



**Town of Hilton Head Island  
Regular Planning Commission Meeting  
Wednesday, December 21, 2011  
3:00 p.m. Benjamin M. Racusin Council Chambers  
AGENDA**

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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** - Planning Commission Meeting December 7, 2011
- 7. Swearing in Ceremony for new Planning Commissioner** – Mr. Barry Taylor  
*Performed by: Mayor Pro Tem Ken Heitzke*
- 8. Appearance by Citizens on Items Unrelated to Today's Agenda**
- 9. Unfinished Business**  
None
- 10. New Business**  
**Annual Traffic Report** – *Presented by: Darrin Shoemaker*
- 11. Commission Business**
- 12. Chairman's Report**
- 13. Committee Reports**
- 14. Staff Reports**  
Mandatory State Training – *Presented by: Jayme Lopko*
- 15. Adjournment**

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

1 **TOWN OF HILTON HEAD ISLAND**  
2 **Planning Commission**

3 **Minutes of the Wednesday, December 7, 2011 Meeting**  
4 **9:00a.m. – Benjamin M. Racusin Council Chambers**

**DRAFT**

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6  
7 Commissioners Present: Chairman Loretta Warden, Vice Chairman Tom Lennox,  
8 David Bennett, Jack Docherty, Terry Ennis, Bryan Hughes, Gail Quick

9  
10 Commissioners Absent: Charles Young

11  
12 Town Council Present: None

13  
14 Town Staff Present: Shea Farrar, Senior Planner; Jennifer Lyle, Assistant Town Engineer  
15 Darrin Shoemaker, Traffic & Transportation Engineer  
16 Shawn Colin, Comprehensive Planning Division Manager  
17 Jill Foster, Deputy Director Community Development Department  
18 Heather Colin, Development Review Administrator  
19 Teri Lewis, LMO Official  
20 Kathleen Carlin, Secretary & Administrative Assistant

21  
22 **1. Call to Order**

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

24 **3. Roll Call**

25 **4. Freedom of Information Act Compliance**

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

28 **5. Approval of Agenda**

29 The agenda was **approved** as presented by general consent.

30 **6. Approval of Minutes**

31 The Planning Commission **approved** the minutes of the November 16, 2011 meeting as  
32 amended by general consent.

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

34 None

35 **8. Unfinished Business**

36 None

37 **9. New Business**

38 **Public Hearing**

39 **PPR110006**– Application for Public Project Review from the Town of Hilton Head Island  
40 to construct a multi-use pathway along William Hilton Parkway from Long Cove Drive to  
41 Fresh Market Shops. Chairman Warden opened the public hearing for the application and  
42 requested that the staff make their presentation.

43  
44 Ms. Shea Farrar made the presentation on behalf of staff. The staff recommended that the  
45 Planning Commission find the application to be compatible with the Town's

1 Comprehensive Plan for location, character and extent based on the Findings of Facts and  
2 Conclusions of Law as determined by the LMO Official and contained in the staff's report.

3  
4 Ms. Farrar stated that the Town of Hilton Head Island has identified the need for an  
5 additional multi-purpose pathway connection between Long Cove Drive and Fresh Market  
6 Shoppes. This pathway is proposed for construction in fiscal year 2013 as part of the  
7 Town's Capital Improvement Program. The pathway will provide the opportunity to walk  
8 and bike from commercial to residential areas.

9  
10 The pathway will be designed to match the existing asphalt multi-purpose pathways used by  
11 the Town. The path will meander along the roadside and the project will be designed with  
12 sensitivity to natural resources. Ms. Farrar briefly reviewed the Findings of Fact and  
13 Conclusions of Law. At the Planning Commission's request, Ms. Jennifer Lyle, Assistant  
14 Town Engineer, presented statements on behalf of Engineering.

15  
16 Following staff's presentation, Chairman Warden requested public comments and  
17 none were received. Chairman Warden then stated that the public hearing for this  
18 application is closed. Following final discussion by the Planning Commission, Chairman  
19 Warden requested that a motion be made.

20  
21 Commissioner Ennis made a **motion to approve** application for Public Project Review,  
22 PPR110006 as presented by staff. The Planning Commission finds this application to be  
23 compatible with the Town's Comprehensive Plan for location, character and extent based  
24 on the Findings of Facts and Conclusions of Law determined by the LMO Official and  
25 stated in the staff's report. Commissioner Quick **seconded** the motion and the motion  
26 **passed** with a vote of 7-0-0.

### 27 28 **Public Hearing**

29 **PPR110007**– Application for Public Project Review from the Town of Hilton Head Island  
30 to construct a multi-use pathway along Sol Blatt Jr. Cross Island Parkway access ramps  
31 from William Hilton Parkway to the access to Honey Horn. Also included are new  
32 signalized pedestrian crossings on William Hilton Parkway at Gum Tree Road and  
33 pavement markings along William Hilton Parkway that will modify the traffic patterns.  
34 Chairman Warden opened the public hearing for the application and requested that the staff  
35 make their presentation.

36  
37 Mr. Shawn Colin made the presentation on behalf of staff. Staff recommended that the  
38 Planning Commission find the application to be compatible with the Town's  
39 Comprehensive Plan for location, character and extent based on the Findings of Facts and  
40 Conclusions of Law as determined by the LMO Official and contained in the staff's report.

41  
42 Mr. Colin stated that Town Council approved a master plan for the Honey Horn property in  
43 2002 and approved an update in May of 2009 on behalf of the Coastal Discovery Museum.  
44 The master plan update included provisions that the gated maintenance access on William  
45 Hilton Parkway serving Honey Horn would be converted into a fully-functioning right-  
46 in/right-out access. The master plan update actually referenced a "one way entrance" at this  
47 location, however due to this access being used as an exit for attendees of the Concours  
48 d'Elegance and other special events held at Honey Horn. A right in/right out is being  
49 proposed. The 2009 Master Plan update also cited the need to provide pathway access to

1 Honey Horn, but provided no details. A project to create a free-flowing right-turn  
2 movement for motorists exiting the Cross Island Parkway across from Gum Tree Road onto  
3 on-island William Hilton Parkway has been programmed in the CIP for many years. Due to  
4 their proximity to each other, the projects have been combined. This project identified in the  
5 Fiscal Year 2012 CIP and is proposed for construction starting in the Spring of 2012 with  
6 completion prior to the 2012 Concours event at Honey Horn.  
7

8 The Town proposes to construct a pathway to connect the main entrance of Honey Horn to  
9 the Town's existing pathway network. This would be done by constructing a pathway  
10 along the western side of the access ramps serving the Sol Blatt Jr. Cross Island Parkway  
11 from William Hilton Parkway opposite Gum Tree Road to the existing main Honey Horn  
12 entrance located on the access ramps. Decorative stamped asphalt crosswalks, served by  
13 new pedestrian signals, will be provided on William Hilton Parkway and the Cross Island  
14 Parkway. The pedestrian signals serving pedestrians crossing William Hilton Parkway will  
15 be pushbutton-actuated in order to ensure that the pedestrian signal's timing is adequate to  
16 accommodate elderly or physically challenged individuals using the crosswalk while  
17 impacting the flow of traffic on William Hilton Parkway as little as possible. The Town  
18 may provide a median refuge to assist pedestrians and bicycles crossing William Hilton  
19 Parkway.  
20

21 In addition, pavement marking revisions will be accomplished on eastbound William Hilton  
22 Parkway at the Gum Tree Road intersection and also at the currently-gated secondary  
23 maintenance entrance serving the Honey Horn property. The pavement marking revisions  
24 will convert the third (outer) of three available through lanes on eastbound William Hilton  
25 Parkway to an auxiliary lane exclusively dedicated to use by motorists turning right into or  
26 out of the side streets at these two locations. This will facilitate the future use of Honey  
27 Horn's gated maintenance access on William Hilton Parkway as a fully-functioning primary  
28 access, and greatly improving operations and safety where the toll road's access ramps  
29 intersect William Hilton Parkway. These improvements will allow motorists to turn right  
30 from the Cross Island Parkway off-ramp onto eastbound William Hilton Parkway in a free-  
31 flowing manner without having to yield to other traffic at all times, regardless of the traffic  
32 signal's display. At the Planning Commission's request, Mr. Darrin Shoemaker presented  
33 statements on behalf of the Engineering Department.  
34

35 At the completion of staff's presentation, Chairman Warden requested public comments.  
36 Mr. Frank Babel, citizen, presented statements in support of the application. Mr. Babel  
37 suggested a potential change in the location of the crosswalk. Mr. Michael Marks, with the  
38 Coastal Discovery Museum, presented statements in support of the application. Mr. Shawn  
39 Colin responded to the public comments with statements regarding today's conceptual  
40 discussion. Following the public comments, Chairman Warden stated that the public  
41 hearing for this application is closed. Following final discussion by the Planning  
42 Commission, Chairman Warden requested that a motion be made.  
43

44 Commissioner Docherty made a **motion to approve** application for Public Project Review,  
45 PPR110007 as presented by staff. The Planning Commission finds this application to be  
46 compatible with the Town's Comprehensive Plan for location, character and extent based  
47 on the Findings of Facts and Conclusions of Law determined by the LMO Official and  
48 stated in the staff's report. Vice Chairman Lennox **seconded** the motion and the motion  
49 **passed** with a vote of 7-0-0.

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**10. Commission Business**

Chairman Warden requested that Mrs. Jayme Lopko provide the Planning Commissioners with their individual training requirements, 2011. Chairman Warden requested that staff provide this information in advance of the December 21<sup>st</sup> meeting.

**11. Chairman's Report**

Chairman Warden stated that she is pleased to report that Mr. Barry Taylor has been appointed to the Planning Commission. Mr. Taylor will be sworn in by Mayor Pro Tem Heitzke on December 21<sup>st</sup>.

**12. Committee Reports**

Commissioner Quick presented an update on the LMO Rewrite Committee. The Selection Committee is currently working on their evaluation of six consultants' proposals. Details will be provided when available.

**13. Staff Reports**

Mr. Shawn Colin presented brief comments with regard to Town Council's Annual Workshop and the Planning Commission's recommendations. Details will be provided to the Planning Commission when available.

**14. Adjournment**

The meeting was adjourned at 10:40am.

Submitted By:

Approved By:

\_\_\_\_\_  
Kathleen Carlin  
Administrative Assistant

\_\_\_\_\_  
Loretta Warden  
Chairman

**To:** Hilton Head Island Planning Commission

**From:** Darrin A. Shoemaker, Traffic and Transportation Engineer

**Via:** Teri Lewis, LMO Official

**Cc:** Charles Cousins, Director of Community Development  
Scott Liggett, Director of Public Projects & Facilities/Chief Engineer  
Honorable Drew A. Laughlin, Mayor  
Town Council

**Date:** December 12<sup>th</sup>, 2011

**Re:** 2011 TRAFFIC MONITORING AND EVALUATION REPORT

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## **PART ONE – INTRODUCTION**

As required by Section 16-3-1311 of the Town's Land Management Ordinance (LMO), this report will summarize 2011 traffic volume demand on the Town's primary roadway network and recommend improvements to mitigate any operating conditions identified as being out of compliance with the Town's adopted operational goals outlined in Section 16-5-1103 of the LMO. The minimum requirements of the report as outlined in Section 16-3-1311 of the LMO are: 1) Summary of June 2011 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 edition of the Transportation Research Board's *Highway Capacity Manual*, and how these conditions have changed since the preparation of the 2010 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 and 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 years that are multiples of five. Sea Pines Circle was analyzed and found compliant in the 2010 Traffic Monitoring and Evaluation report, and will not be reevaluated until 2015. See

the bottom of page two and top of page three of this report for a definition of average total delay and its distinction from average stopped duration.

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 Chapter 10 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 the RBC Heritage golf tournament. The Town traditionally hires a traffic counting consultant to collect the data during the first and/or second full weeks of June. While the morning and afternoon peak hour turning movement count data summarized in Appendix A was counted manually by human beings until approximately three years ago, today's technology allows the data to be compiled by an automated counter and computer software. Therefore, all of the 2011 volume data summarized in this report was collected on Tuesday, June 7<sup>th</sup>, 2011. The Town's Engineering Division monitored traffic conditions on this date and attempted 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. Despite these efforts, significant year-to-year fluctuations in demand are routinely evident, and these can sometimes be unpredictable or difficult to rationalize. Due to these variations, this report includes historical data that enables 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 2011 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 operating goals for all signalized intersections as outlined in Section 16-5-1103 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, the signalized intersection's capacity, is dependent to a large extent on the manner in which the signal is operated, or "timed." The 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. 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. 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.

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 reducing signal changes and 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. Therefore, the Town's operating goals simultaneously ensure that our traffic signals are not set to change so infrequently that capacity is maximized in favor of inordinately long delays, or conversely, so frequently that delay is minimized while adequate capacity to move traffic is compromised. The traffic engineer's job is to select an optimum signal timing that balances these competing interests by operating the signal in a fashion that affords the required capacity without causing excessive delays. Congested, high-volume intersections require relatively infrequent signal changes in order to afford the required capacity to move traffic, while lighter-demand intersections change more frequently to reduce delays to motorists.

## **PART TWO – TURNING MOVEMENT COUNTS AT SIGNALIZED INTERSECTIONS – JUNE 2011 PEAK VOLUME HOURS**

Turning movement counts for all signalized intersections during the intersection's morning and afternoon peak volume hours as recorded on Tuesday, June 7<sup>th</sup>, 2011 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 movement that must be counted separately for analysis purposes, however. On each of the diagrams, the percentage change in the June 2011 turning movement volume relative to the comparable June 2010 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 2010 or 2011. 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 six of this report. Where pedestrian or bicycle crossing activity was observed, this demand is shown as a pedestrian demand adjacent to the vehicular volume data for each approach. Therefore, the pedestrian volume data reflects total number of crossings, regardless of the direction in which the crossing took place and regardless of whether the crossing was made by a pedestrian or a bicyclist. 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 and Pope Avenue 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.

### **PART THREE – 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 7<sup>th</sup>, 2011 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 2006 through 2011. The 2006 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 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 2005 through 2010. Being a calendar year average, the 2011 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, they are generally about ten percent less than the average June weekday data collected by the Town each year.

## TABLE ONE

### 24-HOUR BI-DIRECTIONAL TRAFFIC DEMAND – JUNE 2006-2011

| Map Ref.                         | Location                                  | 2006           | 2007           | 2008           | 2009           | 2010           | 2011           | %chg./yr. |
|----------------------------------|---|----------------|----------------|----------------|----------------|----------------|----------------|-----------|
| 1)                               | Wm. Hilton Pkwy. at J. Wilton Graves Br.  | 62,855         | 57,524         | 53,479         | 53,949         | 55,275         | 52,080         | -3.7      |
| 2)                               | Wm. Hilton Pkwy. west of Cross Is. Pkwy.  | 54,445         | 51,054         | 50,066         | 53,971         | 53,946         | 48,519         | -2.3      |
| 3)                               | Wm. Hilton Pkwy. east of Whooping Crane   | 48,404         | 45,934         | 44,848         | 46,600         | 45,444         | 43,750         | -2.0      |
| 4)                               | Wm. Hilton Pkwy. east of Coggins Pt. Rd.  | 34,275         | 32,143         | 34,535         | 32,231         | 32,578         | 29,920         | -2.7      |
| 5)                               | Wm. Hilton Pkwy. west of Queens Folly Rd  | 43,029         | 40,671         | 37,888         | 39,856         | 39,699         | 34,805         | -4.2      |
| 6)                               | Wm. Hilton Pkwy. west of Arrow Road       | 32,026         | 30,350         | 28,585         | 30,940         | 31,036         | 27,868         | -2.7      |
| 7)                               | Pope Avenue south of New Orleans Rd.      | 33,817         | 32,007         | 29,991         | 29,990         | 30,700         | 30,871         | -1.8      |
| 8)                               | Palmetto Bay Rd. south of Pt. Comfort Rd. | 25,716         | 24,795         | 23,870         | 23,558         | 23,678         | 22,814         | -2.4      |
| 9)                               | Sol Blatt Jr. XIP south of W.Hilton Pkwy. | 15,495         | 16,230         | 17,717         | 13,904         | 14,412         | 14,171         | -1.8      |
| 10)                              | Sol Blatt Jr. Cross-Is. at Toll Plaza     | 24,740         | 26,241         | 23,793         | 24,339         | 23,446         | 23,314         | -1.2      |
| <b>TOTAL OF ALL TEN STATIONS</b> |   | <b>374,802</b> | <b>356,949</b> | <b>344,772</b> | <b>349,338</b> | <b>350,214</b> | <b>328,112</b> |           |

Town-Wide Rate of Change – 2010-2011 = - 6.3 % \*

Town-Wide Rate of Change – 2009-2010 = + 0.2 % \*

Effective Town-Wide *Annual* Rate of Change – 2006-2011 = - 2.6 % \*

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

## TABLE TWO

### SCDOT 24-HOUR AVERAGE BI-DIRECTIONAL DEMAND ON HHI BRIDGES (by calendar year)

|              |   |       |
|--------------|---|-------|
| 2005 - 50000 | % change 2009 vs. 2008:                 | -0.6% |
| 2006 - 48900 | % change 2010 vs. 2009:                 | +4.2% |
| 2007 - 50200 | Avg. annual rate of change 2005 – 2010: | -0.2% |
| 2008 - 47900 |   |       |
| 2009 - 47600 |   |       |
| 2010 - 49600 |   |       |

As shown in Table One, the twenty-four hour June 2011 traffic counts decreased by 6.3 percent relative to the June 2010 counts, and the June 2010 counts were up 0.2 percent from those collected in June 2009. Traffic demand on Hilton Head Island increased dramatically until 2000, and then the rate of increase leveled off a bit. Peak demand occurred in 2005, and then the years 2005 through 2008 recorded significant decreases. Traffic volume reached a low point in 2008 and then increased slightly in both 2009 and 2010. Traffic volume counted on June 7<sup>th</sup>, 2011, however, was lower than during any comparable June weekday count conducted from 2006 through 2010. The effective average annual rate of change in the twenty-four hour counts considered in aggregate has been a decrease of approximately 2.6 percent during the most recent five-year period, and all ten count stations on the Town's major arterial network recorded volumes in 2011 that are less than those counted in 2006.

Appendix C contains a statement recently released from the *Transportation Research Board* on downward trends in the amount of motorized vehicle travel nationwide.

Table Three below show the total combined vehicular and pedestrian morning and peak hour demand on each of the Town's twenty-two signalized intersections in June 2011, and the percentage change from the comparable June 2010 figure.

**TABLE THREE**  
**AM AND PM PEAK HOUR SIGNALIZED INTERSECTION VOLUME**  
**– JUNE 2011 vs. JUNE 2010**

|  | AM   |              | PM   |              |
|--|------|--------------|------|--------------|
|  | Vol. | %Chg.'11-'10 | Vol. | %Chg.'11-'10 |
| William Hilton Pkwy. / Squire Pope Rd.       | 3922 | +6.4         | 4260 | -11.4        |
| William Hilton Pkwy. / Spanish Wells Rd.     | 3921 | -2.2         | 4327 | -6.7         |
| William Hilton Pkwy. / Gumtree Rd.           | 3384 | -2.2         | 3524 | -11.3        |
| William Hilton Pkwy. / Wilborn Rd.           | 3106 | -9.0         | 3201 | -12.0        |
| William Hilton Pkwy. / Pembroke Dr.          | 2893 | -14.9        | 3191 | -11.5        |
| William Hilton Pkwy. / Whooping Crane Way    | 3389 | +0.0         | 3691 | -9.3         |
| William Hilton Pkwy. / Beach City Rd.        | 3175 | -1.3         | 3388 | -8.2         |
| William Hilton Pkwy. / Mathews Dr. (north)   | 2753 | +2.3         | 3563 | +3.1         |
| William Hilton Pkwy. / Dillon Rd.            | 2188 | -8.2         | 2898 | -6.3         |
| William Hilton Pkwy. / Coggins Point Rd.     | 1990 | -5.9         | 2625 | -11.3        |
| William Hilton Pkwy. / Beachwood Dr.         | 1582 | -11.1        | 2291 | -6.8         |
| William Hilton Pkwy. / Mathews / Folly Field | 2098 | -15.6        | 3053 | -17.1        |
| William Hilton Pkwy. / Singleton Beach Rd.   | 1839 | -16.7        | 2578 | -20.2        |
| William Hilton Pkwy. / Mall Blvd.            | 2173 | +1.7         | 3215 | +0.5         |
| William Hilton Pkwy. / Queen's Folly Rd.     | 2457 | -0.3         | 3419 | -13.4        |
| William Hilton Pkwy. / Shipyard / Wexford    | 1909 | -4.8         | 2965 | -8.0         |

|  |      |       |      |       |
|--|------|-------|------|-------|
| William Hilton Pkwy. / New Orleans Rd.   | 1740 | -2.7  | 2674 | -7.0  |
| William Hilton Pkwy. / Arrow Rd.         | 1772 | +4.4  | 2498 | -8.0  |
| Pope Ave. / New Orleans / Office Park    | 1580 | -2.0  | 2590 | -13.1 |
| Pope Ave. / Cordillo Pkwy.               | 1498 | -4.7  | 2532 | -1.1  |
| Palmetto Bay Rd. / Target Rd.            | 1908 | +6.8  | 2459 | +0.2  |
| Palmetto Bay Rd. / Arrow / Point Comfort | 2166 | +13.9 | 2374 | -9.0  |

**PART FOUR – 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 on June 7<sup>th</sup>, 2011. The analysis was conducted in accordance with the newly released 2010 edition of the Transportation Research Board’s *Highway Capacity Manual* as required by the LMO. This newly released document secedes the 2000 edition as being the most current. Shortly after the Town procured the 2010 edition and its accompanying new software, we received advice from the software manufacturer that the new methodology does not give correct results in instances where a “permitted” left turn is opposed by a shared left-turn/through lane. A “permitted” left turn is a left turn that can be made on a circular green signal indication while yielding to opposing through and right-turning traffic. The advice from the software manufacturer indicated that the 2000 edition methodology should continue to be employed at such intersections until the error in the 2010 methodology is corrected. The only location in the Town where a permitted left turn is opposed by a shared left-turn/through lane is exiting the Village at Wexford shopping center onto William Hilton Parkway. Therefore, the 2000 edition methodology was used for this intersection’s analysis and the newer 2010 edition methodology was employed at all other locations. Since the 2010 methodology has been completely redeveloped, the reader should be cautious in drawing direct comparisons between the 2010 and 2011 analysis results.

The LMO states that the LMO Official will recommend improvements to address instances where the analysis identifies intersections operating at more than ninety percent of their theoretical capacity, or that are resulting in average delays 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 2010 and in June 2011 is shown in Table Four on the following page.

**TABLE FOUR – MORNING PEAK HOUR  
INTERSECTION VOLUME-TO-CAPACITY RATIOS AND AVERAGE TOTAL DELAY PER VEHICLE –  
JUNE 2011 -- JUNE 2010**

|  | 2011 |      | 2010 |      |
|--|------|------|------|------|
|  | v/c  | dpv  | v/c  | dpv  |
| WHP w/ Squire Pope Rd/Chamberlin Drive             | 0.86 | 17.8 | 0.84 | 53.6 |
| WHP w/ Spanish Wells Rd./Wild Horse Road           | 0.60 | 12.2 | 0.76 | 16.8 |
| WHP w/ Gumtree Road/XIP Ramps                      | 0.82 | 51.3 | 0.79 | 42.6 |
| WHP w/ Wilborn Road/Jarvis Park Road               | 0.74 | 20.4 | 0.81 | 26.5 |
| WHP w/ Pembroke Dr./Museum Street                  | 0.57 | 15.1 | 0.74 | 19.1 |
| WHP w/ Whooping Crane Way/Indigo Run Dr.           | 0.67 | 25.4 | 0.70 | 32.2 |
| WHP w/ Beach City Rd./Gardner Dr.                  | 0.58 | 16.6 | 0.58 | 24.1 |
| WHP w/ Mathews Drive (north)                       | 0.49 | 22.0 | 0.53 | 38.5 |
| WHP w/ Dillon Road                                 | 0.46 | 12.1 | 0.56 | 20.0 |
| WHP w/ Coggins Pt. Rd.                             | 0.42 | 27.0 | 0.53 | 38.2 |
| WHP w/ Beachwood Dr.                               | 0.31 | 1.8  | 0.34 | 8.5  |
| WHP w/ Folly Field Rd./Mathews Dr.                 | 0.33 | 21.5 | 0.42 | 27.6 |
| WHP w/ Singleton Bch. Rd.                          | 0.38 | 3.1  | 0.54 | 4.3  |
| WHP w/ Mall Boulevard                              | 0.42 | 1.7  | 0.52 | 24.4 |
| WHP w/ Queens Folly Rd./King Neptune Dr.           | 0.57 | 16.3 | 0.56 | 29.5 |
| WHP w/ Shipyard Dr./Wexford Dr.                    | 0.41 | 10.2 | 0.46 | 23.4 |
| WHP w/ New Orleans Rd.                             | 0.39 | 18.1 | 0.36 | 12.8 |
| WHP w/ Arrow Road                                  | 0.46 | 13.5 | 0.47 | 22.2 |
| Pope Ave. w/ New Orleans Rd./Office Park Rd.       | 0.40 | 21.3 | 0.51 | 34.1 |
| Pope Ave. w/ Cordillo Parkway                      | 0.36 | 20.6 | 0.48 | 28.7 |
| Palmetto Bay Road w/ Target Road                   | 0.43 | 12.8 | 0.52 | 22.7 |
| Palmetto Bay Road w/ Arrow Road/Point Comfort Road | 0.53 | 14.3 | 0.61 | 27.0 |

v/c – volume-to-capacity ratio

dpv – average total delay per vehicle in seconds

WHP-William Hilton Parkway

Table Four indicates that, as in June 2010, all of the signalized intersections within the Town of Hilton Head Island are operating in compliance with the LMO-identified goals during the morning peak hour in June 2011.

Table Five on the following page provides the same information as Table Four, but for the afternoon peak hour. Values failing to satisfy the LMO traffic goals are shown in boldface.

**TABLE FIVE – AFTERNOON PEAK HOUR  
INTERSECTION VOLUME-TO-CAPACITY RATIOS AND AVERAGE TOTAL DELAY PER VEHICLE –  
JUNE 2011 -- JUNE 2010**

|  | 2011        |            | 2010        |             |
|--|-------------|------------|-------------|-------------|
|  | <b>v/c</b>  | <b>dpv</b> | <b>v/c</b>  | <b>dpv</b>  |
| WHP w/ Squire Pope Rd/Chamberlin Drive             | <b>0.96</b> | 29.2       | <b>1.19</b> | <b>69.4</b> |
| WHP w/ Spanish Wells Rd./Wild Horse Road           | 0.62        | 13.5       | 0.71        | 22.2        |
| WHP w/ Gumtree Road/XIP Ramps                      | 0.77        | 43.8       | 0.82        | 46.5        |
| WHP w/ Wilborn Road/Jarvis Park Road               | 0.67        | 7.3        | 0.78        | 14.4        |
| WHP w/ Pembroke Dr./Museum Street                  | 0.57        | 20.0       | 0.90        | 28.0        |
| WHP w/ Whooping Crane Way/Indigo Run Dr.           | 0.67        | 24.9       | 0.89        | 29.6        |
| WHP w/ Beach City Rd./Gardner Dr.                  | 0.59        | 11.4       | 0.72        | 23.2        |
| WHP w/ Mathews Drive (north)                       | 0.64        | 26.5       | 0.77        | 42.9        |
| WHP w/ Dillon Road                                 | 0.57        | 13.3       | 0.73        | 19.4        |
| WHP w/ Coggins Pt. Rd.                             | 0.60        | 16.7       | 0.78        | 29.0        |
| WHP w/ Beachwood Dr.                               | 0.41        | 1.6        | 0.51        | 7.9         |
| WHP w/ Folly Field Rd./Mathews Dr.                 | 0.61        | 23.7       | 0.78        | 43.2        |
| WHP w/ Singleton Bch. Rd.                          | 0.46        | 5.3        | 0.62        | 5.9         |
| WHP w/ Mall Boulevard                              | 0.59        | 23.1       | 0.90        | 45.2        |
| WHP w/ Queens Folly Rd./King Neptune Dr.           | 0.69        | 31.7       | 0.88        | 39.4        |
| WHP w/ Shipyard Dr./Wexford Dr.                    | 0.59        | 13.4       | 0.74        | 20.9        |
| WHP w/ New Orleans Rd.                             | 0.52        | 18.2       | 0.54        | 19.2        |
| WHP w/ Arrow Road                                  | 0.51        | 22.4       | 0.74        | 36.6        |
| Pope Ave. w/ New Orleans Rd./Office Park Rd.       | 0.60        | 22.8       | 0.83        | 41.8        |
| Pope Ave. w/ Cordillo Parkway                      | 0.56        | 33.9       | 0.79        | 46.9        |
| Palmetto Bay Road w/ Target Road                   | 0.51        | 15.8       | 0.67        | 26.6        |
| Palmetto Bay Road w/ Arrow Road/Point Comfort Road | 0.57        | 19.4       | 0.82        | 36.3        |

**v/c** – volume-to-capacity ratio

**dpv** – average total delay per vehicle in seconds

WHP-William Hilton Parkway

As shown in bold near the top of Table Five, the intersection of William Hilton Parkway with Squire Pope Road/Chamberlin Drive during the afternoon peak hour is the only intersection within the Town that is failing to meet the operational goals outlined in the LMO. This intersection has failed to meet the goals for over a decade now, and analysis has historically shown that this cannot be mitigated and brought into compliance with the LMO goals without widening to construct a third westbound lane through the intersection on William Hilton Parkway. An alternate improvement that does not include widening to provide a third westbound through lane and that successfully mitigates the intersection’s operational deficiency was identified within this year’s analysis, and is discussed in Part Five of this report on the following page.

As stated previously, intersection capacity and average delay experienced at any signal is greatly influenced by the way that a signal is timed, and shifts in demand among various traffic movements may warrant adjustments to a signal's timing to ensure optimum performance. Where analyses of peak hour operations based on our updated June 2011 traffic counts indicate that revisions to a traffic signal's timing may benefit operations, the analysis is repeated a number of times to determine the optimum signal timing. Adjustments are then implemented at once via the Town's central traffic signal computer system, and the improved analysis results are reflected in this report. Signals that had timing adjustments implemented in response to the analysis results reflected in this report included those at the intersections of William Hilton Parkway with Wilborn and Jarvis Park Roads, Pembroke Drive and Museum Street, and Whooping Crane Way/Indigo Run Drive.

Detailed capacity analyses yielding the results for each intersection during both the morning and afternoon peak hours that are summarized in Tables Four and Five are available for review in the office of the Traffic and Transportation Engineer. An additional analysis that reflects successful mitigation of the deficiency identified during the afternoon peak hour at the intersection of William Hilton Parkway with Squire Pope Road without the need to widen the highway sufficiently to construct a third off-island through lane is also available for review.

## **PART FIVE – INTERSECTIONS OPERATING OUT OF COMPLIANCE WITH TOWN OPERATIONAL GOALS IN JUNE 2011**

As noted in Tables Four and Five, the intersection of William Hilton Parkway with Squire Pope Road and Chamberlin Drive is the only intersection that is failing to meet the operational goals outlined in the LMO during either the morning or afternoon peak hours.

### **INTERSECTION OF WM. HILTON PARKWAY WITH SQUIRE POPE ROAD**

This intersection satisfied the average total delay-based goal during both morning and afternoon peak hour flows and the volume-to-capacity ratio goal during the morning peak hour, but does not satisfy the volume-to-capacity ratio-based goal during the afternoon peak hour. The intersection exhibited a 0.96 volume-to-capacity ratio during the afternoon peak hour that could not be reduced with signal timing revisions. This intersection was also the only intersection found deficient during either peak hour in the previous year's report in June 2010.

This intersection's capacity was greatly improved in 2008 with a sales-tax funded intersection improvement project that was accomplished within the Town's capital improvements program. The improvement provided additional intersection capacity in the form of side street improvements and most notably a third eastbound, or "on-island" through lane on William Hilton Parkway. This improvement has successfully mitigated the intersection and brought it into compliance with the Town's adopted goals during the morning peak hour. The Town also extended a third lane westward from Old Wild Horse Road to Squire Pope Road in association with this project, terminating this lane as an exclusive right-turn lane to serve westbound motorists proceeding onto Squire Pope Road. Previous years' analyses have traditionally shown that the successful mitigation of this intersection during the afternoon peak hour required that this third lane be extended further westward through the intersection as a through lane, due to the density of the traffic stream on off-island William Hilton Parkway during the afternoon peak volume hour. Through traffic on William Hilton Parkway at this intersection was down approximately fifteen percent in June 2011 over June 2010, however, and this precipitous drop in the amount of through traffic on William Hilton Parkway led to the identification of an alternate improvement that successfully mitigates the intersection during the afternoon peak hour. This is the construction of an acceleration lane to serve the right-turn movement from Squire Pope Road onto off-island William Hilton Parkway. While the widening needed to provide this acceleration lane basically mimics that which would be required to extend a third westbound through lane through the intersection, the Town's recent acquisition of a large parcel to the north and west of the intersection will ultimately substantially reduce impacts to existing residences associated with either improvement, and may make the elimination of this deficiency with an improvement project highly feasible in the near future.

## **PART SEVEN – SUMMARY**

The Transportation Research Board, which publishes the *Highway Capacity Manual* cited in the LMO as the authority governing the capacity analyses of intersections within the Town, released a new edition in 2011. The 2011 edition is the first update to the document since the previous edition was released in 2000, and contains completely new analysis methodology that may make direct comparisons between 2011 analyses results and previous years' results not directly comparable. Volume demands recorded within the Town in June 2011 were generally approximately six percent lower than those recorded in June 2010, following the identification of small increases in both June 2010 and June 2009. Total demand in June 2011 was measured at approximately thirteen percent lower than in June 2005, when the highest June volumes in the Town's history were recorded. Only one intersection, that of William Hilton Parkway with Squire Pope Road and Chamberlin Drive, was found to be operating outside of the Town's operational goals in June 2011. The intersection, like

all others within the Town, was found to be operating in compliance with the goals during the morning peak hour. It operates out of compliance during the afternoon peak hour, however, due to a 0.96 volume-to-capacity ratio that cannot be readily decreased with signal timing adjustments. Although analysis has traditionally shown that the extension of a third westbound, or off-island through lane is required to mitigate this intersection and bring it into compliance with the Town's operation goals, an additional alternate treatment was identified based on June 2011 conditions. The analysis of decreased volume recorded in June 2011 with the new methodology recently released by the Transportation Research Board indicates that the intersection may also be successfully mitigated by constructing an acceleration lane to serve southbound motorists on Squire Pope Road turning right onto off-island William Hilton Parkway. The addition of a third westbound through lane would also and perhaps more fully mitigate the intersection's operation. While the widening required to construct either of these alternate improvements is similar in scope, the reader is cautioned that the increase of through traffic demand on William Hilton Parkway to previous years' June levels may again make it impossible to fully mitigate the intersection without extending a third westbound, or off-island through lane through the intersection.

**APPENDIX A**

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

JUNE 2011

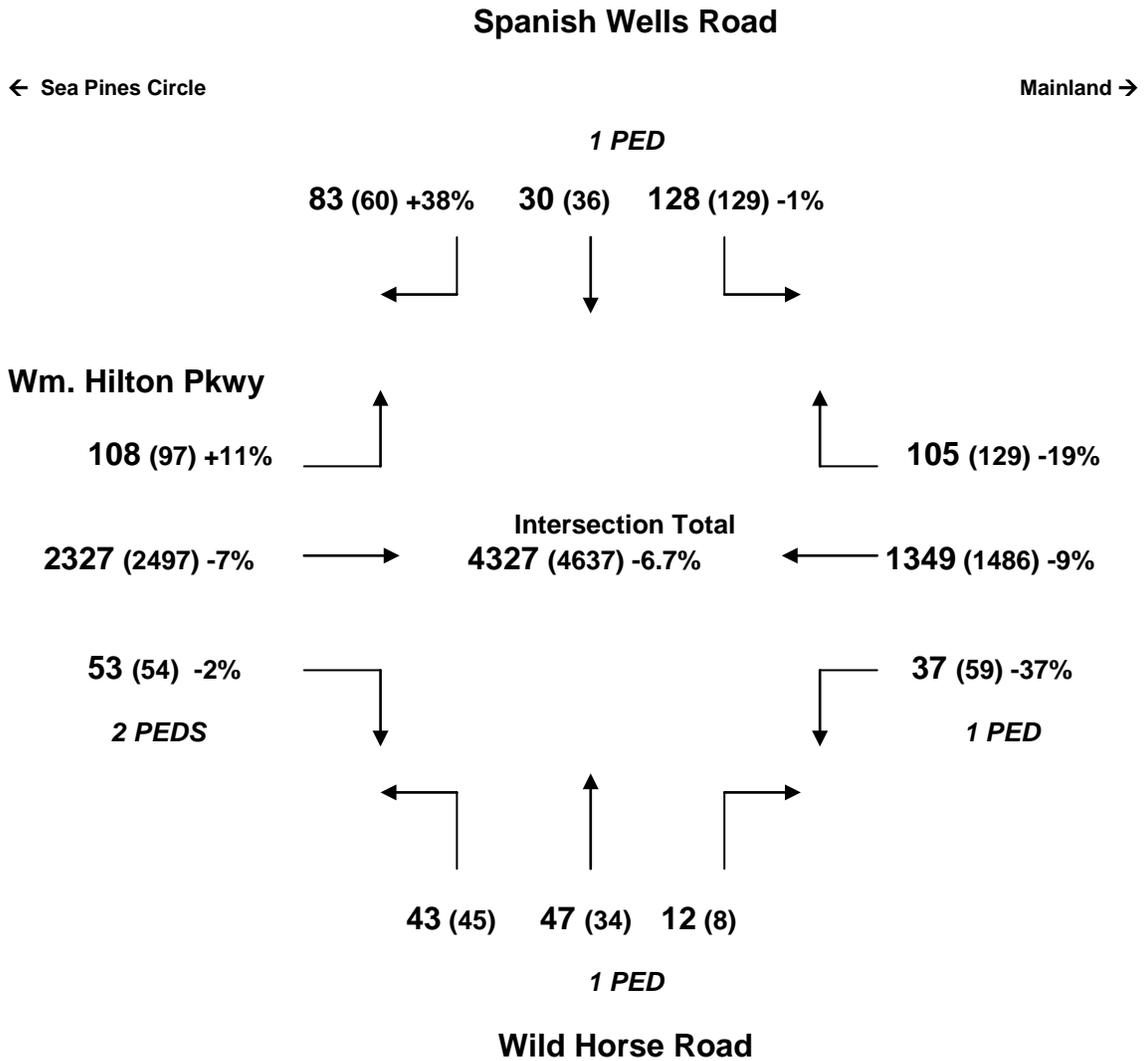






# William Hilton Parkway with Spanish Wells Road and Wild Horse Road

P.M. PEAK HOUR (4:30 to 5:30 p.m. – Tue. 6/7/11)



2011 (2010) %chg

# William Hilton Parkway with Gum Tree Road and Cross Island Parkway

A.M. PEAK HOUR (7:45 to 8:45 a.m. – Tue. 6/7/11)

## Cross Island Expressway

← Sea Pines Circle

Mainland →

3 PEDS

114 (107) +7%    130 (97) +34%    7 (3)



Wm. Hilton Pkwy

126 (82) +54%



5 (3)

726 (749) -3%



Intersection Total  
3384 (3459) -2.2%



1475 (1671) -12%

79 (117) -32%



222 (161) +38%



240 (204) +18%

147 (154) -5%

108 (109) -1%

2 PEDS

Gumtree Road

2011 (2010) %chg



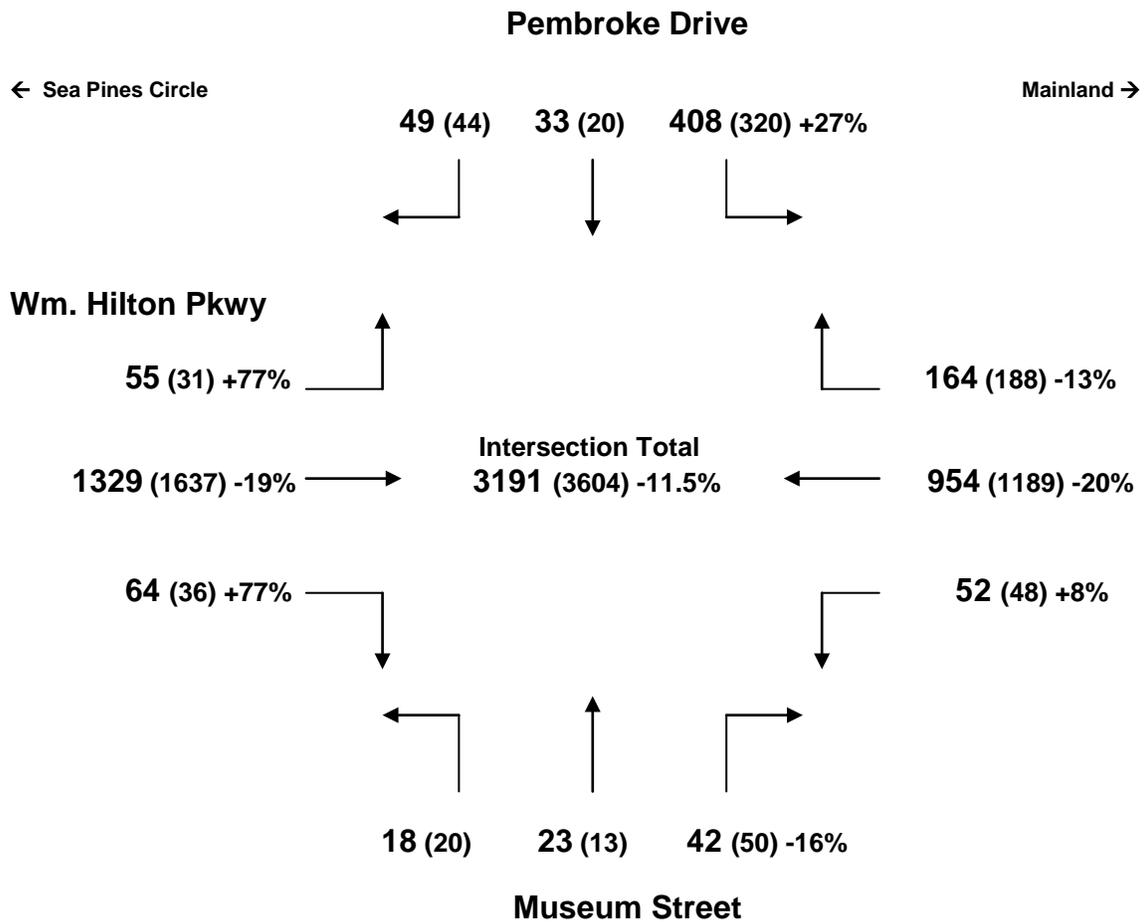






# William Hilton Parkway with Pembroke Drive and Museum Street

P.M. PEAK HOUR (4:30 to 5:30 p.m. – Tue. 6/7/11)



**NO PEDS  
RECORDED**

2011 (2010) %chg





# William Hilton Parkway with Beach City Road and Gardner Drive

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/7/11)

## Gardner Drive

← Sea Pines Circle

Mainland →

1 PED



## Wm. Hilton Pkwy

33 (19)

9 (15)

**873 (952) -8%**    →    **Intersection Total**    ←    **1485 (1393) +7%**  
**3175 (3217) -1.3%**

78 (94) -17%

256 (341) -25%



1 PED

## Beach City Road

2011 (2010) %chg

A-13

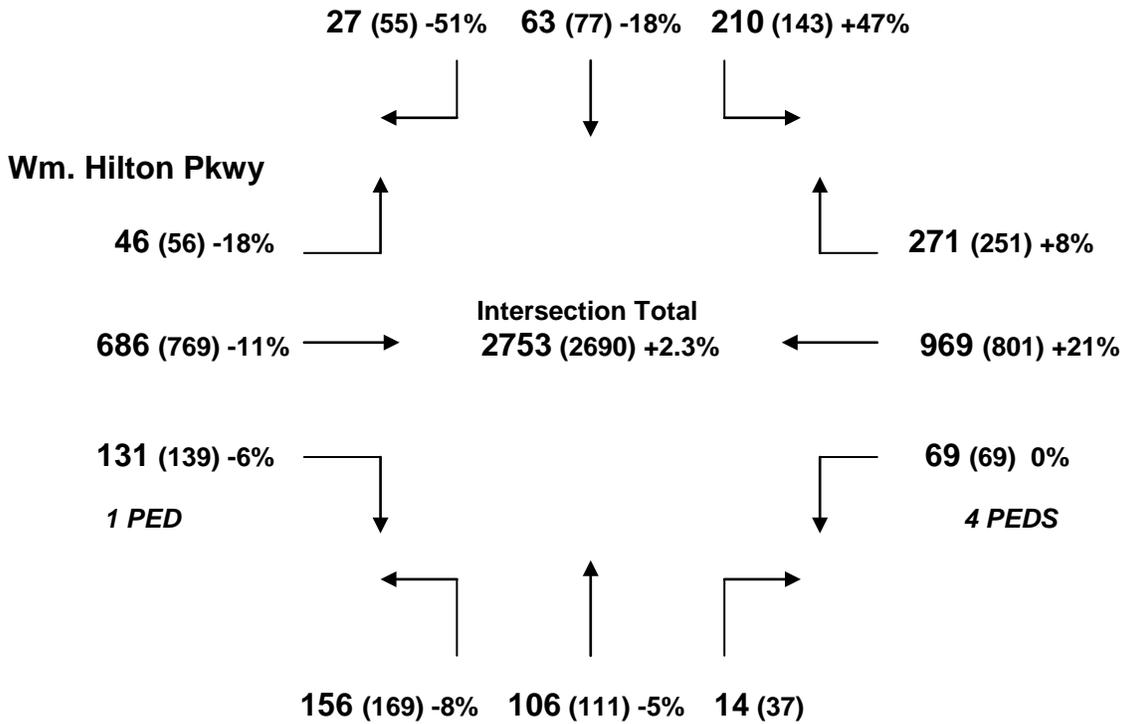


**William Hilton Parkway with Mathews Drive  
(NORTHERN INTERSECTION)  
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/7/11)**

**Mathews Drive**

← Sea Pines Circle

Mainland →



**Mathews Drive**

**2011 (2010) %chg**







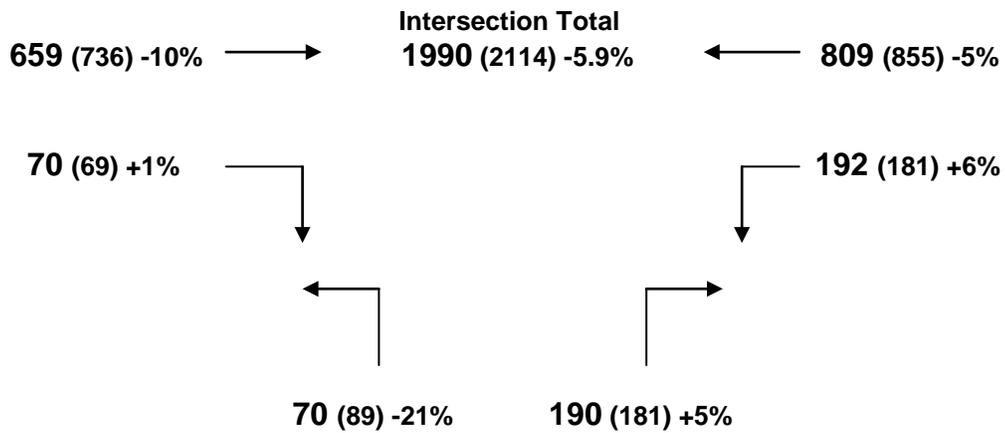
# William Hilton Parkway with Coggins Point Road

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/7/11)

← Sea Pines Circle

Mainland →

## Wm. Hilton Pkwy



## Coggins Point Road

2011 (2010) %chg

**NO PEDS  
RECORDED**

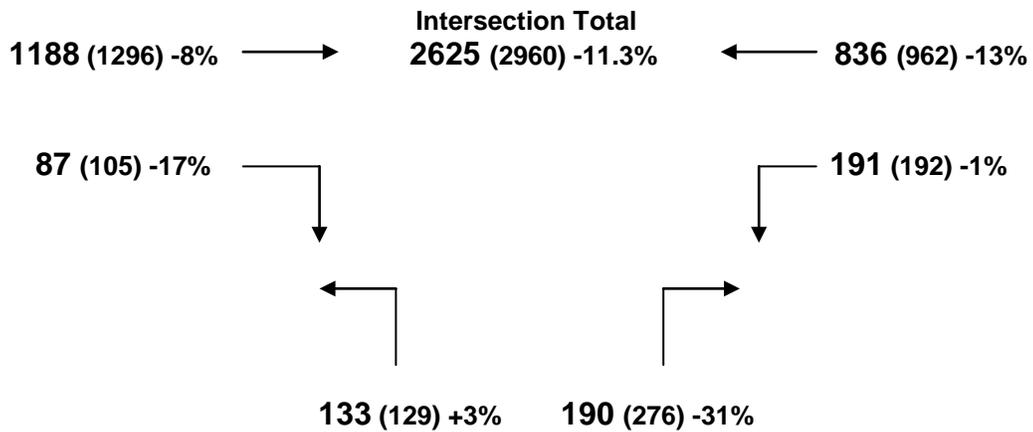
# William Hilton Parkway with Coggins Point Road

P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Tue. 6/7/11)

← Sea Pines Circle

Mainland →

## Wm. Hilton Pkwy



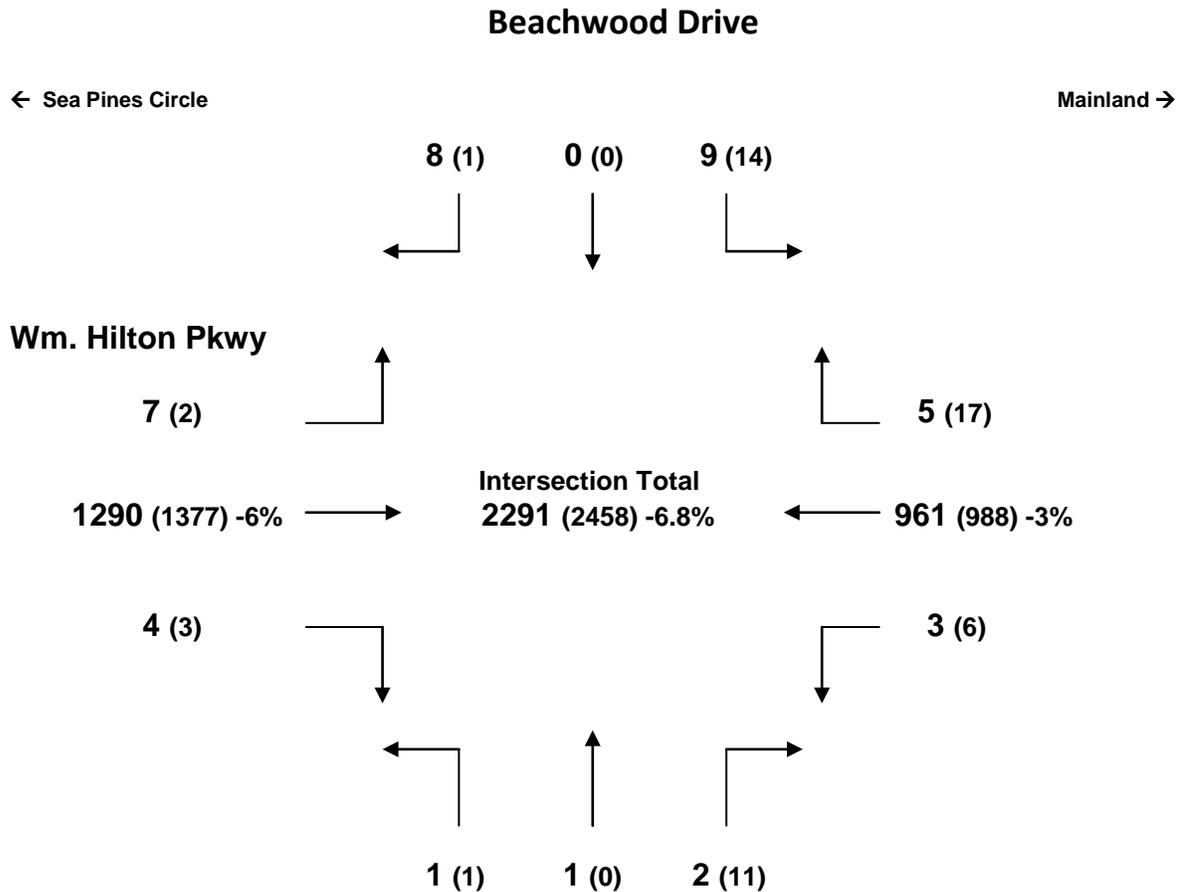
## Coggins Point Road

**NO PEDS  
RECORDED**

2011 (2010) %chg



**William Hilton Parkway with Beachwood Drive**  
**P.M. PEAK HOUR - (5:00 to 6:00 p.m. – Tue. 6/7/11)**



**Beachwood Drive**

***NO PEDS  
RECORDED***

**2011 (2010) %chg**





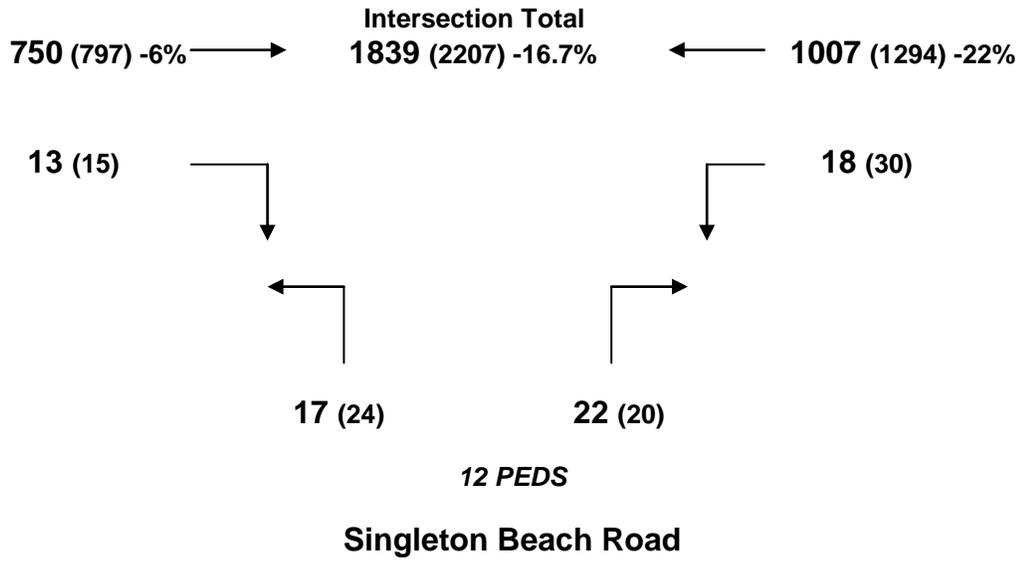
# William Hilton Parkway with Singleton Beach Road

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/7/11)

← Sea Pines Circle

Mainland →

## Wm. Hilton Pkwy



2011 (2010) %chg

# William Hilton Parkway with Singleton Beach Road

P.M. PEAK HOUR - (4:00 to 5:00 p.m. – Wed. 6/7/11)

← Sea Pines Circle

Mainland →

**Wm. Hilton Pkwy**

1433 (1638) -13% →      **Intersection Total**      ← 1050 (1410) -26%  
**2578 (3229) -20.2%**

16 (27)

23 (27)



23 (36)

33 (29)

**Singleton Beach Road**

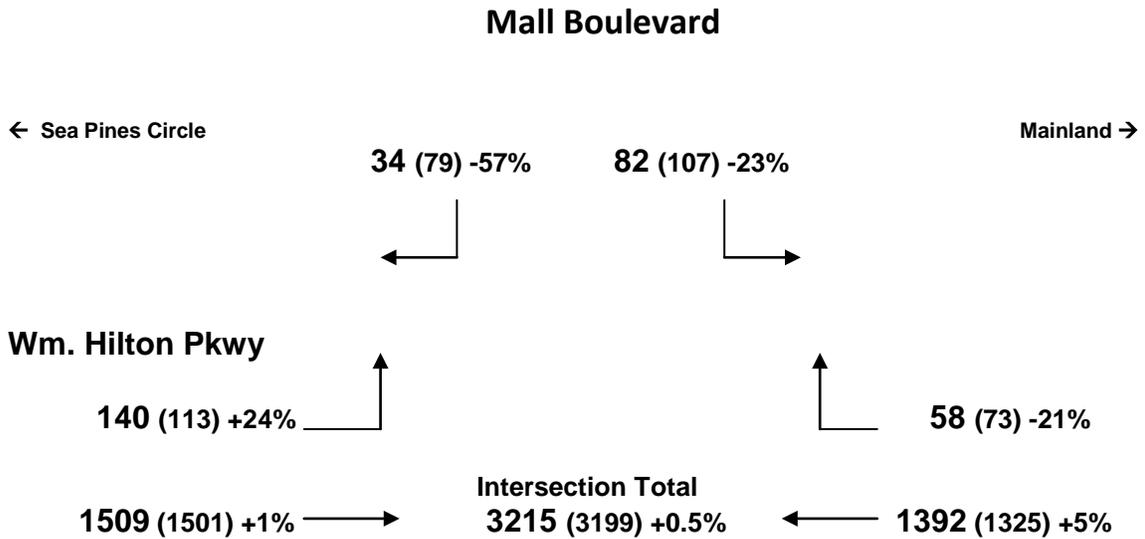
**NO PEDS  
RECORDED**

**2011 (2010) %chg**



# William Hilton Parkway with Mall Boulevard

P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Wed. 6/9/10)



**NO PEDS  
RECORDED**

**2011 (2010) %chg**

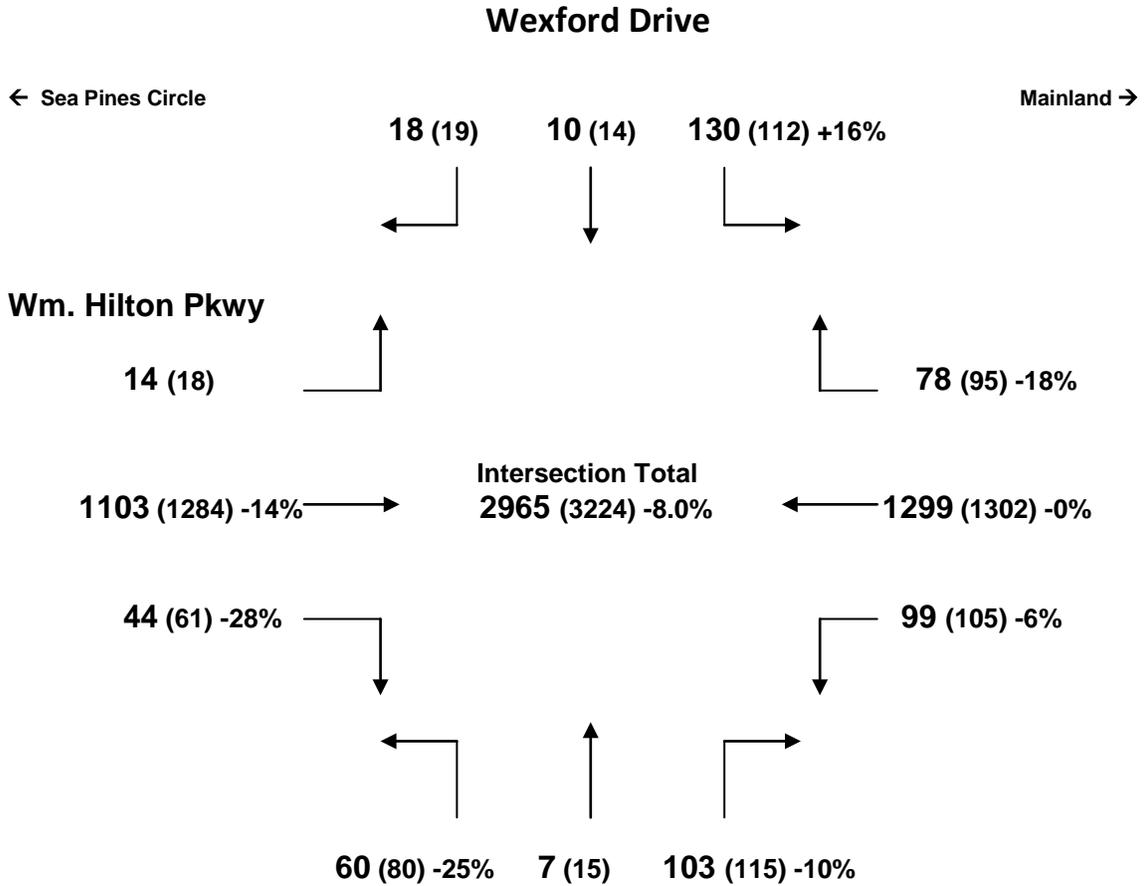






# William Hilton Parkway with Shipyard Drive and Wexford Drive

P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Tue. 6/7/11)



**Shipyard Drive**

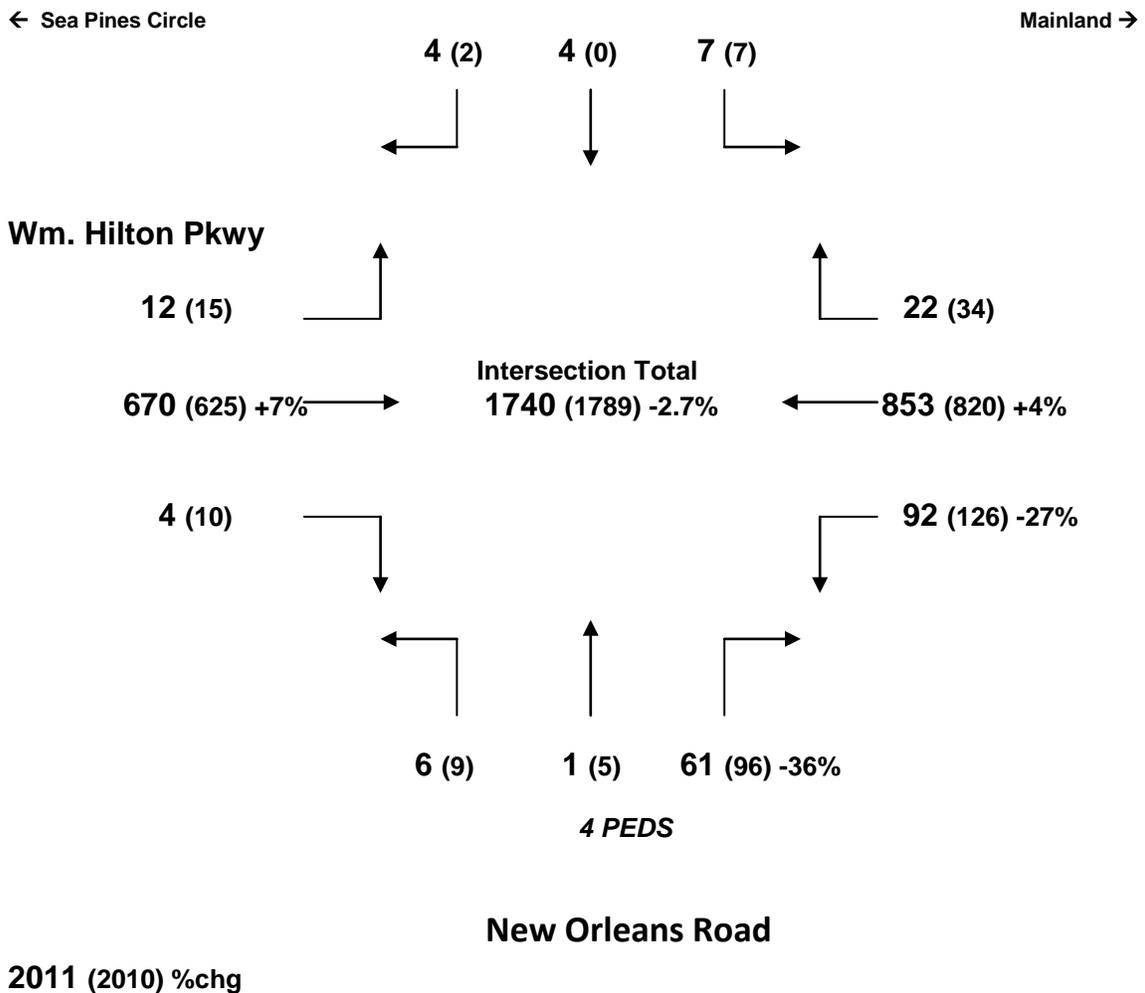
**NO PEDS  
RECORDED**

2011 (2010) %chg

# William Hilton Parkway with New Orleans Road and Village at Wexford

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/7/11)

## Village at Wexford



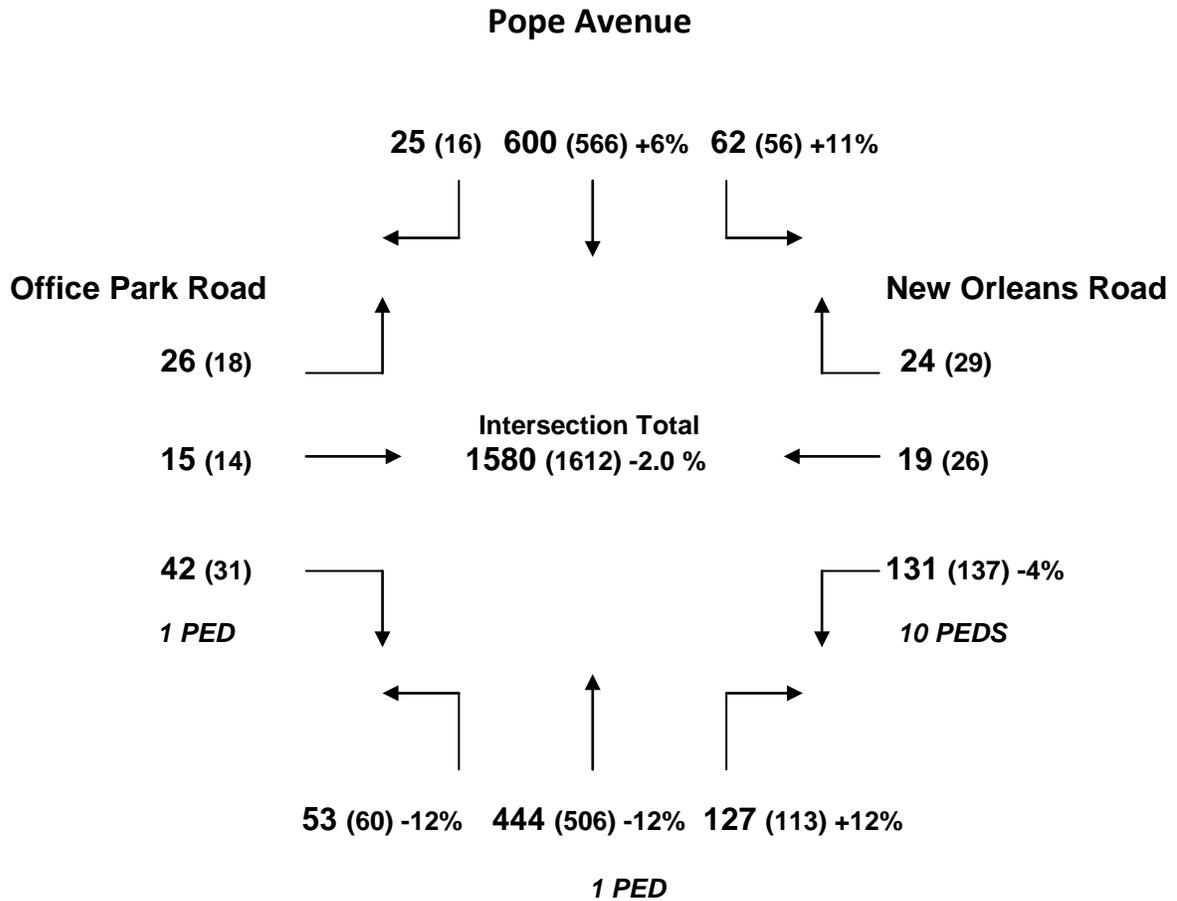






# Pope Avenue with New Orleans Road and Office Park Road

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/7/11)



**Pope Avenue**

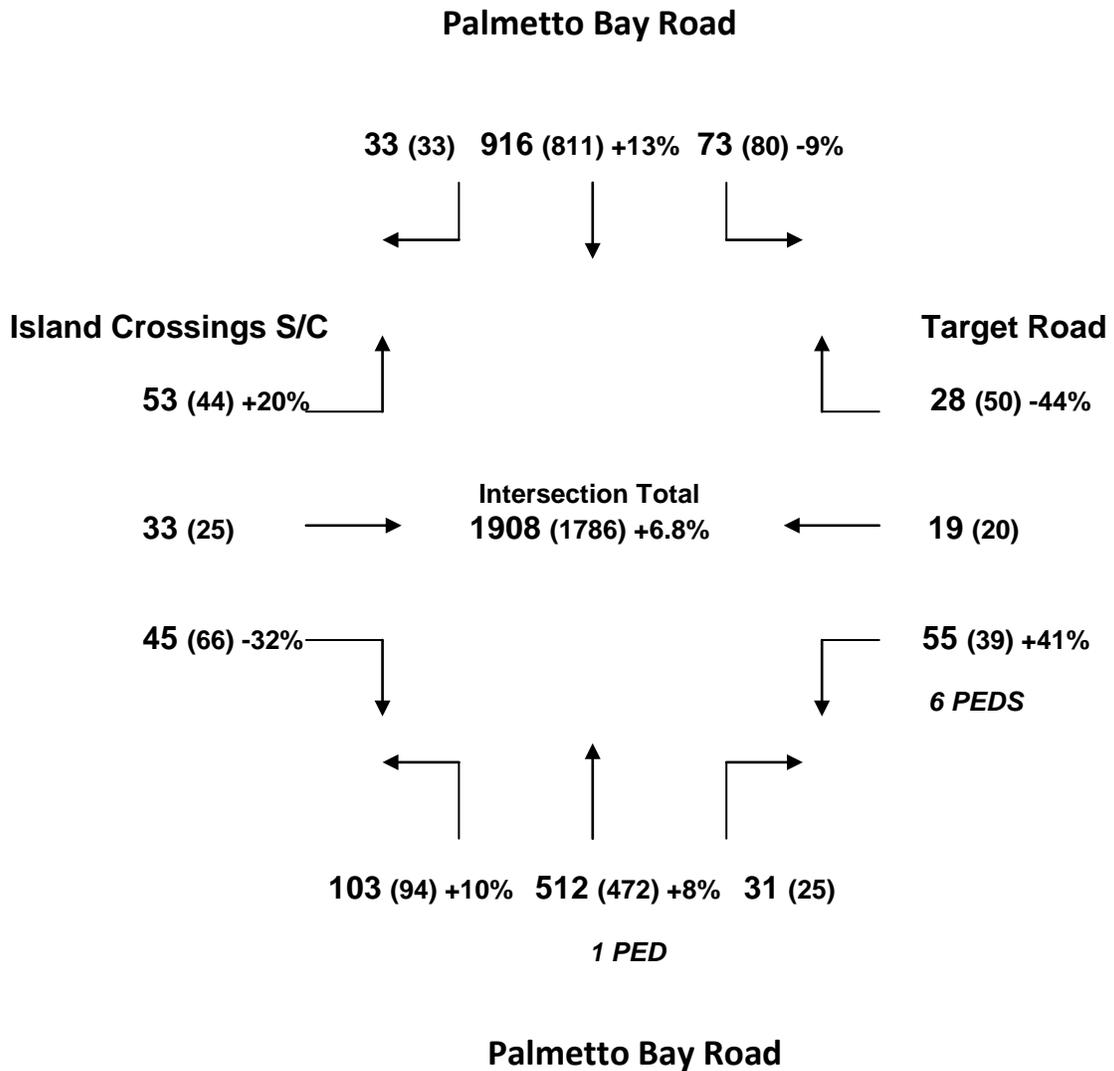
2011 (2010) %chg







**Palmetto Bay Road with Target Road  
and Entrance to Island Crossings S/C**  
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/7/11)



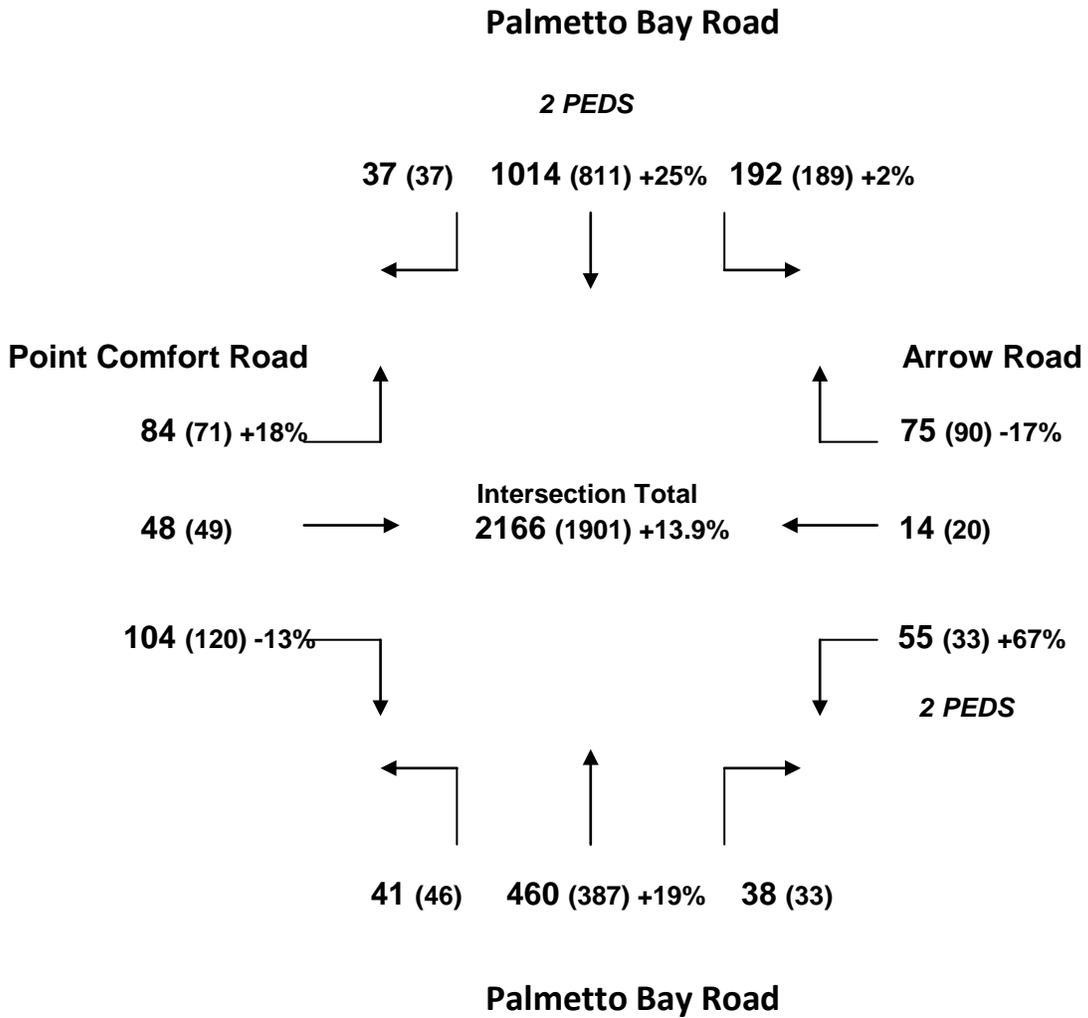
2011 (2010) %chg

A-41



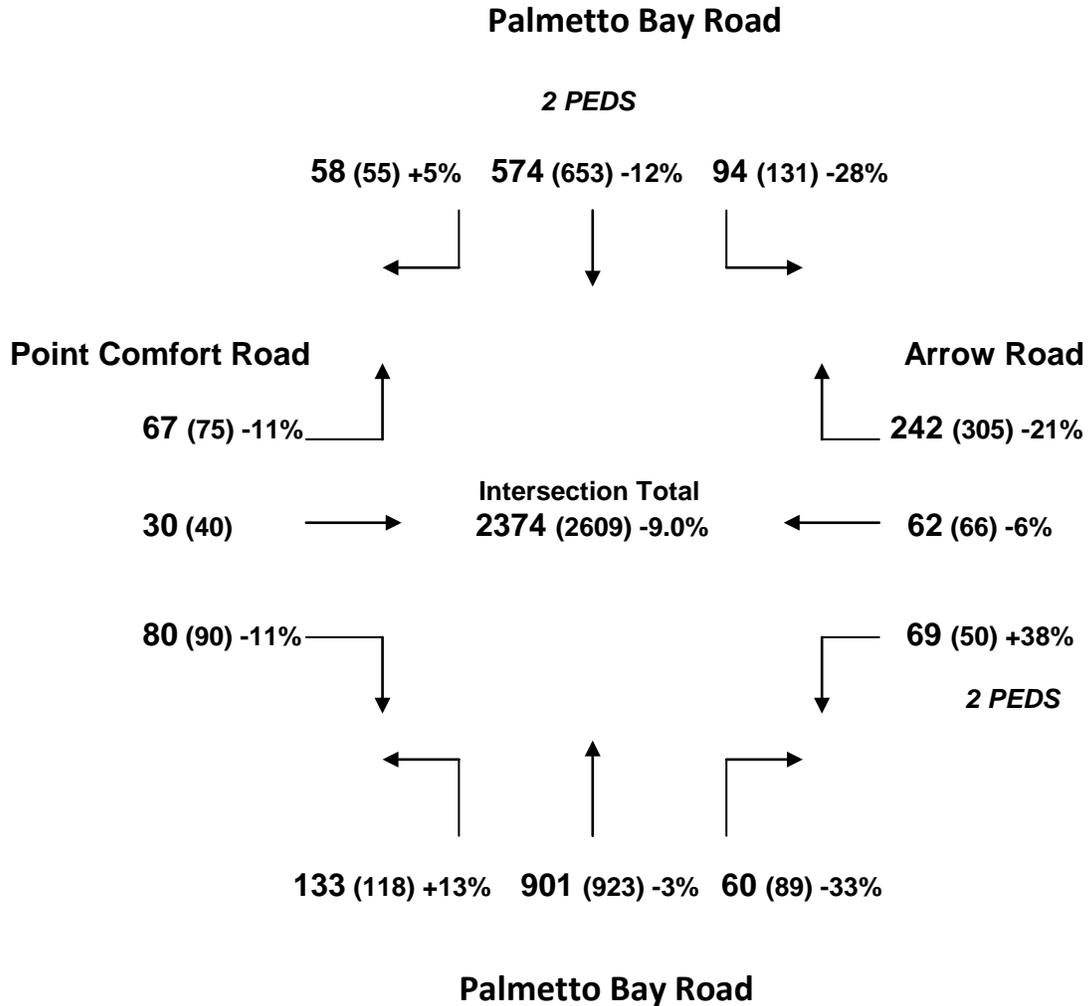
# Palmetto Bay Road with Arrow Road and Point Comfort Road

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/7/11)



2011 (2010) %chg

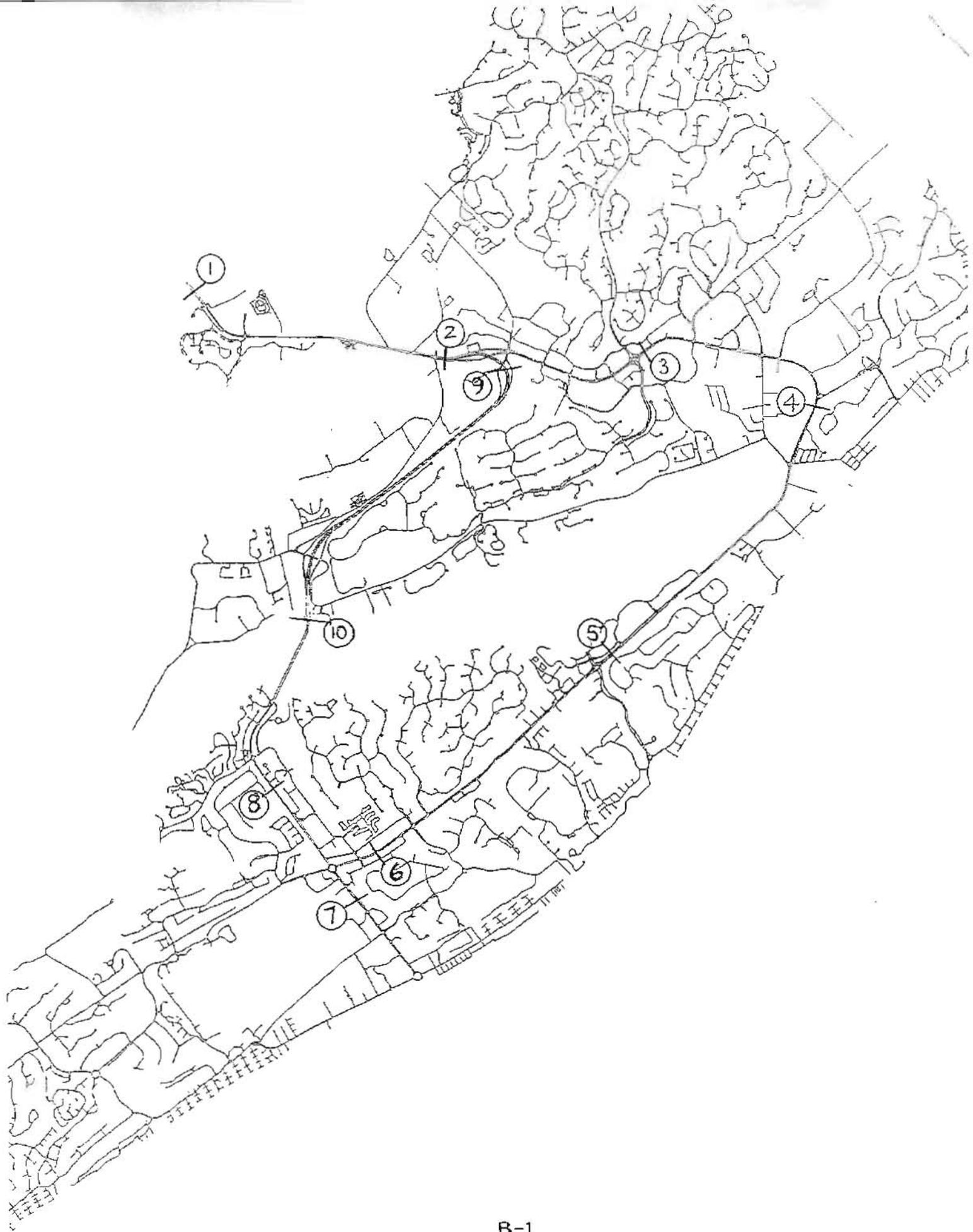
**Palmetto Bay Road with Arrow Road  
and Point Comfort Road**  
P.M. PEAK HOUR - (4:15 to 5:15 p.m. – Thu. 6/7/11)



2011 (2010) %chg

## **APPENDIX B**

LOCATIONS OF 24-HOUR MACHINE COUNTS SUMMARIZED  
IN TABLE ONE



**APPENDIX C**

TRANSPORTATION RESEARCH BOARD STATEMENT ON  
NATIONAL VOLUME TRENDS IN 2011

# Policy Information

FHWA > September 2011 Traffic Volume Trends

[Next Page](#)

Highway Performance Monitoring System

Motor Fuel & Highway Trust Fund

Highway Finance Data & Information

National Household Travel Survey

Travel Monitoring

## September 2011 Traffic Volume Trends

- Travel on all roads and streets changed by -1.5% (-3.7 billion vehicle miles) for September 2011 as compared with September 2010.
- Travel for the month is estimated to be 244.2 billion vehicle miles.
- Cumulative Travel for 2011 changed by -1.3% (-29.8 billion vehicle miles).
- Cumulative estimate for the year is 2,222.5 billion vehicle miles of travel.



Estimated Vehicle-Miles of Travel by Region - September 2011 - (in Billions)

Change in Traffic as compared to same month last year.

| Region         | Total Travel | Percentage Change |
|----------------|--------------|-------------------|
| North-East     | 37.8         | -0.8              |
| South-Atlantic | 52.4         | -2.0              |
| North-Central  | 56.5         | -1.5              |
| South-Gulf     | 46.8         | -1.7              |
| West           | 50.8         | -1.4              |

## 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 2009 Table VM-2 as a base.
- Compiled with data on hand as of November 10, 2011.
- Some historical data were revised based on HPMS and amended TVT data as of December 2009.
- 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).

1. [Travel Trends \(September 2011\)](#)
2. [Individual Monthly Motor Vehicle Travel in the U.S. for September 2011](#)
3. [Changes on Rural Arterial Roads by Region and State](#)
4. [Changes on Urban Arterial Roads by Region and State](#)
5. [Changes on All Estimated Roads by Region and State](#)
6. [Volume Trends - Rural](#)
7. [Volume Trends - Urban](#)
8. [Figure 1 - Moving 12-Month Total on All Highways](#)
9. [Figure 2 - Travel on U.S. Highways By Month](#)

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United States Department of Transportation - Federal Highway Administration