.8	Feb	81,014	2.5	Feb	35,423	2.4	Feb	154,002	2.5	Feb	220,787	2.6
Mar	44,747	3.8	Mar	94,417	3.6	Mar	41,152	3.2	Mar	180,316	3.5	Mar	261,445	3.7
Q1	*123,106*	*3.8*	Q1	*261,884*	*3.3*	Q1	*114,544*	*3.4*	Q1	*499,535*	*3.5*	Q1	*719,150*	*3.7*
Apr	45,140	3.6	Apr	95,905	3.1	Apr	42,404	3.2	Apr	183,449	3.3	Apr	267,189	3.6
May	46,838	2.4	May	96,786	2.6	May	42,974	2.2	May	186,597	2.4	May	275,125	2.6
Jun	47,600	4.0	Jun	95,489	4.0	Jun	42,598	3.3	Jun	185,687	3.9	Jun	275,060	3.8
Q2	*139,577*	*3.3*	Q2	*288,180*	*3.2*	Q2	*127,976*	*2.9*	Q2	*555,733*	*3.2*	Q2	*817,375*	*3.3*
1st Half	262,683	3.6	1st Half	550,064	3.3	1st Half	242,520	3.1	1st Half	1,055,268	3.3	1st Half	1,536,525	3.5
Jul	46,136	3.8	Jul	97,832	4.0	Jul	43,915	3.9	Jul	187,883	3.9	Jul	283,749	4.2
Aug			Aug			Aug			Aug			Aug		
Sep			Sep			Sep			Sep			Sep		
Q3	*46,136*	*3.8*	Q3	*97,832*	*4.0*	Q3	*43,915*	*3.9*	Q3	*187,883*	*3.9*	Q3	*283,749*	*4.2*
Oct			Oct			Oct			Oct			Oct		
Nov			Nov			Nov			Nov			Nov		
Dec			Dec			Dec			Dec			Dec		
Q4		0.0	Q4		0.0	Q4		0.0	Q4		0.0	Q4		0.0
2nd Half	46,136	3.8	2nd Half	97,832	4.0	2nd Half	43,915	3.9	2nd Half	187,883	3.9	2nd Half	283,749	4.2
Year	***308,819***	***3.6***	***Year***	***647,896***	***3.4***	***Year***	***286,435***	***3.2***	***Year***	***1,243,150***	***3.4***	***Year***	***1,820,274***	***3.6***

Figure - 1. Moving 12-Month Total on ALL Roads

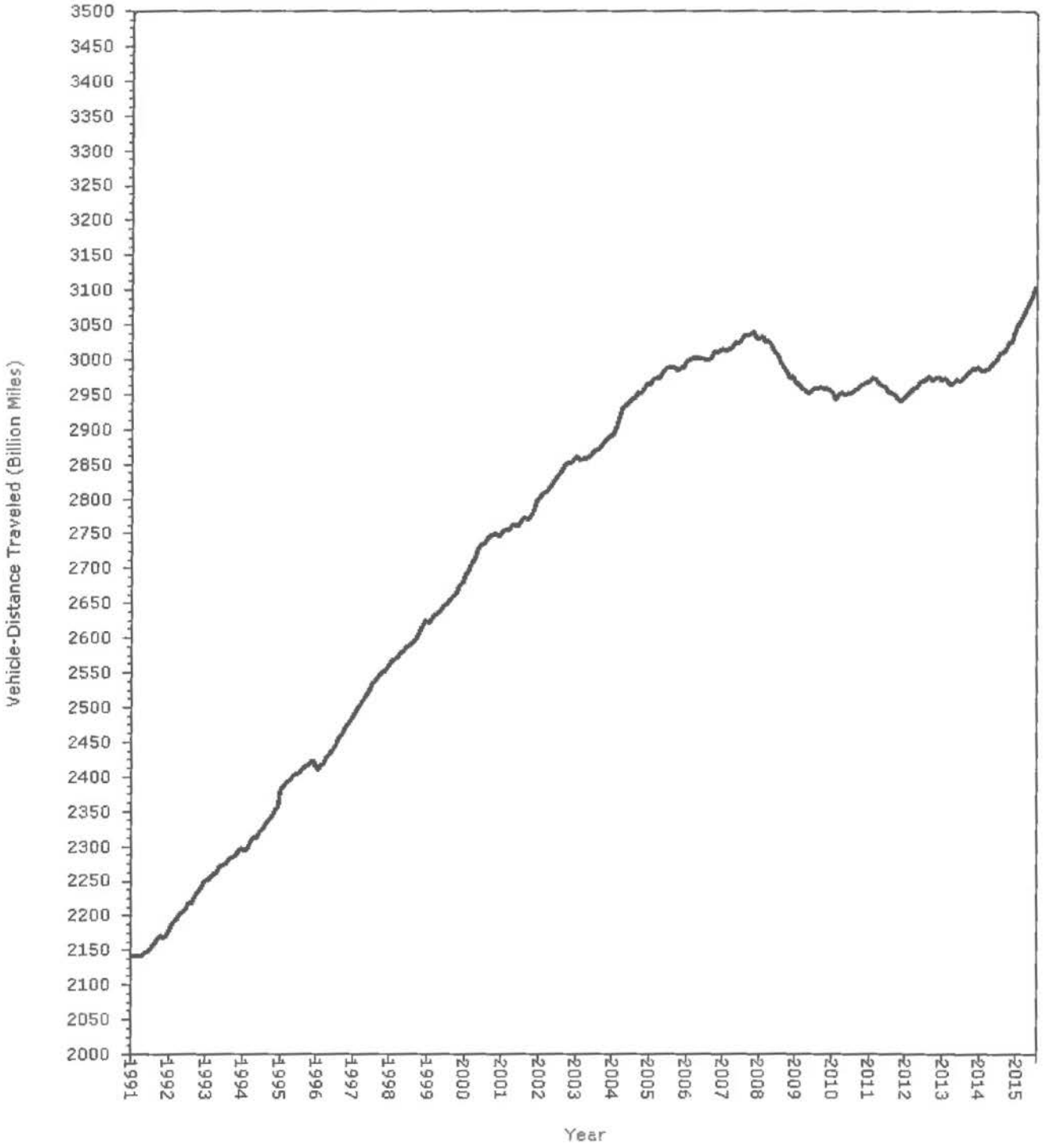
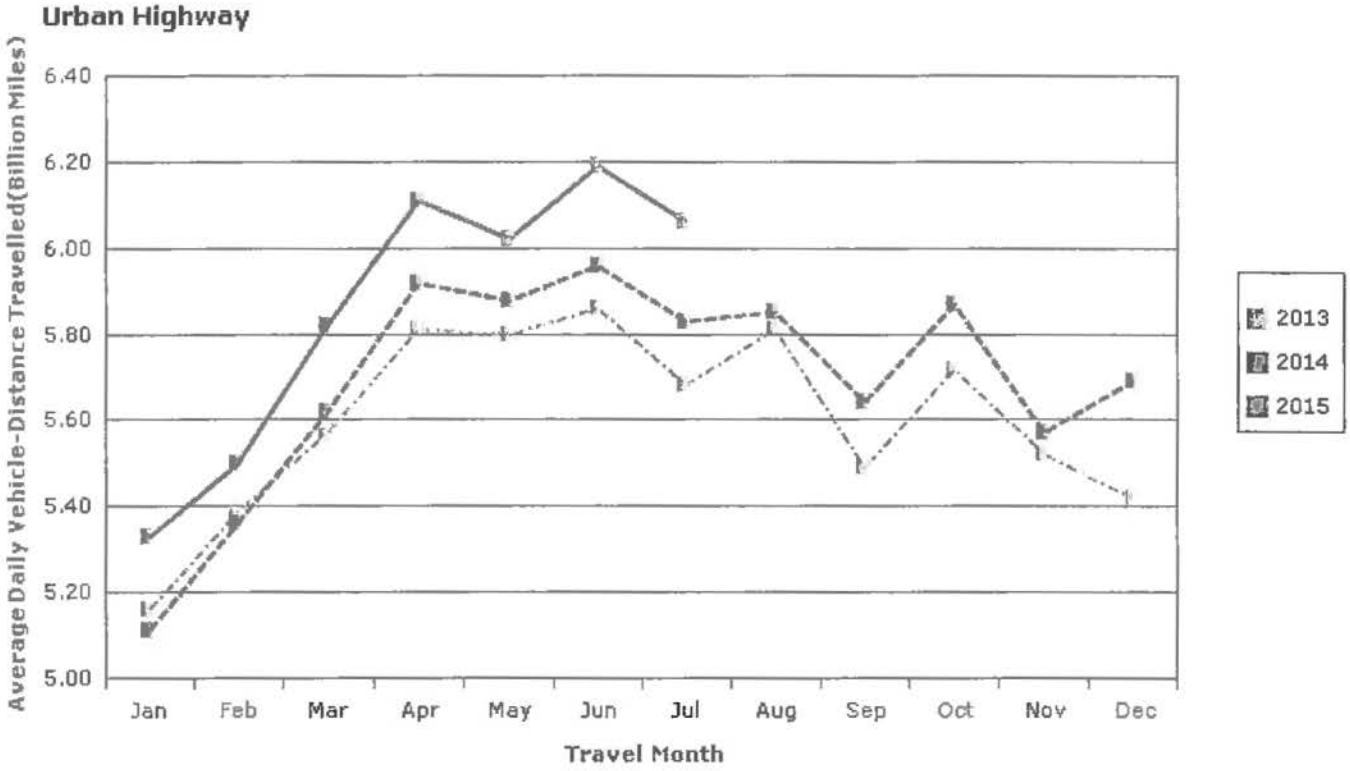


Figure - 2. Travel on U.S. Highways by Month



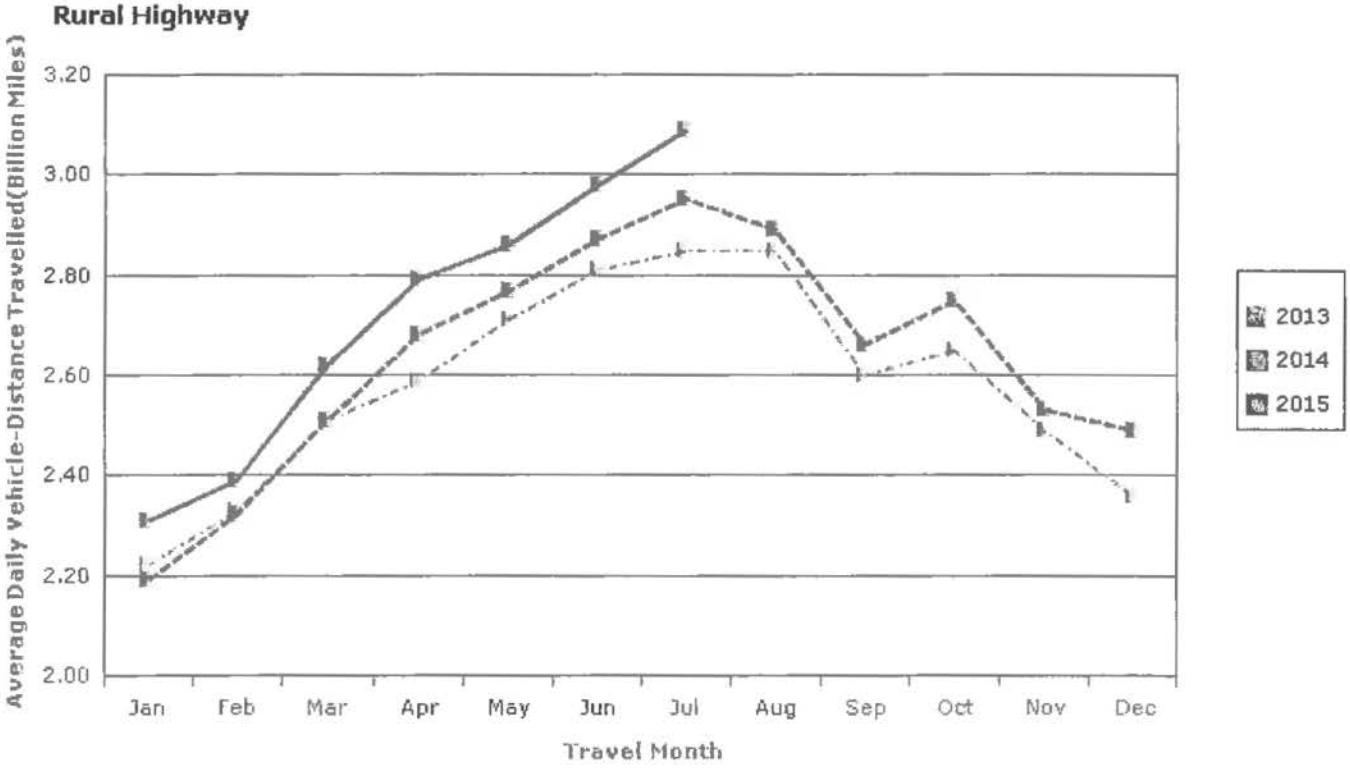
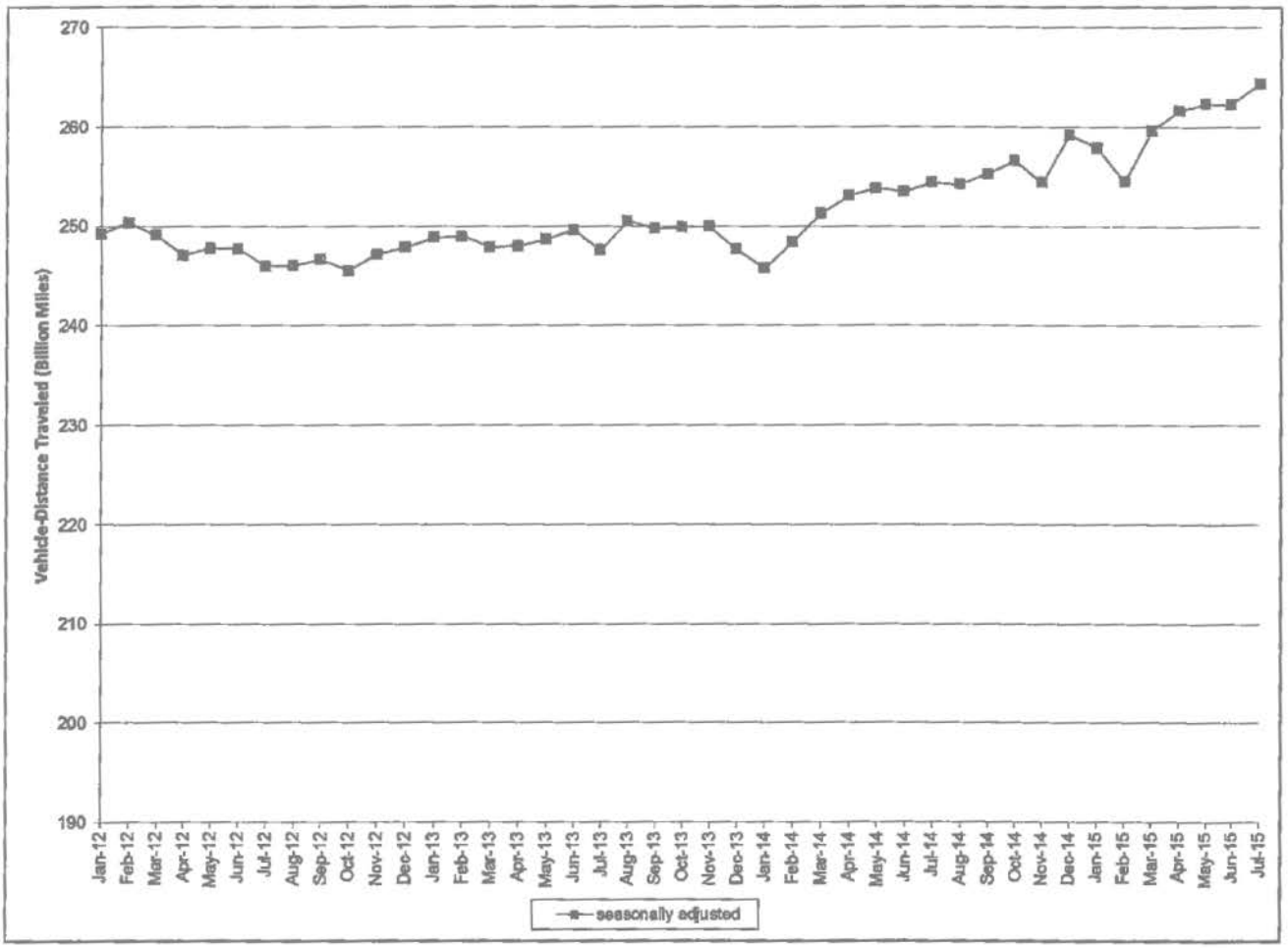


Figure 3: Seasonally Adjusted Vehicle Miles Traveled by Month



Seasonally adjusted data are modeled by the Bureau of Transportation Statistics, Office of the Assistant Secretary for Research and Technology, U.S. Department of Transportation. See http://www.transtats.bts.gov/OSEA/SeasonalAdjustment/ for additional seasonally adjusted travel data and information.

PLANNING COMMISSION QUARTERLY REPORT
4th QUARTER 2015

Previously Reviewed Applications or Documents:

LMO Amendments:	***Status:***
The Town of Hilton Head Island is proposing to amend Chapters 2, 3, 4, 5, 6, 10 and Appendices A and D of the Land Management Ordinance (LMO) to revise the following sections: Section 16-2-102: to clarify which days count in the computation of Board and Commission related applications, Section 16-2-103.B – D: to require that Text Amendments, Zoning Map Amendments and PUD Zonings are sent back to Planning Commission only when the applicant requests a change to the application, Section 16-2-103.G: to return to the LMO the list of sections with which single-family structures have to comply, Section 16-2-103.I: to require all new development within the Corridor Overlay District to be reviewed by the Design Review Board (DRB) regardless of whether or not the proposed development is visible from an arterial street, Sections 16-3-105 & 16-4-102: to allow Group Living as a permitted use in the MS (Main Street) zoning district, Section 16-5-102: to apply the single-family setback only to the exterior subdivision boundary; to create flexibility from the setback requirements for Minor Subdivisions and Small Residential Developments, Section 16-5-103.B: to eliminate adjacent street buffers in the CR (Coligny Resort) zoning district, Section 16-5-103.E: to apply the single-family buffer only to the exterior subdivision boundary; to change the required buffer between a proposed single-family use and an existing other residential or commercial recreation use, Section 16-5-103.F: to provide a reference in the buffer section to the requirement for a buffer from a loading area, Section 16-5-103.I: to allow ornamental plants in certain areas when reviewed as part of a minor or major corridor review application, Section 16-5-105.F: to specify when a street is considered a cul-de-sac, Figure 16-5-105.H.6: to make the figure more accurately reflect the associated language in Section 16-5-105.H, Section 16-5-108: to permit LED lights, Section 16-5-109.B: to clarify that only new development (not redevelopment or site additions) of less than ½ acre is exempt from meeting the stormwater standards, Section 16-5-109.D: to clarify that all on-site impervious surfaces shall be used when calculating the on-site retention of the first inch of runoff, Section 16-5-112: to provide an exception to the limitation on fill materials for critical facilities, Section 16-6-103: to allow, as the prior LMO did, the use of Mobi-mat for handicap access and a wooden deck not larger than 144 square feet in the dunes, Section 16-6-104: to allow flexibility for tree replacement during the development of single-family subdivisions, athletic fields, airport runways and golf courses, Section 16-10-101: to match the language in LMO Section 16-2-102.E.2.1, Section 16-10-105: to provide a definition for critical facilities, Appendix A. A-3 & A-4: to	• Public Hearing Date: October 7, 2015 • Adoption Date: November 3, 2015

fix incorrect State Code section references, Appendix A. A-4.B: to delete the limitation on the number of design professionals on the DRB, Appendix D. D-6: to change the term 'Administrator' to 'Official', Appendix D. D-20: to return to the LMO the plat stamping requirements, Appendix D. D-20 – D-23: to re-number these sections, Appendix D. D-23: to clarify which days count in the computation of Board and Commission related applications.	

Zoning Map Amendments:	***Status:***
ZA-1190-2015 - A request (A Zoning Map Amendment – PUD District application type), from Victor J. Mills on behalf of Shelter Cove Towne Centre, LLC and Shelter Cove II, LLC proposing to amend the Official Zoning Map by amending the PD-1 Zoning District, specifically the Palmetto Dunes Resort Master Plan, to allow for 240 multi-family residential units. All other permitted uses and associated densities will remain unchanged. This request is specifically related to proposed amendments to the Development Agreement associated with the property that potentially will relocate the multi-family units from the west portion of the 'Mall Tract' to the east portion and will be further distributed between the 'Mall Tract' and the adjacent eastern property not to exceed a total of 240 units.	• Public Hearing Date: July 15, 2015 • Adoption Date: September 15, 2015

Public Project Review Applications:	***Status:***
PPR-2042-2015 - Application for Public Project Review from the Town of Hilton Head Island to make improvements in the Coligny area, including roadway and intersection improvements, surface parking, a destination park and playground, a children's museum, streetscape improvements, pedestrian and pathway improvements, and drainage improvements. These improvements are centered in the area bounded by Pope Avenue on the east, Tanglewood Drive on the west, Nassau Street on the north, and South Forest Beach Drive and Coligny Circle on the South.	The Planning Commission heard this item on December 2, 2015 and found the project to be consistent with the Comprehensive Plan for location, character, and extent.
PPR-2127-2015 - Application for Public Project Review from the Town of Hilton Head Island for the construction of a new education facility for	The Planning Commission heard this item on December 16, 2015 and found the project to be consistent with the

University of South Carolina Beaufort (USCB) Hospitality Management and Osher Lifelong Learning Institute (OLLI) in the Office Park Road area. The plans include an academic building, an OLLI building, a student café, parking, leisure trail network, and outdoor gathering spaces.	Comprehensive Plan for location, character, and extent.
PPR-2118-2015 - Application for Public Project Review from the Town of Hilton Head Island for improvements at the intersection of Office Park Road, Pope Avenue, and New Orleans Road. These improvements include an expanded, signalized intersection that will widen all three roads.	The Planning Commission heard this item on December 16, 2015 and found the project to be consistent with the Comprehensive Plan for location, character, and extent.

Appeal Applications:	***Status:***
APL100006: Request for Appeal from Chester C. Williams on behalf of Ephesian Ventures, LLC. The Community Development Department issued a notice of action, approving the construction of a tabby walkway and brick areas at Edgewater on Broad Creek. The appellant contends that the Community Development Department erred in its decision to issue a notice of action and is requesting that the notice of action be declared void.	This item was postponed to a future date to be determined after a decision is made by the Circuit Court.

Subdivision Applications:	***Status:***
SUB-723-2014 – Silver Moss Subdivision – 48 single family lots located off Spanish Wells Road	Received a Certificate of Compliance on August 18, 2015. First home is under construction.
SUB-986-2014 – Salt Creek Landing Subdivision – 39 single family lots located off Spanish Wells Road	Notice of Action issued June 30, 2015. Infrastructure construction underway.
SUB-1124-2014 – Lopez Mobile Home Park Subdivision – 14 single family lots located off Spanish Wells Road	Notice of Action issued January 29, 2015. Infrastructure construction underway.
SUB-1864-2015 – Beach City Place Subdivision - 43 single family lots located off Beach City Road	Under staff review.
SUB-1867-2015 – Magnolia Place Subdivision - 26 single family lots located off Leg-O-Mutton Road	Under staff review, awaiting revised plans.

Planning Commission Quarterly Report – 4th Quarter 2015

Ongoing Capital Improvement Projects:

Pathways:	***Status:***
Pedestrian Crossing on Palmetto Bay Road at the Audubon Newhall Preserve	Project Complete.
Pembroke Drive from William Hilton Parkway to Otter Hole Road	Project Complete.
William Hilton Parkway from existing sidewalk to Shelter Cove Lane	Project Complete.
Bridge Pathway under WHP near Shelter Cove	• Permitting complete. • Anticipated start of construction February 2016. • Target completion April 2016.
South Forest Beach (SFB) from Coligny Circle to Tanglewood and Tanglewood from SFB to Cordillo	• Design underway. • Public Project Review completed. • Anticipated start of construction Fall 2016..

Roadway Improvements:	***Status:***
Intersection improvements at Squire Pope Road & WHP	• Possible change in project scope. • Engineering study underway. • Design and engineering deferred to Fiscal Year 2017.
Office Park/Pope/New Orleans Intersection – USCB Roadway Improvements	• Design underway. • Public Project Review completed. • Anticipated start of construction Fall 2016.
Coligny Road Projects: • Lagoon/Pope Intersection • SFB signal • Nassau Extension	• Design underway. • Public Project Review completed. • Anticipated start of construction Fall 2016.

Park Development:	***Status:***
Island Recreation Center Expansion	• Design and permitting underway. • Phased project over several years. • Anticipated start of construction Summer 2016.

Existing Facilities and Infrastructure:	***Status:***
Fire Station #2	• Permitting underway. • Anticipate start of construction in Fiscal Year 2017.

Planning Commission Quarterly Report – 4th Quarter 2015

Power Line Burials ***15 year project to be completed by 2019***	*Not CIP funded, included for update. Funded by 3% franchise fee from Palmetto Electric*

• Marshland Road
  • Allen Road
  • Roller's Trailer Park
• Spanish Wells Road feeder 1 – Humane Center to Cohen Drive
• Spanish Wells Road feeder 2 – Spanish Wells Commercial to Grant Drive
• William Hilton Pkwy/ Greenery to Village of Wexford Feeder
• William Hilton Pkwy/ Village of Wexford to Arrow Road Feeder
• Honey Horn
• Rhiner Drive to Boys & Girls Club
• Dillon Road-Union Cemetery Road
	• 85% Complete
	• 100% Complete
	• 0% Complete
	• 40% Complete (Jarvis Creek section postponed for new bridge)
	• Engineering now
	• 100% Complete
	• 0% Complete (4th Quarter 2016)
	• 20% Complete
	• 75% Complete
	• 10% Complete

New Facilities and Infrastructure:	***Status:***
Palmetto Dunes Emergency Access Gate	• Revised easement under negotiation. • Anticipated start of construction early 2016.
F&R Computer Systems Upgrades	Ongoing.

Beach Maintenance:	***Status:***
Dune Refurbishment	Ongoing.
Beach Renourishment	• Contractor selected. • Anticipated start of construction February 2016.