

INDEPENDENT RESORT REZONING
TRAFFIC IMPACT STATEMENT

Project #16537

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2149 McGregor Boulevard

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INDEPENDENT RESORT REZONING **TRAFFIC IMPACT STATEMENT**

Introduction

Independent Resort (hereafter referred to as the Project) is a proposed redevelopment project located adjacent to Times Square within the downtown core of the Town of Fort Myers Beach, Florida. The Project includes the triangle-shaped property generally bounded by the Matanzas Pass Bridge and Estero Boulevard to the west and south, Crescent Street to the east and Fifth Avenue to the north. Independent Resort also includes beachfront property situated on the beachside of Estero Boulevard just north of Crescent Street, Exhibit 1.

The redevelopment of the Estero Boulevard - Time Square Area has been an on-going effort of the Town and Lee County. The Matanzas Pass Bridge (San Carlos Boulevard), Old San Carlos Boulevard, and the section of Estero Boulevard from the bridge to Crescent Street have been the subject of numerous traffic circulation studies, evaluations and recommendations over the past decades. As a result, the proposed Independent Resort redevelopment plan represents the implementation of the goals and objectives of the Fort Myers Beach Comprehensive Plan.

Updated Traffic Study

The original traffic study dated March 8, 2017 was submitted to the Town of Fort Myers Beach as part of the rezoning application. In response to review comments and recommendations provided by the Town of Fort Myers Beach (Appendix H), the traffic study has been updated and is reflected in this document.

Study Purpose

In the continuation of the redevelopment effort of downtown Fort Myers Beach, this traffic impact statement (TIS) was prepared in support of the rezoning (ZTIS) of the Independent Resort property. The subject property consists of a bayside resort hotel and a beachside restaurant and bar located within a publicly accessible commercial recreation facility with the anticipated buildout year in late 2019/ early 2020.

Executive Summary

The findings and conclusions of the ZTIS are as follows.

1. The proposed Independent Resort reflects the implementation of the redevelopment vision of Times Square, Estero Boulevard and downtown Fort Myers Beach.

2. The proposed Independent Resort is anticipated to generate 17% and 11% fewer vehicle trips for the PM peak hour and weekday, respectively, than the Pre-Demolition Development (Pre-Hurricane Charley).
3. The proposed Independent Resort is anticipated to generate 64% and 63% fewer vehicle trips for the PM peak hour and weekday, respectively, than allowed under the Build Per Code Development.
4. Future traffic conditions with the Proposed Development will not cause Estero Boulevard to exceed the minimum LOS standard established by Policy 7-I-2 of the Comprehensive Plan for the Town of Fort Myers Beach.
5. All intersections under study will operate at an acceptable LOS with the Proposed Development.
6. The Proposed Development will not significantly or adversely impact the Times Square roadway circulation system (based on Lee County standards).
7. During the critical peak hour, the Proposed Development will replace traffic associated with the Existing (Occupied) Development (3.3% of total traffic), and contribute only 2 additional new trips to the external road network. In addition, the proposed development will comprise a smaller portion of total traffic compared to the Pre-Demolition and Build Per Code Developments.

Study Area

Roadway Under Study

Estero Boulevard is an arterial road that provides access to the Town of Fort Myers Beach from San Carlos Boulevard to Hickory Boulevard. It is a two-lane roadway throughout Estero Island.

Intersections Under Study

The intersections analyzed in the study are listed below and further depicted in Exhibit 2. A total of 3 intersections were analyzed and evaluated in the ZTIS.

Independent Resort Rezoning		
Major Street	Minor Street	Type
Estero Boulevard	Fifth Street	Directional Movement, 4-Way Intersection, Unsignalized
	Crescent Street	Full Movement, T-Intersection, Unsignalized
Fifth Street	Crescent Street	Full Movement, T-Intersection, Unsignalized



Project Access

The proposed rezoning includes two access points that connect the parking areas to the external road network, Exhibit 1b.

- Access 1 has full inbound access on the west side of Crescent Street and full outbound access on the south side of Fifth Street. Access 1 serves as the main entrance to the Project.
- Access 2 is a full access on the north side of Fifth Street where additional parking is provided.

The proposed rezoning includes additional access points on Fifth Street to accommodate a service vehicle drive lane.

Also included in the proposed rezoning is a parking lot on the beachside of Estero Boulevard. However, this parking lot is intended for public use and not for the Project.

Development Scenarios and Description

For purposes of the rezoning request, the trip generation analysis compares four development scenarios of the subject property and discussed below.

- Existing (Occupied) Development with Current Zoning
- Pre-Demolition Development (Pre-Hurricane Charley) with Current Zoning
- Build Per Code Development (Maximum Allowable Development with Current Zoning)
- Proposed Development with Rezoning

Existing (Occupied) Development

The Existing (Occupied) Development scenario reflects the existing development on the subject property. At the request made by the Town of Fort Myers Beach, only occupied land uses (at the time of this study) were considered for this scenario. Therefore, this scenario does not reflect the full potential of existing commercial buildings located on the subject property.

Pre-Demolition Development

The Pre-Demolition Development scenario reflects the existing development on the subject property and also includes the previously existing beach-front hotels and the Seafarer's Mall, prior to Hurricane Charley.

Build Per Code Development

For comparative purposes, this development scenario reflects the maximum potential level of development of the subject property allowed under the current zoning.

Proposed Development

The proposed Independent Resort development is comprised of a hotel resort with supporting uses such as a spa and restaurant. The Proposed Development also includes a separate bayside commercial building as well as a beachside restaurant and bar located within a publicly accessible commercial recreation facility. The commercial recreation facility is considered to be a supporting use to the Independent Resort and the beachside restaurant and bar.

Independent Resort is being designed to be a pedestrian focal point of Times Square with direct linkages to the beach and adjacent social/recreational activities along Estero Boulevard. At-grade parking has been incorporated into the design to accommodate on-site parking demand. Additional public parking will be provided which will improve overall beach access for the general public.

The development parameters summary by land use and size associated with the four development scenarios are as follows.

Development Parameters Summary				
Land Use	Existing (Occupied) Development	Pre-Demolition Development	Build Per Code Development	Proposed Development
Resort Hotel (Occupied Rooms)	0	66	0	290
Hotel (Occupied Rooms)	12	0	0	0
Retail (sq. ft.)	5,839	24,200	110,000	0
Specialty Retail (sq. ft.)	3,796	30,750	65,600	1,800
Restaurant (sq. ft.)	0	0	0	19,750
Bar (sq. ft.)	2,896	0	0	1,955
Public Beach Parking (Stalls)	216	0	0	0

Trip Generation

The trip generation associated with each of the four development scenarios discussed above was estimated based on trip rates from the Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition (Appendix A). Internal trip capture for mixed-use developments were estimated based on the procedures described in the Institute of Transportation Engineers (ITE), Trip Generation Handbook, 3rd Edition (Appendix B), where applicable.

The original trip generation using Trafficware software is provided in Appendix C. Also, the ITE Land Use Code and complete trip generation assumptions and calculation worksheets are provided in the following.

- Existing (Occupied) Development – Exhibit 3

- Pre-Demolition Development - Exhibit 4
- Build Per Code Development - Exhibit 5
- Proposed Development - Exhibit 6

Existing (Occupied) Development

The trip generation characteristics associated with the Existing (Occupied) Development scenario reflects hotel units, commercial uses, and public beach parking that are currently in use as of November, 2017.

Due to its beach location, the development is not expected to generate the level of vehicle trips of the typical commercial establishments reflective of the ITE trip rates. The commercial customers generally arrived by foot, bike or trolley by beachgoers, tourists and from near-by residents. In addition, low percentage of retail pass-by vehicular trips was assumed due to the somewhat circuitous access to the site.

The resultant trip generation analysis is presented in Exhibit 3 and summarized below.

Existing (Occupied) Development ⁽¹⁾									
Trip Generation Summary									
Trip Type	AM Peak Hour			PM Peak Hour			Daily		
	In	Out	Total	In	Out	Total	In	Out	Total
Total ⁽²⁾	93	7	100	80	137	217	1,133	1,129	2,262
Mixed-Use Internal ⁽³⁾	0	0	0	15	15	30	148	148	296
Hotel	0	0	0	2	2	4	20	13	33
Restaurant	0	0	0	7	6	13	56	78	134
Retail	0	0	0	6	7	13	72	57	129
External Non-Auto ⁽⁴⁾	4	4	8	25	24	49	223	220	443
External Auto ⁽⁵⁾	89	3	92	40	98	138	762	761	1,523
Pass-By Auto ⁽⁶⁾	0	0	0	3	4	7	24	24	48
Net New Auto ⁽⁷⁾	89	3	92	37	94	131	738	737	1,475

Footnotes:

(1) Existing (Occupied) Development.

(2) ITE, Trip Generation, 9th Edition.

(3) ITE, Trip Generation Handbook, 3rd Edition:

AM ICR = 0%; PM ICR = 14%.

(4) External Non-Auto/Multimodal (PCE) trips including walk, bike and trolley:

AM Non-Auto = 8%; PM Non-Auto = 23%.

(5) External Auto = Total (2) – Mixed-Use Internal (3) – External Non-Auto (4).

(6) Low retail pass-by trips reflective of inconvenient parking and access.

(7) Net New trips on the road network = External Auto (5) - Pass-by (6).

The Existing (Occupied) Development scenario is estimated to generate 92 net new auto trips during the AM peak hour, 131 net new auto trips during the PM peak hour and 1,475 net new auto trips on a typical weekday. These net new vehicle trips are circulated on the public road network.

Pre-Demolition Development

The trip generation characteristics associated with the Pre-Demolition Development scenario reflects hotel units and a retail commercial center that served the Fort Myers Beach community for many years prior to Hurricane Charley.

Due to its beach location, the prior development did not generate the level of vehicle trips of the typical retail establishments reflective of the ITE trip rates. The retail commercial customers generally arrived by foot, bike or trolley by beachgoers, tourists and from near-by residents. In addition, low percentage of retail pass-by vehicular trips was assumed due to the somewhat circuitous access to the site.

The resultant trip generation analysis is presented in Exhibit 4 and summarized below.

Pre-Demolition Development ⁽¹⁾									
Trip Generation Summary									
Trip Type	AM Peak Hour			PM Peak Hour			Daily		
	In	Out	Total	In	Out	Total	In	Out	Total
Total ⁽²⁾	74	45	119	176	204	380	2,252	2,251	4,503
Mixed-Use Internal ⁽³⁾	1	1	2	5	5	10	68	68	136
Hotel	0	1	1	2	3	5	35	33	68
Retail	1	0	1	3	2	5	33	35	68
External Non-Auto ⁽⁴⁾	35	21	56	81	94	175	1,034	1,033	2,067
External Auto ⁽⁵⁾	38	23	61	90	105	195	1,150	1,150	2,300
Pass-By Auto ⁽⁶⁾	5	4	9	16	19	35	205	205	410
Net New Auto ⁽⁷⁾	33	19	52	74	86	160	945	945	1,890

Footnotes:

(1) Pre-Hurricane Charley.

(2) ITE, *Trip Generation*, 9th Edition.

(3) ITE, *Trip Generation Handbook*, 3rd Edition:

AM ICR = 2%; PM ICR = 3%.

(4) External Non-Auto/Multimodal (PCE) trips including walk, bike and trolley:

AM Non-Auto = 47%; PM Non-Auto = 46%.

(5) External Auto = Total (2) – Mixed-Use Internal (3) – External Non-Auto (4).

(6) Low retail pass-by trips reflective of inconvenient parking and access.

(7) Net New trips on the road network = External Auto (5) - Pass-by (6).

The Pre-Demolition Development scenario is estimated to generate 52 net new auto trips during the AM peak hour, 160 net new auto trips during the PM peak hour and 1,890 net new auto trips on a typical weekday. These net new vehicle trips are circulated on the public road network.

Build Per Code Development

The trip generation characteristics associated with the Build Per Code Development scenario reflects the maximum intensity of retail commercial use that is allowed under the current zoning.

Due to its beach location, the maximum intensity development is not expected to generate the level of vehicle trips of the typical retail establishments reflective of the ITE trip rates. The retail commercial customers generally arrived by foot, bike or trolley by beachgoers, tourists and from near-by residents. In addition, low percentage of retail pass-by trips was assumed due to the circuitous access and limited parking on site.

The resultant trip generation analysis is presented in Exhibit 5 and summarized below.

Build Per Code Development ⁽¹⁾									
Trip Generation Summary									
Trip Type	AM Peak Hour			PM Peak Hour			Daily		
	In	Out	Total	In	Out	Total	In	Out	Total
Total ⁽²⁾	124	87	211	386	432	818	5,035	5,034	10,069
Mixed-Use Internal ⁽³⁾	0	0	0	0	0	0	0	0	0
External Non-Auto ⁽⁴⁾	56	39	95	174	194	368	2,266	2,265	4,531
External Auto ⁽⁵⁾	68	48	116	212	238	450	2,769	2,769	5,538
Pass-By Auto ⁽⁶⁾	12	9	21	39	43	82	504	503	1,007
Net New Auto ⁽⁷⁾	56	39	95	173	195	368	2,265	2,266	4,531

Footnotes:

(1) Build Per Code Development under current zoning.

(2) ITE, Trip Generation, 9th Edition.

(3) ITE, Trip Generation Handbook, 3rd Edition:

AM ICR = 0%; PM ICR = 0%.

(4) External Non-Auto/Multimodal (PCE) trips including walk, bike and trolley:

AM Non-Auto = 45%; PM Non-Auto = 45%.

(5) External Auto = Total (2) – Mixed-Use Internal (3) – External Non-Auto (4).

(6) Low retail pass-by trips reflective of inconvenient parking and access.

(7) Net New trips on the road network = External Auto (5) - Pass-by (6).

The Build Per Code Development scenario is estimated to generate 95 net new auto trips during the AM peak hour, 368 net new auto trips during the PM peak hour and 4,531 net new auto trips on a typical weekday. These net new vehicle trips are circulated on the public road network.

Proposed Development

The trip generation characteristics associated with the Proposed Development scenario is characterized by the reliance on multimodal travel and with minimum pedestrian and automobile conflict. Independent Resort includes its own amenities such as a restaurant and spa but these are not anticipated to generate traffic as stand-alone uses. The hotel guests are provided with on-site resort amenities along with direct access to Times Square, the beach, and the commercial recreation facility without the need to drive. In addition, no retail pass-by trips deduction was assumed as the resort discourages the reliance on automobile traffic. Other patrons to Independent Resort are expected to arrive by foot, bike or trolley by beachgoers, tourists and from near-by residents.



The resultant trip generation analysis is presented in Exhibit 6 and summarized below.

Proposed Development ⁽¹⁾ Trip Generation Summary									
Trip Type	AM Peak Hour			PM Peak Hour			Daily		
	In	Out	Total	In	Out	Total	In	Out	Total
Total ⁽²⁾	195	128	323	195	169	364	2,312	2,311	4,623
Mixed-Use Internal ⁽³⁾	6	6	12	15	15	30	199	199	398
Hotel	3	3	6	6	7	13	98	69	167
Restaurant	3	3	6	8	7	15	80	116	196
Retail	0	0	0	1	1	2	21	14	35
External Non-Auto ⁽⁴⁾	107	70	177	108	93	201	1,268	1,267	2,535
External Auto ⁽⁵⁾	82	52	134	72	61	133	845	845	1,690
Pass-By Auto ⁽⁶⁾	0	0	0	0	0	0	0	0	0
Net New Auto ⁽⁷⁾	82	52	134	72	61	133	845	845	1,690

Footnotes:

(1) Proposed Development with rezoning.

(2) ITE, *Trip Generation*, 9th Edition.

(3) ITE, *Trip Generation Handbook*, 3rd Edition:

 AM ICR = 4%; PM ICR = 8%.

(4) External Non-Auto/Multimodal (PCE) trips including walk, bike and trolley:

 AM Non-Auto = 55%; PM Non-Auto = 55%.

(5) External Auto = Total (2) – Mixed-Use Internal (3) – External Non-Auto (4).

(6) Low retail pass-by trips reflective of inconvenient parking and access.

(7) Net New trips on the road network = External Auto (5) - Pass-by (6).

The Proposed Development scenario is estimated to generate 134 net new auto trips during the AM peak hour, 133 net new auto trips during the PM peak hour and 1,690 net new auto trips on a typical weekday. These net new vehicle trips are circulated on the public road network.

Trip Generation Comparison

The Proposed Development is expected to generate 42 (46%), 2 (1.5%), and 215 (15%) greater net new external trips during the AM peak hour, PM peak Hour, and weekday, respectively, as compared to the Existing (Occupied) Development.

Proposed Development versus Existing (Occupied) Development (Net New Auto Trips)			
Scenario	AM Peak	PM Peak	Daily
Proposed Development	134	133	1,690
Existing (Occupied)	92	131	1,475
Trip Reduction With Proposed Development			
Trip Reduction	+42	+2	+215
Percent Reduction	+46%	+1.5%	+15%

The Proposed Development is expected to generate 82 (158%) greater net new external trips during AM peak hour as compared to the Pre-Demolition Development (Pre-Hurricane Charley). However, there is expected to be 27 (17%) and 200 (11%) fewer net new external trips during the PM peak hour and weekday, respectively.

Proposed Development versus Pre-Demolition Development (Net New Auto Trips)			
Scenario	AM Peak	PM Peak	Daily
Proposed Development	134	133	1,690
Pre-Demolition	52	160	1,890
Trip Reduction With Proposed Development			
Trip Reduction	+82	-27	-200
Percent Reduction	+158%	-17%	-11%

The Proposed Development is expected to generate 39 (41%) greater net new external trips during AM peak hour as compared to the Build Per Code Development. However, there is expected to be 235 (64%) and 2,841 (63%) fewer net new external trips during the PM peak hour and weekday, respectively.

Proposed Development versus Build Per Code Development (Net New Auto Trips)			
Scenario	AM Peak	PM Peak	Daily
Proposed Development	134	133	1,690
Build Per Code Development	95	368	4,531
Trip Reduction With Proposed Development			
Trip Reduction	+39	-235	-2,841
Percent Reduction	+41%	-64%	-63%

Project Trip Distribution/ Assignment

Project trips were distributed to the external road network as depicted in Exhibit 7 and summarized as follows.

- 65% of net new external vehicular trips distributed to and off Fort Myers Beach.
- 30% of net new external vehicular trips distributed south of Times Square.
- 5% of net new external vehicular trips distributed to the north point of the island.

Estero Boulevard Segment Analysis

In accordance with the Lee County Concurrency Report 2016, the Town of Fort Myers Beach has adopted a different methodology for measuring the LOS on Estero Boulevard. Policy 7-I-2 of the Comprehensive Plan for the Town of Fort Myers Beach states:



“The peak capacity of Estero Boulevard’s congested segments is 1,300 vehicles per hour. The minimum acceptable level-of service standard for Estero Boulevard shall be that average monthly traffic flows from 10:00 A.M. to 5:00 P.M. during each month do not exceed that level for more than four calendar months in any continuous twelve month period. Measurements from the Permanent Count Station at Donora Boulevard shall be used for this standard.”

The segment analysis performed for this ZTIS is compliance with Policy 7-I-2 of the Comprehensive Plan for the Town of Fort Myers Beach. The complete segment analysis is depicted in Exhibit 8 and includes the following scenarios.

- Existing Traffic Conditions (2016 Traffic Count Data).
- Future Traffic Conditions without Development.
- Future Traffic Conditions with Pre-Demolition Development.
- Future Traffic Conditions with Build Per Code Development.
- Future Traffic Conditions with Proposed Development.

The Lee County ZTIS guidelines identify roadway significant impact as Project Traffic that consumes 10% or more of the roadway service volume at LOS C. The link specific 2-way service volume at LOS C for the segment under study is 1,162 vehicles per hour, Appendix D.

The LOS conditions and roadway impacts for Estero Boulevard are summarized below.

Roadway Segment Level of Service ¹ and Significant Impacts ²			
Scenario	Consecutive Months Exceeding 1,300 vph	Project Traffic as % of SV @ LOS C	Significant Impact (Yes or No)
Existing Conditions	0	N/A	N/A
Future Conditions without Development	0	N/A	N/A
Future Conditions with Pre-Demolition Development	0	9.0%	No
Future Conditions with Build Per Code Development	0	21%	Yes
Future Conditions with Proposed Development	0	7.4%	No

Footnotes:

- (1) Per the Town of Fort Myers Beach Comprehensive Plan Policy 7-I-2. The peak capacity of Estero Boulevard’s congested segments is 1,300 vehicles per hour. The minimum acceptable level-of-service standard for Estero Boulevard shall be that average monthly traffic flows from 10:00 A.M. to 5:00 P.M. during each month do not exceed that level for more than four calendar months in any continuous twelve-month period. Measurements from the permanent count station at Donora Boulevard shall be used for this standard.
- (2) Lee County ZTIS significant impact with service volume consumptions of 10% or more.



Existing Traffic Conditions

The latest AADT count reported for PCS 44 in the 2016 Lee County Traffic Count Report was used to establish current traffic volumes for Estero Boulevard (Appendix D). Existing AADT was converted to average monthly traffic flows from 10 A.M. to 5:00 P.M. using the adjustment factors provided for PCS 44.

The average monthly traffic flows from 10:00 AM to 5:00 PM under existing traffic conditions is under the minimum LOS standard of 1,300 vehicles per hour for all months in 2015. The peak month has a volume to capacity ratio of 0.73.

Future Traffic Conditions without Development

Background traffic projections to 2020 (Project buildout of 2019 plus 1 year) were developed based on long-term growth trends derived from the historic traffic counts between 2007 and 2016 reported in the 2016 Lee County Traffic Count Report for PCS 44 (Appendix E). The resultant growth rate from the historic growth trend analysis was -1.50%. Rather than using a negative value, a growth rate of 1% per year was applied to the existing AADT to project 2020 AADT. The 2020 AADT was converted to average monthly traffic flows from 10 A.M. to 5:00 P.M. using the adjustment factors provided for PCS 44.

The average monthly traffic flows from 10:00 AM to 5:00 PM under future traffic conditions without development is under the minimum LOS standard for all months in 2020. The peak month has a volume to capacity ratio of 0.76.

Future Traffic Conditions with Pre-Demolition Development

The PM peak hour net new external vehicular trips generated by the Pre-Demolition Development were added to the future background traffic with the assumption that 65% (Exhibit 6) of the total trip generation would be the peak project trip assignment applied to Estero Boulevard. The total combined future traffic for each month was compared to the minimum LOS standard to determine the traffic impacts.

The average monthly traffic flows from 10:00 AM to 5:00 PM under future traffic conditions with the Pre-Demolition Development is under the minimum LOS standard for all months in 2020. The peak month has a volume to capacity ratio of 0.84.

The Pre-Demolition Development trips consume 9.0% of the 2-way service volume at LOS C so there are no significant impacts affecting Estero Boulevard.

Future Traffic Conditions with Build Per Code Development

The PM peak hour net new external vehicular trips generated by the Build Per Code Development were added to the future background traffic with the assumption that 65% (Exhibit 6) of the total trip generation would be the peak project trip assignment applied to Estero Boulevard. The total combined future traffic for each month was compared to the minimum LOS standard to determine the traffic impacts.

The average monthly traffic flows from 10:00 AM to 5:00 PM under future traffic conditions with the Build Per Code Development is anticipated to exceed the minimum LOS standard for four consecutive months. The peak month has a volume to capacity ratio of 0.94.

The Build Per Code Development trips consume 21% of the 2-way service volume at LOS C so there are significant (but not adverse) impacts affecting Estero Boulevard.

Future Traffic Conditions with Proposed Development

The PM peak hour net new external vehicular trips generated by the Proposed Development were added to the future background traffic with the assumption that 65% (Exhibit 6) of the total trip generation would be the peak project trip assignment applied to Estero Boulevard. The total combined future traffic for each month was compared to the minimum LOS standard to determine the traffic impacts.

The average monthly traffic flows from 10:00 AM to 5:00 PM under future traffic conditions with the Proposed Development is under the minimum LOS standard for all months in 2020. The peak month has a volume to capacity ratio of 0.83.

The Proposed Development trips consume 7.4% of the 2-way service volume at LOS C so there are no significant impacts affecting Estero Boulevard.

Intersection Analysis

Synchro was used to perform the HCM 2010 analysis of the intersections under existing traffic conditions and future conditions with each development scenario. For unsignalized (TWSC) intersections, the Intersection Capacity Utilization (ICU) LOS was reported to better reflect the overall operations of the intersection. The complete HCM and ICU analysis output are in Appendix G and includes the following scenarios.

- Existing Traffic Conditions (2016 Turning Movement Data)
- Future Traffic Conditions with Pre-Demolition Development
- Future Traffic Conditions with Build Per Code Development
- Future Traffic Conditions with Proposed Development

The intersection LOS analysis is summarized as the following.

Intersection Level of Service					
Scenario	Estero Blvd/ Fifth St ¹	Estero Blvd/ Crescent St ¹	Fifth St/ Crescent St ²	Fifth St/ Access 1 ¹	Fifth St/ Access 2 ¹
Existing Conditions	B	B	A	N/A	N/A
Pre-Demolition Development	B	C	A	N/A	N/A
Build Per Code Development	B	C	A	N/A	N/A
Proposed Development	B	C	A	A/A ³	A

Footnotes:

- (1) Unsignalized (TWSC) Intersection – ICU LOS of overall intersection reported.
- (2) Unsignalized (AWSC) Intersection – HCM overall LOS reported.
- (3) Inbound / Outbound

As shown above, all intersections are expected to operate at an acceptable level of service under existing conditions and future conditions with each development program. However, the side streets under stop control are expected to experience delay.

Existing Traffic Conditions

Intersections turning movement counts for the AM and PM peak hours were conducted by DPA in September 2016. At the time of the counts, the roadway construction on Estero Boulevard near the intersections under was completed. The turning movement counts are provided in Appendix F and include the following intersections.

- Estero Boulevard/ Fifth Street
- Estero Boulevard/ Crescent Street
- Fifth Street/ Crescent Street

Although the turning movement counts were performed during off season, the counts were fixed to a common peak hour and then seasonally adjusted, using adjustment factors from the appropriate permanent count station, so that the counts represent 2016 peak season, peak hour volumes. During the time of this study, the resultant 2016 peak season, peak hour volumes (Exhibit 9) served as the most current data available.

Under existing traffic conditions, all intersections operate at an acceptable level of service.

Future Background Traffic

The 2016 peak season, peak hour volumes were projected to the year 2020 (Project buildout of 2019 plus 1 year) based on long-term growth trends derived from the historic traffic counts between 2007 and 2016 reported in the 2016 Lee County Traffic Count Report for PCS 44 (Appendix E). The resultant growth rate was -1.50% so a growth rate of 1% per year was used



in this study to project 2020 background traffic. The resultant 2020 background traffic volumes at the intersections under study are shown in Exhibit 10.

No intersection analysis was performed for future background traffic.

Future Traffic Conditions with Existing (Occupied) Development

The background traffic projections were combined with Project traffic to derive the total future volume for the Existing (Occupied) Development scenario. Exhibit 11 depicts the total combined and Project trips for the Existing (Occupied) Development.

No intersection analysis was performed for future traffic conditions with Existing (Occupied) Development.

Future Traffic Conditions with Pre-Demolition Development

The background traffic projections were combined with Project traffic to derive the total future volume for the Pre-Demolition Development scenario. Exhibit 12 depicts the total combined and Project trips for the Pre-Demolition Development.

Under future traffic conditions with Pre-Demolition Development, all intersections (including Project accesses) operate at an acceptable level of service.

Future Traffic Conditions with Build Per Code Development

The background traffic projections were combined with Project traffic to derive the total future volume for the Build Per Code Development scenario. Exhibit 13 depicts the total combined and Project trips for the Build Per Code Development.

Under future traffic conditions with Build Per Code Development, all intersections (including Project accesses) operate at an acceptable level of service.

Future Traffic Conditions with Proposed Development

The background traffic projections were combined with Project traffic to derive the total future volume for the Proposed Development scenario. Exhibit 14 depicts the total combined and Project trips for the Proposed Development.

Under future traffic conditions with Proposed Development, all intersections (including Project accesses) operate at an acceptable level of service.

Times Square Network Analysis

The Project's traffic composition in relation to the total traffic within the Times Square study area was reviewed to demonstrate the apparent impacts on the surrounding road network. Exhibits 11-14 depict Project traffic for each scenario as a percent of the total circulating traffic within the Times Square study area during the PM peak hour and is summarized in the following table.

Project Traffic as a Percent of Total Traffic at Times Square – PM Peak	
Scenario	%
Existing (Occupied) Development	3.3%
Pre-Demolition (Pre-Charley) Development	4.0%
Build Per Code Development	8.7%
Proposed Development	3.3%

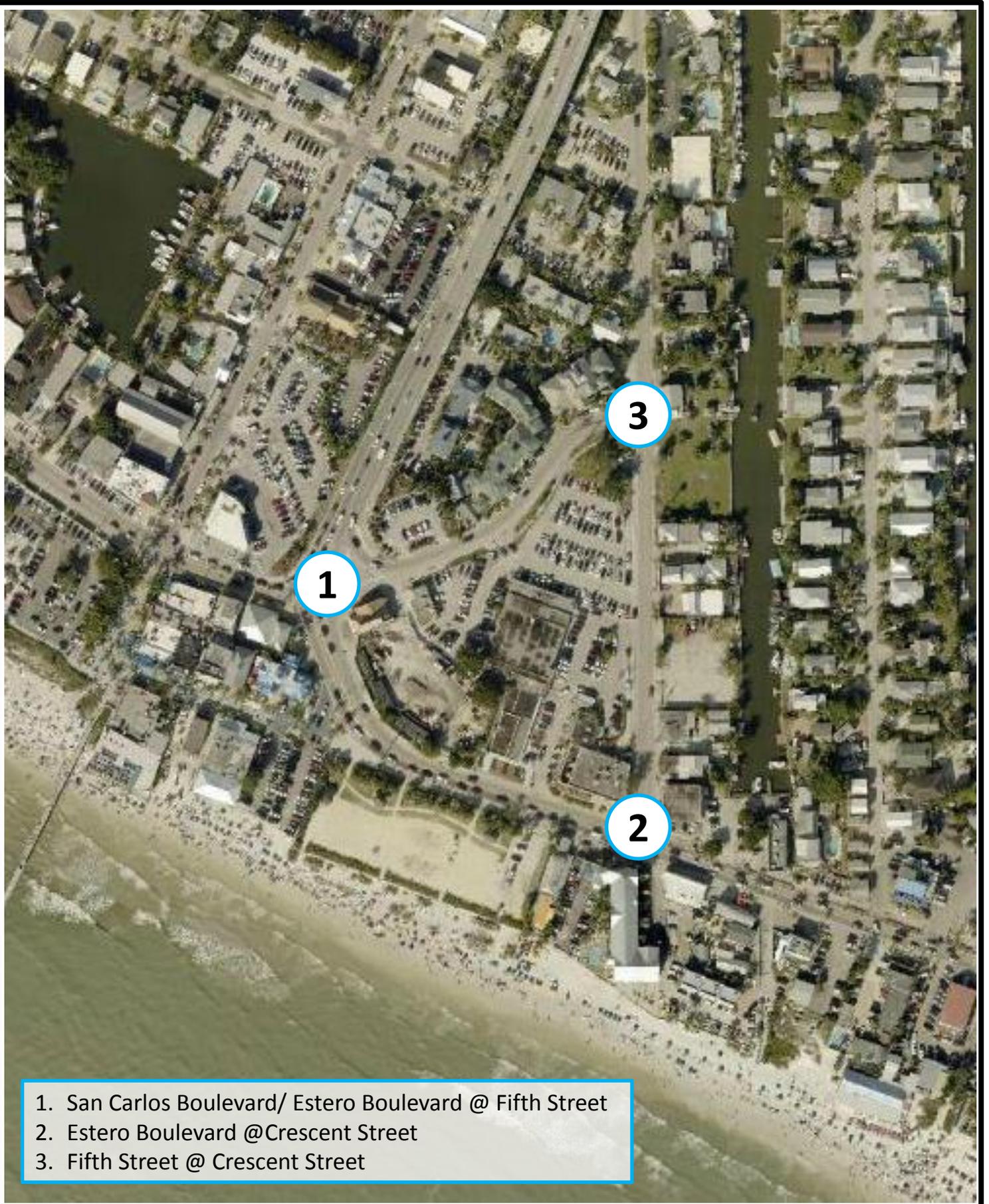
The proposed development will replace traffic associated with the existing development, but not add a significant number to the total traffic within the Times Square study area. In addition, the proposed development will comprise a smaller portion of total traffic compared to the Pre-Charley development and the development allowed under the current zoning.

Conclusions

The findings and conclusions of the ZTIS are as follows.

1. The proposed Independent Resort reflects the implementation of the redevelopment vision of Times Square, Estero Boulevard and downtown Fort Myers Beach.
2. The proposed Independent Resort is anticipated to generate 17% and 11% fewer vehicle trips for the PM peak hour and weekday, respectively, than the Pre-Demolition Development (Pre-Hurricane Charley).
3. The proposed Independent Resort is anticipated to generate 64% and 63% fewer vehicle trips for the PM peak hour and weekday, respectively, than allowed under the Build Per Code Development.
4. Future traffic conditions with the Proposed Development will not cause Estero Boulevard to exceed the minimum LOS standard established by Policy 7-I-2 of the Comprehensive Plan for the Town of Fort Myers Beach.
5. All intersections under study will operate at an acceptable LOS with the Proposed Development.
6. The Proposed Development will not significantly or adversely impact the Times Square roadway circulation system (based on Lee County standards).

7. During the critical peak hour, the Proposed Development will replace traffic associated with the Existing (Occupied) Development (3.3% of total traffic), and contribute only 2 additional new trips to the external road network. In addition, the proposed development will comprise a smaller portion of total traffic compared to the Pre-Demolition and Build Per Code Developments.



- 1. San Carlos Boulevard/ Estero Boulevard @ Fifth Street
- 2. Estero Boulevard @ Crescent Street
- 3. Fifth Street @ Crescent Street



EXHIBIT 3

**INDEPENDENT RESORT
EXISTING (OCCUPIED) DEVELOPMENT - TOTAL PROJECT
TRIP GENERATION ⁽¹⁾**

Hotel	LUC	SIZE	AM PEAK HOUR				PM PEAK HOUR				DAILY						
			In	Out	Total	%	In	Out	Total	%	In	Out	Total	%			
Hotel																	
Beachside Hotel	310	12 Occupied Rooms	5	3	8 ⁽⁵⁾		4	4	8 ⁽⁶⁾		54	53	107 ⁽⁶⁾				
Trips			5	3	8		4	4	8		54	53	107				
Internal Capture ⁽²⁾			0	0	0	0%	2	2	4	50%	20	13	33	31%			
Non-Auto Trip Reduction ⁽³⁾			3	2	5	55%	2	2	4	55%	30	29	59	55%			
Pass-by - Automobile trips ⁽⁴⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%			
External			2	1	3		0	0	0		4	11	15				
Restaurant																	
Beachside Bar	925	2.90 Gross Floor Area 1000 SF	0	0	0 ⁽⁷⁾		22	11	33 ⁽⁸⁾		165	164	329 ⁽⁹⁾				
Trips			0	0	0		22	11	33		165	164	329				
Internal Capture ⁽²⁾			0	0	0	0%	7	6	13	39%	56	78	134	41%			
Non-Auto Trip Reduction ⁽³⁾			0	0	0	55%	10	5	15	45%	83	82	165	50%			
Pass-by - Automobile trips ⁽⁴⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%			
External			0	0	0		5	0	5		26	4	30				
Retail																	
Bayside Specialty Retail	826	5.84 Gross Leasable Area 1000 SF	2	2	4 ⁽¹⁰⁾		15	20	35 ⁽¹¹⁾		144	143	287 ⁽¹¹⁾				
Beachside Specialty Retail	826	3.10 Gross Leasable Area 1000 SF	1	2	3 ⁽¹⁰⁾		14	17	31 ⁽¹¹⁾		100	100	200 ⁽¹¹⁾				
Trips			3	4	7		29	37	66		244	243	487				
Internal Capture ⁽²⁾			0	0	0	0%	6	7	13	20%	72	57	129	26%			
Non-Auto Trip Reduction ⁽²⁾			1	2	3	45%	13	17	30	45%	110	109	219	45%			
Pass-by - Automobile trips ⁽³⁾			0	0	0	10%	3	4	7	10%	24	24	48	10%			
External			2	2	4		10	13	23		62	77	139				
Beach																	
Public Parking	N/A	216 Parking Stalls	85	0	85 ⁽¹²⁾		25	85	110 ⁽¹²⁾		670	669	1,339 ⁽¹³⁾				
Trips			85	0	85		25	85	110		670	669	1,339				
Internal Capture ⁽²⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%			
Non-Auto Trip Reduction ⁽²⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%			
Pass-by - Automobile trips ⁽³⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%			
External			85	0	85		25	85	110		670	669	1,339				
TOTAL			<u>93</u>	<u>7</u>	<u>100</u>		<u>80</u>	<u>137</u>	<u>217</u>		<u>1,133</u>	<u>1,129</u>	<u>2,262</u>				
INTERNAL CAPTURE ⁽²⁾			0	0	0	0%	15	15	30	14%	148	148	296	13%			
NON-AUTO TRIP REDUCTION ⁽³⁾			4	4	8	8%	25	24	49	23%	223	220	443	20%			
DRIVEWAY VOLUME			<u>89</u>	<u>3</u>	<u>92</u>		<u>40</u>	<u>98</u>	<u>138</u>		<u>762</u>	<u>761</u>	<u>1,523</u>				
PASS-BY - AUTOMOBILE TRIPS ⁽⁴⁾			0	0	0	0%	3	4	7	3%	24	24	48	2%			
NET NEW EXTERNAL AUTOMOBILE TRIPS			<u>89</u>	<u>3</u>	<u>92</u>		<u>37</u>	<u>94</u>	<u>131</u>		<u>738</u>	<u>737</u>	<u>1,475</u>				

Footnotes:

- (1) Trip generation estimate based on ITE Trip Generation (9th Edition) using Trafficware software.
- (2) ITE, Trip Generation Handbook - An ITE Proposed Recommended Practice (3rd Edition). Chapter 6 - Trip Generation for Mixed-Use Development.
- (3) Reduction reflects pedestrian and bicycle trips to / from immediate vicinity.
- (4) ITE average retail pass-by rate capped at 10% for retail and specialty retail uses.
- (5) ITE LUC 310 Hotel average rate applied. Hotel units are too low to apply fitted curve equation.
- (6) ITE LUC 310 Hotel fitted curve not provided by ITE - Average rate applied.
- (7) ITE does not offer AM peak hour trip generation rates for LUC 925 Drinking Place. An AM peak hour trip generation rate of 0 is assumed for LUC 925 Drinking Place.
- (8) ITE LUC 926 Drinking Place fitted curve not provided by ITE - Average rate applied.
- (9) ITE does not offer weekday trip generation rates for LUC 925 Drinking Place. A weekday trip generation rate of 113.4 is used (assumes PM peak hour rate is 10% of the weekday).
- (10) ITE does not offer AM peak hour trip generation rates for LUC 826 Specialty Retail. A custom rate has been developed based on the AM and PM peak hour rates for LUC 820 Shopping Center.
 - a) The PM peak hour rate for LUC 820 Shopping Center is 3.71 trips per 1,000 GSF.
 - b) The PM peak hour rate for LUC 826 Specialty Retail is 2.71 trips per 1,000 GSF.
 - c) The PM peak hour rate for LUC 826 Specialty Retail is 73% of the PM peak hour rate for LUC 810 Shopping Center.
 - d) The AM peak hour trip generation rate for LUC 826 Specialty Retail is derived by multiplying the AM peak hour trip generation rate for LUC 820 Shopping Center (0.96) by 0.73.
 - e) The resultant AM peak hour trip generation rate for LUC 826 Specialty Retail is 0.70.
- (11) ITE LUC 826 Specialty Retail fitted curve equation applied.
- (12) ITE trip generation estimates for beach parking not provided. AM and PM peak hour trip generation is based on observations by parking maintenance agents.
- (13) ITE trip generation estimates for beach parking not provided. Daily trip generation derived from observations by parking maintenance agents.

EXHIBIT 4

**INDEPENDENT RESORT
PRE-DEMOLITION DEVELOPMENT PROGRAM - TOTAL PROJECT
TRIP GENERATION ⁽¹⁾**

	LUC	SIZE	AM PEAK HOUR				PM PEAK HOUR				DAILY			
			In	Out	Total	%	In	Out	Total	%	In	Out	Total	%
Hotel														
Beachside Resort Hotel	330	66 Occupied Rooms	22	9	31 ⁽⁵⁾		14	18	32 ⁽⁶⁾		206	206	412 ⁽⁷⁾	
Trips			22	9	31		14	18	32		206	206	412	
Internal Capture ⁽²⁾			0	1	1	3.2%	2	3	5	16%	35	33	68	17%
Non-Auto Trip Reduction ⁽³⁾			12	5	17	55%	8	10	18	55%	113	113	226	55%
Pass-by - Automobile trips ⁽⁴⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%
External			10	3	13		4	5	9		58	60	118	
Retail														
Bayside Retail	820	24.2 Gross Leasable Area 1000 SF	41	25	66 ⁽⁸⁾		111	121	232 ⁽⁸⁾		1,350	1,350	2,700 ⁽⁸⁾	
Bayside Specialty Retail	826	22.45 Gross Leasable Area 1000 SF	8	8	16 ⁽⁹⁾		33	42	75 ⁽¹⁰⁾		499	499	998 ⁽¹⁰⁾	
Beachside Specialty Retail	826	8.3 Gross Leasable Area 1000 SF	3	3	6 ⁽⁹⁾		18	23	41 ⁽¹⁰⁾		197	196	393 ⁽¹⁰⁾	
Trips			52	36	88		162	186	348		2046	2045	4,091	
Internal Capture ⁽²⁾			1	0	1	1.1%	3	2	5	1.4%	33	35	68	1.7%
Non-Auto Trip Reduction ⁽³⁾			23	16	39	45%	73	84	157	45%	921	920	1,841	45%
Pass-by - Automobile trips ⁽⁴⁾			5	4	9	10%	16	19	35	10%	205	205	410	10%
External			28	20	48		86	100	186		1,092	1,090	2,182	
TOTAL			<u>74</u>	<u>45</u>	<u>119</u>		<u>176</u>	<u>204</u>	<u>380</u>		<u>2,252</u>	<u>2,251</u>	<u>4,503</u>	
INTERNAL CAPTURE ⁽²⁾			1	1	2	2%	5	5	10	3%	68	68	136	3%
NON-AUTO TRIP REDUCTION ⁽³⁾			35	21	56	47%	81	94	175	46%	1,034	1,033	2,067	46%
DRIVEWAY VOLUME			<u>38</u>	<u>23</u>	<u>61</u>		<u>90</u>	<u>105</u>	<u>195</u>		<u>1,150</u>	<u>1,150</u>	<u>2,300</u>	
PASS-BY - AUTOMOBILE TRIPS ⁽⁴⁾			5	4	9	8%	16	19	35	9%	205	205	410	9%
NET NEW EXTERNAL AUTOMOBILE TRIPS			<u>33</u>	<u>19</u>	<u>52</u>		<u>74</u>	<u>86</u>	<u>160</u>		<u>945</u>	<u>945</u>	<u>1,890</u>	

Footnotes:

- (1) Trip generation estimate based on ITE Trip Generation (9th Edition) using Trafficware software.
- (2) ITE, Trip Generation Handbook - An ITE Proposed Recommended Practice (3rd Edition).
Chapter 6 - Trip Generation for Mixed-Use Development.
- (3) Reduction reflects pedestrian and bicycle trips to / from immediate vicinity.
- (4) ITE average retail pass-by rate capped at 10% for retail and specialty retail uses.
- (5) ITE LUC 330 Resort Hotel fitted curve equation applied.
- (6) ITE LUC 330 Resort Hotel fitted curve not provided by ITE - Average rate applied.
- (7) ITE does not offer weekday trip generation rates for LUC 330 Resort Hotel. A custom rate has been developed based on the PM peak hour and weekday rates for LUC 310 Hotel.
 - a) The PM peak hour rate for LUC 310 Hotel is 0.70 trips per occupied room.
 - b) The PM peak hour rate for LUC 330 Resort Hotel is 0.49 per occupied room.
 - c) The PM peak hour rate for LUC 330 Resort Hotel is 70% of the PM peak hour rate for LUC 310 Hotel.
 - d) The weekday trip generation rate for LUC 330 Resort Hotel is derived by multiplying the weekday trip generation rate for LUC 310 Hotel (8.92) by 0.70.
 - e) The resultant weekday trip generation rate for LUC 330 Resort Hotel is 6.24.
- (8) ITE LUC 820 Shopping Center fitted curve equation applied.
- (9) ITE does not offer AM peak hour trip generation rates for LUC 826 Specialty Retail. A custom rate has been developed based on the AM and PM peak hour rates for LUC 820 Shopping Center.
 - a) The PM peak hour rate for LUC 820 Shopping Center is 3.71 trips per 1,000 GSF.
 - b) The PM peak hour rate for LUC 826 Specialty Retail is 2.71 trips per 1,000 GSF.
 - c) The PM peak hour rate for LUC 826 Specialty Retail is 73% of the PM peak hour rate for LUC 810 Shopping Center.
 - d) The AM peak hour trip generation rate for LUC 826 Specialty Retail is derived by multiplying the AM peak hour trip generation rate for LUC 820 Shopping Center (0.96) by 0.73.
 - e) The resultant AM peak hour trip generation rate for LUC 826 Specialty Retail is 0.70.
- (10) ITE LUC 826 Specialty Retail fitted curve equation applied.

EXHIBIT 5

**INDEPENDENT RESORT
BUILD PER CODE DEVELOPMENT PROGRAM - TOTAL PROJECT
TRIP GENERATION ⁽¹⁾**

	LUC	SIZE	AM PEAK HOUR				PM PEAK HOUR				DAILY			
			In	Out	Total	%	In	Out	Total	%	In	Out	Total	%
Retail														
Bayside Retail	820	110.0 Gross Leasable Area 1000 SF	102	63	165 ⁽⁵⁾		307	332	639 ⁽⁵⁾		3,613	3,612	7,225 ⁽⁵⁾	
Beachside Specialty Retail	826	65.6 Gross Leasable Area 1000 SF	22	24	46 ⁽⁶⁾		79	100	179 ⁽⁷⁾		1,422	1,422	2,844 ⁽⁷⁾	
Trips			124	87	211		386	432	818		5,035	5,034	10,069	
Internal Capture ⁽²⁾			0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
Non-Auto Trip Reduction ⁽³⁾			56	39	95	45%	174	194	368	45%	2,266	2,265	4,531	45%
Pass-by - Automobile trips ⁽⁴⁾			12	9	21	10%	39	43	82	10%	504	503	1,007	10%
External			68	48	116		212	238	450		2,769	2,769	5,538	
			<u>In</u>	<u>Out</u>	<u>Total</u>	<u>%</u>	<u>In</u>	<u>Out</u>	<u>Total</u>	<u>%</u>	<u>In</u>	<u>Out</u>	<u>Total</u>	<u>%</u>
TOTAL			124	87	211		386	432	818		5,035	5,034	10,069	
INTERNAL CAPTURE ⁽²⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%
NON-AUTO TRIP REDUCTION ⁽³⁾			56	39	95	45%	174	194	368	45%	2,266	2,265	4,531	45%
DRIVEWAY VOLUME			<u>68</u>	<u>48</u>	<u>116</u>		<u>212</u>	<u>238</u>	<u>450</u>		<u>2,769</u>	<u>2,769</u>	<u>5,538</u>	
PASS-BY - AUTOMOBILE TRIPS ⁽⁴⁾			12	9	21	10%	39	43	82	10%	504	503	1,007	10%
NET NEW EXTERNAL AUTOMOBILE TRIPS			<u>56</u>	<u>39</u>	<u>95</u>		<u>173</u>	<u>195</u>	<u>368</u>		<u>2,265</u>	<u>2,266</u>	<u>4,531</u>	

Footnotes:

- (1) Trip generation estimate based on ITE Trip Generation (9th Edition) using Trafficware software.
- (2) ITE, Trip Generation Handbook - An ITE Proposed Recommended Practice (3rd Edition).
Chapter 6 - Trip Generation for Mixed-Use Development.
- (3) Reduction reflects pedestrian and bicycle trips to / from immediate vicinity.
- (4) ITE average retail pass-by rate capped at 10% for retail and specialty retail uses.
- (5) ITE LUC 820 Shopping Center fitted curve equation applied.
- (6) ITE does not offer AM peak hour trip generation rates for LUC 826 Specialty Retail. A custom rate has been developed based on the AM and PM peak hour rates for LUC 820 Shopping Center.
 - a) The PM peak hour rate for LUC 820 Shopping Center is 3.71 trips per 1,000 GSF.
 - b) The PM peak hour rate for LUC 826 Specialty Retail is 2.71 trips per 1,000 GSF.
 - c) The PM peak hour rate for LUC 826 Specialty Retail is 73% of the PM peak hour rate for LUC 810 Shopping Center.
 - d) The AM peak hour trip generation rate for LUC 826 Specialty Retail is derived by multiplying the AM peak hour trip generation rate for LUC 820 Shopping Center (0.96) by 0.73.
 - e) The resultant AM peak hour trip generation rate for LUC 826 Specialty Retail is 0.70.
- (7) ITE LUC 826 Specialty Retail fitted curve equation applied.

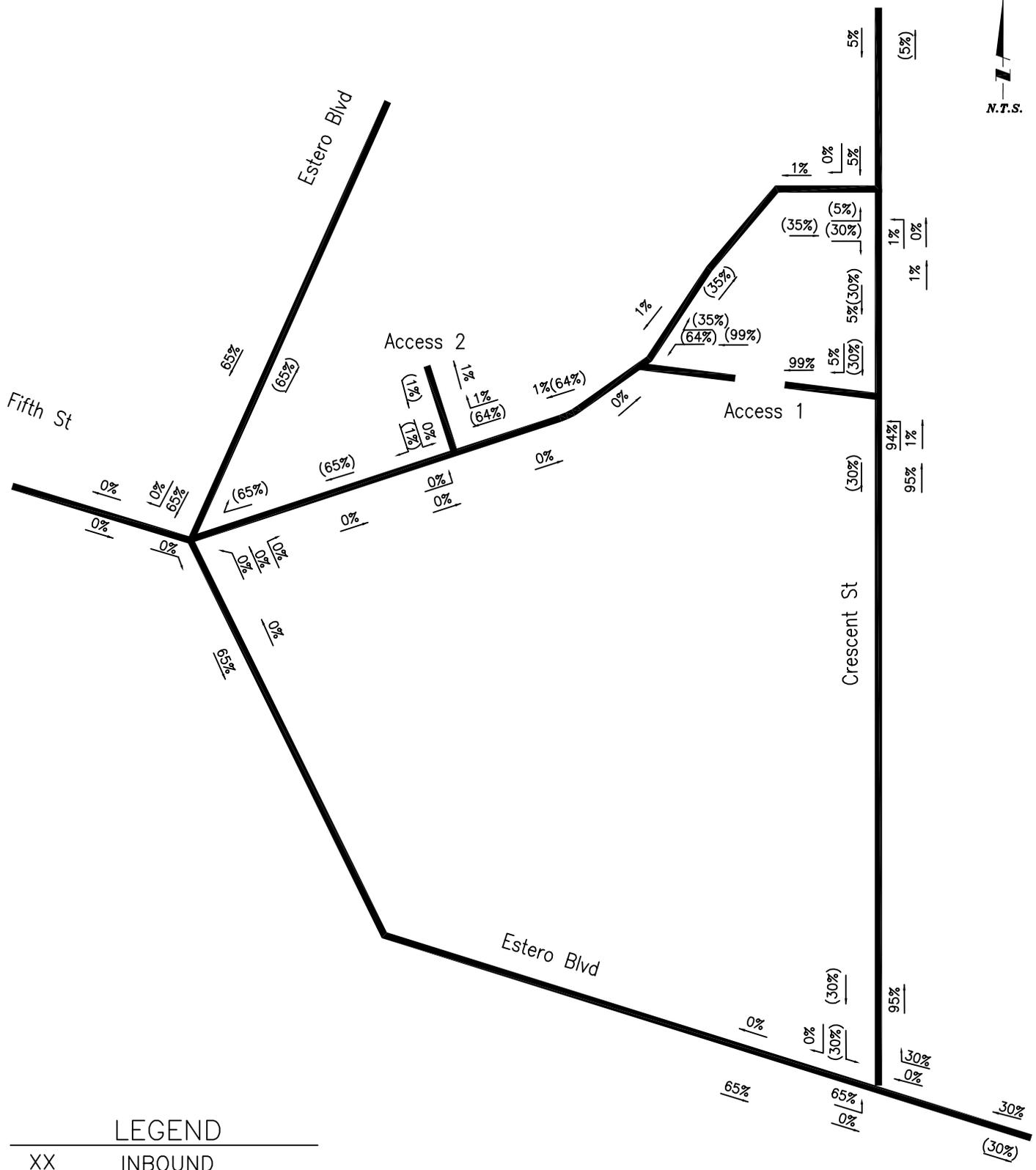
EXHIBIT 6

**INDEPENDENT RESORT
PROPOSED DEVELOPMENT PROGRAM - TOTAL PROJECT
TRIP GENERATION ⁽¹⁾**

Hotel	LUC	SIZE	AM PEAK HOUR				PM PEAK HOUR				DAILY			
			In	Out	Total	%	In	Out	Total	%	In	Out	Total	%
Hotel														
Bayside Resort Hotel	330	290 Occupied Rooms	78	31	109 ⁽⁵⁾		61	81	142 ⁽⁶⁾		905	905	1,810 ⁽⁷⁾	
Trips			78	31	109		61	81	142		905	905	1,810	
Internal Capture ⁽²⁾			3	3	6	5.5%	6	7	13	9.2%	98	69	167	9.2%
Non-Auto Trip Reduction ⁽³⁾			43	17	60	55%	34	45	79	55%	498	498	996	55%
Pass-by - Automobile trips ⁽⁴⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%
External			32	11	43		21	29	50		309	338	647	
Restaurant														
Beachside Restaurant	932	19.75 Gross Floor Area 1000 SF	117	96	213 ⁽⁸⁾		117	78	195 ⁽⁸⁾		1,256	1,255	2,511 ⁽⁸⁾	
Beachside Bar	925	1.96 Gross Floor Area 1000 SF	0	0	0 ⁽⁹⁾		15	7	22 ⁽¹⁰⁾		111	111	222 ⁽¹¹⁾	
Trips			117	96	213		132	85	217		1367	1366	2,733	
Internal Capture ⁽²⁾			3	3	6	2.8%	8	7	15	6.9%	80	116	196	7.2%
Non-Auto Trip Reduction ⁽³⁾			64	53	117	55%	73	47	120	55%	752	751	1,503	55%
Pass-by - Automobile trips ⁽⁴⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%
External			50	40	90		51	31	82		535	499	1,034	
Retail														
Bayside Specialty Retail	826	1.8 Gross Leasable Area 1000 SF	0	1	1 ⁽¹²⁾		2	3	5 ⁽¹³⁾		40	40	80 ⁽¹³⁾	
Trips			0	1	1		2	3	5		40	40	80	
Internal Capture ⁽²⁾			0	0	0	0%	1	1	2	40%	21	14	35	44%
Non-Auto Trip Reduction ⁽²⁾			0	0	0	45%	1	1	2	45%	18	18	36	45%
Pass-by - Automobile trips ⁽³⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%
External			0	1	1		0	1	1		1	8	9	
TOTAL			<u>195</u>	<u>128</u>	<u>323</u>		<u>195</u>	<u>169</u>	<u>364</u>		<u>2,312</u>	<u>2,311</u>	<u>4,623</u>	
INTERNAL CAPTURE ⁽²⁾			6	6	12	4%	15	15	30	8%	199	199	398	9%
NON-AUTO TRIP REDUCTION ⁽³⁾			107	70	177	55%	108	93	201	55%	1,268	1,267	2,535	55%
DRIVEWAY VOLUME			<u>82</u>	<u>52</u>	<u>134</u>		<u>72</u>	<u>61</u>	<u>133</u>		<u>845</u>	<u>845</u>	<u>1,690</u>	
PASS-BY - AUTOMOBILE TRIPS ⁽⁴⁾			0	0	0	0%	0	0	0	0%	0	0	0	0%
NET NEW EXTERNAL AUTOMOBILE TRIPS			<u>82</u>	<u>52</u>	<u>134</u>		<u>72</u>	<u>61</u>	<u>133</u>		<u>845</u>	<u>845</u>	<u>1,690</u>	

Footnotes:

- (1) Trip generation estimate based on ITE Trip Generation (9th Edition) using Trafficware software.
- (2) ITE, Trip Generation Handbook - An ITE Proposed Recommended Practice (3rd Edition).
Chapter 6 - Trip Generation for Mixed-Use Development.
- (3) Reduction reflects pedestrian and bicycle trips to / from immediate vicinity.
- (4) ITE average retail pass-by rate capped at 10% for retail and specialty retail uses.
- (5) ITE LUC 330 Resort Hotel fitted curve equation applied.
- (6) ITE LUC 330 Resort Hotel fitted curve not provided by ITE - Average rate applied.
- (7) ITE does not offer weekday trip generation rates for LUC 330 Resort Hotel. A custom rate has been developed based on the PM peak hour and weekday rates for LUC 310 Hotel.
 - a) The PM peak hour rate for LUC 310 Hotel is 0.70 trips per occupied room.
 - b) The PM peak hour rate for LUC 330 Resort Hotel is 0.49 per occupied room.
 - c) The PM peak hour rate for LUC 330 Resort Hotel is 70% of the PM peak hour rate for LUC 310 Hotel.
 - d) The weekday trip generation rate for LUC 330 Resort Hotel is derived by multiplying the weekday trip generation rate for LUC 310 Hotel (8.92) by 0.70.
 - e) The resultant weekday trip generation rate for LUC 330 Resort Hotel is 6.24.
- (8) ITE LUC 932 High-Turnover (Sit-Down) Restaurant fitted curve not provided by ITE - Average rate applied.
- (9) ITE does not offer AM peak hour trip generation rates for LUC 925 Drinking Place. An AM peak hour trip generation rate of 0 is assumed for LUC 925 Drinking Place.
- (10) ITE LUC 926 Drinking Place fitted curve not provided by ITE - Average rate applied.
- (11) ITE does not offer weekday trip generation rates for LUC 925 Drinking Place. A weekday trip generation rate of 113.4 is used (assumes PM peak hour rate is 10% of the weekday).
- (12) ITE does not offer AM peak hour trip generation rates for LUC 826 Specialty Retail. A custom rate has been developed based on the AM and PM peak hour rates for LUC 820 Shopping Center.
 - a) The PM peak hour rate for LUC 820 Shopping Center is 3.71 trips per 1,000 GSF.
 - b) The PM peak hour rate for LUC 826 Specialty Retail is 2.71 trips per 1,000 GSF.
 - c) The PM peak hour rate for LUC 826 Specialty Retail is 73% of the PM peak hour rate for LUC 810 Shopping Center.
 - d) The AM peak hour trip generation rate for LUC 826 Specialty Retail is derived by multiplying the AM peak hour trip generation rate for LUC 820 Shopping Center (0.96) by 0.73.
 - e) The resultant AM peak hour trip generation rate for LUC 826 Specialty Retail is 0.70.
- (13) ITE LUC 826 Specialty Retail fitted curve equation applied.



LEGEND

- XX INBOUND
- (XX) OUTBOUND



INDEPENDENT RESORT

PROJECT TRIP DISTRIBUTION

16537/31B/1117

Exhibit 8

**Times Square Redevelopment
Estero Boulevard Segment Analysis ¹**

PCS 44 - Estero Blvd north of Donora Blvd ²
2016 AADT = 12,400 VPD

→ Growth Rate ³ = 1.0% → 2020 AADT = 12896 VPD

Hour	NB	SB	Total	Month of Year	Fraction
0	0.80%	0.65%	0.73%	January	1.07
1	0.54%	0.41%	0.48%	February	1.06
2	0.39%	0.29%	0.34%	March	1.08
3	0.24%	0.26%	0.25%	April	1.11
4	0.29%	0.36%	0.33%	May	1.01
5	0.79%	0.79%	0.79%	June	0.99
6	2.03%	1.99%	2.01%	July	1.05
7	4.92%	4.23%	4.57%	August	0.89
8	6.22%	6.15%	6.19%	September	0.82
9	6.65%	7.23%	6.94%	October	0.93
10	6.87%	7.38%	7.13%	November ^b	1.00
11	6.76%	7.21%	6.98%	December ^b	1.00

Average Monthly Vehicles per Hour Calculated per Policy 7-I-2 of the Comp. Plan for the Town of FMB

→ Average Hourly % (10 AM - 5 PM) = $\frac{7.13+6.98+6.90+6.78+6.91+6.89+6.72}{7} = 6.90\%$

→ Monthly Average Veh/Hour (10 AM - 5 PM) = 6.90% * 2020 AADT * Monthly Fraction

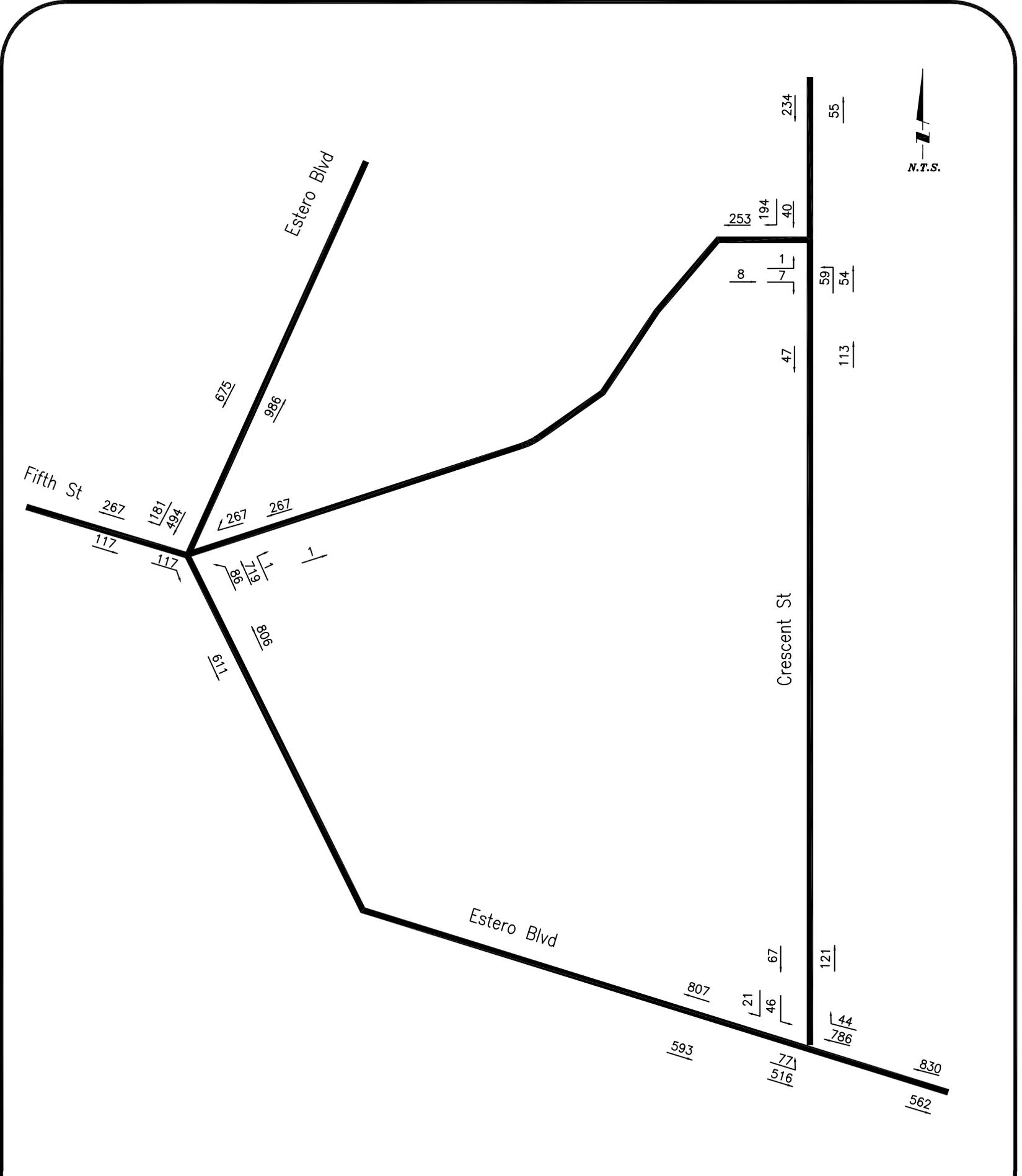
Average Monthly Vehicles per Hour

Month	No Development		With Development Trips (2020) ⁵		
	2016	2020	Pre-Demolition Development	Build Per Code Development	Proposed Development
January	916	952	1056	1191	1038
February	907	943	1047	1182	1029
March	924	961	1065	1200	1047
April	950	988	1092	1227	1074
May	864	899	1003	1138	985
June	847	881	985	1120	967
July	899	935	1039	1174	1021
August	762	792	896	1031	878
September	702	730	834	969	816
October	796	828	932	1067	914
November ⁶	856	890	994	1129	976
December ⁶	856	890	994	1129	976

Development Scenario	Project Trips Peak 2-Way ⁴	
	%	Trips
Pre-Demolition Development	65%	104
Build per Code Development	65%	239
Proposed Development	65%	86

Footnotes:

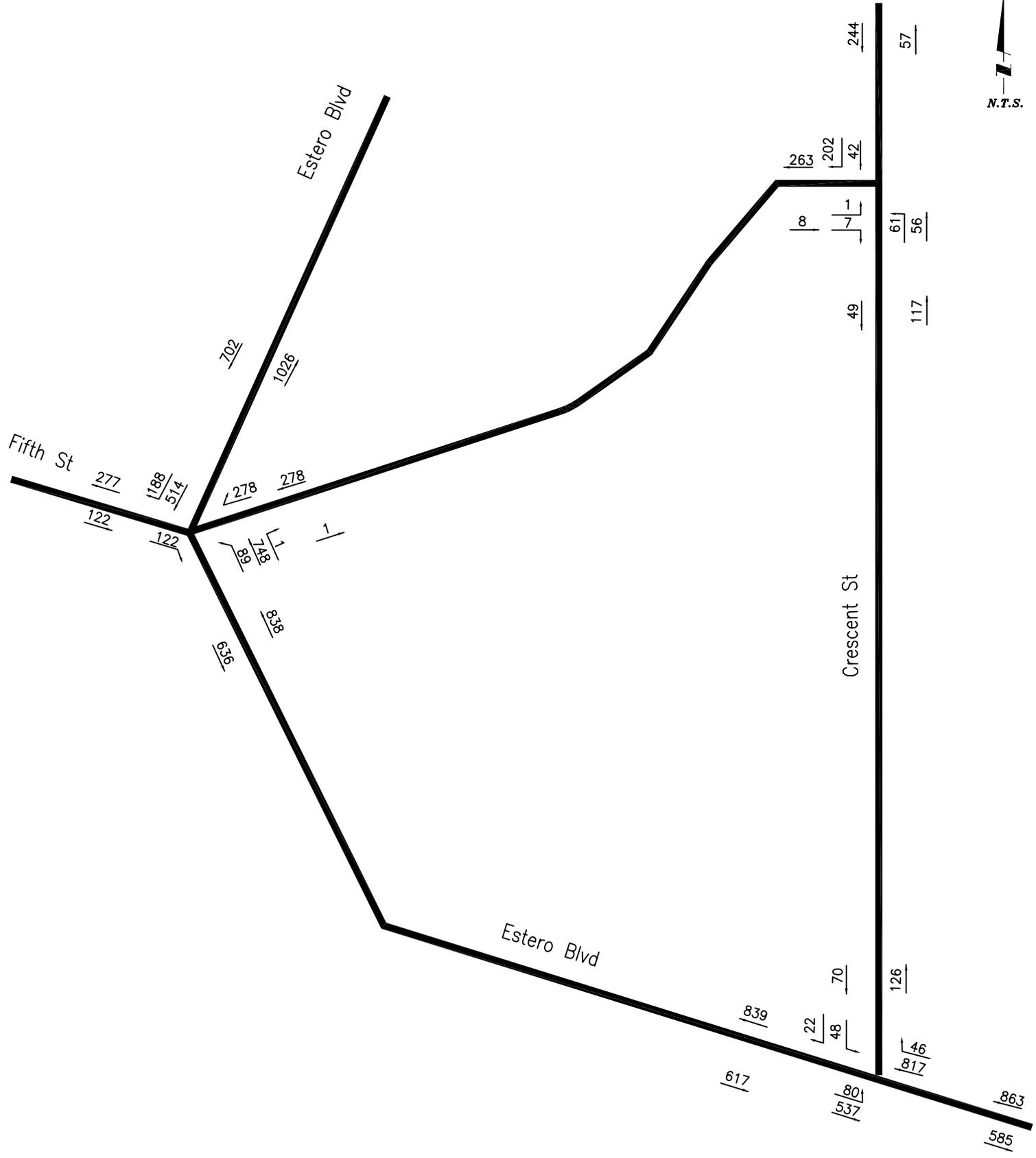
- (1) Per the Town of Fort Myers Beach Comprehensive Plan Policy 7-I-2. The peak capacity of Estero Boulevard's congested segments is 1,300 vehicles per hour. The minimum acceptable level-of-service standard for Estero Boulevard shall be that average monthly traffic flows from 10:00 A.M. to 5:00 P.M. during each month do not exceed that level for more than four calendar months in any continuous twelve-month period. Measurements from the permanent count station at Donora Boulevard shall be used for this standard.
- (2) Lee County Traffic Count Report 2016 - PCS 44 traffic data encircled in red.
- (3) Linear growth rate. Growth rate developed from Lee County Traffic Count Report 2015 Historical AADT.
- (4) Based on the Project PM peak hour trip generation and assignment.
- (5) 2020 projected average monthly volume plus peak hour, peak 2-way Project traffic.
- (6) Monthly fraction not provided by Lee County Traffic Count Report 2016. Assume monthly fraction of 1.0.



INDEPENDENT RESORT

EXISTING 2016
TRAFFIC VOLUMES
PM PEAK HOUR

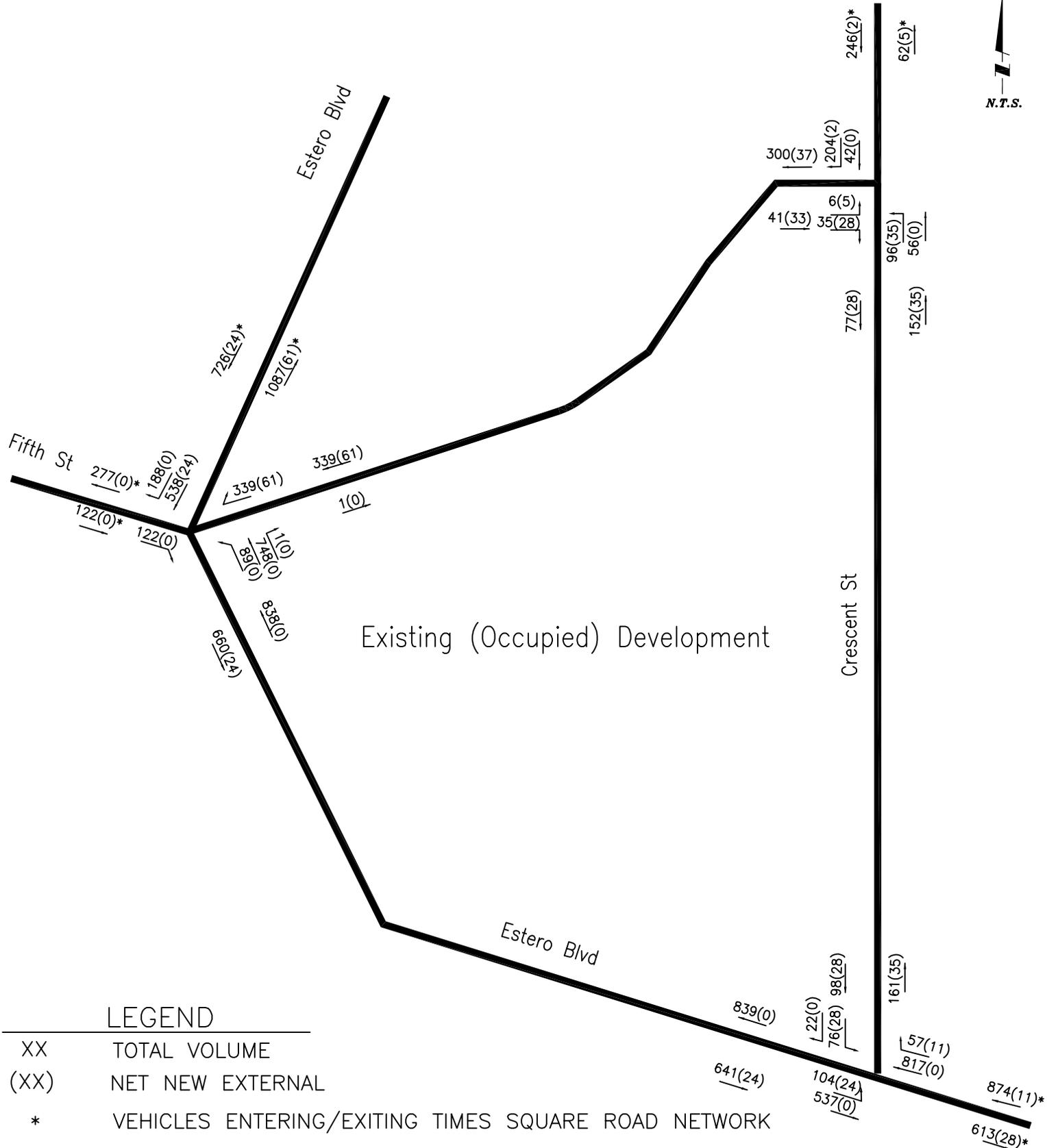
16537/32B/1117



INDEPENDENT RESORT

PROJECTED 2020
BACKGROUND TRAFFIC VOLUMES
PM PEAK HOUR

16537/33B/1117



LEGEND

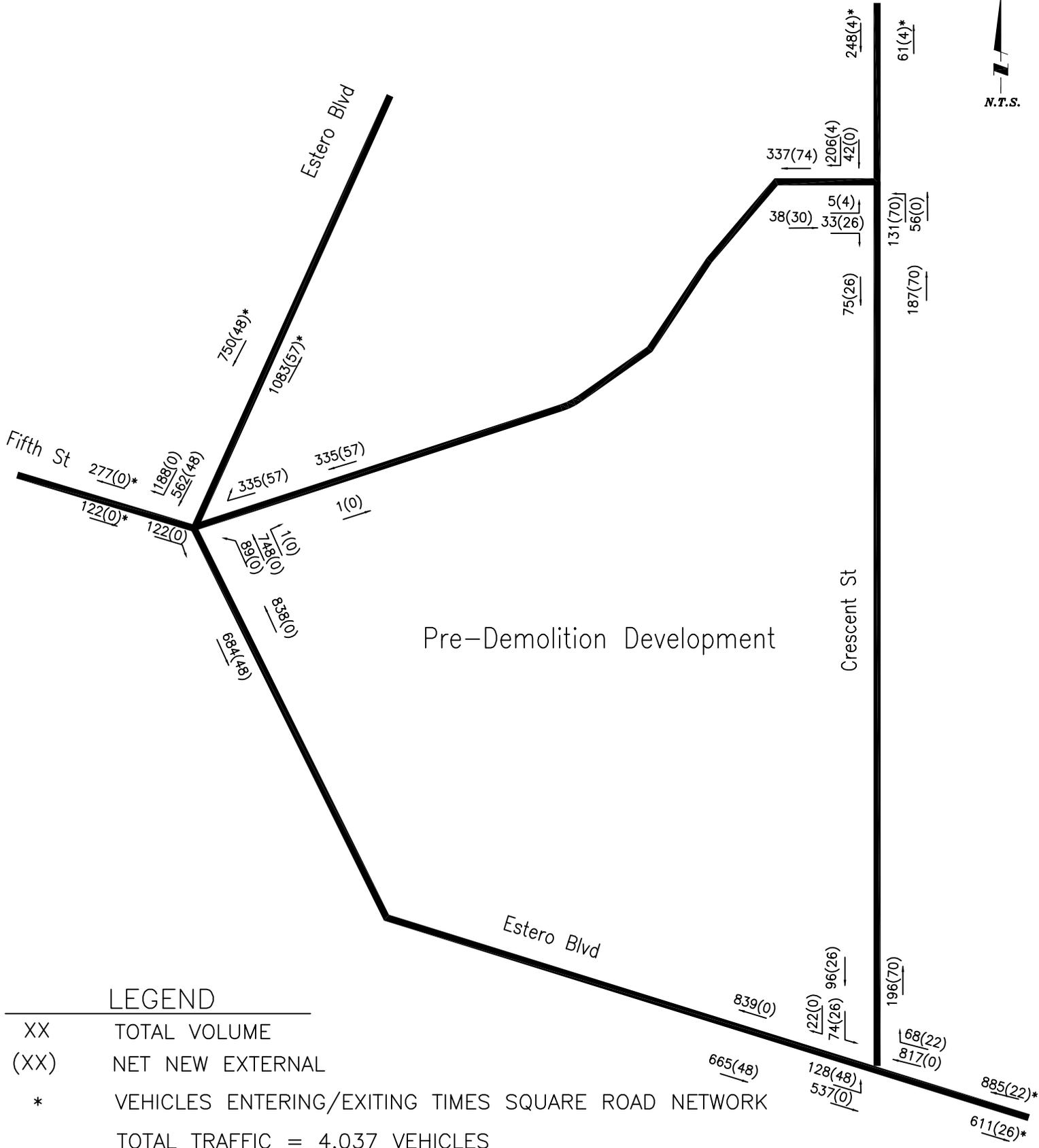
- XX TOTAL VOLUME
 - (XX) NET NEW EXTERNAL
 - * VEHICLES ENTERING/EXITING TIMES SQUARE ROAD NETWORK
- TOTAL TRAFFIC = 4,007 VEHICLES
 PROJECT TRAFFIC = 131 VEHICLES = 3.3% OF TOTAL



INDEPENDENT RESORT

FUTURE 2020
 TRAFFIC VOLUMES
 PM PEAK HOUR

16537/37A/1117



Pre-Demolition Development

LEGEND

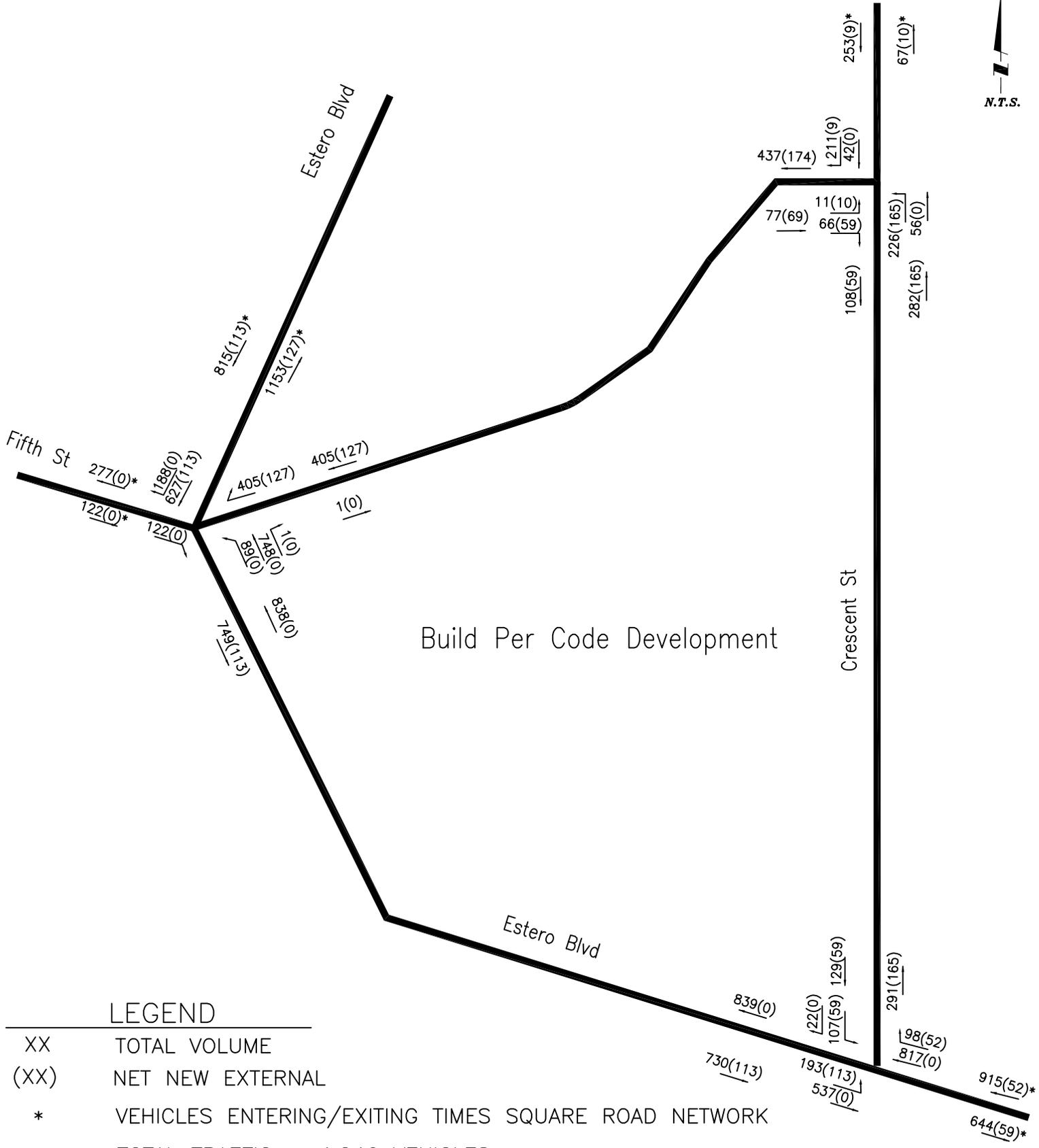
- XX TOTAL VOLUME
 - (XX) NET NEW EXTERNAL
 - * VEHICLES ENTERING/EXITING TIMES SQUARE ROAD NETWORK
- TOTAL TRAFFIC = 4,037 VEHICLES
 PROJECT TRAFFIC = 161 VEHICLES = 4.0% OF TOTAL



INDEPENDENT RESORT

FUTURE 2020
 TRAFFIC VOLUMES
 PM PEAK HOUR

16537/34B/1117



LEGEND

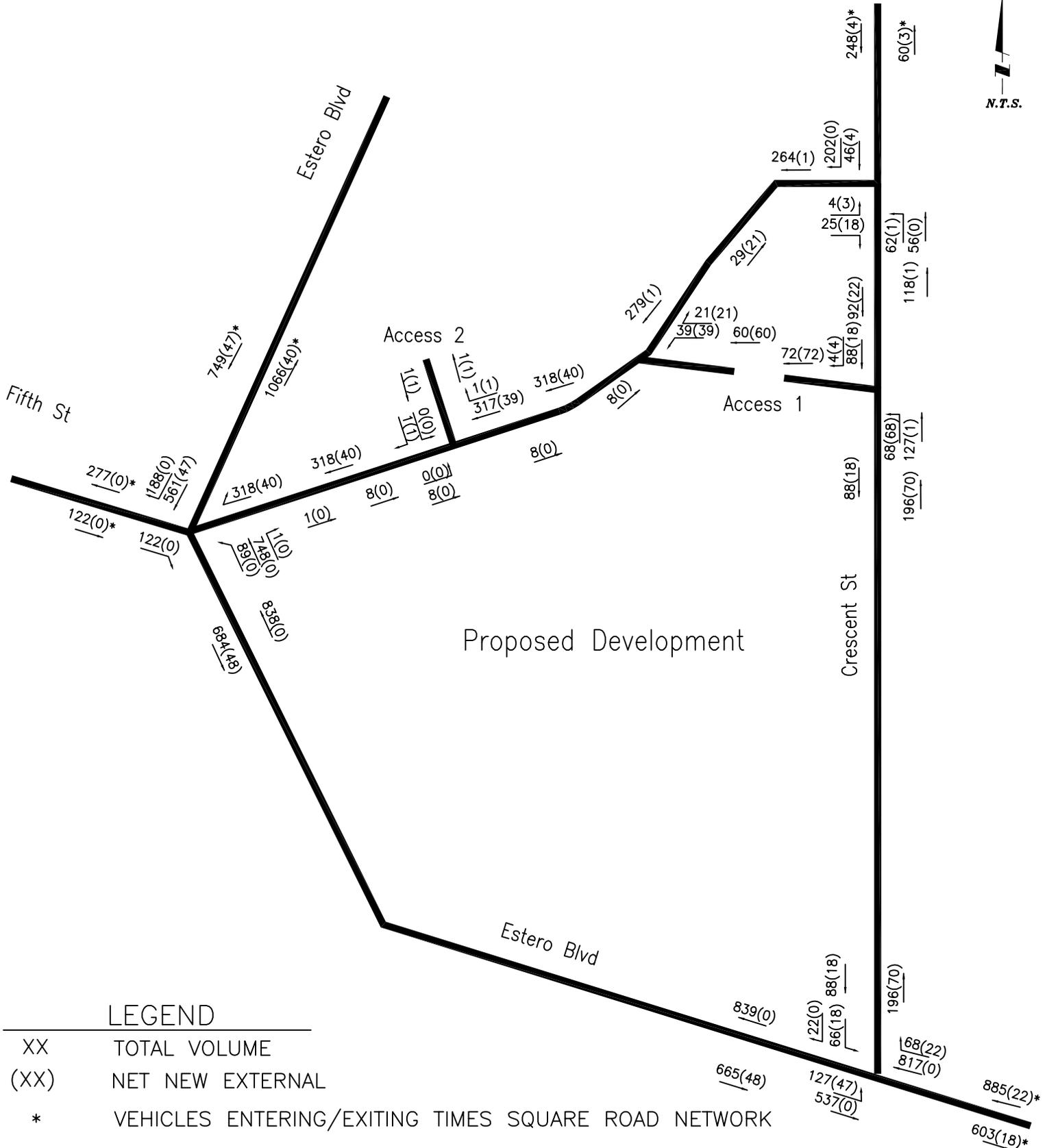
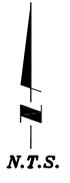
- XX TOTAL VOLUME
 - (XX) NET NEW EXTERNAL
 - * VEHICLES ENTERING/EXITING TIMES SQUARE ROAD NETWORK
- TOTAL TRAFFIC = 4,246 VEHICLES
 PROJECT TRAFFIC = 370 VEHICLES = 8.7% OF TOTAL



INDEPENDENT RESORT

FUTURE 2020
 TRAFFIC VOLUMES
 PM PEAK HOUR

16537/35B/1117



LEGEND

- XX TOTAL VOLUME
 - (XX) NET NEW EXTERNAL
 - * VEHICLES ENTERING/EXITING TIMES SQUARE ROAD NETWORK
- TOTAL TRAFFIC = 4,010 VEHICLES
 PROJECT TRAFFIC = 134 VEHICLES = 3.3% OF TOTAL



INDEPENDENT RESORT

FUTURE 2020
 TRAFFIC VOLUMES
 PM PEAK HOUR

16537/36B/1117

APPENDIX A

ITE TRIP GENERATION
DATA AND RATES

Land Use: 310 Hotel

Description

Hotels are places of lodging that provide sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops. Some of the sites included in this land use category are actually large motels providing the hotel facilities noted above. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320) and resort hotel (Land Use 330) are related uses.

Additional Data

Studies of hotel employment density indicate that, on the average, a hotel will employ 0.9 employees per room.¹

Thirty studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 83 percent.

The hotels surveyed were primarily located outside central business districts in suburban areas.

Some properties contained in this land use provide guest transportation services such as airport shuttles, limousine service, or golf course shuttle service, which may have an impact on the overall trip generation rates.

The sites were surveyed between the late 1960s and the 2000s throughout the United States.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Trip generation at a hotel may be related to the presence of supporting facilities such as convention facilities, restaurants, meeting/banquet space and retail facilities. Future data submissions should specify the presence of these amenities. Reporting the level of activity at the supporting facilities such as full, empty, partially active, number of people attending a meeting/banquet during observation may also be useful in further analysis of this land use.

Source Numbers

4, 5, 12, 13, 18, 55, 72, 170, 187, 254, 260, 262, 277, 280, 301, 306, 357, 422, 436, 507, 577, 728

¹ Buttke, Carl H. Unpublished studies of building employment densities, Portland, Oregon.

Hotel (310)

Vehicle Trip Ends vs: Occupied Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

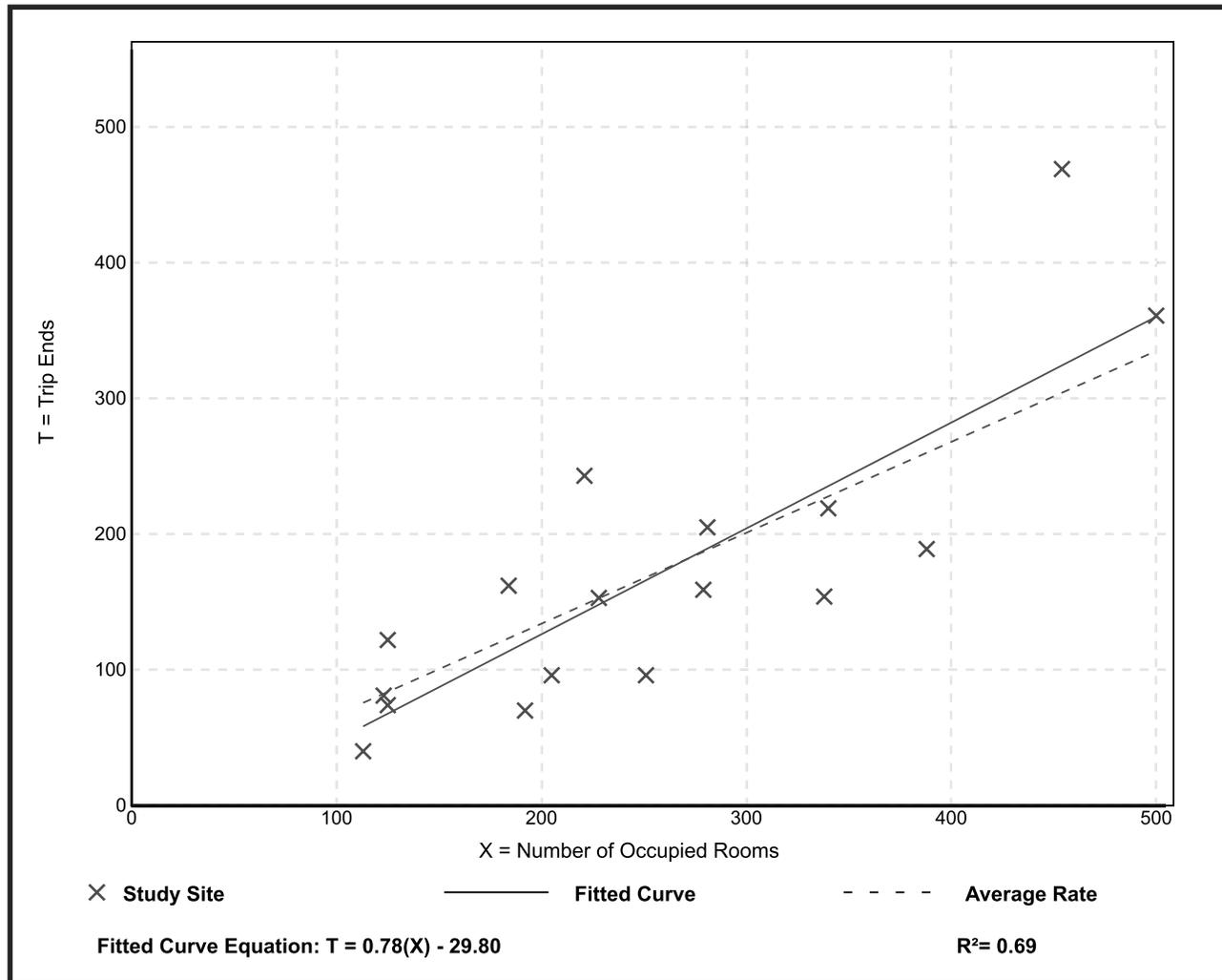
Setting/Location: General Urban/Suburban

Number of Studies: 17
 Average Number of Occupied Rooms: 256
 Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Occupied Room

Average Rate	Range of Rates	Standard Deviation
0.67	0.35 - 1.1	0.23

Data Plot and Equation



Trip Generation Manual, 9th Edition • Institute of Transportation Engineers

Hotel (310)

Vehicle Trip Ends vs: Occupied Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

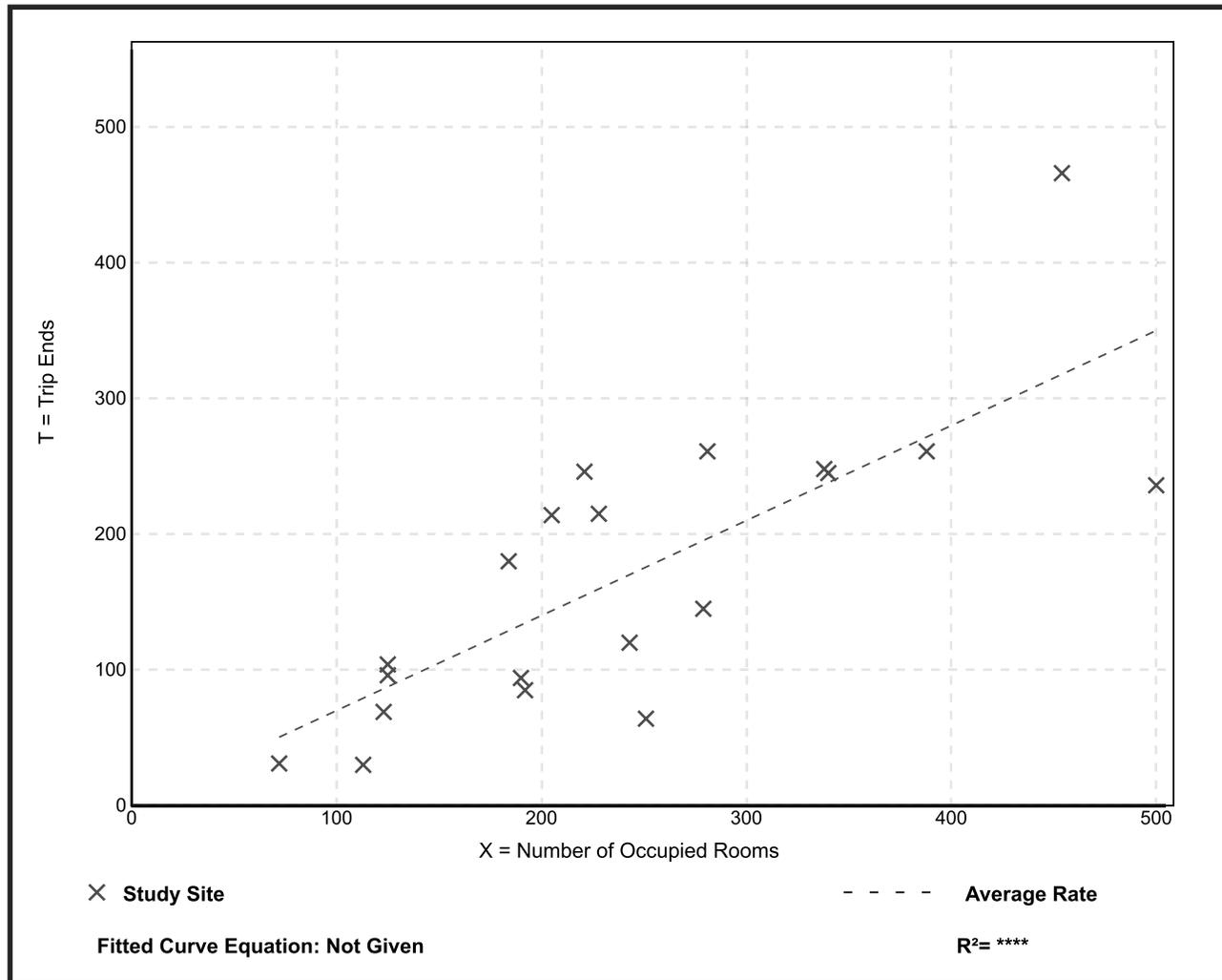
Setting/Location: General Urban/Suburban

Number of Studies: 20
 Average Number of Occupied Rooms: 243
 Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Occupied Room

Average Rate	Range of Rates	Standard Deviation
0.7	0.25 - 1.11	0.26

Data Plot and Equation



Land Use: 330

Resort Hotel

Description

Resort hotels are similar to hotels (Land Use 310) in that they provide sleeping accommodations, restaurants, cocktail lounges, retail shops and guest services. The primary difference is that resort hotels cater to the tourist and vacation industry, often providing a wide variety of recreational facilities/programs (golf courses, tennis courts, beach access, or other amenities) rather than convention and meeting business. Resort hotels are normally located in suburban or outlying locations on larger sites than conventional hotels. Hotel (Land Use 310), all suites hotel (Land Use 311), business hotel (Land Use 312) and motel (Land Use 320) are related uses.

Additional Data

Eleven studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 82 percent.

Some properties contained in this land use provide guest transportation services such as airport shuttles, limousine service, or golf course shuttle service, which may have an impact on the overall trip generation rates.

One site surveyed in the San Diego, California area is actually a “motel row” with combined facilities similar to a resort hotel.

The sites were surveyed between the 1970s and the 1990s throughout the United States.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Source Numbers

18, 40, 100, 270, 277, 381, 436

Resort Hotel (330)

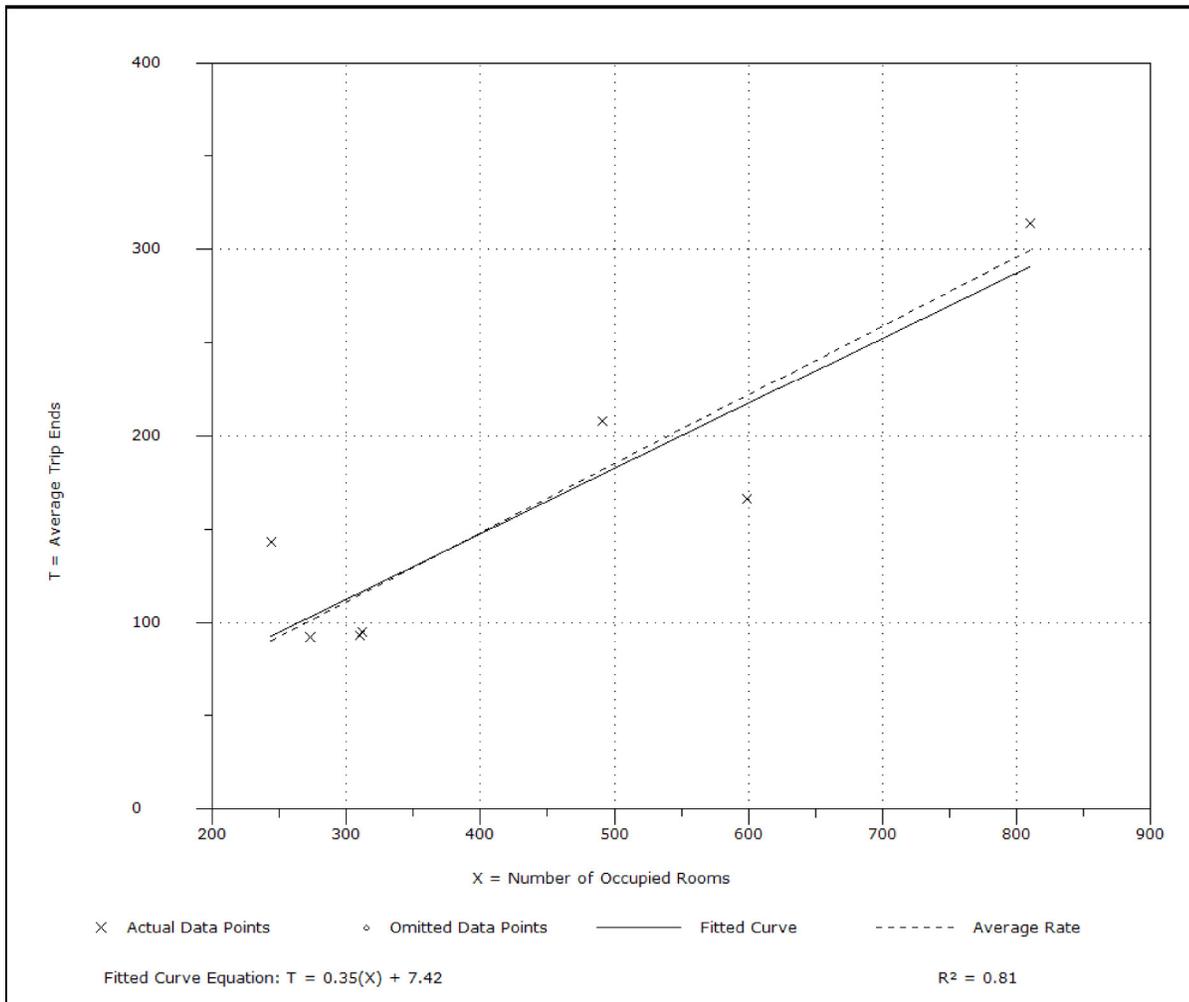
Average Vehicle Trip Ends vs: Occupied Rooms
On a: Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Number of Studies: 7
 Average Number of Occupied Rooms: 434
 Directional Distribution: 72% entering, 28% exiting

Trip Generation per Occupied Room

Average Rate	Range of Rates	Standard Deviation
0.37	0.28 - 0.59	0.09

Data Plot and Equation



Trip Generation, ITE-TGM 9th Edition

Resort Hotel (330)

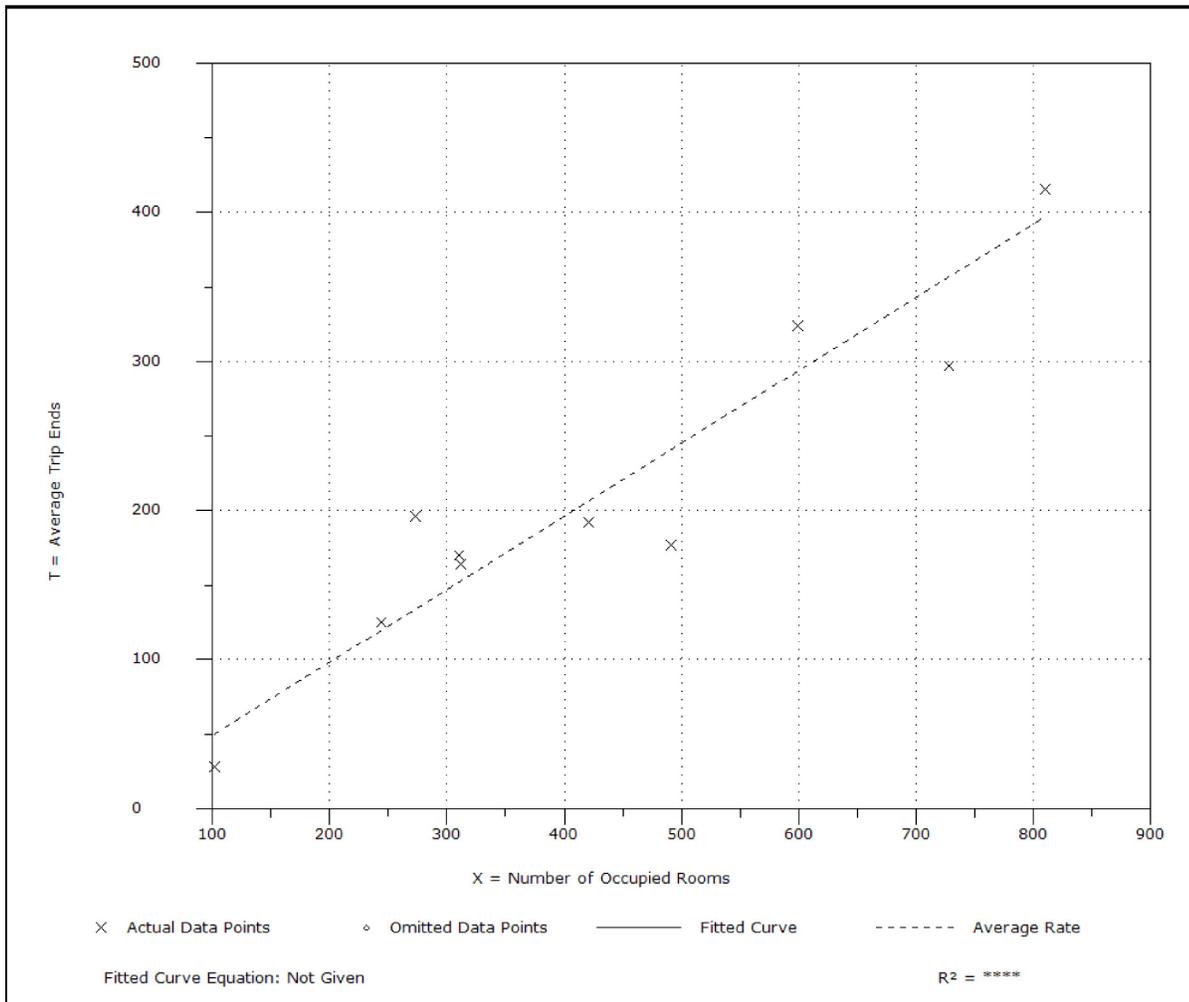
Average Vehicle Trip Ends vs: Occupied Rooms
On a: Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Number of Studies: 10
 Average Number of Occupied Rooms: 429
 Directional Distribution: 43% entering, 57% exiting

Trip Generation per Occupied Room

Average Rate	Range of Rates	Standard Deviation
0.49	0.27 - 0.72	0.10

Data Plot and Equation



Trip Generation, ITE-TGM 9th Edition

Land Use: 820

Shopping Center

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned and managed as a unit. A shopping center's composition is related to its market area in terms of size, location and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands. Specialty retail center (Land Use 826) and factory outlet center (Land Use 823) are related uses.

Additional Data

Shopping centers, including neighborhood centers, community centers, regional centers and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs and recreational facilities (for example, ice skating rinks or indoor miniature golf courses). The centers ranged in size from 1,700 to 2.2 million square feet gross leasable area (GLA). The centers studied were located in suburban areas throughout the United States and, therefore, represent typical U.S. suburban conditions.

Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.

The vehicle trips generated at a shopping center are based upon the total GLA of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area of the building.

Separate equations have been developed for shopping centers during the Christmas shopping season. Plots were included for the weekday peak hour of adjacent street traffic and the Saturday peak hour of the generator.

Information on approximate hourly, monthly and daily variation in shopping center traffic is shown in Tables 1–3. It should be noted, however, that the information contained in these tables is based on a limited sample size. Therefore, caution should be exercised when applying the data. Also, some information provided in the tables may conflict with the results obtained by applying the average rate or regression equations. When this occurs, it is suggested that the results from the average rate or regression equations be used, as they are based on a larger number of studies.

Table 1 Hourly Variation in Shopping Center Traffic						
Time	Average Weekday ^a		Average Saturday ^b		Average Sunday ^c	
	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic
6 a.m.–7 a.m.	0.8	0.3	0.2	0.2	0.2	0.1
7 a.m.–8 a.m.	2.0	0.9	0.9	0.4	0.4	0.3
8 a.m.–9 a.m.	3.1	1.2	2.7	1.0	0.9	0.5
9 a.m.–10 a.m.	5.5	2.0	5.5	2.2	1.7	1.1
10 a.m.–11 a.m.	7.0	4.3	8.6	4.8	3.8	2.5
11 a.m.–12 p.m.	8.4	6.2	10.8	7.5	10.0	4.6
12 p.m.–1 p.m.	9.4	8.3	11.8	9.3	15.1	7.9
1 p.m.–2 p.m.	8.2	8.6	12.1	10.3	16.7	12.0
2 p.m.–3 p.m.	7.7	8.9	11.8	11.8	15.8	14.7
3 p.m.–4 p.m.	7.8	8.8	10.7	12.5	13.0	15.6
4 p.m.–5 p.m.	8.0	8.9	8.8	12.5	9.4	15.8
5 p.m.–6 p.m.	8.4	9.2	5.3	11.3	5.1	13.0
6 p.m.–7 p.m.	8.0	7.5	3.3	6.7	2.3	4.6
7 p.m.–8 p.m.	7.9	7.2	2.7	2.9	1.7	1.9
8 p.m.–9 p.m.	4.3	7.7	1.8	2.2	1.1	1.3
9 p.m.–10 p.m.	1.8	7.2	1.0	1.6	0.7	1.1
10 p.m.–6 a.m.	1.7	2.8	2.0	2.8	2.1	3.0

Sites ranged in size from 11,000 to 1,750,000 square feet gross leasable area

^a Source numbers – 13, 73, 88, 190, 217, 220, 225 and 376; based on ten studies

^b Source numbers – 13, 73, 88, 190, 220, 225 and 376; based on nine studies

^c Source numbers – 13, 73, 88, 190, 220 and 225; based on eight studies

Table 2				
Daily Variation in Shopping Center Traffic				
Percentage of Average Weekday Volume (Monday through Friday)				
Day	Less than 100,000 Square Feet GLA	100,000 to 300,000 Square Feet GLA	More than 300,000 Square Feet GLA	Discount Center
Sunday	45.2	65.4	77.4	82.1
Monday	97.3	96.8	96.8	95.1
Tuesday	92.9	103.1	97.1	91.4
Wednesday	92.7	99.1	93.6	94.8
Thursday	98.2	85.3	97.1	99.5
Friday	118.9	108.7	115.4	119.2
Saturday	128.5	113.4	128.0	151.0
Sample Size	6	8	17	2

Source numbers: 88, 124

Table 3			
Monthly Variation in Shopping Center Traffic			
Percentage of Average Month			
Month	Percentage	Month	Percentage
January	85.3	July	100.8
February	78.1	August	102.1
March	92.0	September	94.8
April	93.2	October	98.9
May	105.4	November	101.5
June	106.0	December	141.8

Sample size: 2

Average gross leasable area: 938,000 square feet

The sites were surveyed between the 1960s and the 2000s throughout the United States and Canada.

Specialized Land Use Data

Two studies provided data on outdoor shopping centers in Illinois and Alberta, Canada. The trip generation characteristics of these sites varied from the other stores in this land use; therefore, the information collected for these facilities is presented in the following tables and was excluded from the data plots.

<u>Independent Variable</u>	<u>Average Trip Generation Rate</u>	<u>Size of Independent Variable</u>	<u>Number of Studies</u>	<u>Directional Distribution</u>
1,000 Square Feet Gross Leasable Area				
Weekday	66.64	797	2	Not available
Weekday A.M. Peak Hour of Adjacent Street Traffic	3.27	797	2	Not available
Weekday P.M. Peak Hour of Adjacent Street Traffic	5.46	797	2	Not available

Sources: 446, 702

Source Numbers

1, 2, 3, 4, 5, 6, 13, 14, 18, 19, 22, 26, 40, 42, 48, 49, 54, 59, 60, 61, 64, 65, 72, 73, 75, 76, 77, 78, 79, 87, 89, 90, 98, 99, 100, 105, 110, 124, 156, 159, 172, 186, 193, 194, 195, 196, 197, 198, 199, 202, 204, 211, 213, 260, 263, 269, 295, 299, 300, 301, 304, 305, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 358, 365, 376, 385, 390, 400, 404, 414, 420, 423, 428, 437, 440, 442, 444, 446, 507, 562, 563, 580, 598, 629, 658, 702, 715, 728

Shopping Center (820)

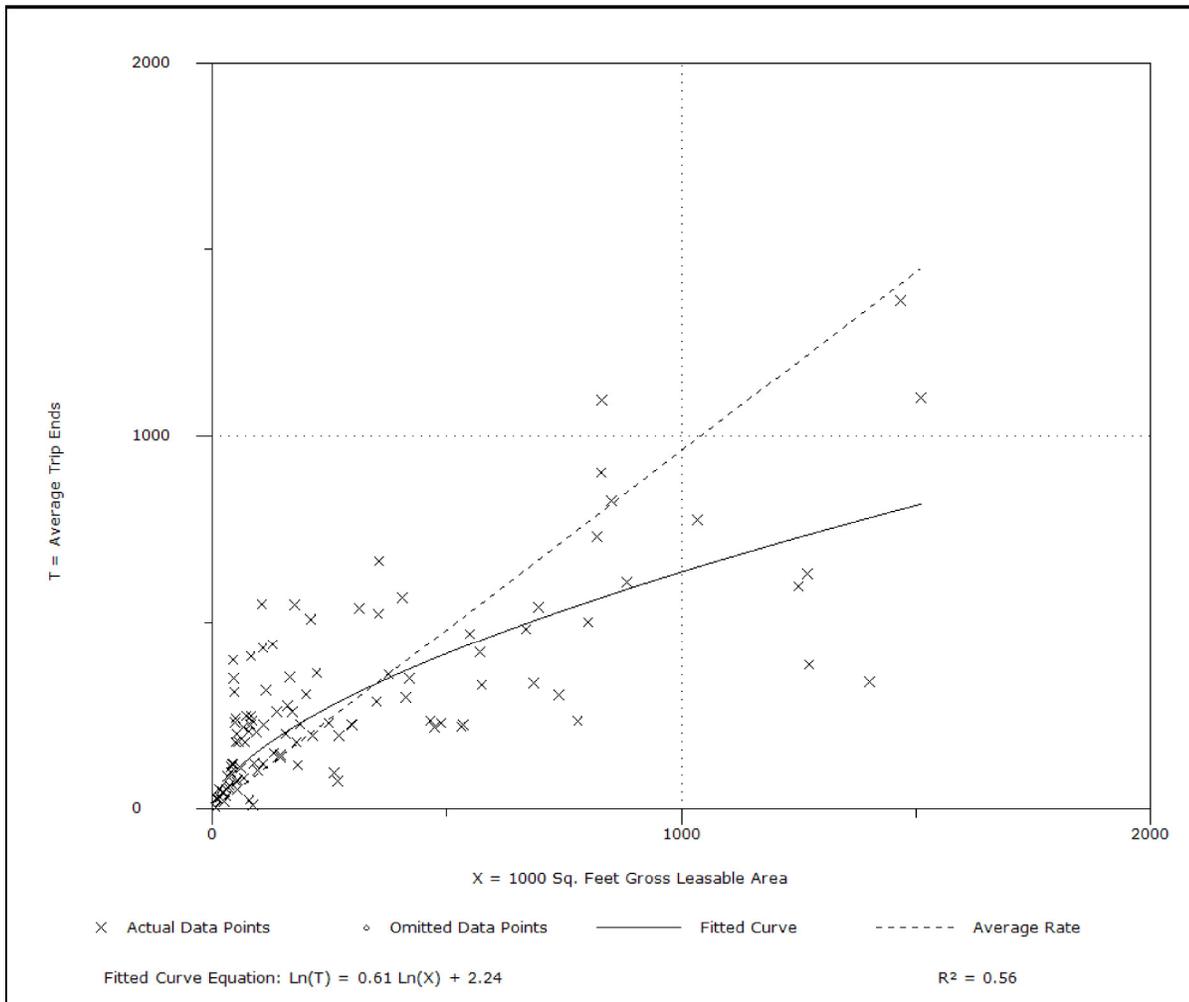
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Number of Studies: 104
 Average 1000 Sq. Feet GLA: 310
 Directional Distribution: 62% entering, 38% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
0.96	0.10 - 9.05	0.87

Data Plot and Equation



Trip Generation, ITE-TGM 9th Edition

Shopping Center (820)

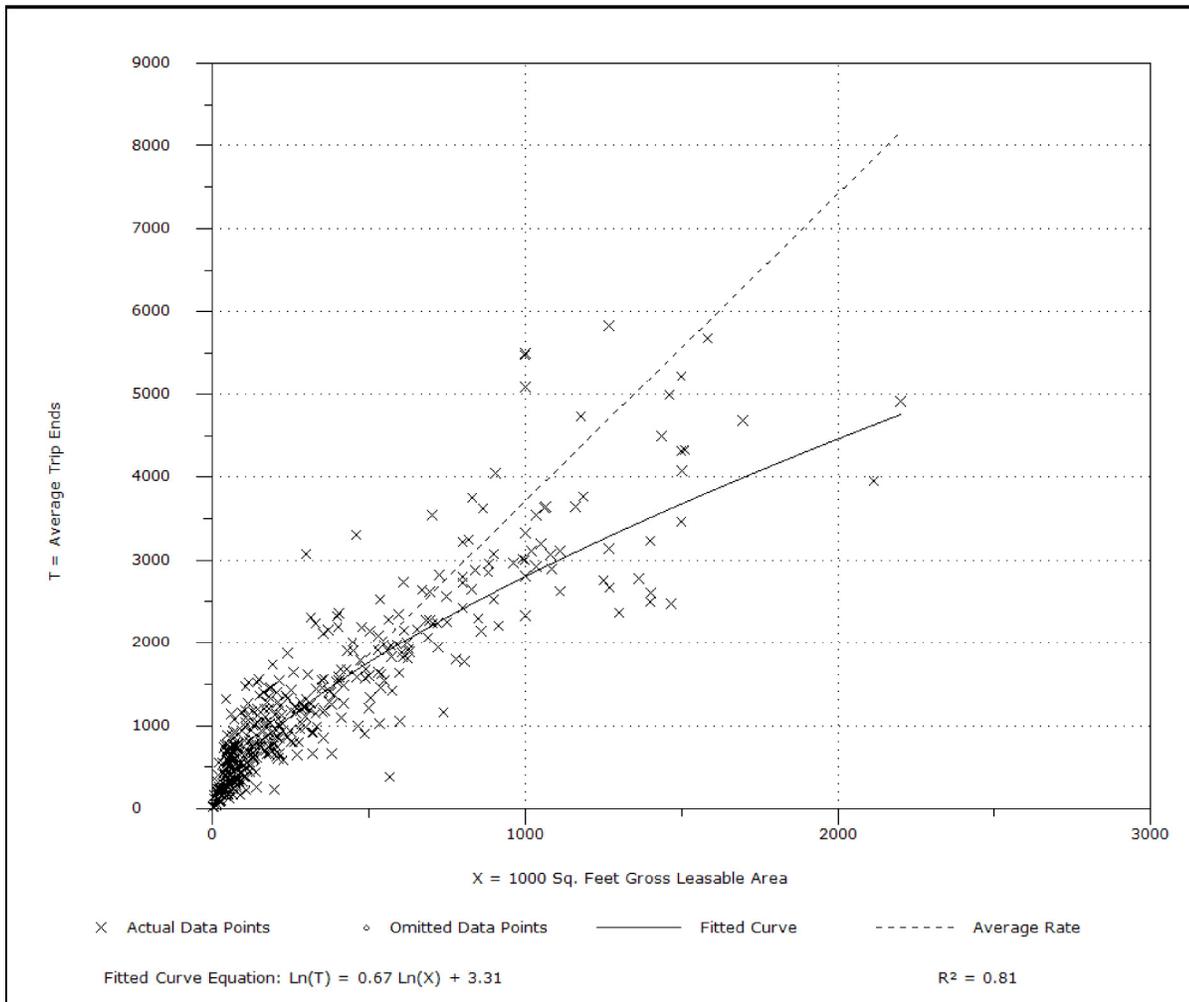
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Number of Studies: 426
 Average 1000 Sq. Feet GLA: 376
 Directional Distribution: 48% entering, 52% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
3.71	0.68 - 29.27	1.95

Data Plot and Equation



Trip Generation, ITE-TGM9th Edition

Shopping Center (820)

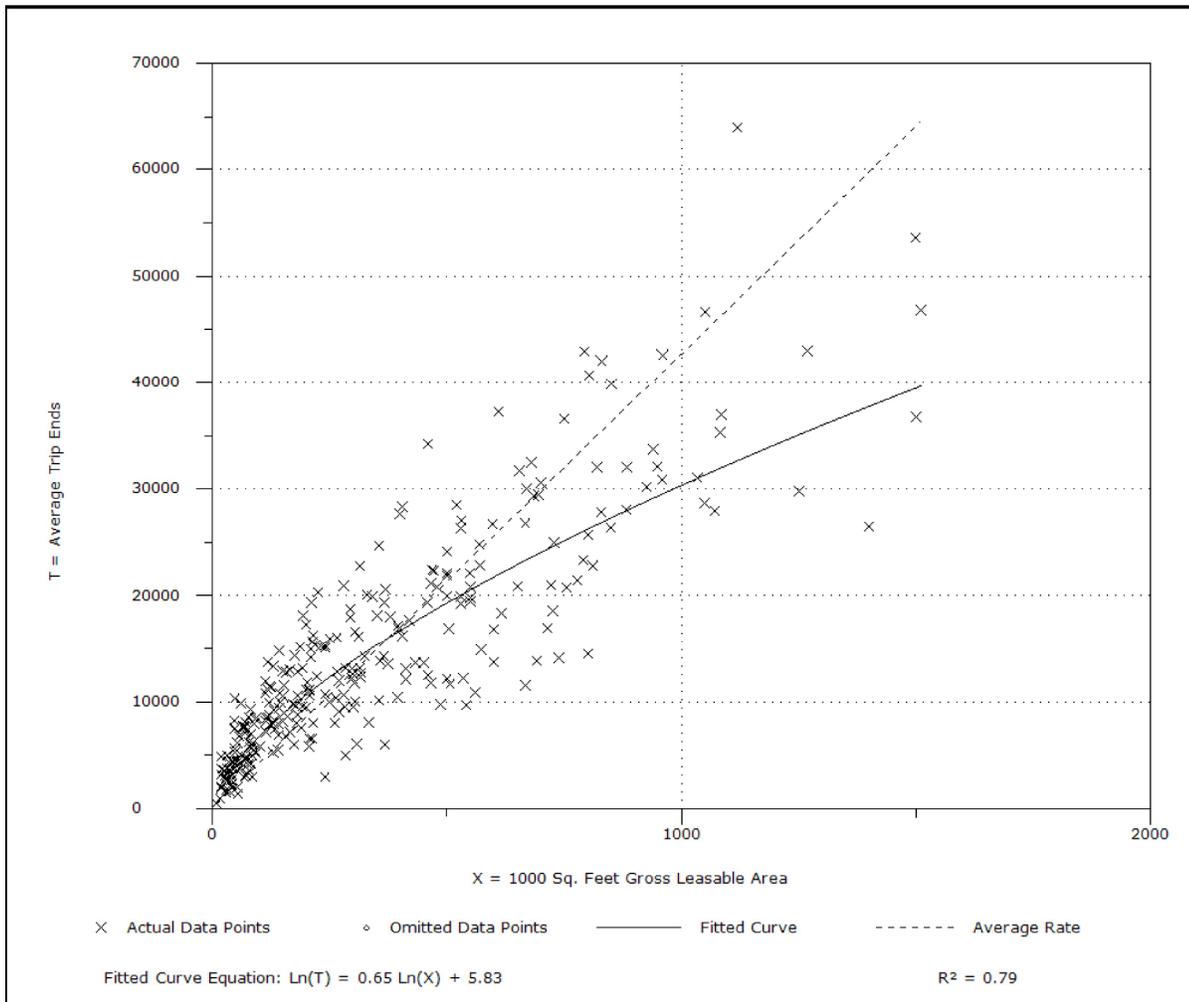
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday

Number of Studies: 302
 Average 1000 Sq. Feet GLA: 331
 Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
42.70	12.50 - 270.89	20.26

Data Plot and Equation



Trip Generation, ITE-TGM 9th Edition

Land Use: 826

Specialty Retail Center

Description

Specialty retail centers are generally small strip shopping centers that contain a variety of retail shops and specialize in quality apparel, hard goods and services, such as real estate offices, dance studios, florists and small restaurants. Shopping center (Land Use 820) is a related use.

Additional Data

The sites were surveyed between the late 1970s and the 2000s in California, Florida, Georgia, New York and Pennsylvania.

Source Numbers

100, 304, 305, 367, 423, 507, 577

Specialty Retail Center (826)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

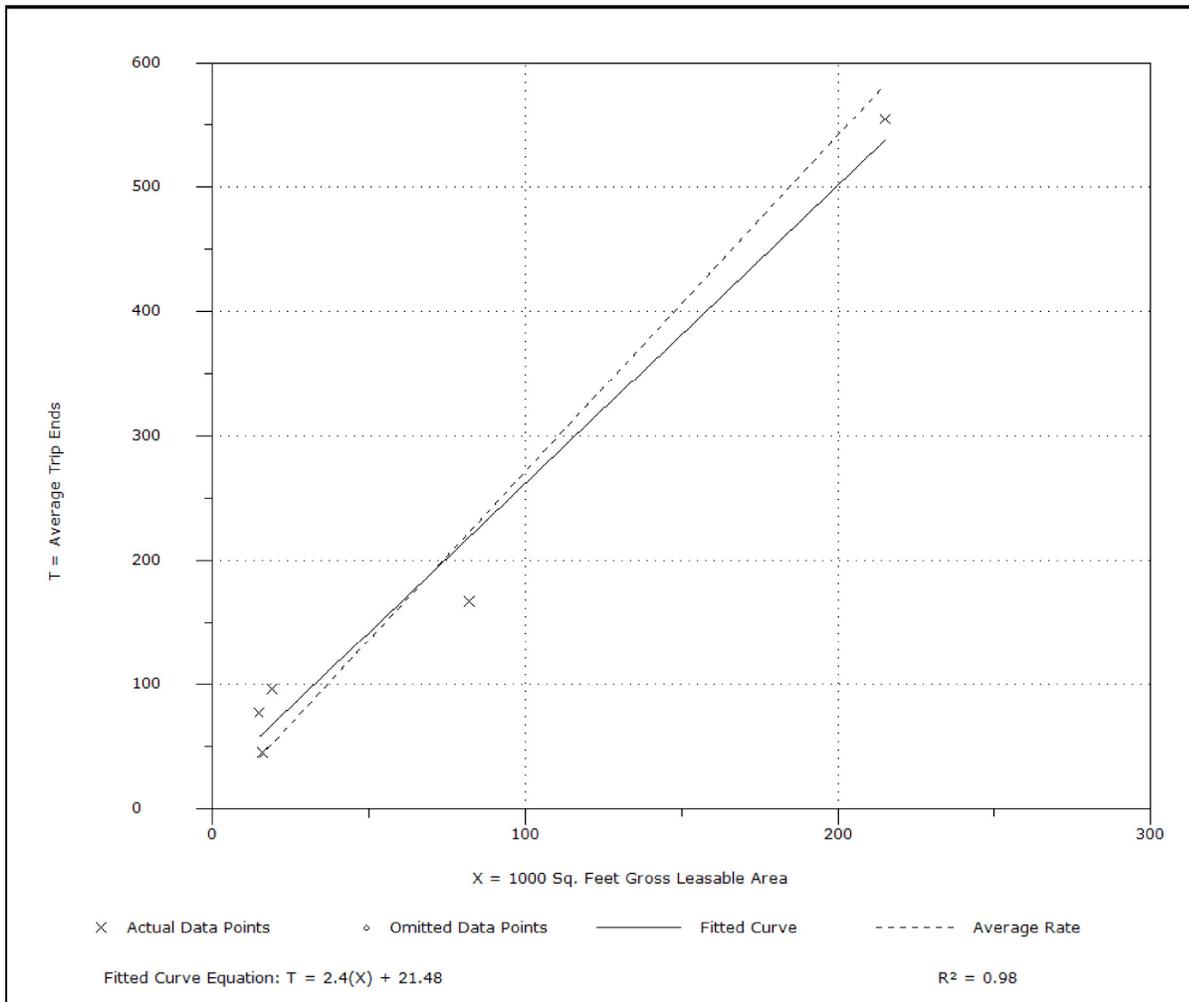
Number of Studies: 5
 Average 1000 Sq. Feet GLA: 69
 Directional Distribution: 44% entering, 56% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
2.71	2.03 - 5.16	0.93

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Trip Generation, ITE-TGM9th Edition

Specialty Retail Center (826)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday

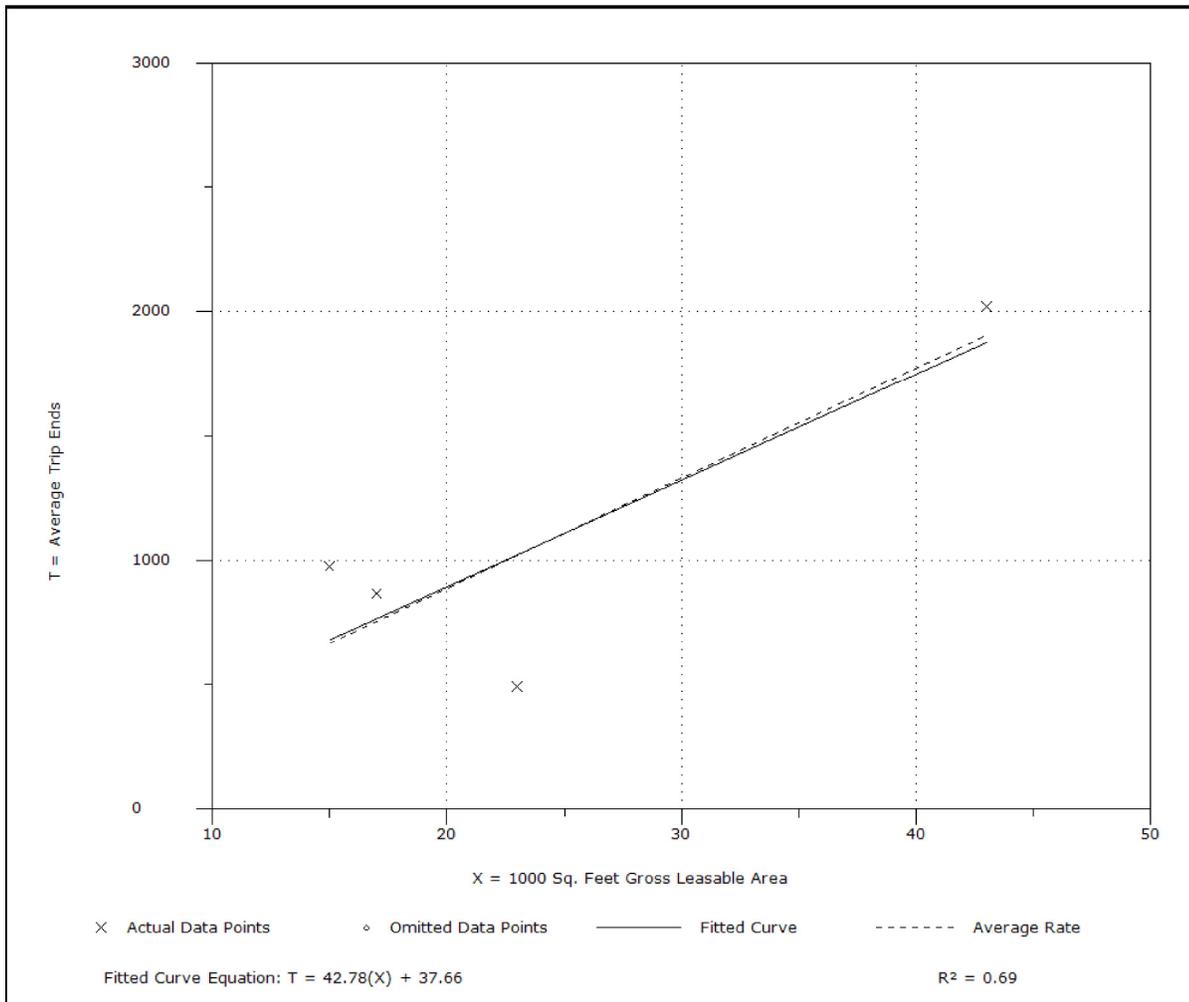
Number of Studies: 4
Average 1000 Sq. Feet GLA: 25
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
44.32	21.30 - 64.21	16.17

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Trip Generation, ITE-TGM 9th Edition

Land Use: 925

Drinking Place

Description

A drinking place contains a bar, where alcoholic beverages and food are sold, and possibly some type of entertainment, such as music, television screens, video games, or pool tables. Establishments that specialize in serving food but also have bars are not included in this land use.

Additional Data

The sites were surveyed in 1987, 1995 and 1997 in Colorado, Oregon and South Dakota.

Source Numbers

291, 358, 583

Drinking Place (925)

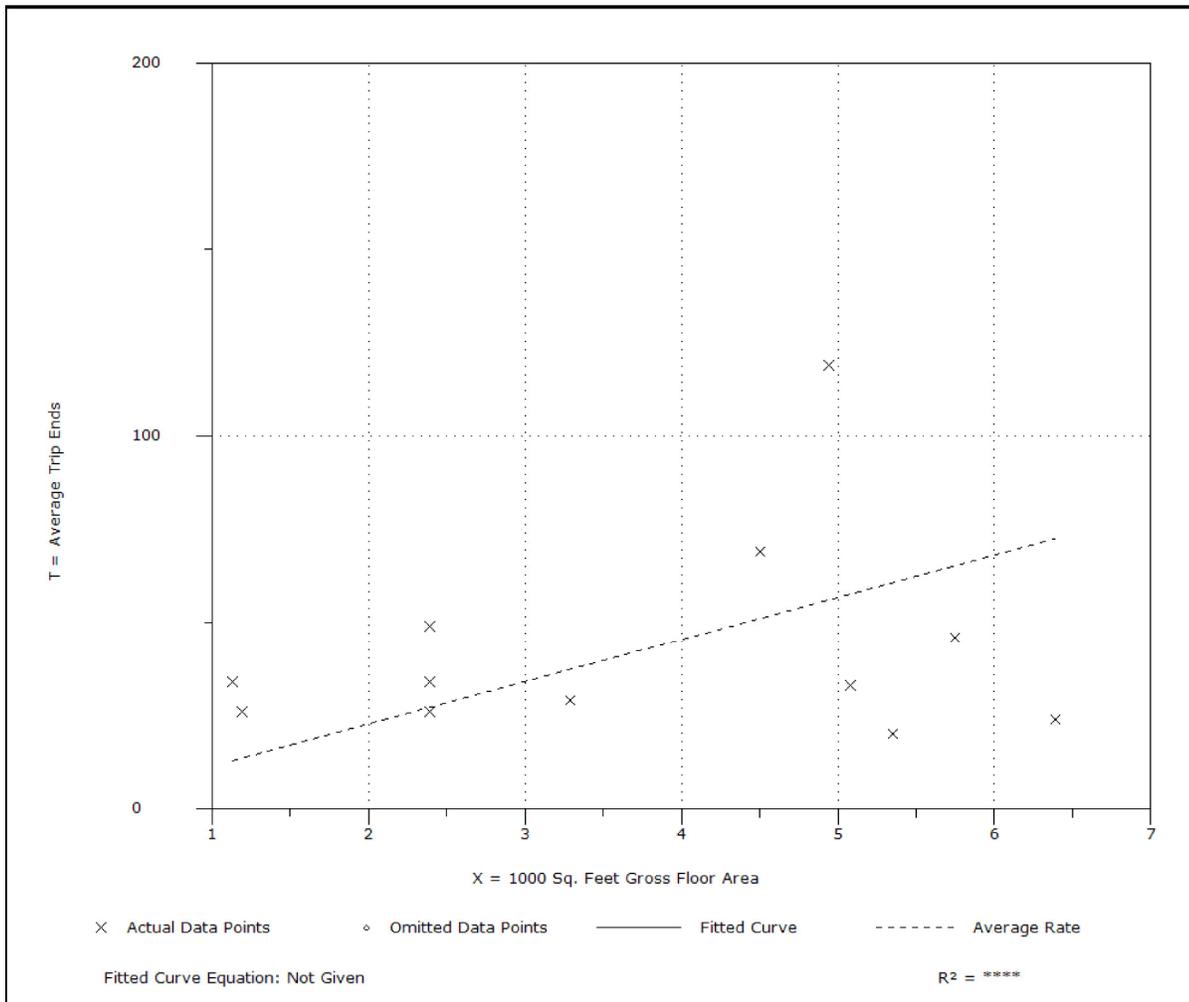
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Number of Studies: 12
 Average 1000 Sq. Feet GFA: 4
 Directional Distribution: 66% entering, 34% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
11.34	3.73 - 29.98	7.79

Data Plot and Equation



Trip Generation, ITE-TGM 9th Edition

Land Use: 932

High-Turnover (Sit-Down) Restaurant

Description

This land use consists of sit-down, full-service eating establishments with typical duration of stay of approximately one hour. This type of restaurant is usually moderately priced and frequently belongs to a restaurant chain. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours per day. These restaurants typically do not take reservations. Patrons commonly wait to be seated, are served by a waiter/waitress, order from menus and pay for their meal after they eat. Some facilities contained within this land use may also contain a bar area for serving food and alcoholic drinks. Quality restaurant (Land Use 931), fast-food restaurant without drive-through window (Land Use 933), fast-food restaurant with drive-through window (Land Use 934) and fast-food restaurant with drive-through window and no indoor seating (Land Use 935) are related uses.

Additional Data

Users should exercise caution when applying statistics during the A.M. peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the A.M. peak hour of the adjacent street traffic were removed from the database.

Information on approximate hourly variation in high-turnover (sit-down) restaurant traffic is shown in the following table. It should be noted, however, that the information contained in this table is based on a limited sample size. Therefore, caution should be exercised when applying the data. Also, some information provided in the table may conflict with the results obtained by applying the average rate or regression equations. When this occurs, it is suggested that the results from the average rate or regression equations be used, as they are based on a larger number of studies.

Hourly Variation in High-Turnover (Sit-Down) Restaurant Traffic						
Time	Average Weekday ^a		Average Saturday ^b		Average Sunday ^c	
	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic	Percent of 24-Hour Entering Traffic	Percent of 24-Hour Exiting Traffic
6 a.m.–7 a.m.	1.5	0.8	0.9	0.6	0.1	0.4
7 a.m.–8 a.m.	3.0	1.7	2.2	1.0	0.9	1.3
8 a.m.–9 a.m.	3.6	2.3	4.1	2.8	1.7	0.1
9 a.m.–10 a.m.	4.1	2.7	4.1	3.5	1.4	1.2
10 a.m.–11 a.m.	3.3	3.2	4.6	3.7	2.3	4.2
11 a.m.–12 p.m.	7.4	3.8	4.6	4.0	5.5	2.6
12 p.m.–1 p.m.	8.6	6.6	5.1	3.6	8.8	3.9
1 p.m.–2 p.m.	4.8	8.6	4.4	4.3	6.6	8.2
2 p.m.–3 p.m.	3.2	5.5	3.8	4.3	5.9	5.1
3 p.m.–4 p.m.	3.0	4.0	3.6	3.5	8.7	7.2
4 p.m.–5 p.m.	5.6	4.5	4.5	4.0	10.0	8.4
5 p.m.–6 p.m.	9.7	4.6	7.1	4.3	12.4	10.5
6 p.m.–7 p.m.	10.7	7.9	9.9	6.7	11.3	10.0
7 p.m.–8 p.m.	9.5	9.0	8.5	7.3	8.7	9.3
8 p.m.–9 p.m.	7.7	9.0	8.1	8.5	5.9	8.0
9 p.m.–10 p.m.	4.9	8.6	6.5	7.3	4.2	7.5
10 p.m.–6 a.m.	9.4	17.2	18.0	30.6	5.6	12.1

Sites ranged in size from 4,500 to 21,000 square feet gross floor area

^a Source numbers – 13, 88,126, 507 and The Traffic Group, Inc.; based on seven studies

^b Source numbers – 13, 88,126 and The Traffic Group, Inc.; based on five studies

^c Source numbers – 13, 88 and 126; based on three studies

Vehicle occupancy ranged from 1.39 to 1.69 persons per automobile on an average weekday. The average for the sites surveyed was approximately 1.52.

Five sites submitted for inclusion in this land use indicated the presence of an on-site pick-up window. From the limited data sample, it does not appear that the presence of a pick-up window had a significant impact on trip generation.

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

The sites were surveyed between the 1960s and the 2000s throughout the United States.

Source Numbers

2, 4, 5, 72, 90, 100, 126, 269, 275, 280, 300, 301, 305, 338, 340, 341, 358, 384, 424, 432, 437, 438, 444, 507, 555, 577, 589, 617, 618, 728

High-Turnover (Sit-Down) Restaurant (932)

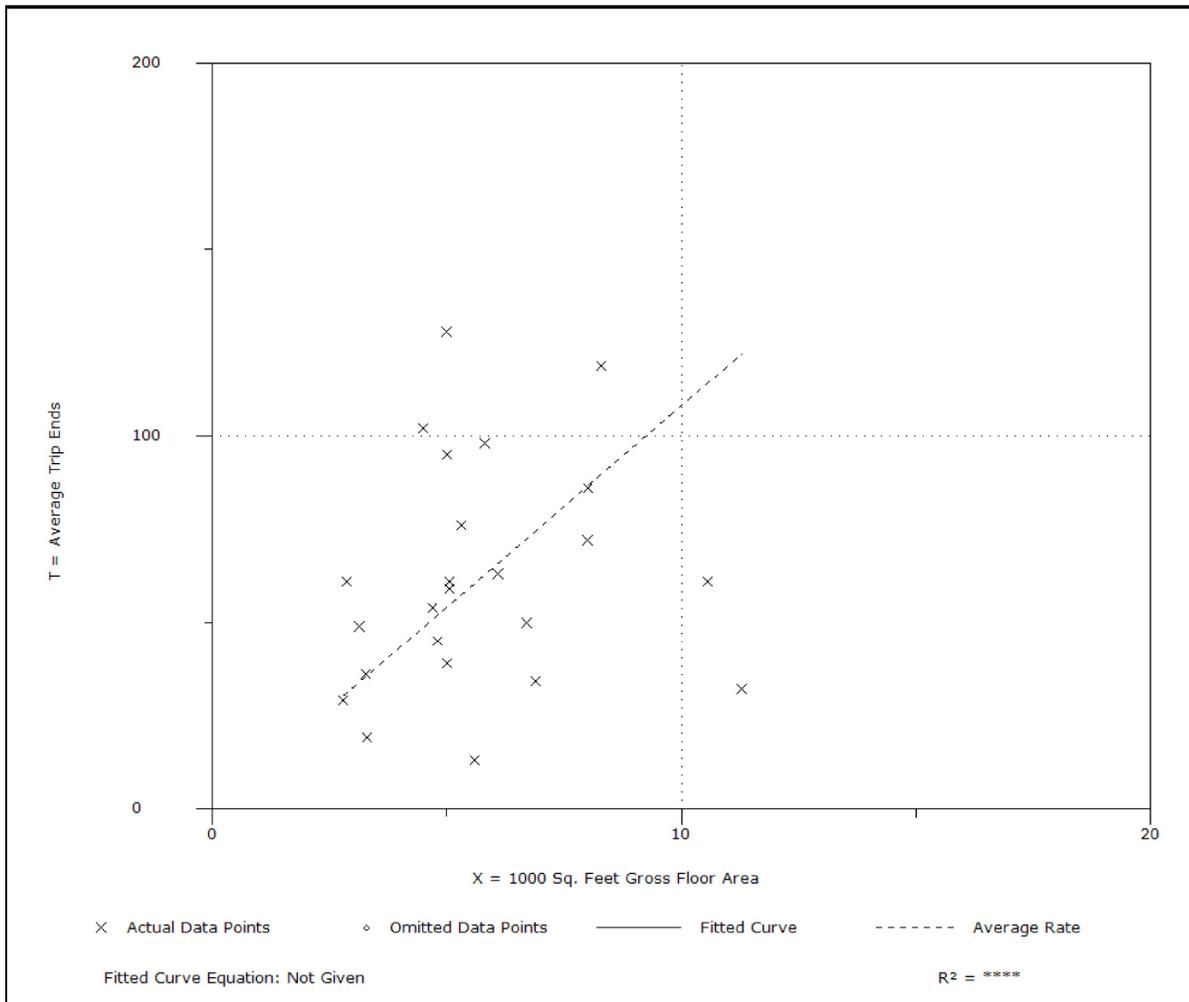
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Number of Studies: 24
 Average 1000 Sq. Feet GFA: 6
 Directional Distribution: 55% entering, 45% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
10.81	2.32 - 25.60	5.99

Data Plot and Equation



Trip Generation, ITE-TGM 9th Edition

High-Turnover (Sit-Down) Restaurant (932)

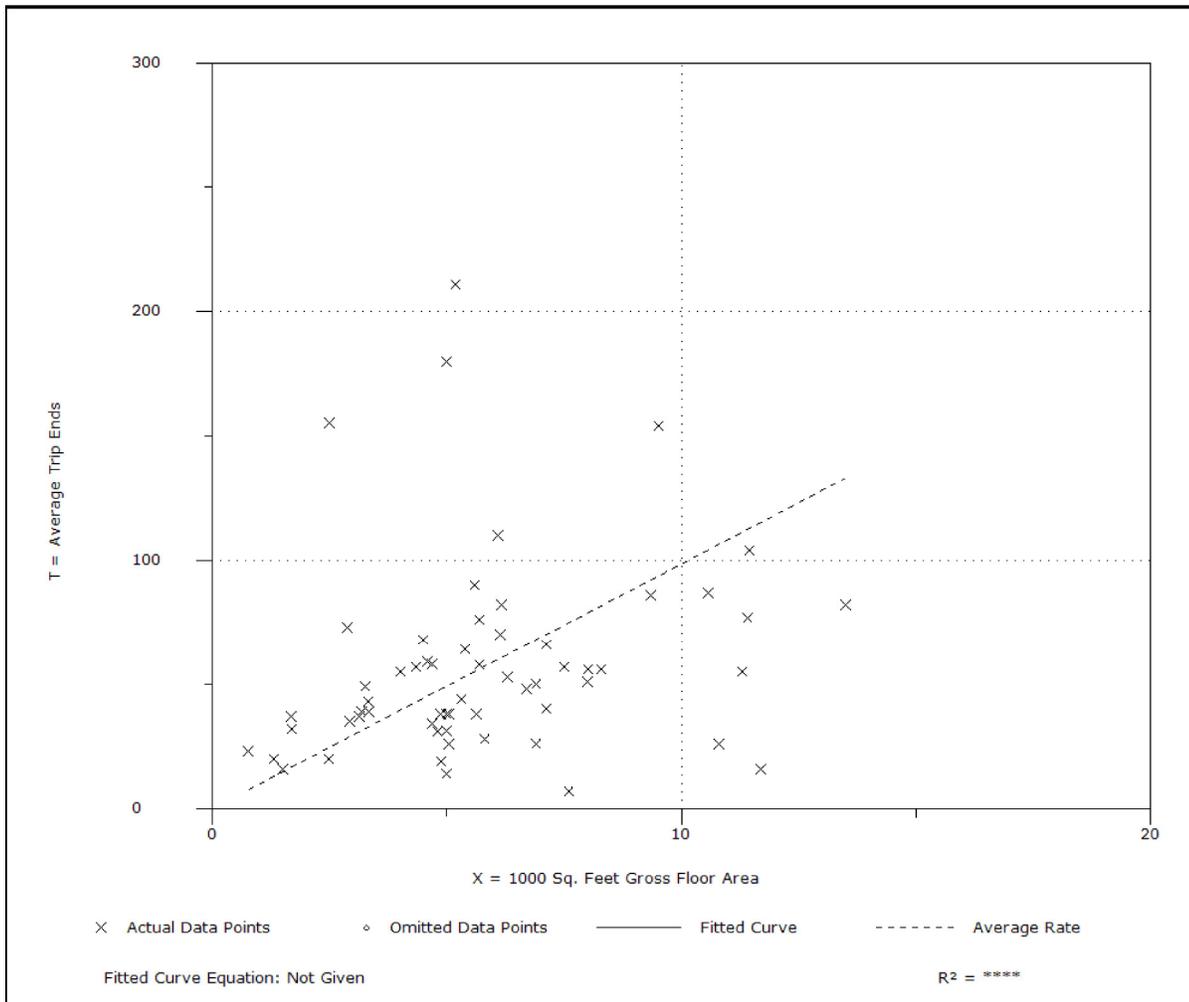
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Number of Studies: 60
 Average 1000 Sq. Feet GFA: 6
 Directional Distribution: 60% entering, 40% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
9.85	0.92 - 62.00	8.13

Data Plot and Equation



Trip Generation, ITE-TGM9th Edition

High-Turnover (Sit-Down) Restaurant (932)

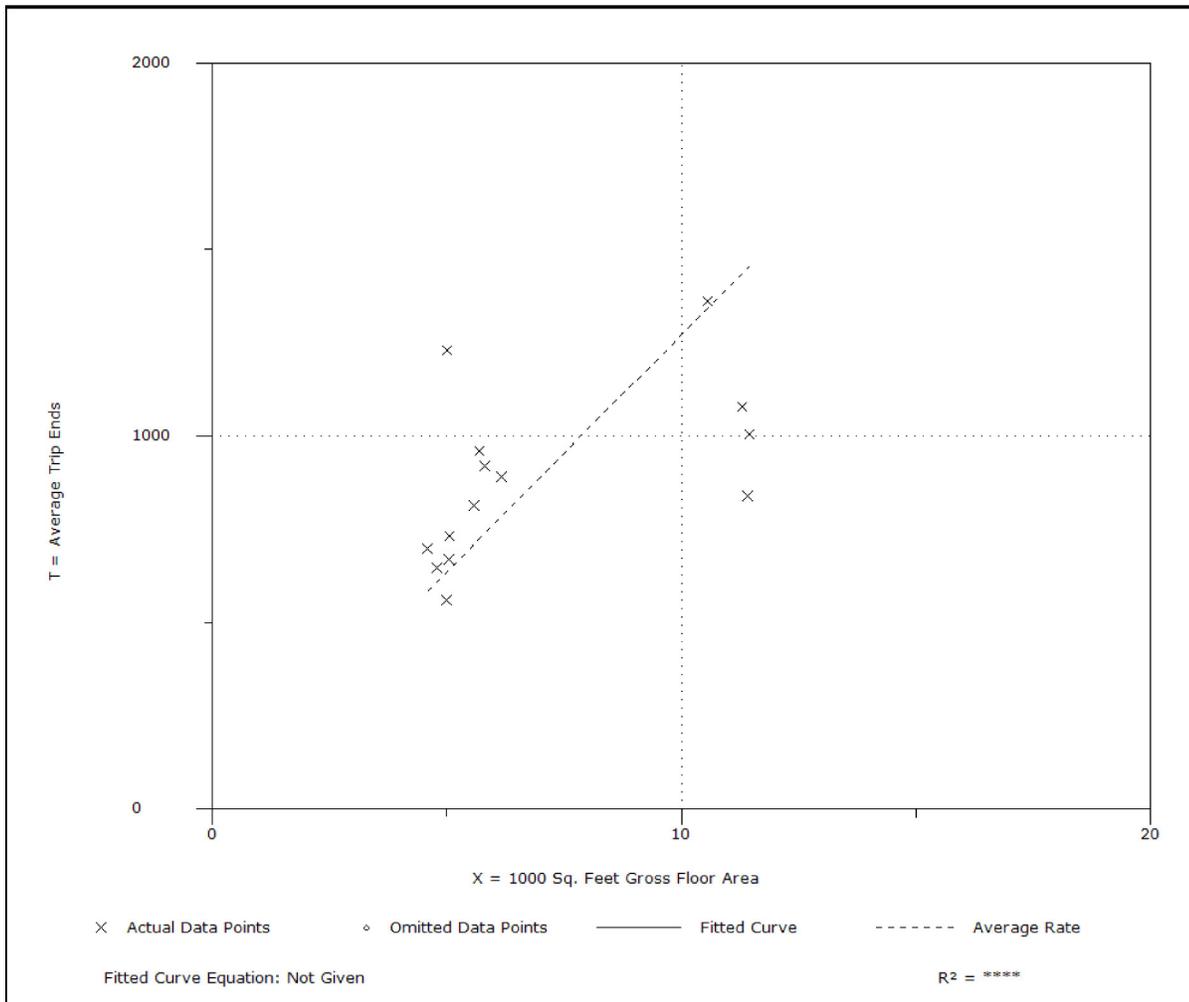
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday

Number of Studies: 14
Average 1000 Sq. Feet GFA: 7
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
127.15	73.51 - 246.00	41.76

Data Plot and Equation



Trip Generation, ITE-TGM 9th Edition

APPENDIX B

ITE TRIP GENERATION HANDBOOK
MIXED-USE DEVELOPMENT TRIP CAPTURE RATES

**Table 6.1 Unconstrained Internal Person Trip Capture Rates
for Trip Origins within a Mixed-Use Development**

		WEEKDAY	
		AM Peak Hour	PM Peak Hour
From OFFICE	To Retail	28%	20%
	To Restaurant	63%	4%
	To Cinema/Entertainment	0%	0%
	To Residential	1%	2%
	To Hotel	0%	0%
From RETAIL	To Office	29%	2%
	To Restaurant	13%	29%
	To Cinema/Entertainment	0%	4%
	To Residential	14%	26%
	To Hotel	0%	5%
From RESTAURANT	To Office	31%	3%
	To Retail	14%	41%
	To Cinema/Entertainment	0%	8%
	To Residential	4%	18%
	To Hotel	3%	7%
From CINEMA/ENTERTAINMENT	To Office	0%	2%
	To Retail	0%	21%
	To Restaurant	0%	31%
	To Residential	0%	8%
	To Hotel	0%	2%
From RESIDENTIAL	To Office	2%	4%
	To Retail	1%	42%
	To Restaurant	20%	21%
	To Cinema/Entertainment	0%	0%
	To Hotel	0%	3%
From HOTEL	To Office	75%	0%
	To Retail	14%	16%
	To Restaurant	9%	68%
	To Cinema/Entertainment	0%	0%
	To Residential	0%	2%

Source: Bochner, B., K. Hooper, B. Sperry, and R. Dunphy. NCHRP Report 684: *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. Washington, DC: Transportation Research Board, Tables 99 and 100, 2011.

**Table 6.2 Unconstrained Internal Person Trip Capture Rates
for Trip Destinations within a Mixed-Use Development**

		Weekday	
		AM Peak Hour	PM Peak Hour
To OFFICE	From Retail	4%	31%
	From Restaurant	14%	30%
	From Cinema/Entertainment	0%	6%
	From Residential	3%	57%
	From Hotel	3%	0%
To RETAIL	From Office	32%	8%
	From Restaurant	8%	50%
	From Cinema/Entertainment	0%	4%
	From Residential	17%	10%
	From Hotel	4%	2%
To RESTAURANT	From Office	23%	2%
	From Retail	50%	29%
	From Cinema/Entertainment	0%	3%
	From Residential	20%	14%
	From Hotel	6%	5%
To CINEMA/ENTERTAINMENT	From Office	0%	1%
	From Retail	0%	26%
	From Restaurant	0%	32%
	From Residential	0%	0%
	From Hotel	0%	0%
To RESIDENTIAL	From Office	0%	4%
	From Retail	2%	46%
	From Restaurant	5%	16%
	From Cinema/Entertainment	0%	4%
	From Hotel	0%	0%
To HOTEL	From Office	0%	0%
	From Retail	0%	17%
	From Restaurant	4%	71%
	From Cinema/Entertainment	0%	1%
	From Residential	0%	12%

Source: Bochner, B., K. Hooper, B. Sperry, and R. Dunphy. NCHRP Report 684: *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. Washington, DC: Transportation Research Board, Tables 101 and 102, 2011.

APPENDIX C

TRAFFICWARE TRIP GENERATION

Trip Generation Summary - Existing (Occupied)

Project: FMB Times Square Resort
 Alternative: Alternative 1

Open Date: 10/5/2016
 Analysis Date: 10/5/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
826	Bayside Specialty Retail 5.84 Gross Leasable Area 1000 SF	144	143	287	2	2	4	15	20	35
826	Beachside Specialty Retail 3.8 Gross Leasable Area 1000 SF	100	100	200	1	2	3	14	17	31
310	Beachside Hotel 12 Occupied Rooms	54	53	107	5	3	8	4	4	8
925	Beachside Bar 2.9 Gross Floor Area 1000 SF	165	164	329	0	0	0	22	11	33
Unadjusted Volume		463	460	923	8	7	15	55	52	107
Internal Capture Trips		0	0	0	0	0	0	15	15	30
Pass-By Trips		0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets		463	460	923	8	7	15	40	37	77

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 28 Percent

Trip Generation Summary - Pre-Demolition Development

Project: FMB Times Square Resort
 Alternative: Alternative 1

Open Date: 10/5/2016
 Analysis Date: 10/5/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
820	Bayside Retail 24.2 Gross Leasable Area 1000 SF	1350	1350	2700	41	25	66	111	121	232
826	Bayside Specialty Retail 22.45 Gross Leasable Area 1000 SF	499	499	998	8	8	16	33	42	75
330	Beachside Resort Hotel 66 Occupied Rooms	206	206	412	22	9	31	14	18	32
826	Beachside Specialty Retail 8.3 Gross Leasable Area 1000 SF	197	196	393	3	3	6	18	23	41
Unadjusted Volume		2252	2251	4503	74	45	119	176	204	380
Internal Capture Trips		0	0	0	1	1	2	5	5	10
Pass-By Trips		0	0	0	0	0	0	37	41	78
Volume Added to Adjacent Streets		2252	2251	4503	73	44	117	134	158	292

Total AM Peak Hour Internal Capture = 2 Percent

Total PM Peak Hour Internal Capture = 3 Percent

Trip Generation Summary - Build Per Code Development

Project: FMB Times Square Resort
 Alternative: Alternative 1

Open Date: 10/5/2016
 Analysis Date: 10/5/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
820	Bayside Retail 110 Gross Leasable Area 1000 SF	3613	3612	7225	102	63	165	307	332	639
826	Beachside Specialty Retail 65.6 Gross Leasable Area 1000 SF	1422	1422	2844	22	24	46	79	100	179
Unadjusted Volume		5035	5034	10069	124	87	211	386	432	818
Internal Capture Trips		0	0	0	0	0	0	0	0	0
Pass-By Trips		0	0	0	0	0	0	104	113	217
Volume Added to Adjacent Streets		5035	5034	10069	124	87	211	282	319	601

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

Trip Generation Summary - Proposed Development

Project: FMB Times Square Resort
 Alternative: Alternative 1

Open Date: 10/5/2016
 Analysis Date: 10/5/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
330	Bayside Resort Hotel 290 Occupied Rooms	905	905	1810	78	31	109	61	81	142
932	Beachside Restaurant 19.75 Gross Floor Area 1000 SF	1256	1255	2511	117	96	213	117	78	195
925	Beachside Bar 1.96 Gross Floor Area 1000 SF	111	111	222	0	0	0	15	7	22
826	Bayside Specialty Retail 1.8 Gross Leasable Area 1000 SF	40	40	80	0	1	1	2	3	5
Unadjusted Volume		2312	2311	4623	195	128	323	195	169	364
Internal Capture Trips		0	0	0	6	6	12	15	15	30
Pass-By Trips		0	0	0	0	0	0	47	31	78
Volume Added to Adjacent Streets		2312	2311	4623	189	122	311	133	123	256

Total AM Peak Hour Internal Capture = 4 Percent

Total PM Peak Hour Internal Capture = 8 Percent

APPENDIX D

**LEE COUNTY LINK-SPECIFIC SERVICE VOLUMES &
TRAFFIC COUNT REPORT 2016 EXCERPTS**

LINK-SPECIFIC SERVICE VOLUMES ON ARTERIALS IN LEE COUNTY (2015 DATA)

ROAD SEGMENT	FROM	TO	TRAFFIC DISTRIC	LENGTH (MILE)	ROAD TYPE	SERVICE VOLUMES (PEAK HOUR PEAK DIRECTION)					SERVICE VOLUMES (PEAK HOUR--BOTH DIRECTIONS)				
						A	B	C	D	E	A	B	C	D	E
COLONIAL BLVD	SIX MILE PKWY	I-75	1	0.5	6LD	0	2,630	3,100	3,100	3,100	0	4,390	5,180	5,180	5,180
	I-75	SR 82	1	2.4	6LD	0	2,280	3,040	3,040	3,040	0	3,800	5,070	5,070	5,070
CORKSCREW RD	US 41	SANDY LN	4	0.5	4LD	0	390	1,900	1,900	1,900	0	760	3,670	3,670	3,670
	SANDY LN	THREE OAKS PKWY	4	0.7	4LD	0	390	1,900	1,900	1,900	0	760	3,670	3,670	3,670
	THREE OAKS PKWY	I-75	4	0.8	4LD	0	390	1,900	1,900	1,900	0	760	3,670	3,670	3,670
	I-75	BEN HILL GRIFFIN PKWY	3	0.5	4LD	0	390	1,900	1,900	1,900	0	760	3,670	3,670	3,670
	BEN HILL GRIFFIN PKWY	WILDCAT RUN DR	3	1.7	2LD	0	820	1,200	1,200	1,200	0	1,580	2,310	2,310	2,310
	WILDCAT RUN DR	ALICO RD	3	2.6	2LN	90	310	570	790	1,140	180	600	1,100	1,520	2,200
	ALICO RD	COUNTY LINE	3	10.4	2LN	90	310	570	790	1,140	180	600	1,100	1,520	2,200
CYPRESS LAKE DR	McGREGOR BLVD	SOUTH POINT BLVD	4	0.4	4LD	0	0	890	1,880	1,940	0	0	1,590	3,360	3,480
	SOUTH POINT BLVD	WINKLER RD	4	0.6	4LD	0	0	890	1,880	1,940	0	0	1,590	3,360	3,480
	WINKLER RD	SUMMERLIN RD	4	0.7	4LD	0	0	890	1,880	1,940	0	0	1,590	3,360	3,480
	SUMMERLIN RD	US 41	4	0.9	6LD	0	0	1,360	2,890	2,940	0	0	2,430	5,170	5,240
DANIELS PKWY	US 41	BIG PINE WAY	4	0.5	6LD	0	0	590	2,480	2,680	0	0	1,100	4,600	4,980
	BIG PINE WAY	METRO PKWY	4	0.6	6LD	0	0	590	2,480	2,680	0	0	1,100	4,600	4,980
	METRO PKWY	SIX MILE PKWY	4	0.8	6LD	0	0	590	2,480	2,680	0	0	1,100	4,600	4,980
	SIX MILE PKWY	PALOMINO DR	4	2.2	6LD	210	2,830	3,040	3,040	3,040	390	5,250	5,650	5,650	5,650
	PALOMINO DR	I-75	4	0.6	6LD	210	2,830	3,040	3,040	3,040	390	5,250	5,650	5,650	5,650
	I-75	TREELINE AVE	3	0.5	6LD	2,510	3,260	3,260	3,260	3,260	4,190	5,420	5,420	5,420	5,420
	TREELINE AVE	CHAMBERLIN PKWY	3	0.8	6LD	2,510	3,260	3,260	3,260	3,260	4,190	5,420	5,420	5,420	5,420
CHAMBERLIN PKWY	SR 82	3	3.8	4LD	1,620	2,160	2,160	2,160	2,160	2,700	3,600	3,600	3,600	3,600	
DEL PRADO BLVD	CAPE CORAL PKWY	SE 46TH ST	5	0.3	6LD	0	0	1,660	2,660	2,660	0	0	3,140	5,000	5,000
	SE 46TH ST	CORONADO PKWY	5	0.7	6LD	0	0	1,660	2,660	2,660	0	0	3,140	5,000	5,000
	CORONADO PKWY	CORNWALLIS PKWY	5	1.3	6LD	0	0	1,660	2,660	2,660	0	0	3,140	5,000	5,000
	CORNWALLIS PKWY	VETERANS PKWY	5	0.8	6LD	0	0	1,660	2,660	2,660	0	0	3,140	5,000	5,000
	VETERANS PKWY	HANCOCK B. PKWY	5	3.0	6LD	0	0	1,640	2,800	2,800	0	0	3,160	5,390	5,390
	HANCOCK B. PKWY	NE 6TH ST	5	0.7	6LD	0	0	2,770	2,800	2,800	0	0	5,330	5,370	5,370
	NE 6TH ST	SR 78	5	0.4	6LD	0	0	2,770	2,800	2,800	0	0	5,330	5,370	5,370
ESTERO BLVD	HICKORY BLVD	AVENIDA PESCADORA	4	2.9	2LN	571	616	644	685	726	1,120	1,208	1,264	1,344	1,424
	AVENIDA PESCADORA	MID ISLAND DR	4	1.2	2LN	571	616	644	685	726	1,120	1,208	1,264	1,344	1,424
	MID ISLAND DR	SAN CARLOS BLVD	4	1.8	2LD	500	568	593	632	671	980	1,113	1,162	1,239	1,316
ESTERO PKWY	US 41	BEN HILL GRIFFIN PKWY	4	2.6	4LD	0	2,000	2,000	2,000	2,000	0	3,850	3,850	3,850	3,850
FOWLER ST	US 41	N AIRPORT RD	1	1.0	6LD	0	0	0	2,040	2,300	0	0	0	3,710	4,180
	N AIRPORT RD	COLONIAL BLVD	1	0.3	6LD	0	0	0	2,040	2,300	0	0	0	3,710	4,180
GLADIOLUS DR	McGREGOR BLVD	PINE RIDGE RD	4	0.5	4LD	0	190	1,840	1,840	1,840	0	360	3,430	3,430	3,430
	PINE RIDGE RD	BASS RD	4	1.6	4LD	0	190	1,840	1,840	1,840	0	360	3,430	3,430	3,430
	BASS RD	WINKLER RD	4	0.8	6LD	0	290	2,780	2,780	2,780	0	540	5,160	5,160	5,160
	WINKLER RD	SUMMERLIN RD	4	0.5	6LD	0	2,060	2,780	2,780	2,780	0	3,890	5,240	5,240	5,240
	SUMMERLIN RD	US 41	4	1.5	6LD	0	2,060	2,780	2,780	2,780	0	3,890	5,240	5,240	5,240

PCS 44 - Estero Blvd north of Donora Blvd

2016 AADT = 12,400 VPD

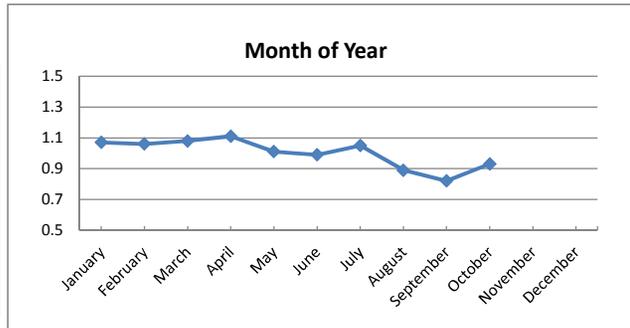
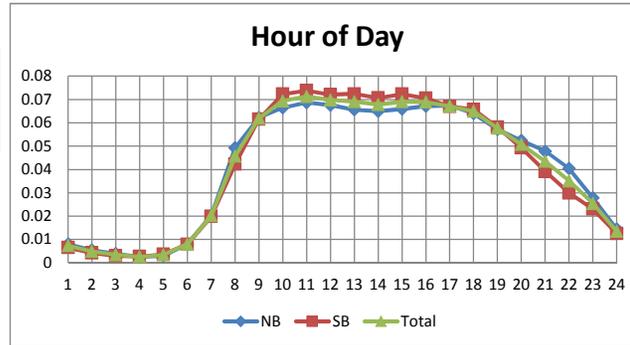
Hour	NB	SB	Total
0	0.80%	0.65%	0.73%
1	0.54%	0.41%	0.48%
2	0.39%	0.29%	0.34%
3	0.24%	0.26%	0.25%
4	0.29%	0.36%	0.33%
5	0.79%	0.79%	0.79%
6	2.03%	1.99%	2.01%
7	4.92%	4.23%	4.57%
8	6.22%	6.15%	6.19%
9	6.65%	7.23%	6.94%
10	6.87%	7.38%	7.13%
11	6.76%	7.21%	6.98%
12	6.56%	7.24%	6.90%
13	6.49%	7.07%	6.78%
14	6.59%	7.23%	6.91%
15	6.72%	7.05%	6.89%
16	6.74%	6.70%	6.72%
17	6.40%	6.57%	6.49%
18	5.72%	5.81%	5.77%
19	5.24%	4.92%	5.08%
20	4.78%	3.92%	4.35%
21	4.03%	2.99%	3.51%
22	2.78%	2.30%	2.54%
23	1.44%	1.25%	1.34%

Month of Year	Fraction
January	1.07
February	1.06
March	1.08
April	1.11
May	1.01
June	0.99
July	1.05
August	0.89
September	0.82
October	0.93
November	
December	

Day of Week	Fraction
Sunday	0.95
Monday	0.97
Tuesday	0.99
Wednesday	0.98
Thursday	1
Friday	1.06
Saturday	1.05

Directional Factor		
AM	0.54	NB
PM	0.51	SB

Design Hour Volume		
#	Volume	Factor
5		9.20
10		9.10
20		9.00
30		8.90
50		8.80
100		8.50
150		8.40
200		8.20



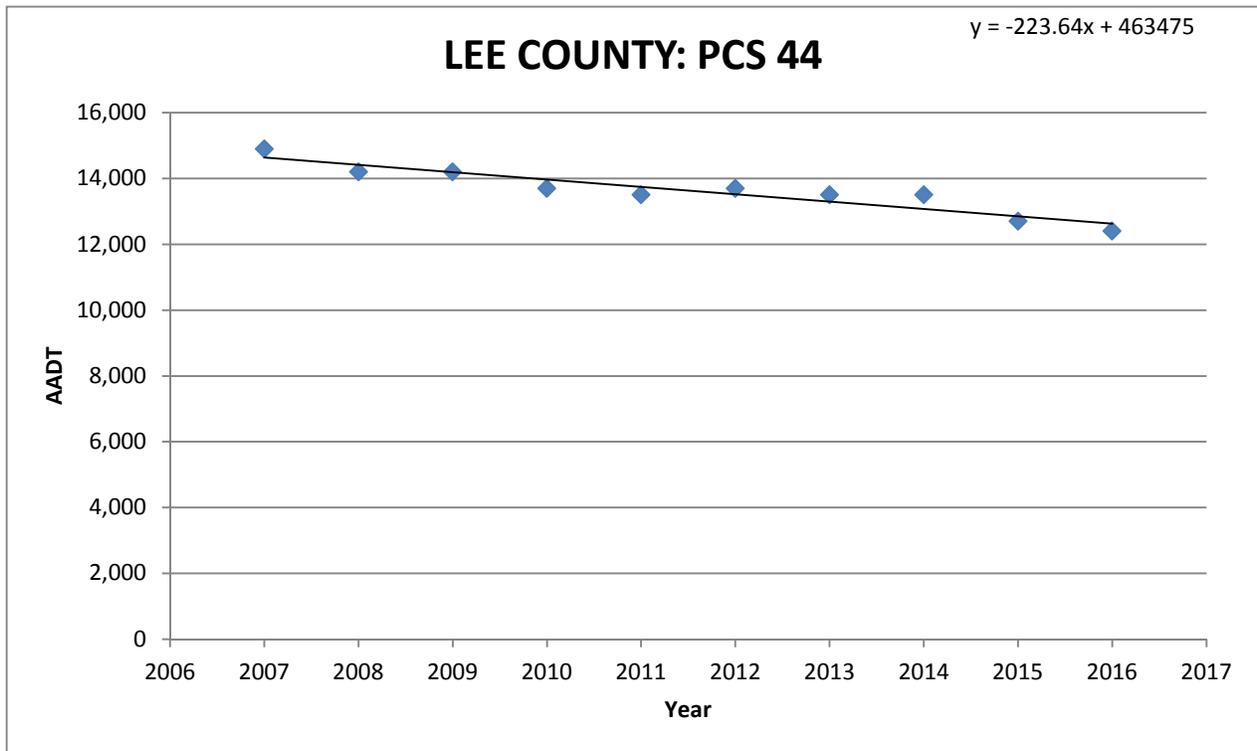
Design Hour Volume		
#	Volume	K Factor
1	1554	12.5
2	1234	10
3	1184	9.5
4	1162	9.4
5	1145	9.2
6	1144	9.2
7	1141	9.2
8	1136	9.2
9	1136	9.2
10	1134	9.1
20	1115	9
25	1108	8.9
30	1106	8.9
35	1103	8.9
40	1100	8.9
45	1094	8.8
50	1089	8.8
75	1075	8.7
100	1059	8.5
125	1047	8.4
150	1036	8.4
175	1025	8.3
200	1013	8.2

APPENDIX E

HISTORICAL AADT GROWTH TREND ANALYSIS

LEE COUNTY: PCS 44
ESTERO BLVD NORTH OF DONORA BLVD

Year	AADT ⁽¹⁾	Equation	Growth
2007	14,900	y_1	-1.50% per year
2008	14,200	x_1	
2009	14,200	14,860	2006
2010	13,700	y_2	-1.50% per year
2011	13,500	x_2	
2012	13,700	12,847	2015
2013	13,500		
2014	13,500		
2015	12,700		
2016	12,400		



Footnotes:

(1) Lee County Traffic Count Report 2016

APPENDIX F

INTERSECTION TURNING MOVEMENT COUNTS

TURNING MOVEMENT COUNTS – RAW

**DAVID PLUMMER & ASSOCIATES
SUMMARY OF VEHICLE MOVEMENTS**

TRAFFIC COUNT ADJUSTMENT FACTORS

File# _____
Job # 16537

Project name: Times Square Resort
Job number: 16537

Count location: San Carlos Blvd @ Fifth Street @ Estero Blvd
County: Lee
City: Fort Myers Beach
Date: 09/08/2016
Day of Week: Thursday
Weather: Good
Road Condition: Good

Observer: TH/LH
Remark: Illegal EB Fifth Street Lefts / WB Fifth Street Thrus

Intersection Description:
From North (SB): San Carlos Blvd
From South (NB): San Carlos Blvd
From East (WB) Fifth Street
From West (EB) Fifth Street

AM Peak Hour: 9:15 AM to 10:15 AM
PM Peak Hour: 3:30 PM to 4:30 PM

LEE COUNTY ADJUSTMENT FACTOR

Traffic count report: 2015
Permanent count station: 44
Month of count AADT: 0.77
AADT to peak season 1.10

$$\text{Factor} = 1.00 \div 0.77 \times 1.10 = 1.43$$

David Plummer & Associates
Based On
MSHA Highway Information Services Division
Turning Counts Study - Field Sheet

Request No.: Times Square Resort
 Job No.: 16537

Location: San Carlos Blvd @ Fifth Street @ Estero
 Date: 09/08/2014 Thursday
 Recorder: TH/LH
 Interval (dd) : 15
 (In Minutes)

County: Lee
 Town: Fort Myers Beach
 Weather: Good

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start	End	Volume	PM PERIOD 12:00PM-7:00PM	Start	End	Volume
		9:15 AM	10:15 AM	1166		3:30 PM	4:30 PM	1308

Street Name-->	San Carlos Blvd				San Carlos Blvd				Fifth Street				Fifth Street				GRAND TOTAL
	Southbound				Northbound				Westbound				Eastbound				
HOUR	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	
7:15 AM				0				0				0				0	0
7:30 AM				0				0				0				0	0
7:45 AM	0	122	34	156	5	66	0	71	0	0	17	17	0	0	9	9	253
8:00 AM	0	114	33	147	13	76	0	89	0	0	11	11	0	0	7	7	254
8:15 AM	0	103	32	135	7	64	1	72	0	0	20	20	0	0	7	7	234
8:30 AM	0	118	26	144	8	63	1	72	0	0	13	13	0	0	7	7	236
8:45 AM	0	115	51	166	14	64	0	78	0	0	22	22	0	0	16	16	282
9:00 AM	0	104	39	143	6	82	0	88	0	0	21	21	0	0	15	15	267
9:15 AM	0	105	52	157	6	86	0	92	0	0	27	27	0	0	11	11	287
9:30 AM	0	93	33	126	5	98	3	106	0	0	22	22	1	0	22	23	277
9:45 AM	0	104	34	138	13	102	0	115	0	2	23	25	1	0	16	17	295
10:00 AM	0	99	42	141	11	85	0	96	0	0	24	24	0	0	13	13	274
10:15 AM	0	128	33	161	20	92	2	114	0	1	33	34	1	0	10	11	320
10:30 AM	0	99	29	128	13	91	0	104	0	0	25	25	0	0	16	16	273
10:45 AM				0		0		0				0				0	0
11:00 AM				0		0		0				0				0	0
11:15 AM				0				0				0				0	0
11:30 AM				0				0				0				0	0
11:45 AM				0				0				0				0	0
12:00 PM				0				0				0				0	0
12:15 PM				0				0				0				0	0
12:30 PM				0				0				0				0	0
12:45 PM				0				0				0				0	0
1:00 PM				0				0				0				0	0
1:15 PM				0				0				0				0	0
1:30 PM				0				0				0				0	0
1:45 PM				0				0				0				0	0
2:00 PM				0				0				0				0	0
2:15 PM				0				0				0				0	0
2:30 PM				0				0				0				0	0
2:45 PM				0				0				0				0	0
3:00 PM				0				0				0				0	0
3:15 PM				0				0				0				0	0
3:30 PM				0				0				0				0	0
3:45 PM	1	89	36	126	16	120	1	137	0	0	54	54	0	0	24	24	341
4:00 PM	0	83	31	114	15	119	0	134	0	0	42	42	0	0	13	13	303
4:15 PM	0	82	28	110	16	134	0	150	0	0	45	45	1	0	26	27	332
4:30 PM	0	92	32	124	13	130	0	143	0	0	46	46	0	0	19	19	332
4:45 PM	0	79	24	103	14	112	1	127	1	0	48	49	0	0	17	17	296
5:00 PM	0	99	33	132	14	113	1	128	0	0	35	35	0	1	13	14	309
5:15 PM	0	81	29	110	19	102	0	121	0	0	58	58	0	0	20	20	309
5:30 PM	0	100	34	134	20	125	0	145	0	0	40	40	1	0	22	23	342
5:45 PM	0	112	25	137	25	103	0	128	0	1	22	23	1	0	21	22	310
6:00 PM	0	95	41	136	18	112	0	130	0	0	25	25	1	0	14	15	306
6:15 PM	0	96	39	135	19	99	2	120	0	0	29	29	0	0	25	25	309
6:30 PM	0	91	28	119	13	81	2	96	0	0	33	33	1	0	20	21	269

TOTAL	1	2403	818	3222	323	2319	14	2656	1	4	735	740	8	1	383	392	7010
AM Peak Vol	0	424	142	566	49	377	5	431	0	3	102	105	3	0	61	64	1166
PM Peak Vol	1	346	127	474	60	503	1	564	0	0	187	187	1	0	82	83	1308

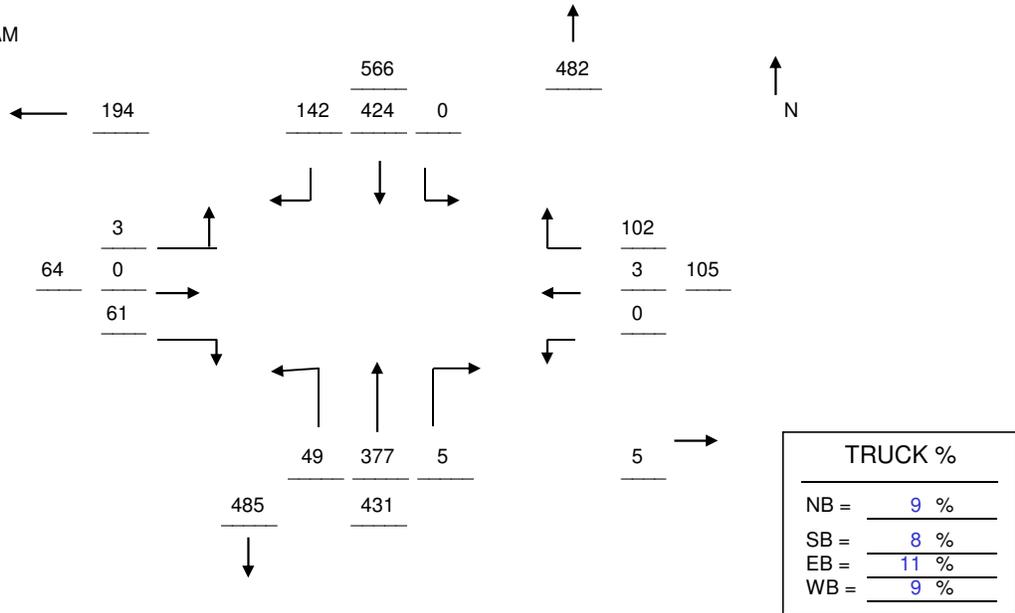
Peak Hour Factor (PHF)																	
AM Peak Hour		0.88				0.94				0.77				0.70			0.91
PM Peak Hour		0.94				0.94				0.87				0.77			0.96

DPA RAW TURNING MOVEMENT DIAGRAM

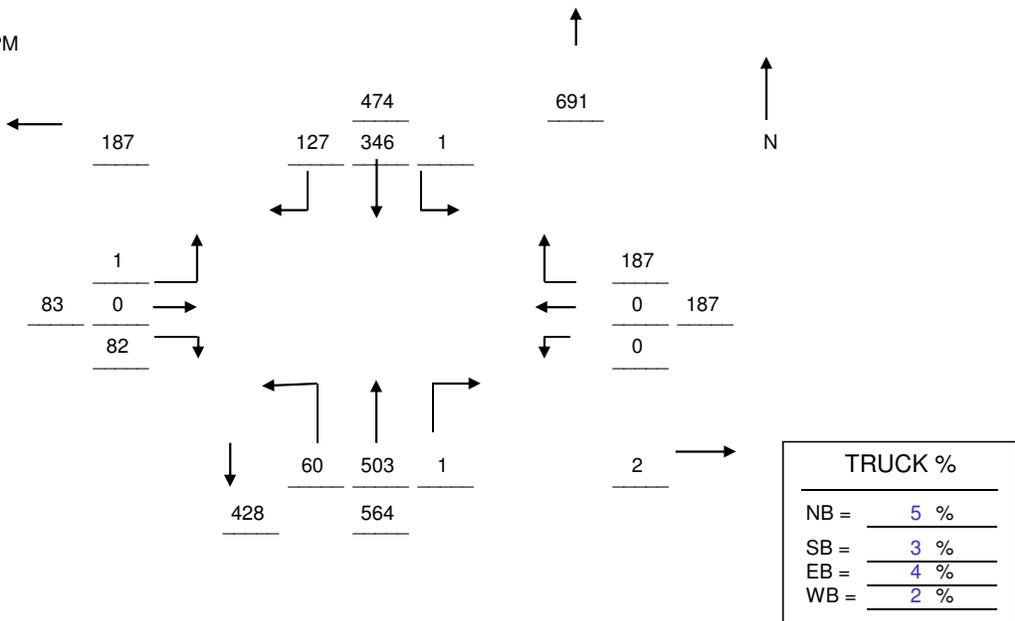
LOCATION: San Carlos Blvd @ Fifth Street @ Estero Blvd
 COUNTY : Lee
 OBSERVER: TH/LH

CITY: Fort Myers Beach
 DATE: 09/08/2016 Thursday

AM Peak Hour
 9:15 AM 10:15 AM



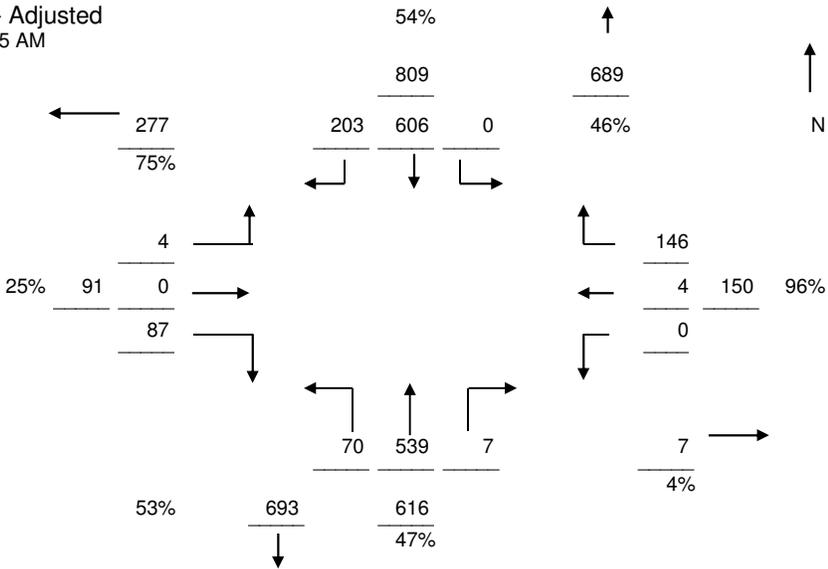
PM Peak Hour
 3:30 PM 4:30 PM



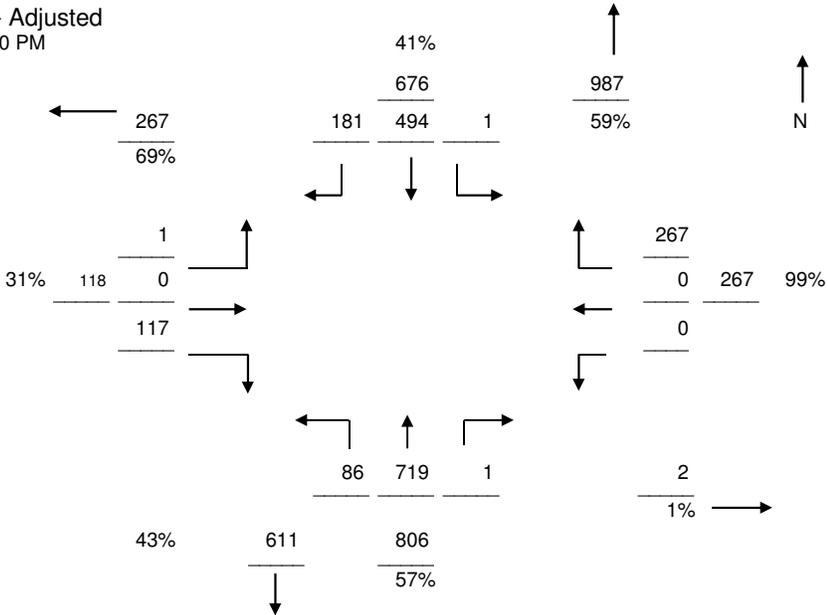
DPA ADJUSTED TURNING MOVEMENT DIAGRAM

LOCATION:	San Carlos Blvd @ Fifth Street @ Estero Blvd	REPORT:	2015
COUNTY :	Lee	STATION:	44
OBSERVER:	TH/LH	MONTHLY:	0.77
		ANNUAL:	1.10
		ADJUSTMENT FACTOR:	1.43

AM Peak Hour - Adjusted
9:15 AM 10:15 AM



PM Peak Hour - Adjusted
3:30 PM 4:30 PM



**DAVID PLUMMER & ASSOCIATES
SUMMARY OF VEHICLE MOVEMENTS**

TRAFFIC COUNT ADJUSTMENT FACTORS

File# _____
Job # 16537

Project name: Times Square Resort
Job number: 16537

Count location: Estero Blvd @ Crescent Street
County: Lee
City: Fort Myers Beach
Date: 09/08/2016
Day of Week: Thursday
Weather: Good
Road Condition: Good

Observer: DC/RC
Remark: None

Intersection Description:
From North (SB): Crescent Street
From South (NB): Motel Parking Lot
From East (WB): Estero Blvd
From West (EB): Estero Blvd

AM Peak Hour: 9:30 AM to 10:30 AM
PM Peak Hour: 5:15 PM to 6:15 PM

LEE COUNTY ADJUSTMENT FACTOR

Traffic count report: 2015
Permanent count station: 44
Month of count AADT: 0.77
AADT to peak season 1.10

$$\text{Factor} = 1.00 \div 0.77 \times 1.10 = 1.43$$

David Plummer & Associates
Based On
MSHA Highway Information Services Division
Turning Counts Study - Field Sheet

Request No.: Times Square Resort
 Job No.: 16537

Location: Estero Blvd @ Crescent Street
 Date: 09/08/2016 Thursday
 Recorder: DC/RC
 Interval (dd): 15
 (In Minutes)

County: Lee
 Town: Fort Myers Beach
 Weather: Good

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start	End	Volume	PM PERIOD 12:00PM-7:00PM	Start	End	Volume
		9:30 AM	10:30 AM	968		5:15 PM	6:15 PM	1056

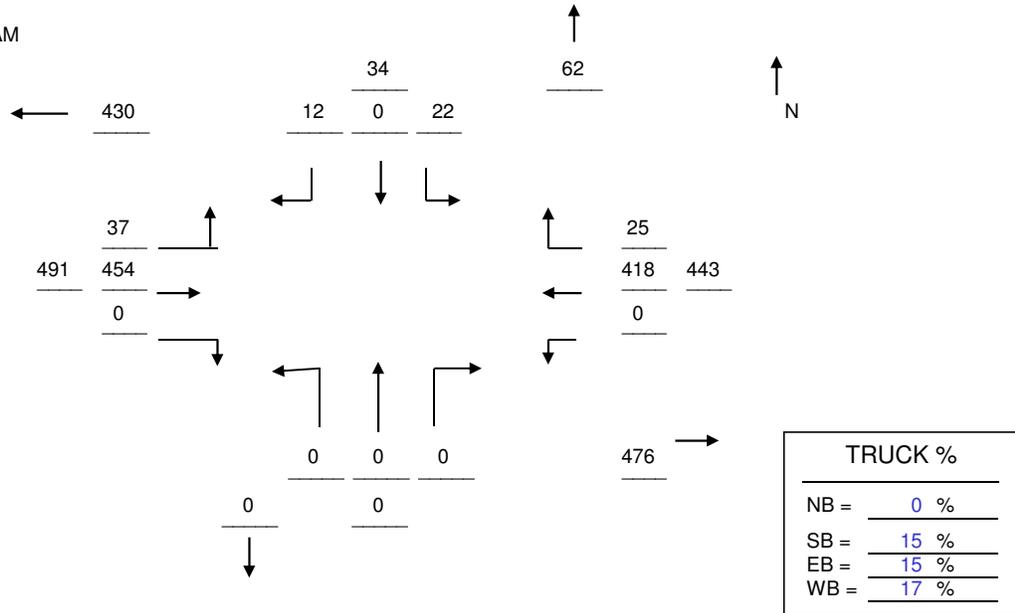
Street Name-->	Crescent Street				Motel Parking Lot				Estero Blvd				Estero Blvd				GRAND TOTAL
	Southbound				Northbound				Westbound		Eastbound						
HOUR	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	
7:15 AM				0				0				0				0	0
7:30 AM				0				0				0				0	0
7:45 AM	1	0	1	2	0	0	0	0	0	68	2	70	3	133	0	136	208
8:00 AM	1	0	2	3	0	0	0	0	0	106	4	110	2	135	0	137	250
8:15 AM	0	0	0	0	0	0	0	0	0	55	2	57	5	101	0	106	163
8:30 AM	5	0	2	7	0	0	1	1	0	75	1	76	3	135	1	139	223
8:45 AM	6	0	2	8	0	0	0	0	1	91	6	98	8	132	0	140	246
9:00 AM	2	0	2	4	0	0	0	0	0	72	3	75	7	116	0	123	202
9:15 AM	12	0	4	16	0	0	0	0	0	96	9	105	7	144	0	151	272
9:30 AM	4	0	2	6	0	0	0	0	0	102	2	104	6	118	1	125	235
9:45 AM	2	0	2	4	0	0	0	0	0	119	11	130	8	98	0	106	240
10:00 AM	5	0	2	7	0	0	0	0	0	87	2	89	5	113	0	118	214
10:15 AM	5	0	3	8	0	0	0	0	0	110	9	119	17	127	0	144	271
10:30 AM	10	0	5	15	0	0	0	0	0	102	3	105	7	116	0	123	243
10:45 AM				0				0				0				0	0
11:00 AM				0				0				0				0	0
11:15 AM				0				0				0				0	0
11:30 AM				0				0				0				0	0
11:45 AM				0				0				0				0	0
12:00 PM				0				0				0				0	0
12:15 PM				0				0				0				0	0
12:30 PM				0				0				0				0	0
12:45 PM				0				0				0				0	0
1:00 PM				0				0				0				0	0
1:15 PM				0				0				0				0	0
1:30 PM				0				0				0				0	0
1:45 PM				0				0				0				0	0
2:00 PM				0				0				0				0	0
2:15 PM				0				0				0				0	0
2:30 PM				0				0				0				0	0
2:45 PM				0				0				0				0	0
3:00 PM				0				0				0				0	0
3:15 PM				0				0				0				0	0
3:30 PM				0				0				0				0	0
3:45 PM	9	0	5	14	2	0	0	2	0	144	9	153	11	93	1	105	274
4:00 PM	5	0	3	8	0	0	0	0	0	112	5	117	8	94	0	102	227
4:15 PM	12	0	4	16	0	0	0	0	0	151	8	159	15	95	0	110	285
4:30 PM	6	0	3	9	0	0	0	0	0	143	9	152	20	79	0	99	260
4:45 PM	12	0	4	16	1	0	0	1	0	129	12	141	6	78	2	86	244
5:00 PM	9	0	4	13	0	0	0	0	0	112	7	119	12	94	0	106	238
5:15 PM	10	0	3	13	1	0	0	1	0	126	4	130	12	90	0	102	246
5:30 PM	9	0	3	12	0	0	0	0	0	137	3	140	17	89	0	106	258
5:45 PM	9	0	3	12	0	0	0	0	0	123	5	128	7	115	0	122	262
6:00 PM	11	0	5	16	0	0	0	0	0	142	6	148	12	104	0	116	280
6:15 PM	8	0	8	16	2	0	0	2	0	112	7	119	19	100	0	119	256
6:30 PM	6	0	3	9	0	0	0	0	1	82	6	89	14	120	0	134	232
TOTAL	159	0	75	234	6	0	1	7	2	2596	135	2733	231	2619	5	2855	5829
AM Peak Vol	22	0	12	34	0	0	0	0	0	418	25	443	37	454	0	491	968
PM Peak Vol	37	0	19	56	2	0	0	2	0	514	21	535	55	408	0	463	1056
Peak Hour Factor (PHF)																	
AM Peak Hour	0.57				0.00				0.85				0.85				0.89
PM Peak Hour	0.88				0.25				0.90				0.95				0.94

DPA RAW TURNING MOVEMENT DIAGRAM

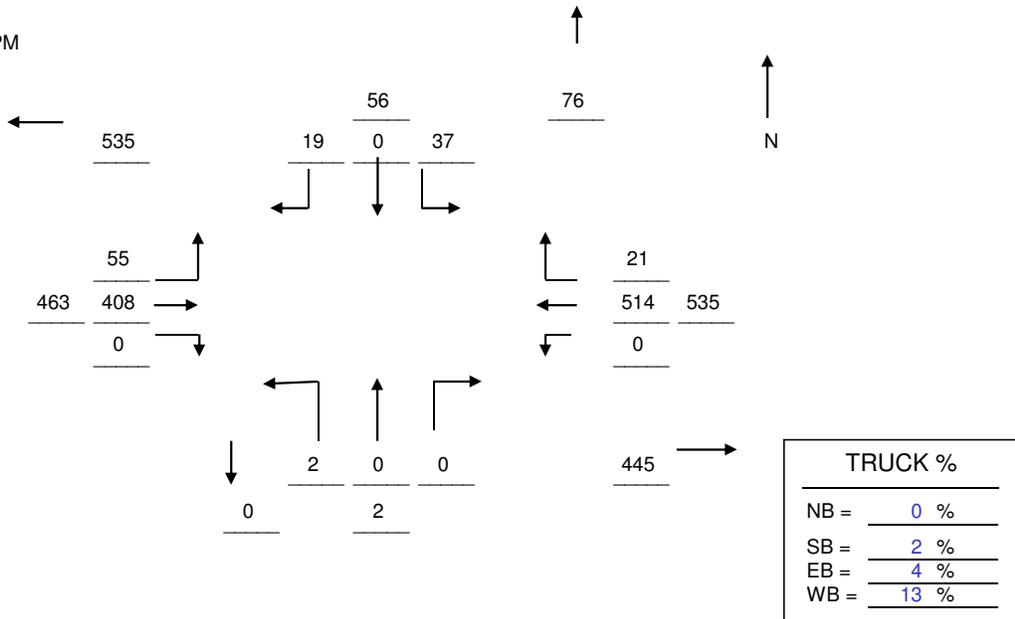
LOCATION: Estero Blvd @ Crescent Street
 COUNTY : Lee
 OBSERVER: DC/RC

CITY: Fort Myers Beach
 DATE: 09/08/2016 Thursday

AM Peak Hour
 9:30 AM 10:30 AM



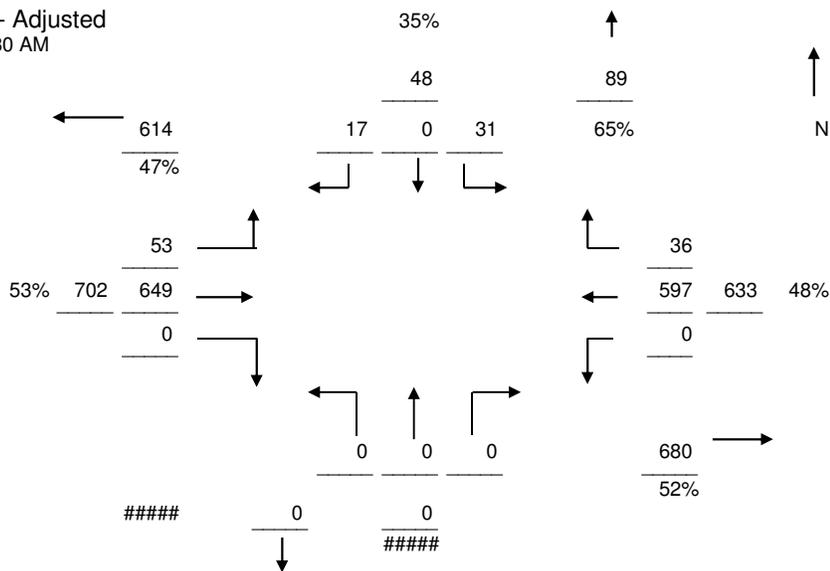
PM Peak Hour
 5:15 PM 6:15 PM



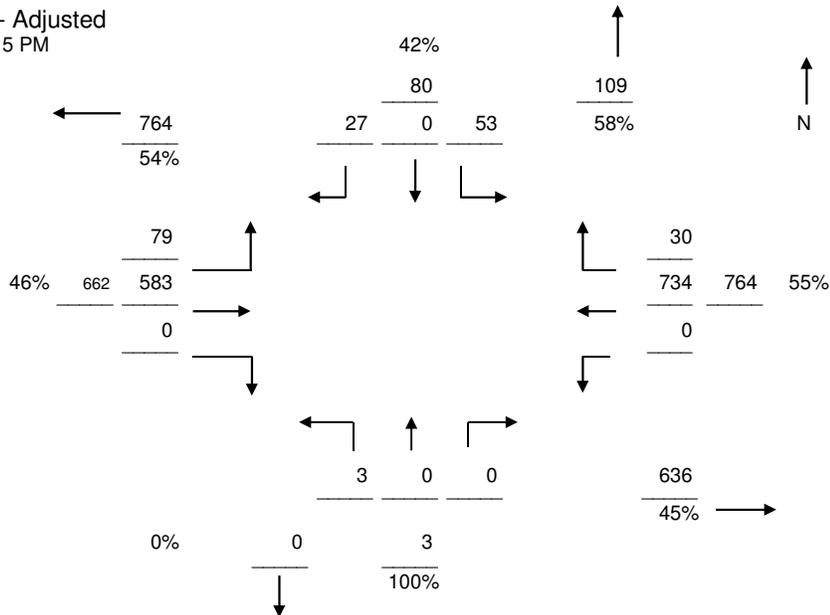
DPA ADJUSTED TURNING MOVEMENT DIAGRAM

LOCATION:	Estero Blvd @ Crescent Street	REPORT:	2015
COUNTY :	Lee	STATION:	44
OBSERVER:	DC/RC	MONTHLY:	0.77
		ANNUAL:	1.10
		ADJUSTMENT FACTOR:	1.43

AM Peak Hour - Adjusted
9:30 AM 10:30 AM



PM Peak Hour - Adjusted
5:15 PM 6:15 PM



**DAVID PLUMMER & ASSOCIATES
SUMMARY OF VEHICLE MOVEMENTS**

TRAFFIC COUNT ADJUSTMENT FACTORS

File# _____
Job # 16537

Project name: Times Square Resort
Job number: 16537

Count location: Fifth Street @ Crescent Street
County: Lee
City: Fort Myers Beach
Date: 09/08/2016
Day of Week: Thursday
Weather: Good
Road Condition: Good

Observer: PW
Remark: None

Intersection Description:
From North (SB): Crescent Street
From South (NB): Crescent Street
From East (WB): None
From West (EB): Fifth Street

AM Peak Hour: 9:30 AM to 10:30 AM
PM Peak Hour: 4:30 PM to 5:30 PM

LEE COUNTY ADJUSTMENT FACTOR

Traffic count report: 2015
Permanent count station: 44
Month of count AADT: 0.77
AADT to peak season 1.10

$$\text{Factor} = 1.00 \div 0.77 \times 1.10 = 1.43$$

David Plummer & Associates
Based On
MSHA Highway Information Services Division
Turning Counts Study - Field Sheet

Request No.: Times Square Resort
 Job No.: 16537

Location: Fifth Street @ Crescent Street
 Date: 09/08/2014 Thursday
 Recorder: PW
 Interval (dd) : 15
 (In Minutes)

County: Lee
 Town: Fort Myers Beach
 Weather: Good

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start	End	Volume	PM PERIOD 12:00PM-7:00PM	Start	End	Volume
		9:30 AM	10:30 AM	163		4:30 PM	5:30 PM	263

Street Name-->	Crescent Street				Crescent Street				None				Fifth Street				GRAND TOTAL
	Southbound				Northbound				Westbound				Eastbound				
	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	
7:15 AM				0				0				0				0	0
7:30 AM				0				0				0				0	0
7:45 AM	0	0	10	10	3	2	0	5	0	0	0	0	0	0	0	0	15
8:00 AM	0	2	11	13	3	2	0	5	0	0	0	0	0	0	0	0	18
8:15 AM	0	0	17	17	0	6	0	6	0	0	0	0	1	0	0	1	24
8:30 AM	0	3	11	14	3	1	0	4	0	0	0	0	0	0	4	4	22
8:45 AM	1	1	14	16	6	3	0	9	0	0	0	0	0	0	3	3	28
9:00 AM	0	5	14	19	10	6	0	16	0	0	0	0	0	0	1	1	36
9:15 AM	0	8	19	27	8	6	0	14	0	0	0	0	0	0	4	4	45
9:30 AM	0	5	18	23	5	5	0	10	0	0	0	0	1	0	3	4	37
9:45 AM	0	2	19	21	6	10	0	16	0	0	0	0	0	0	0	0	37
10:00 AM	0	7	18	25	2	3	0	5	0	0	0	0	0	0	0	0	30
10:15 AM	0	7	25	32	7	12	0	19	0	0	0	0	2	0	4	6	57
10:30 AM	0	9	21	30	5	2	0	7	0	0	0	0	0	0	2	2	39
10:45 AM				0				0				0					0
11:00 AM				0				0				0					0
11:15 AM				0				0				0					0
11:30 AM				0				0				0					0
11:45 AM				0				0				0					0
12:00 PM				0				0				0					0
12:15 PM				0				0				0					0
12:30 PM				0				0				0					0
12:45 PM				0				0				0					0
1:00 PM				0				0				0					0
1:15 PM				0				0				0					0
1:30 PM				0				0				0					0
1:45 PM				0				0				0					0
2:00 PM				0				0				0					0
2:15 PM				0				0				0					0
2:30 PM				0				0				0					0
2:45 PM				0				0				0					0
3:00 PM				0				0				0					0
3:15 PM				0				0				0					0
3:30 PM				0				0				0					0
3:45 PM	0	6	38	44	12	9	0	21	0	0	0	0	1	0	1	2	67
4:00 PM	0	10	33	43	8	9	0	17	0	0	0	0	0	0	0	0	60
4:15 PM	0	8	33	41	12	10	0	22	0	0	0	0	0	0	2	2	65
4:30 PM	0	4	32	36	9	10	0	19	0	0	0	0	0	0	2	2	57
4:45 PM	0	11	37	48	14	10	0	24	0	0	0	0	1	0	3	4	76
5:00 PM	0	6	24	30	13	6	0	19	0	0	0	0	0	0	2	2	51
5:15 PM	0	7	50	57	7	7	0	14	0	0	0	0	2	0	2	4	75
5:30 PM	0	11	29	40	12	7	0	19	0	0	0	0	1	0	1	2	61
5:45 PM	0	9	14	23	5	7	0	12	0	0	0	0	0	0	2	2	37
6:00 PM	0	9	20	29	15	13	0	28	0	0	0	0	1	0	1	2	59
6:15 PM	0	12	16	28	18	5	0	23	0	0	0	0	3	0	2	5	56
6:30 PM	0	6	25	31	9	10	0	19	0	0	0	0	1	0	1	2	52

TOTAL	1	148	548	697	192	161	0	353	0	0	0	0	14	0	40	54	1104
AM Peak Vol	0	25	83	108	20	27	0	47	0	0	0	0	2	0	6	8	163
PM Peak Vol	0	35	140	175	46	30	0	76	0	0	0	0	4	0	8	12	263

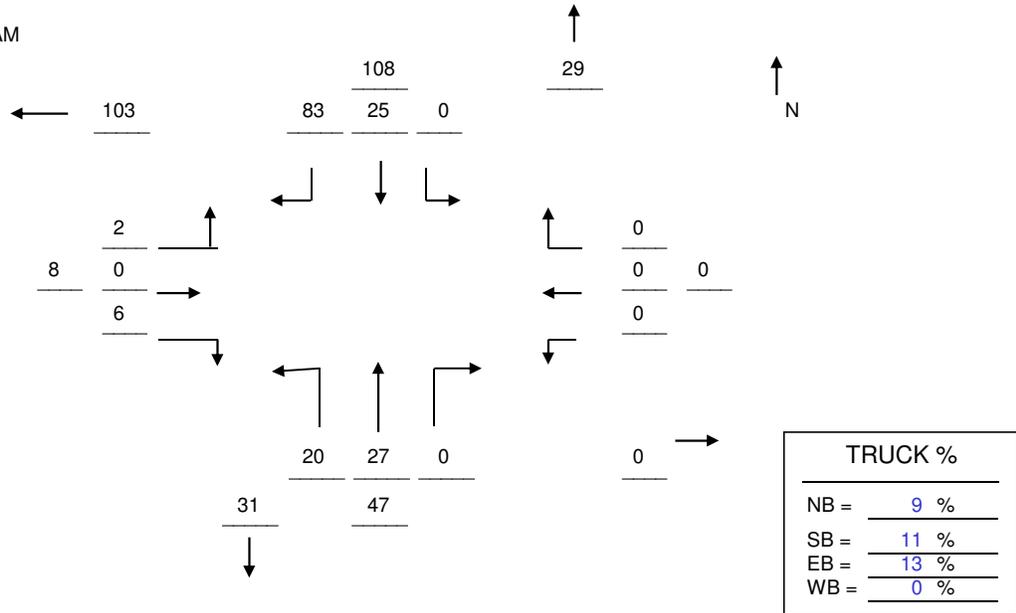
Peak Hour Factor (PHF)																	
AM Peak Hour		0.84				0.62				0.00					0.33		0.71
PM Peak Hour		0.77				0.79				0.00					0.75		0.87

DPA RAW TURNING MOVEMENT DIAGRAM

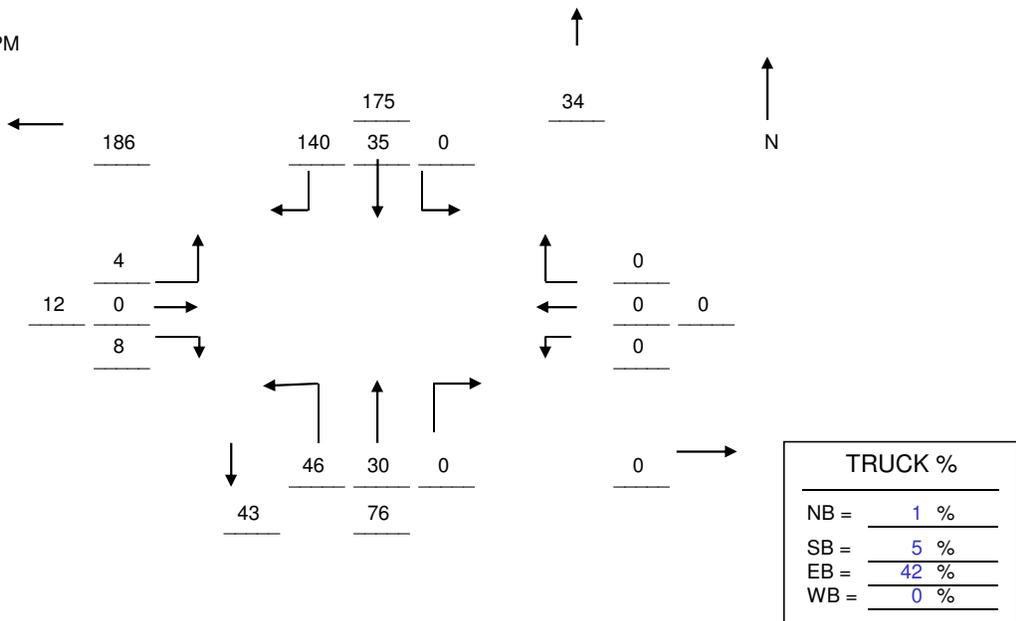
LOCATION: Fifth Street @ Crescent Street
 COUNTY : Lee
 OBSERVER: PW

CITY: Fort Myers Beach
 DATE: 09/08/2016 Thursday

AM Peak Hour
 9:30 AM 10:30 AM



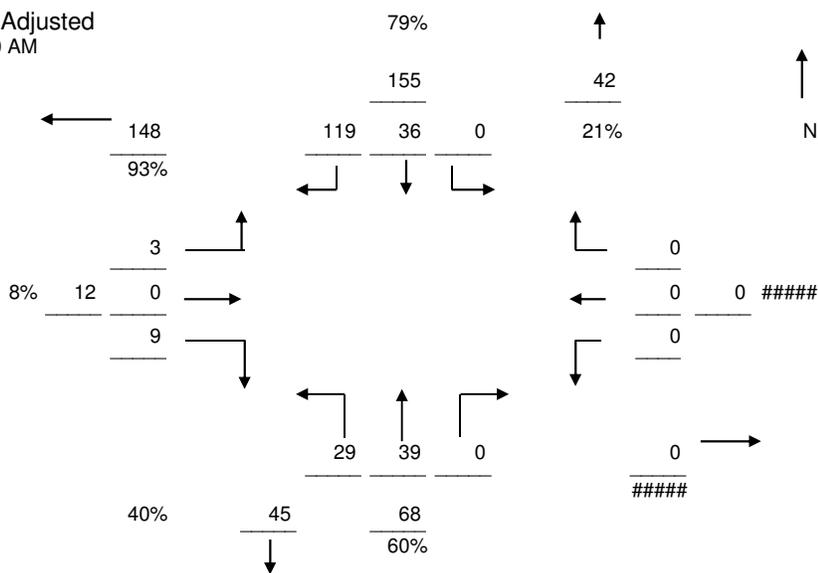
PM Peak Hour
 4:30 PM 5:30 PM



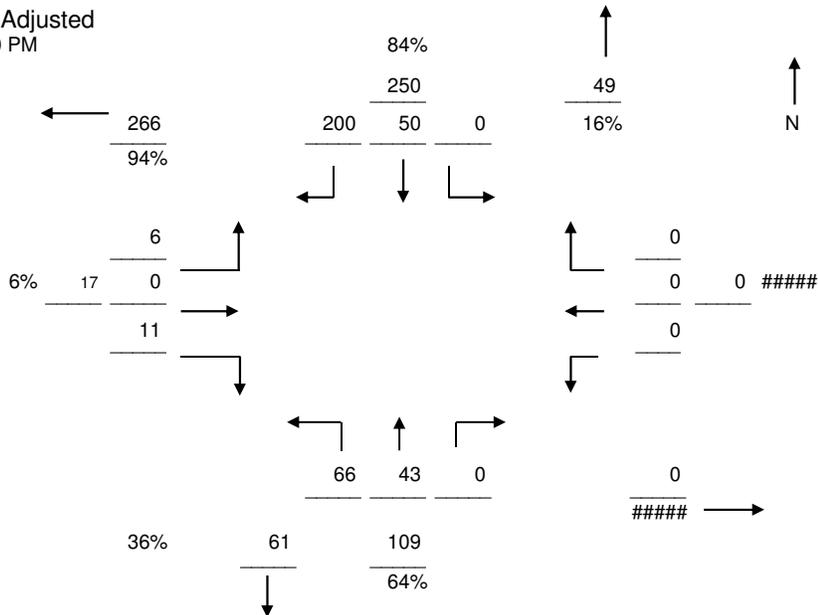
DPA ADJUSTED TURNING MOVEMENT DIAGRAM

LOCATION:	Fifth Street @ Crescent Street	REPORT:	2015
COUNTY :	Lee	STATION:	44
OBSERVER:	PW	MONTHLY:	0.77
		ANNUAL:	1.10
		ADJUSTMENT FACTOR:	1.43

AM Peak Hour - Adjusted
9:30 AM 10:30 AM



PM Peak Hour - Adjusted
4:30 PM 5:30 PM



TURNING MOVEMENT COUNTS
FIXED PM PEAK HOUR (3:30 PM – 4:30 PM)

**DAVID PLUMMER & ASSOCIATES
SUMMARY OF VEHICLE MOVEMENTS**

TRAFFIC COUNT ADJUSTMENT FACTORS

File# _____
Job # 16537

Project name: Times Square Resort
Job number: 16537

Count location: San Carlos Blvd @ Fifth Street @ Estero Blvd
County: Lee
City: Fort Myers Beach
Date: 09/08/2016
Day of Week: Thursday
Weather: Good
Road Condition: Good

Observer: TH/LH
Remark: Illegal EB Fifth Street Lefts / WB Fifth Street Thrus

Intersection Description:
From North (SB): San Carlos Blvd
From South (NB): San Carlos Blvd
From East (WB) Fifth Street
From West (EB) Fifth Street

AM Peak Hour: 9:15 AM to 10:15 AM
PM Peak Hour: 3:30 PM to 4:30 PM

LEE COUNTY ADJUSTMENT FACTOR

Traffic count report: 2015
Permanent count station: 44
Month of count AADT: 0.77
AADT to peak season 1.10

$$\text{Factor} = 1.00 \div 0.77 \times 1.10 = 1.43$$

David Plummer & Associates
Based On
MSHA Highway Information Services Division
Turning Counts Study - Field Sheet

Request No.: Times Square Resort
 Job No.: 16537

Location: San Carlos Blvd @ Fifth Street @ Estero
 Date: 09/08/2014 Thursday
 Recorder: TH/LH
 Interval (dd) : 15
 (In Minutes)

County: Lee
 Town: Fort Myers Beach
 Weather: Good

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start	End	Volume	PM PERIOD 12:00PM-7:00PM	Start	End	Volume
		9:15 AM	10:15 AM	1166		3:30 PM	4:30 PM	1308

Street Name-->	San Carlos Blvd				San Carlos Blvd				Fifth Street				Fifth Street				GRAND TOTAL
	Southbound				Northbound				Westbound				Eastbound				
HOUR	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	
7:15 AM				0				0				0				0	0
7:30 AM				0				0				0				0	0
7:45 AM	0	122	34	156	5	66	0	71	0	0	17	17	0	0	9	9	253
8:00 AM	0	114	33	147	13	76	0	89	0	0	11	11	0	0	7	7	254
8:15 AM	0	103	32	135	7	64	1	72	0	0	20	20	0	0	7	7	234
8:30 AM	0	118	26	144	8	63	1	72	0	0	13	13	0	0	7	7	236
8:45 AM	0	115	51	166	14	64	0	78	0	0	22	22	0	0	16	16	282
9:00 AM	0	104	39	143	6	82	0	88	0	0	21	21	0	0	15	15	267
9:15 AM	0	105	52	157	6	86	0	92	0	0	27	27	0	0	11	11	287
9:30 AM	0	93	33	126	5	98	3	106	0	0	22	22	1	0	22	23	277
9:45 AM	0	104	34	138	13	102	0	115	0	2	23	25	1	0	16	17	295
10:00 AM	0	99	42	141	11	85	0	96	0	0	24	24	0	0	13	13	274
10:15 AM	0	128	33	161	20	92	2	114	0	1	33	34	1	0	10	11	320
10:30 AM	0	99	29	128	13	91	0	104	0	0	25	25	0	0	16	16	273
10:45 AM				0		0		0				0				0	0
11:00 AM				0		0		0				0				0	0
11:15 AM				0				0				0				0	0
11:30 AM				0				0				0				0	0
11:45 AM				0				0				0				0	0
12:00 PM				0				0				0				0	0
12:15 PM				0				0				0				0	0
12:30 PM				0				0				0				0	0
12:45 PM				0				0				0				0	0
1:00 PM				0				0				0				0	0
1:15 PM				0				0				0				0	0
1:30 PM				0				0				0				0	0
1:45 PM				0				0				0				0	0
2:00 PM				0				0				0				0	0
2:15 PM				0				0				0				0	0
2:30 PM				0				0				0				0	0
2:45 PM				0				0				0				0	0
3:00 PM				0				0				0				0	0
3:15 PM				0				0				0				0	0
3:30 PM				0				0				0				0	0
3:45 PM	1	89	36	126	16	120	1	137	0	0	54	54	0	0	24	24	341
4:00 PM	0	83	31	114	15	119	0	134	0	0	42	42	0	0	13	13	303
4:15 PM	0	82	28	110	16	134	0	150	0	0	45	45	1	0	26	27	332
4:30 PM	0	92	32	124	13	130	0	143	0	0	46	46	0	0	19	19	332
4:45 PM	0	79	24	103	14	112	1	127	1	0	48	49	0	0	17	17	296
5:00 PM	0	99	33	132	14	113	1	128	0	0	35	35	0	1	13	14	309
5:15 PM	0	81	29	110	19	102	0	121	0	0	58	58	0	0	20	20	309
5:30 PM	0	100	34	134	20	125	0	145	0	0	40	40	1	0	22	23	342
5:45 PM	0	112	25	137	25	103	0	128	0	1	22	23	1	0	21	22	310
6:00 PM	0	95	41	136	18	112	0	130	0	0	25	25	1	0	14	15	306
6:15 PM	0	96	39	135	19	99	2	120	0	0	29	29	0	0	25	25	309
6:30 PM	0	91	28	119	13	81	2	96	0	0	33	33	1	0	20	21	269

TOTAL	1	2403	818	3222	323	2319	14	2656	1	4	735	740	8	1	383	392	7010
AM Peak Vol	0	424	142	566	49	377	5	431	0	3	102	105	3	0	61	64	1166
PM Peak Vol	1	346	127	474	60	503	1	564	0	0	187	187	1	0	82	83	1308

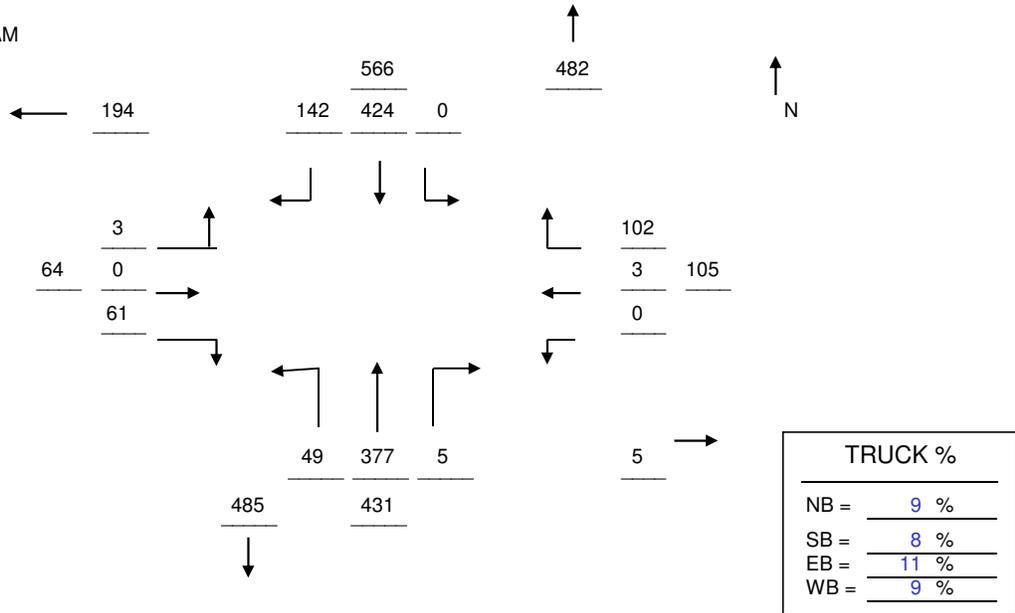
Peak Hour Factor (PHF)																	
AM Peak Hour		0.88				0.94				0.77				0.70			0.91
PM Peak Hour		0.94				0.94				0.87				0.77			0.96

DPA RAW TURNING MOVEMENT DIAGRAM

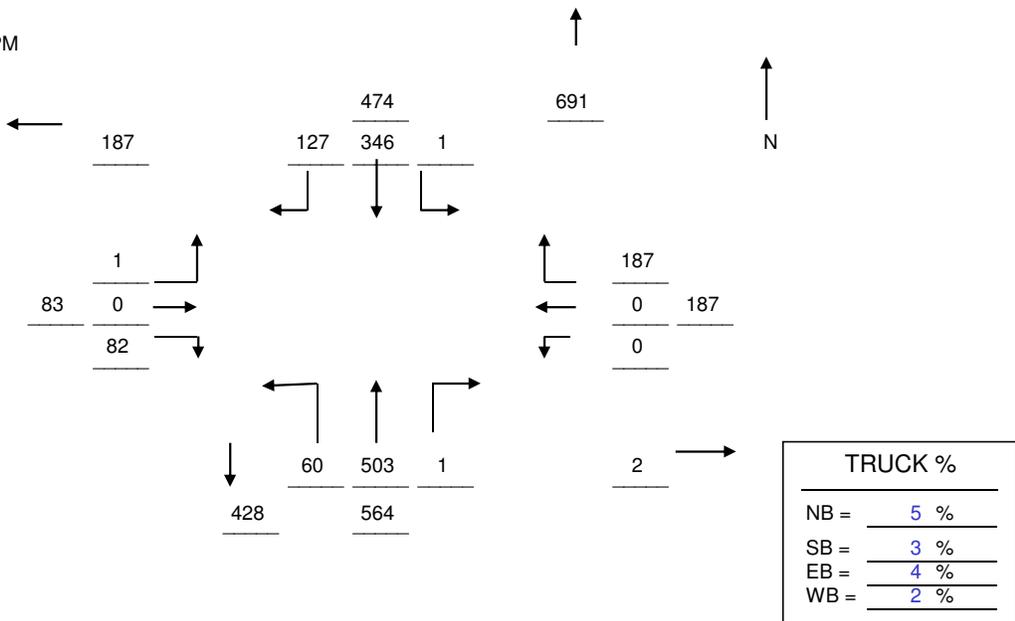
LOCATION: San Carlos Blvd @ Fifth Street @ Estero Blvd
 COUNTY : Lee
 OBSERVER: TH/LH

CITY: Fort Myers Beach
 DATE: 09/08/2016 Thursday

AM Peak Hour
 9:15 AM 10:15 AM



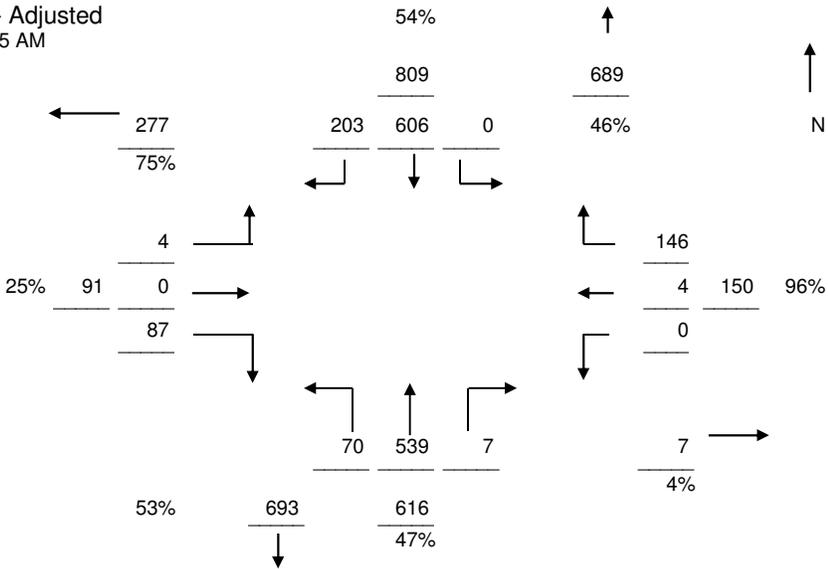
PM Peak Hour
 3:30 PM 4:30 PM



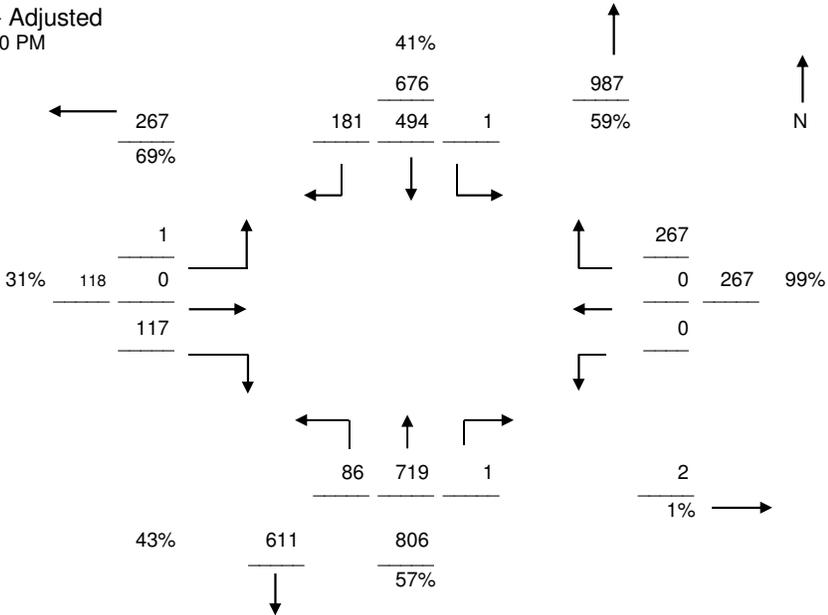
DPA ADJUSTED TURNING MOVEMENT DIAGRAM

LOCATION:	San Carlos Blvd @ Fifth Street @ Estero Blvd	REPORT:	2015
COUNTY :	Lee	STATION:	44
OBSERVER:	TH/LH	MONTHLY:	0.77
		ANNUAL:	1.10
		ADJUSTMENT FACTOR:	1.43

AM Peak Hour - Adjusted
9:15 AM 10:15 AM



PM Peak Hour - Adjusted
3:30 PM 4:30 PM



**DAVID PLUMMER & ASSOCIATES
SUMMARY OF VEHICLE MOVEMENTS**

TRAFFIC COUNT ADJUSTMENT FACTORS

File# _____
Job # 16537

Project name: Times Square Resort
Job number: 16537

Count location: Estero Blvd @ Crescent Street
County: Lee
City: Fort Myers Beach
Date: 09/08/2016
Day of Week: Thursday
Weather: Good
Road Condition: Good

Observer: DC/RC
Remark: None

Intersection Description:
From North (SB): Crescent Street
From South (NB): Motel Parking Lot
From East (WB): Estero Blvd
From West (EB): Estero Blvd

AM Peak Hour: 9:30 AM to 10:30 AM
PM Peak Hour: 3:30 PM to 4:30 PM

LEE COUNTY ADJUSTMENT FACTOR

Traffic count report: 2015
Permanent count station: 44
Month of count AADT: 0.77
AADT to peak season 1.10

$$\text{Factor} = 1.00 \div 0.77 \times 1.10 = 1.43$$

David Plummer & Associates
Based On
MSHA Highway Information Services Division
Turning Counts Study - Field Sheet

Request No.: Times Square Resort
 Job No.: 16537

Location: Estero Blvd @ Crescent Street
 Date: 09/08/2016 Thursday
 Recorder: DC/RC
 Interval (dd) : 15
 (In Minutes)

County: Lee
 Town: Fort Myers Beach
 Weather: Good

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start	End	Volume	PM PERIOD 12:00PM-7:00PM	Start	End	Volume
		9:30 AM	10:30 AM	968		3:30 PM	4:30 PM	1046

Street Name-->	Crescent Street				Motel Parking Lot				Estero Blvd				Estero Blvd				GRAND TOTAL
	Southbound				Northbound				Westbound		Eastbound						
HOUR	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	
7:15 AM				0				0				0				0	0
7:30 AM				0				0				0				0	0
7:45 AM	1	0	1	2	0	0	0	0	0	68	2	70	3	133	0	136	208
8:00 AM	1	0	2	3	0	0	0	0	0	106	4	110	2	135	0	137	250
8:15 AM	0	0	0	0	0	0	0	0	0	55	2	57	5	101	0	106	163
8:30 AM	5	0	2	7	0	0	1	1	0	75	1	76	3	135	1	139	223
8:45 AM	6	0	2	8	0	0	0	0	1	91	6	98	8	132	0	140	246
9:00 AM	2	0	2	4	0	0	0	0	0	72	3	75	7	116	0	123	202
9:15 AM	12	0	4	16	0	0	0	0	0	96	9	105	7	144	0	151	272
9:30 AM	4	0	2	6	0	0	0	0	0	102	2	104	6	118	1	125	235
9:45 AM	2	0	2	4	0	0	0	0	0	119	11	130	8	98	0	106	240
10:00 AM	5	0	2	7	0	0	0	0	0	87	2	89	5	113	0	118	214
10:15 AM	5	0	3	8	0	0	0	0	0	110	9	119	17	127	0	144	271
10:30 AM	10	0	5	15	0	0	0	0	0	102	3	105	7	116	0	123	243
10:45 AM				0				0				0				0	0
11:00 AM				0				0				0				0	0
11:15 AM				0				0				0				0	0
11:30 AM				0				0				0				0	0
11:45 AM				0				0				0				0	0
12:00 PM				0				0				0				0	0
12:15 PM				0				0				0				0	0
12:30 PM				0				0				0				0	0
12:45 PM				0				0				0				0	0
1:00 PM				0				0				0				0	0
1:15 PM				0				0				0				0	0
1:30 PM				0				0				0				0	0
1:45 PM				0				0				0				0	0
2:00 PM				0				0				0				0	0
2:15 PM				0				0				0				0	0
2:30 PM				0				0				0				0	0
2:45 PM				0				0				0				0	0
3:00 PM				0				0				0				0	0
3:15 PM				0				0				0				0	0
3:30 PM				0				0				0				0	0
3:45 PM	9	0	5	14	2	0	0	2	0	144	9	153	11	93	1	105	274
4:00 PM	5	0	3	8	0	0	0	0	0	112	5	117	8	94	0	102	227
4:15 PM	12	0	4	16	0	0	0	0	0	151	8	159	15	95	0	110	285
4:30 PM	6	0	3	9	0	0	0	0	0	143	9	152	20	79	0	99	260
4:45 PM				0				0				0				0	0
5:00 PM				0				0				0				0	0
5:15 PM				0				0				0				0	0
5:30 PM				0				0				0				0	0
5:45 PM				0				0				0				0	0
6:00 PM				0				0				0				0	0
6:15 PM				0				0				0				0	0
6:30 PM				0				0				0				0	0

TOTAL	85	0	42	127	2	0	1	3	1	1633	85	1719	132	1829	3	1964	3813
AM Peak Vol	22	0	12	34	0	0	0	0	0	418	25	443	37	454	0	491	968
PM Peak Vol	32	0	15	47	2	0	0	2	0	550	31	581	54	361	1	416	1046

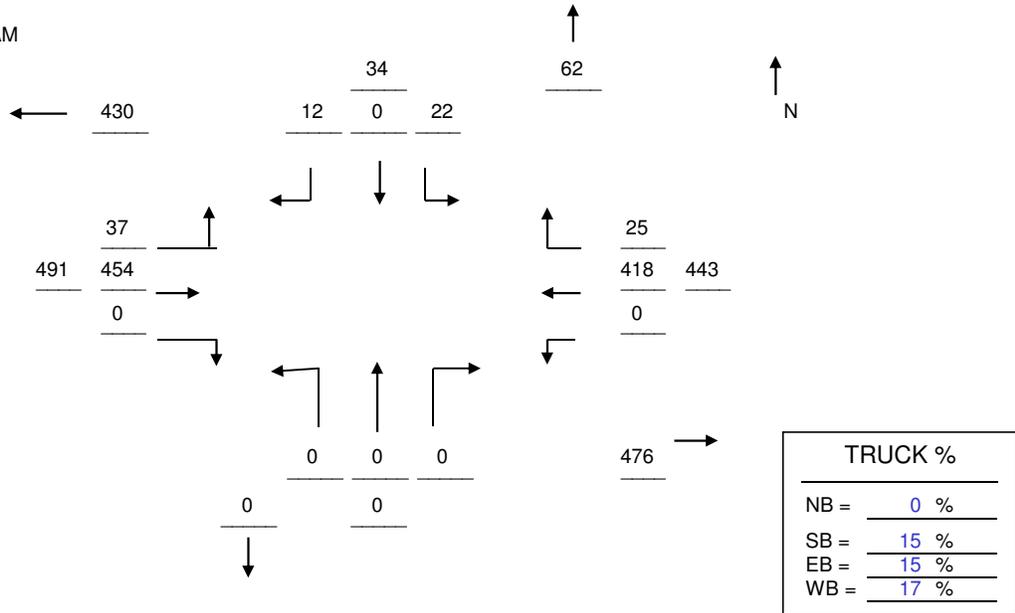
Peak Hour Factor (PHF)																	
AM Peak Hour	0.57				0.00				0.85				0.85				0.89
PM Peak Hour	0.73				0.25				0.91				0.95				0.92

DPA RAW TURNING MOVEMENT DIAGRAM

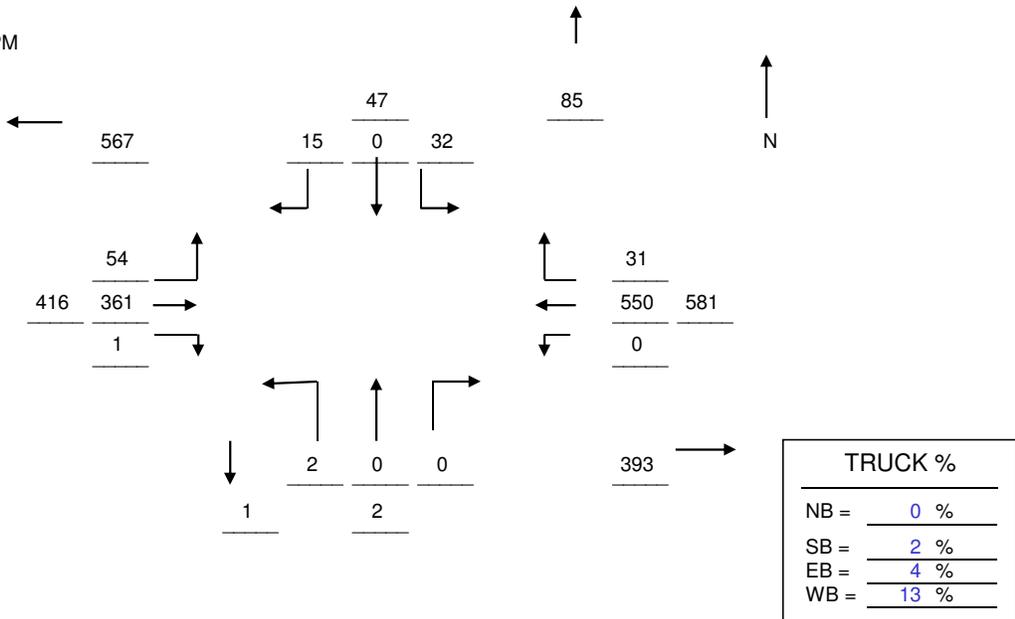
LOCATION: Estero Blvd @ Crescent Street
 COUNTY : Lee
 OBSERVER: DC/RC

CITY: Fort Myers Beach
 DATE: 09/08/2016 Thursday

AM Peak Hour
 9:30 AM 10:30 AM



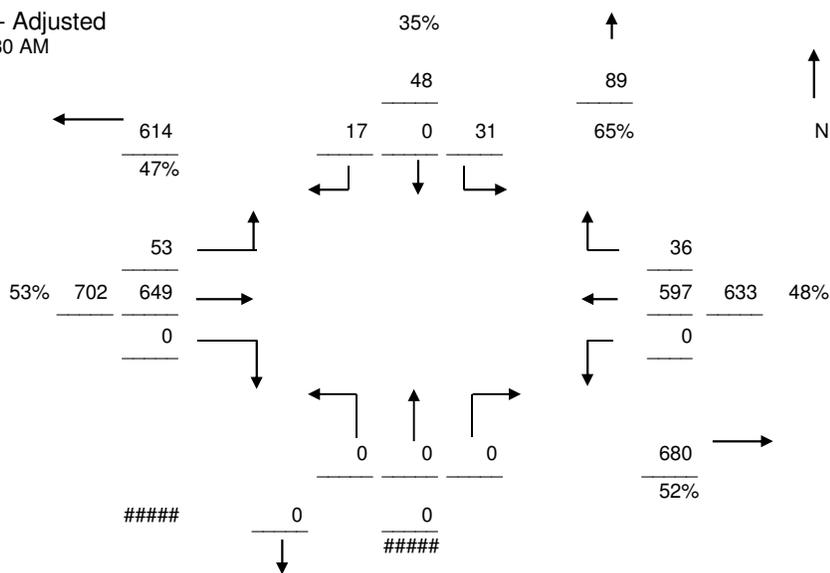
PM Peak Hour
 3:30 PM 4:30 PM



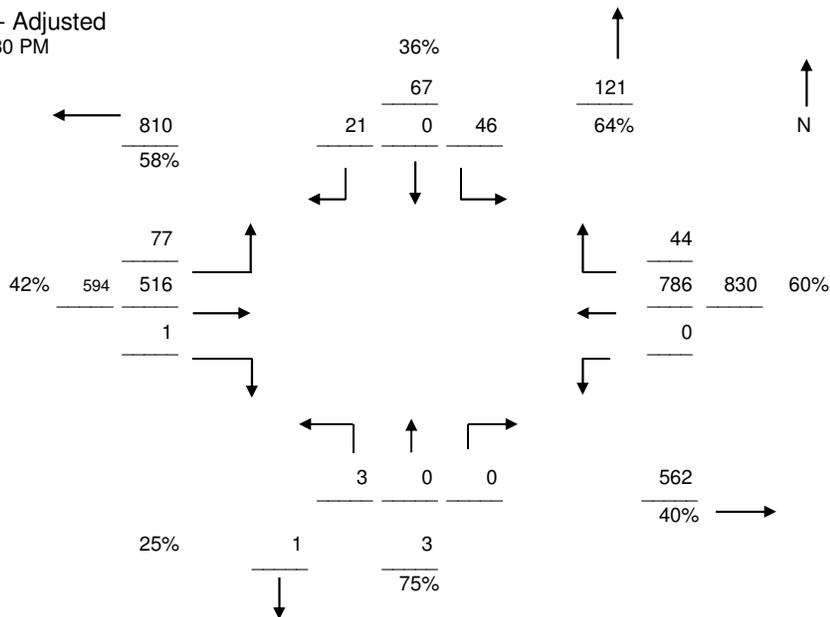
DPA ADJUSTED TURNING MOVEMENT DIAGRAM

LOCATION:	Estero Blvd @ Crescent Street	REPORT:	2015
COUNTY :	Lee	STATION:	44
OBSERVER:	DC/RC	MONTHLY:	0.77
		ANNUAL:	1.10
		ADJUSTMENT FACTOR:	1.43

AM Peak Hour - Adjusted
9:30 AM 10:30 AM



PM Peak Hour - Adjusted
3:30 PM 4:30 PM



**DAVID PLUMMER & ASSOCIATES
SUMMARY OF VEHICLE MOVEMENTS**

TRAFFIC COUNT ADJUSTMENT FACTORS

File# _____
Job # 16537

Project name: Times Square Resort
Job number: 16537

Count location: Fifth Street @ Crescent Street
County: Lee
City: Fort Myers Beach
Date: 09/08/2016
Day of Week: Thursday
Weather: Good
Road Condition: Good

Observer: PW
Remark: None

Intersection Description:
From North (SB): Crescent Street
From South (NB): Crescent Street
From East (WB): None
From West (EB): Fifth Street

AM Peak Hour: 9:30 AM to 10:30 AM
PM Peak Hour: 3:30 PM to 4:30 PM

LEE COUNTY ADJUSTMENT FACTOR

Traffic count report: 2015
Permanent count station: 44
Month of count AADT: 0.77
AADT to peak season 1.10

$$\text{Factor} = 1.00 \div 0.77 \times 1.10 = 1.43$$

David Plummer & Associates
Based On
MSHA Highway Information Services Division
Turning Counts Study - Field Sheet

Request No.: Times Square Resort
 Job No.: 16537

Location: Fifth Street @ Crescent Street
 Date: 09/08/2016 Thursday
 Recorder: PW
 Interval (dd): 15
 (In Minutes)

County: Lee
 Town: Fort Myers Beach
 Weather: Good

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start	End	Volume	PM PERIOD 12:00PM-7:00PM	Start	End	Volume
		9:30 AM	10:30 AM	163		3:30 PM	4:30 PM	249

Street Name-->	Crescent Street				Crescent Street				None				Fifth Street				GRAND TOTAL
	Southbound				Northbound				Westbound				Eastbound				
	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	L	T	R	TOT	
7:15 AM				0				0				0				0	0
7:30 AM				0				0				0				0	0
7:45 AM	0	0	10	10	3	2	0	5	0	0	0	0	0	0	0	0	15
8:00 AM	0	2	11	13	3	2	0	5	0	0	0	0	0	0	0	0	18
8:15 AM	0	0	17	17	0	6	0	6	0	0	0	0	1	0	0	1	24
8:30 AM	0	3	11	14	3	1	0	4	0	0	0	0	0	0	4	4	22
8:45 AM	1	1	14	16	6	3	0	9	0	0	0	0	0	0	3	3	28
9:00 AM	0	5	14	19	10	6	0	16	0	0	0	0	0	0	1	1	36
9:15 AM	0	8	19	27	8	6	0	14	0	0	0	0	0	0	4	4	45
9:30 AM	0	5	18	23	5	5	0	10	0	0	0	0	1	0	3	4	37
9:45 AM	0	2	19	21	6	10	0	16	0	0	0	0	0	0	0	0	37
10:00 AM	0	7	18	25	2	3	0	5	0	0	0	0	0	0	0	0	30
10:15 AM	0	7	25	32	7	12	0	19	0	0	0	0	2	0	4	6	57
10:30 AM	0	9	21	30	5	2	0	7	0	0	0	0	0	0	2	2	39
10:45 AM				0				0				0					0
11:00 AM				0				0				0					0
11:15 AM				0				0				0					0
11:30 AM				0				0				0					0
11:45 AM				0				0				0					0
12:00 PM				0				0				0					0
12:15 PM				0				0				0					0
12:30 PM				0				0				0					0
12:45 PM				0				0				0					0
1:00 PM				0				0				0					0
1:15 PM				0				0				0					0
1:30 PM				0				0				0					0
1:45 PM				0				0				0					0
2:00 PM				0				0				0					0
2:15 PM				0				0				0					0
2:30 PM				0				0				0					0
2:45 PM				0				0				0					0
3:00 PM				0				0				0					0
3:15 PM				0				0				0					0
3:30 PM				0				0				0					0
3:45 PM	0	6	38	44	12	9	0	21	0	0	0	0	1	0	1	2	67
4:00 PM	0	10	33	43	8	9	0	17	0	0	0	0	0	0	0	0	60
4:15 PM	0	8	33	41	12	10	0	22	0	0	0	0	0	0	2	2	65
4:30 PM	0	4	32	36	9	10	0	19	0	0	0	0	0	0	2	2	57
4:45 PM				0				0				0					0
5:00 PM				0				0				0					0
5:15 PM				0				0				0					0
5:30 PM				0				0				0					0
5:45 PM				0				0				0					0
6:00 PM				0				0				0					0
6:15 PM				0				0				0					0
6:30 PM				0				0				0					0

TOTAL	1	77	333	411	99	96	0	195	0	0	0	0	5	0	26	31	637
AM Peak Vol	0	25	83	108	20	27	0	47	0	0	0	0	2	0	6	8	163
PM Peak Vol	0	28	136	164	41	38	0	79	0	0	0	0	1	0	5	6	249

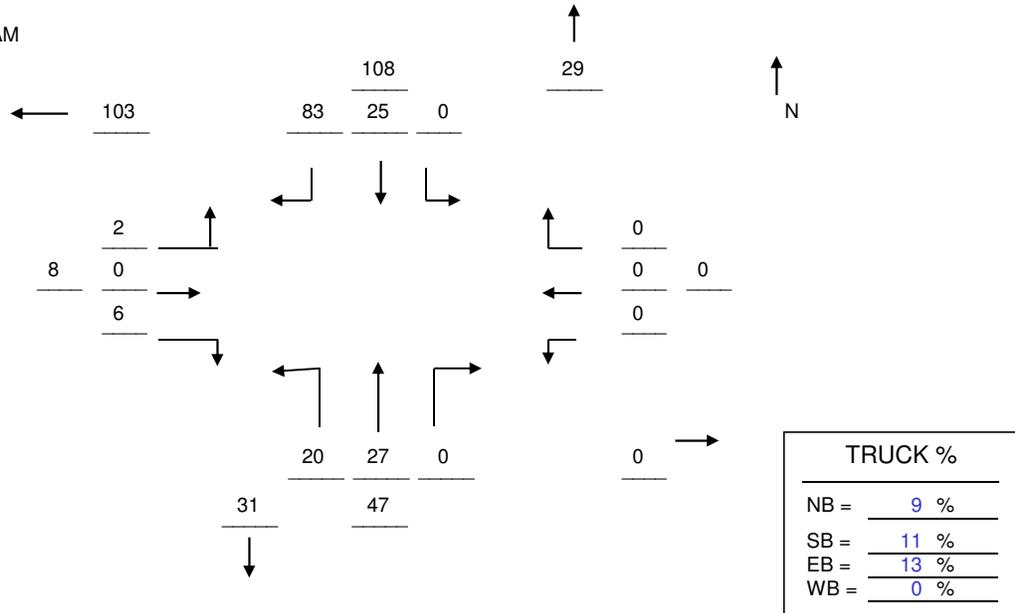
Peak Hour Factor (PHF)																	
AM Peak Hour	0.84				0.62				0.00				0.33				0.71
PM Peak Hour	0.93				0.90				0.00				0.75				0.93

DPA RAW TURNING MOVEMENT DIAGRAM

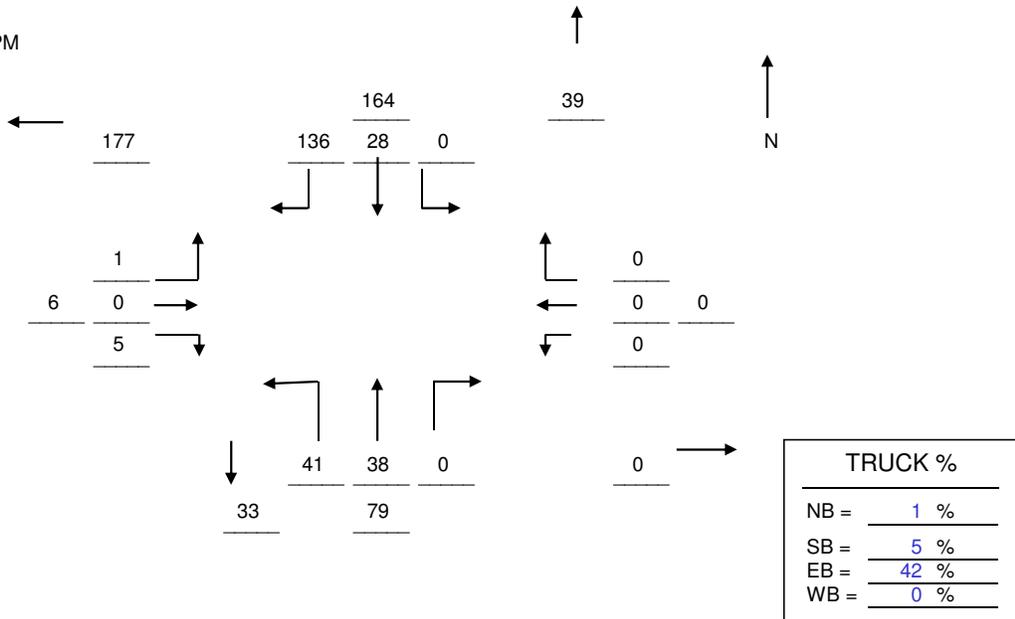
LOCATION: Fifth Street @ Crescent Street
 COUNTY : Lee
 OBSERVER: PW

CITY: Fort Myers Beach
 DATE: 09/08/2016 Thursday

AM Peak Hour
 9:30 AM 10:30 AM



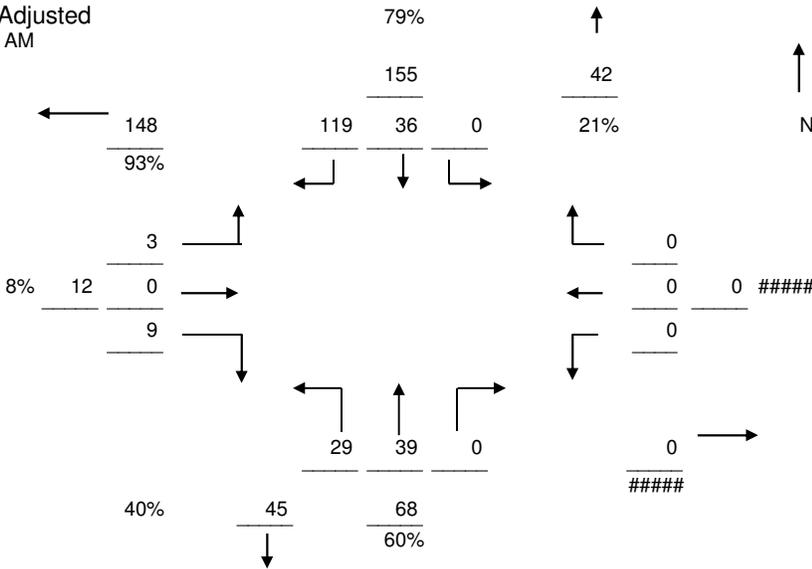
PM Peak Hour
 3:30 PM 4:30 PM



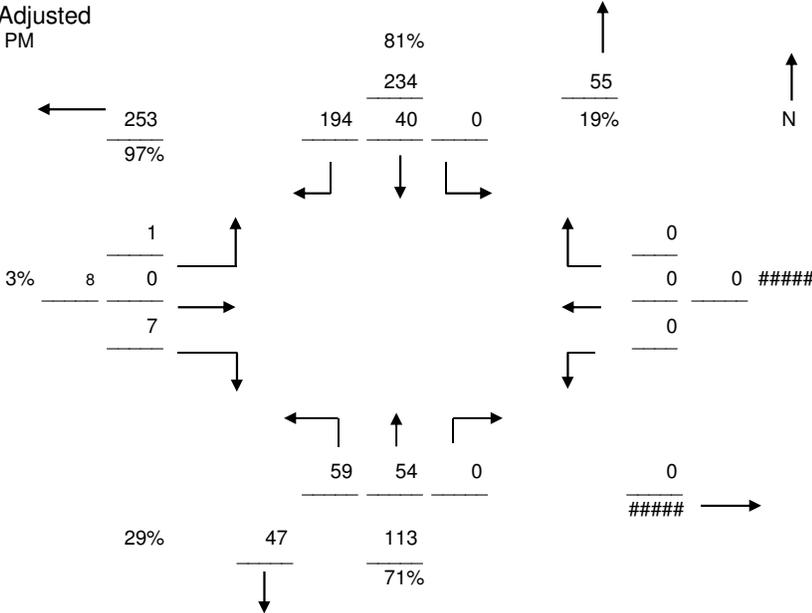
DPA ADJUSTED TURNING MOVEMENT DIAGRAM

LOCATION:	Fifth Street @ Crescent Street	REPORT:	2015
COUNTY :	Lee	STATION:	44
OBSERVER:	PW	MONTHLY:	0.77
		ANNUAL:	1.10
		ADJUSTMENT FACTOR:	1.43

AM Peak Hour - Adjusted
9:30 AM 10:30 AM



PM Peak Hour - Adjusted
3:30 PM 4:30 PM



APPENDIX G
SYNCHRO/HCM
INTERSECTION ANALYSIS OUTPUT

Intersection

Int Delay, s/veh 6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↖	↖			↖	↖
Traffic Vol, veh/h	0	0	117	0	0	267	86	719	1	0	494	181
Future Vol, veh/h	0	0	117	0	0	267	86	719	1	0	494	181
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	100	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	2	2	2	5	5	5	3	3	3
Mvmt Flow	0	0	127	0	0	290	93	782	1	0	537	197

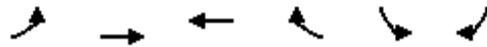
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	-	-	537	-	-	782	537	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.24	-	-	6.22	4.15	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.336	-	-	3.318	2.245	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	540	0	0	394	1016	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	540	-	-	394	1016	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	35.7	0.9	0
HCM LOS	B	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	1016	-	-	540	394	-
HCM Lane V/C Ratio	0.092	-	-	0.236	0.737	-
HCM Control Delay (s)	8.9	-	-	13.7	35.7	-
HCM Lane LOS	A	-	-	B	E	-
HCM 95th %tile Q(veh)	0.3	-	-	0.9	5.8	-

Lanes, Volumes, Timings
 9: Estero Blvd & Crescent St

11/30/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	77	516	786	44	46	21
Future Volume (vph)	77	516	786	44	46	21
Satd. Flow (prot)	1736	1827	1670	0	1724	0
Flt Permitted	0.950				0.967	
Satd. Flow (perm)	1736	1827	1670	0	1724	0
Lane Group Flow (vph)	84	561	902	0	73	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Control Type:	Unsignalized
Intersection Capacity Utilization	62.1% ICU Level of Service B
Analysis Period (min)	15

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	77	516	786	44	46	21
Future Vol, veh/h	77	516	786	44	46	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	13	13	2	2
Mvmt Flow	84	561	854	48	50	23

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	902	0	1606
Stage 1	-	-	878
Stage 2	-	-	728
Critical Hdwy	4.14	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.236	-	3.518
Pot Cap-1 Maneuver	745	-	116
Stage 1	-	-	406
Stage 2	-	-	478
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	745	-	103
Mov Cap-2 Maneuver	-	-	236
Stage 1	-	-	406
Stage 2	-	-	424

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	23.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	745	-	-	-	262
HCM Lane V/C Ratio	0.112	-	-	-	0.278
HCM Control Delay (s)	10.4	-	-	-	23.9
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	1.1

Lanes, Volumes, Timings
6: Crescent St & Fifth St

11/30/2016



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	7	59	54	40	194
Future Volume (vph)	1	7	59	54	40	194
Satd. Flow (prot)	1170	0	0	1834	1607	0
Flt Permitted	0.994			0.975		
Satd. Flow (perm)	1170	0	0	1834	1607	0
Lane Group Flow (vph)	9	0	0	123	254	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 33.5%

ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations									
Traffic Vol, veh/h	0	1	7	0	59	54	0	40	194
Future Vol, veh/h	0	1	7	0	59	54	0	40	194
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	42	42	0	1	1	0	5	5
Mvmt Flow	0	1	8	0	64	59	0	43	211
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.9	8	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	52%	12%	0%
Vol Thru, %	48%	0%	17%
Vol Right, %	0%	88%	83%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	113	8	234
LT Vol	59	1	0
Through Vol	54	0	40
RT Vol	0	7	194
Lane Flow Rate	123	9	254
Geometry Grp	1	1	1
Degree of Util (X)	0.144	0.012	0.254
Departure Headway (Hd)	4.226	4.868	3.594
Convergence, Y/N	Yes	Yes	Yes
Cap	848	740	995
Service Time	2.258	2.868	1.631
HCM Lane V/C Ratio	0.145	0.012	0.255
HCM Control Delay	8	7.9	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0	1

Lanes, Volumes, Timings
 22: Estero Blvd/San Carlos Blvd & Fifth St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	122	0	0	278	89	748	1	0	514	188
Future Volume (vph)	0	0	122	0	0	335	89	748	1	0	562	188
Satd. Flow (prot)	0	0	1580	0	0	1611	1719	1810	0	0	1845	1568
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1580	0	0	1611	1719	1810	0	0	1845	1568
Lane Group Flow (vph)	0	0	133	0	0	364	97	814	0	0	611	204
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

HCM 2010 TWSC
 22: Estero Blvd/San Carlos Blvd & Fifth St

Intersection

Int Delay, s/veh 12.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↑			↑	↑	↑			↑	↑
Traffic Vol, veh/h	0	0	122	0	0	278	89	748	1	0	514	188
Future Vol, veh/h	0	0	122	0	0	335	89	748	1	0	562	188
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	100	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	2	2	2	5	5	5	3	3	3
Mvmt Flow	0	0	133	0	0	364	97	813	1	0	611	204

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	-	-	611	-	-	814	611	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.24	-	-	6.22	4.15	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.336	-	-	3.318	2.245	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	490	0	0	378	953	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	490	-	-	378	953	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.1	71	1	0
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	953	-	-	490 378	-	-
HCM Lane V/C Ratio	0.102	-	-	0.271 0.963	-	-
HCM Control Delay (s)	9.2	-	-	15.1 71	-	-
HCM Lane LOS	A	-	-	C F	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.1 10.9	-	-

Lanes, Volumes, Timings
 9: Estero Blvd & Crescent St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	537	817	46	48	22
Future Volume (vph)	128	537	817	68	74	22
Satd. Flow (prot)	1736	1827	1665	0	1738	0
Flt Permitted	0.950				0.963	
Satd. Flow (perm)	1736	1827	1665	0	1738	0
Lane Group Flow (vph)	139	584	962	0	104	0
Sign Control		Free	Free		Stop	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 64.2% ICU Level of Service C

Analysis Period (min) 15

HCM 2010 TWSC
 9: Estero Blvd & Crescent St

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↖		↖	
Traffic Vol, veh/h	80	537	817	46	48	22
Future Vol, veh/h	128	537	817	68	74	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	13	13	2	2
Mvmt Flow	139	584	888	74	80	24

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	962	0	1787
Stage 1	-	-	925
Stage 2	-	-	862
Critical Hdwy	4.14	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.236	-	3.518
Pot Cap-1 Maneuver	707	-	89
Stage 1	-	-	386
Stage 2	-	-	414
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	707	-	~ 72
Mov Cap-2 Maneuver	-	-	196
Stage 1	-	-	386
Stage 2	-	-	333

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	36.3
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	707	-	-	-	216
HCM Lane V/C Ratio	0.197	-	-	-	0.483
HCM Control Delay (s)	11.3	-	-	-	36.3
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.7	-	-	-	2.4

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
6: Crescent St & Fifth St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	7	61	56	42	202
Future Volume (vph)	5	33	131	56	42	206
Satd. Flow (prot)	1172	0	0	1817	1607	0
Flt Permitted	0.994			0.966		
Satd. Flow (perm)	1172	0	0	1817	1607	0
Lane Group Flow (vph)	41	0	0	203	270	0
Sign Control	Stop			Stop	Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 34.3%	ICU Level of Service A
Analysis Period (min) 15	

HCM 2010 AWSC
6: Crescent St & Fifth St

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations									
Traffic Vol, veh/h	0	1	7	0	61	56	0	42	202
Future Vol, veh/h	0	5	33	0	131	56	0	42	206
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	42	42	2	1	1	2	5	5
Mvmt Flow	0	5	36	0	142	61	0	46	224
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.4	8.8	8.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	70%	13%	0%
Vol Thru, %	30%	0%	17%
Vol Right, %	0%	87%	83%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	187	38	248
LT Vol	131	5	0
Through Vol	56	0	42
RT Vol	0	33	206
Lane Flow Rate	203	41	270
Geometry Grp	1	1	1
Degree of Util (X)	0.245	0.058	0.278
Departure Headway (Hd)	4.334	5.096	3.712
Convergence, Y/N	Yes	Yes	Yes
Cap	819	707	949
Service Time	2.41	3.096	1.81
HCM Lane V/C Ratio	0.248	0.058	0.285
HCM Control Delay	8.8	8.4	8.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.2	1.1

Lanes, Volumes, Timings
 22: Estero Blvd/San Carlos Blvd & Fifth St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	122	0	0	278	89	748	1	0	514	188
Future Volume (vph)	0	0	122	0	0	405	89	748	1	0	627	188
Satd. Flow (prot)	0	0	1580	0	0	1611	1719	1810	0	0	1845	1568
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1580	0	0	1611	1719	1810	0	0	1845	1568
Lane Group Flow (vph)	0	0	133	0	0	440	97	814	0	0	682	204
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

HCM 2010 TWSC
 22: Estero Blvd/San Carlos Blvd & Fifth St

Intersection												
Int Delay, s/veh	25.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↑			↑	↑	↑			↑	↑
Traffic Vol, veh/h	0	0	122	0	0	278	89	748	1	0	514	188
Future Vol, veh/h	0	0	122	0	0	405	89	748	1	0	627	188
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	100	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	2	2	2	5	5	5	3	3	3
Mvmt Flow	0	0	133	0	0	440	97	813	1	0	682	204

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	-	-	682	-	-	814	682	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.24	-	-	6.22	4.15	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.336	-	-	3.318	2.245	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	446	0	0	~ 378	897	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	-	-	446	-	-	~ 378	897	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.5	131.3	1	0
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	897	-	-	446	378	-
HCM Lane V/C Ratio	0.108	-	-	0.297	1.165	-
HCM Control Delay (s)	9.5	-	-	16.5	131.3	-
HCM Lane LOS	A	-	-	C	F	-
HCM 95th %tile Q(veh)	0.4	-	-	1.2	17.3	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 9: Estero Blvd & Crescent St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	537	817	46	48	22
Future Volume (vph)	193	537	817	98	107	22
Satd. Flow (prot)	1736	1827	1656	0	1747	0
Flt Permitted	0.950				0.960	
Satd. Flow (perm)	1736	1827	1656	0	1747	0
Lane Group Flow (vph)	210	584	995	0	140	0
Sign Control		Free	Free		Stop	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 64.2% ICU Level of Service C

Analysis Period (min) 15

HCM 2010 TWSC
 9: Estero Blvd & Crescent St

Intersection

Int Delay, s/veh 7.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↖		↖	
Traffic Vol, veh/h	80	537	817	46	48	22
Future Vol, veh/h	193	537	817	98	107	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	13	13	2	2
Mvmt Flow	210	584	888	107	116	24

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	995	0	1944
Stage 1	-	-	941
Stage 2	-	-	1003
Critical Hdwy	4.14	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.236	-	3.518
Pot Cap-1 Maneuver	687	-	~ 71
Stage 1	-	-	380
Stage 2	-	-	355
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	687	-	~ 49
Mov Cap-2 Maneuver	-	-	157
Stage 1	-	-	380
Stage 2	-	-	246

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	81.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	687	-	-	-	172
HCM Lane V/C Ratio	0.305	-	-	-	0.815
HCM Control Delay (s)	12.5	-	-	-	81.3
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	1.3	-	-	-	5.5

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

6: Crescent St & Fifth St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	7	61	56	42	202
Future Volume (vph)	11	66	226	56	42	211
Satd. Flow (prot)	1175	0	0	1808	1607	0
Flt Permitted	0.993			0.961		
Satd. Flow (perm)	1175	0	0	1808	1607	0
Lane Group Flow (vph)	84	0	0	307	275	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 34.3%

ICU Level of Service A

Analysis Period (min) 15

HCM 2010 AWSC
6: Crescent St & Fifth St

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations		Y				4		4	
Traffic Vol, veh/h	0	1	7	0	61	56	0	42	202
Future Vol, veh/h	0	11	66	0	226	56	0	42	211
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	42	42	2	1	1	2	5	5
Mvmt Flow	0	12	72	0	246	61	0	46	229
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.2	10.5	8.9
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	80%	14%	0%
Vol Thru, %	20%	0%	17%
Vol Right, %	0%	86%	83%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	282	77	253
LT Vol	226	11	0
Through Vol	56	0	42
RT Vol	0	66	211
Lane Flow Rate	307	84	275
Geometry Grp	1	1	1
Degree of Util (X)	0.389	0.125	0.309
Departure Headway (Hd)	4.571	5.369	4.049
Convergence, Y/N	Yes	Yes	Yes
Cap	788	666	888
Service Time	2.598	3.412	2.073
HCM Lane V/C Ratio	0.39	0.126	0.31
HCM Control Delay	10.5	9.2	8.9
HCM Lane LOS	B	A	A
HCM 95th-tile Q	1.9	0.4	1.3

Lanes, Volumes, Timings
 22: Estero Blvd/San Carlos Blvd & Fifth St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	122	0	0	278	89	748	1	0	514	188
Future Volume (vph)	0	0	122	0	0	318	89	748	1	0	561	188
Satd. Flow (prot)	0	0	1580	0	0	1611	1719	1810	0	0	1845	1568
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1580	0	0	1611	1719	1810	0	0	1845	1568
Lane Group Flow (vph)	0	0	133	0	0	346	97	814	0	0	610	204
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

HCM 2010 TWSC
 22: Estero Blvd/San Carlos Blvd & Fifth St

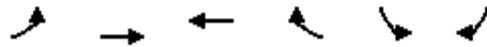
Intersection												
Int Delay, s/veh	10.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↖	↖			↖	↗
Traffic Vol, veh/h	0	0	122	0	0	278	89	748	1	0	514	188
Future Vol, veh/h	0	0	122	0	0	318	89	748	1	0	561	188
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	Yield
Storage Length	-	-	0	-	-	0	100	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	2	2	2	5	5	5	3	3	3
Mvmt Flow	0	0	133	0	0	346	97	813	1	0	610	204

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	-	-	610	-	-	814	610	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.24	-	-	6.22	4.15	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.336	-	-	3.318	2.245	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	491	0	0	378	954	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	491	-	-	378	954	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15	60.8	1	0
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	954	-	-	491 378	-	-
HCM Lane V/C Ratio	0.101	-	-	0.27 0.914	-	-
HCM Control Delay (s)	9.2	-	-	15 60.8	-	-
HCM Lane LOS	A	-	-	C F	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.1 9.5	-	-

Lanes, Volumes, Timings
 9: Estero Blvd & Crescent St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	80	537	817	46	48	22
Future Volume (vph)	127	537	817	68	66	22
Satd. Flow (prot)	1736	1827	1665	0	1735	0
Flt Permitted	0.950				0.964	
Satd. Flow (perm)	1736	1827	1665	0	1735	0
Lane Group Flow (vph)	138	584	962	0	96	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 64.2%	ICU Level of Service C
Analysis Period (min) 15	

HCM 2010 TWSC
 9: Estero Blvd & Crescent St

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	80	537	817	46	48	22
Future Vol, veh/h	127	537	817	68	66	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	13	13	2	2
Mvmt Flow	138	584	888	74	72	24

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	962	0	1785
Stage 1	-	-	925
Stage 2	-	-	860
Critical Hdwy	4.14	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.236	-	3.518
Pot Cap-1 Maneuver	707	-	90
Stage 1	-	-	386
Stage 2	-	-	414
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	707	-	72
Mov Cap-2 Maneuver	-	-	196
Stage 1	-	-	386
Stage 2	-	-	333

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	33.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	707	-	-	-	218
HCM Lane V/C Ratio	0.195	-	-	-	0.439
HCM Control Delay (s)	11.3	-	-	-	33.8
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.7	-	-	-	2.1

Lanes, Volumes, Timings

6: Crescent St & Fifth St



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	7	61	56	42	202
Future Volume (vph)	4	25	62	56	46	202
Satd. Flow (prot)	1173	0	0	1832	1610	0
Flt Permitted	0.994			0.974		
Satd. Flow (perm)	1173	0	0	1832	1610	0
Lane Group Flow (vph)	31	0	0	128	270	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

Control Type: Unsignalized

Intersection Capacity Utilization 34.3%

ICU Level of Service A

Analysis Period (min) 15

HCM 2010 AWSC
6: Crescent St & Fifth St

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations									
Traffic Vol, veh/h	0	1	7	0	61	56	0	42	202
Future Vol, veh/h	0	4	25	0	62	56	0	46	202
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	42	42	2	1	1	2	5	5
Mvmt Flow	0	4	27	0	67	61	0	50	220
Number of Lanes	0	1	0	0	0	1	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.1	8.1	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	53%	14%	0%
Vol Thru, %	47%	0%	19%
Vol Right, %	0%	86%	81%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	118	29	248
LT Vol	62	4	0
Through Vol	56	0	46
RT Vol	0	25	202
Lane Flow Rate	128	32	270
Geometry Grp	1	1	1
Degree of Util (X)	0.152	0.043	0.273
Departure Headway (Hd)	4.28	4.928	3.647
Convergence, Y/N	Yes	Yes	Yes
Cap	831	731	973
Service Time	2.34	2.928	1.71
HCM Lane V/C Ratio	0.154	0.044	0.277
HCM Control Delay	8.1	8.1	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.1	1.1

Lanes, Volumes, Timings
 5: Crescent St & Access 1 Inbound



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (vph)	0	0	0	126	70	0
Future Volume (vph)	0	0	68	127	88	4
Satd. Flow (prot)	0	0	0	1831	1853	0
Flt Permitted				0.983		
Satd. Flow (perm)	0	0	0	1831	1853	0
Lane Group Flow (vph)	0	0	0	212	100	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized	
Intersection Capacity Utilization 10.0%	ICU Level of Service A
Analysis Period (min) 15	

Lanes, Volumes, Timings
 11: Fifth St & Access 1 Outbound



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	0	0	8	0	0	278
Future Volume (vph)	39	21	8	0	0	279
Satd. Flow (prot)	1718	0	1863	0	0	1863
Flt Permitted	0.969					
Satd. Flow (perm)	1718	0	1863	0	0	1863
Lane Group Flow (vph)	65	0	9	0	0	303
Sign Control	Stop		Free			Free

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 24.6%	ICU Level of Service A
Analysis Period (min) 15	

HCM 2010 TWSC
 11: Fifth St & Access 1 Outbound

Intersection

Int Delay, s/veh 1.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	W		↑			↑
Traffic Vol, veh/h	0	0	8	0	0	278
Future Vol, veh/h	39	21	8	0	0	279
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	23	9	0	0	303

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	312	9	0	-	-	-
Stage 1	9	-	-	-	-	-
Stage 2	303	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	681	1073	-	0	0	-
Stage 1	1014	-	-	0	0	-
Stage 2	749	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	681	1073	-	-	-	-
Mov Cap-2 Maneuver	681	-	-	-	-	-
Stage 1	1014	-	-	-	-	-
Stage 2	749	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NETNWLn1	SWT
Capacity (veh/h)	- 781	-
HCM Lane V/C Ratio	- 0.084	-
HCM Control Delay (s)	- 10	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.3	-

Lanes, Volumes, Timings
 13: Fifth St & Access 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	8	278	0	0	0
Future Volume (vph)	0	8	317	1	0	1
Satd. Flow (prot)	0	1863	1863	0	1611	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1863	0	1611	0
Lane Group Flow (vph)	0	9	346	0	1	0
Sign Control		Free	Free		Stop	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 24.6%	ICU Level of Service A
Analysis Period (min) 15	

HCM 2010 TWSC
13: Fifth St & Access 2

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↘	
Traffic Vol, veh/h	0	8	278	0	0	0
Future Vol, veh/h	0	8	317	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	345	1	0	1

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	346	0	354
Stage 1	-	-	345
Stage 2	-	-	9
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1213	-	644
Stage 1	-	-	717
Stage 2	-	-	1014
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1213	-	644
Mov Cap-2 Maneuver	-	-	644
Stage 1	-	-	717
Stage 2	-	-	1014

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1213	-	-	-	698
HCM Lane V/C Ratio	-	-	-	-	0.002
HCM Control Delay (s)	0	-	-	-	10.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

APPENDIX H

SUFFICIENCY REVIEW COMMENTS AND RESPONSES

DAVID PLUMMER & ASSOCIATES, INC.

TRANSPORTATION • CIVIL • STRUCTURAL • ENVIRONMENTAL

Memorandum

To: Tina Ekblad
From: Deven Long
Date: July 07, 2017
RE: **Independent Resort Rezoning Traffic Impact Statement - #17502**
Response to Town of Fort Myers Beach Transportation Comments
cc: John Hafner, Adam Olson, Chris Flagg, Tom Torgerson, Amanda Brock, Russell Schropp, Stephen Leung

DPA is in receipt of Town of Fort Myers Beach Development Review comments dated April 20, 2017 (refer to Attachment A of this memorandum) for the above referenced Project. DPA would like to offer the following response to the “Traffic Impact Statement” section starting on Page 4.

- 1. In the Trip Generation forecasts in Appendix C, for the Pre-Demolition scenario, it is unclear why there are two separate lines for the same Land Use 826 – these sizes should be combined into a single line item. For the Build Per Code scenario, it is unclear why there are two separate retail uses, especially since this is a conceptual scenario. In general, Land Use 820 is used for large retail areas, such as malls or big-box general retailers. For this site, Land Use 826 Specialty Retail, would be more appropriate for all general uses on the site for all three scenarios.**

Response

The land use designations for the Pre-Demolition scenario were divided by location in proximity to Estero Boulevard which was either bayside or beachside. Since the three retail locations were at distinct locations with independent parking, the trip generation estimates were performed independently. Furthermore, Land Use 820 was assumed in the Pre-Demolition scenario to best reflect the general retail uses that occupied the bayside parcel at that time.

In the Build Per Code scenario, Land Use 820 (general retail) was used to reflect to most intense development allowed under the current zoning.

- 2. The report applies reductions to trip generation forecasts based on foot and bicycle traffic, but does not explain how these percentages were arrived at. Additionally, the reductions applied to the Proposed Development (55%) during AM and PM) are higher than the reductions applied to the Pre-Demolition and Build Per Code (47% AM; 46% PM) conditions).**

Response

Vehicular trip reductions are reflective of the beach community and the pedestrian focal point of Times Square. Due to its beach location, the prior development did not generate the level of vehicle trips of the typical retail establishments reflective of the ITE trip rates. Similarly, the Build Per Code and Proposed Development are not expected to generate the level of vehicle trips reflective of the ITE trip rates.

This is because all three development scenarios are not marketed as standalone attractions. Instead, they are amenities catering to the guests and visitors of Fort Myers Beach, which is the primary attraction. Retail customers, as an example, are most likely to arrive by foot, bike, or trolley by beachgoers, tourists and from near-by residents. The same rationale of “beach capture” applies to restaurant customers and hotel visitors as most of them are there for the beach and to tour Times Square area by foot.

A 55% non-auto trip reduction rate was assumed for hotel and restaurant lands uses. A 45% non-auto trip reduction rate was assumed for retail land uses. A lower rate was used for retail since pass-by was assumed. It was preferable to avoid underestimating net-new external trips associated with retail land uses.

- 3. The internal capture calculations were not included – just the rate information available in Trip Generation Handbook, 3rd Edition. Given the higher internal capture rates for the Proposed Development, it is preferable for the calculation spreadsheets to be included in the report.**

Response

The review comment suggests that the use of “Figure 6.2 Spreadsheet Tool” of the ITE Handbook is preferred to demonstrate the internal capture calculations. DPA would like to note that internal capture calculations were performed by the Trafficware trip generation software (see Appendix C of the traffic study) which replicates the procedure and results of the spreadsheets from the ITE Handbook/NCHRP Report 684. Exhibits 3, 4 & 5 of the traffic study have been expanded to show the internal capture calculations consistent with the ITE Handbook and are provided in Attachment B of this response.

4. **The Build Per Code scenario should be reviewed for feasibility – It has a very large retail size that may technically fit on the site, but would not allow room for other necessities, such as parking, open space requirements or setbacks. Trip generation comparisons with this scenario should be considered cautiously because of this, and the comparison between the Pre-Demolition and Proposed Development scenarios should be looked at closer because they are reasonable expectations for the site.**

Response

The Build Per Code development scenario, deemed feasible or not, is consistent with the intensities allowed under the current zoning.

5. **The report did not state the basis for the proposed trip generation (i.e. based on existing traffic patterns), but just provided a statement as to how the trips were distributed.**

Response

The trip distribution and assignment were based on existing traffic patterns entering and exiting the road network under study as depicted in Attachment C of this response.

Based on the existing traffic count, the Project traffic was mostly distributed to the north, off of the island. This path makes sense because it is the shortest path to the airport, most of Lee County and to the Cities of Fort Myers and Cape Coral. The bulk of the remaining trips are coming from south Estero Island and beaches to the south. It was assumed that a small percentage of trips would be attracted to the north end of Estero Island, where there is a public park and other attractions.

6. **The report focuses more on the trip generation comparison between the Build Per Code and Proposed Development scenarios, citing the reduction of trips the Proposed Development would have. The difference in trips is not as significant when comparing to the Pre-Demolition scenario, and the Proposed Development is forecast to generate significantly more trips during the AM peak hour.**

Response

The comparison of the Build Per Code Development (current zoning) and the Proposed Development (proposed zoning) is critical to cite for the purposes of this zoning traffic study. It demonstrates that the Proposed Development will have a lesser impact on traffic compared to the development allowed under the current zoning.

The report also cited the comparison to the Pre-Demolition development. The Proposed Development generates less traffic in the PM peak hour, but as the reviewer notes, it does generate

more traffic in the AM peak hour. However, there is less background traffic during the AM peak hour. The important thing to recognize is that the Proposed Development is on a scale, in terms of generated traffic, similar to the development that once existed on the same properties.

- 7. It appears that only PM peak hour operational analyses were performed. Typically both AM and PM operational analyses are performed, especially when there is a significant increase in forecast traffic during the AM peak hour.**

Response

The standard practice for zoning traffic studies in Lee County is to perform the operational analysis based only on the critical peak hour (K₁₀₀). In this case, the critical peak hour corresponds to the PM peak hour which is verified by the traffic counts. Also, the trip generation of the development scenarios is highest for the PM peak hour (except the Proposed Development which is 1 trip less than the AM peak hour).

Overall intersection operations under AM peak hour conditions will be no worse than the PM peak hour since there is less traffic associated within this period.

Attachment A

Town of Fort Myers Beach Development Review Comments

2149 MCGREGOR BOULEVARD
FORT MYERS, FLORIDA 33901
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EXCEEDING
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EXPECTATIONS



Town of Fort Myers Beach

Dennis Boback
Mayor

Tracey Gore
Vice Mayor

Bruce Butcher
Council Member

Anita Cereceda
Council Member

Joanne Shamp
Council Member

Tina M. Ekblad
C/O Morris Depew
2891 Center Pointe Drive, Unit 100
Fort Myers, FL. 33916

April 20, 2017

RE: DCI17-0001 Sufficiency Review

Dear Tina,

Town staff has reviewed the proposed Commercial Planned Development rezoning information that was submitted to the Town on March 30th, 2017, and the Town finds that additional information is required before the application can be reviewed and scheduled for the required public hearings.

Please respond to each sufficiency review comment. If you do not provide the requested supplements or corrections within 60 calendar days of this letter, the Code requires that this application be considered withdrawn. If additional time is needed, the applicant may ask for additional time. Please feel free to contact me if you have any questions.

Sincerely,

COMMUNITY DEVELOPMENT DEPARTMENT

Matthew A. Noble
Principal Planner

DCI17-0001 Sufficiency Comments:

Evidence of Unified Control and Property Ownership: The submitted application includes ownership information for TPI-FMB I, II, III, however the property appraiser lists Grand Resort Ft Myers Beach LLC. The submittal included an exhibit entitled “TPI-FMB Commercial Planned Development” that lists the various ownerships for the parcels involved in the proposed application. Please clarify and revise this table as necessary.

Legal Description and Boundary Survey: The provided description for Parcel No. 3 is not a metes and bounds legal description. Please provide a metes and bounds legal description for parcel No. 3. In addition, the Sketch and Description refers to “Two Parcels” not three. Please revise to refer to three parcels. Staff would also ask the applicant to review the Description for Parcel No. 2 which includes N.19’24’24”W. but appears to be NE in the Sketch. Please revise as necessary.

Master Concept Plan (MCP): Please clearly delineate any proposed replacement public beach accesses. Proposed dedications, if any, including public beach access, boat ramps, park or recreation areas, open space, or other easements must be depicted on the MCP (34-212(4)(1)). The current proposed MCP makes no mention of public access way placement and the number of public access ways to be placed on site. Please show on the MCP where the public will be able to access the beach when the proposed development is complete.

Staff notes that Canal Street is a Town right of way and that an application to vacate the street is necessary to utilize this property. No vacation application has been submitted. Similarly, a replat of the subject property is also required.

Please provide an exhibit that clearly delineates the location and size of any areas proposed to be utilized for consumption on premises (COP). Please include an exhibit that includes proposed hours of operation for the COP use areas.

Please include the 1978 and 1991 Coastal Construction Control Lines on the MCP. Will any development phases be utilized? The MCP must include the maximum height of any proposed buildings or structures using the Town’s Land Development Code’s (LDC) means of measuring height (see 34-631)(34-212(4)(b)).

The MCP does not show any buffering around the building or parking area. Per Fort Myers Beach LDC Sec. 34-1745, some land uses are required to provide perimeter buffers. Per Sec. 34-2015(2) all parking lots must be designed in accordance with the buffer, landscaping, drainage and other requirements of this code. In LDC section 10-416(d)(2) buffer requirements for a parking lot adjacent to a right-of-way are a minimum buffer width of 15 feet, a minimum number of 5 trees per 100 linear feet, and a shrub hedge (Type D).

Sec. 10-416(b)(1)(b) states that perimeter building edge buffering is required for all newly built commercial developments in the downtown area of Fort Myers Beach. Building edge planting must be installed and maintained along at least 50 percent of the length of all walls that face on-site parking areas with more than 25 parking spaces. The planting areas must be at least 5 feet wide and may consist of landscape areas or adequately drained raised planters or planter boxes. Please adjust the MCP accordingly to reflect these requirements or seek a Deviation.

Drainage and Stormwater Management Plan: The proposed plans currently do not show any drainage and/or stormwater plans to be built along with the described structures. Per LDC Sec. 34-212(4)(i), the general location of stormwater management areas must be shown on the proposed MCP. Please revise the MCP showing the location of proposed curbs and gutters, inlets, culverts, swales, ditches, water control structures, water retention or detention areas, and other drainage or water management structures or facilities.

Property Development Regulations: Property Development Regulations specific to the proposal were not submitted as part of the March 30th rezoning application. The application states that the Downtown zoning district was utilized in the development of the MCP. Please provide an exhibit that contains the property development regulations that the applicant will use for the proposed property development.

Development Parameters: The only development parameters that the application contained were located in the Traffic Impact Statement as well as on the tables on the MCP. Please provide an exhibit that clearly specifies the development that is being proposed. This exhibit should contain the number of units proposed for each use, i.e. hotel or motel units, gross square feet of types of commercial uses, and maximum floor area ratios (34-212(4)).

Parking Plan and Parking Requirements: A parking plan is required for all uses, except single-family and two-family dwelling units. A parking plan has not been submitted as part of the proposed rezoning, please provide a parking plan. The parking plan must include calculations based on the LDC's required parking spaces (34-2020). The applicant has raised the issue of "Parking Location" and the code section (34-676(b)) requirement that parking be placed in rear yards and that the development is proposing parking underneath the hotel building. Section 34-676(b)(2) provides that off-street parking may be provided under commercial or mixed-use buildings provided that the parking area is acceptably screened.

Signage: In reviewing the proposed design plans there is an insufficient amount of information to complete a review of the plans. In exhibit "Sign Locations" proposed signs D, A, and G appear as if they cross into the EC District. Please show the 1978 Coastal Construction Control Line in the proposed placement of the signs to show if placement occurs in the EC District per Sec.6-366 (b) and Sec. 30-93(c)(1) of the LDC.

Lighting: In order to make a determination of the proposal's code consistency with lighting on and adjacent to the beach, a lighting plan must be submitted to demonstrate consistency with the Town's regulations for sea turtles. Please create such a lighting plan and submit to the Town for review per LDC Sec. 14-76(2). The location, number, wattage, elevation, orientation, and all types of proposed exterior artificial light sources must be included on the lighting plan.

Dune Walkovers: The current version of the MCP does not show any dune walk over placement for the new proposed public walkthrough areas which cut into the dune landscape. Please show dune walkover placement in the MCP per LDC Sec. 6-366(d). All walkovers must meet these criteria in addition to state approval: (1) Walkovers must be placed perpendicular to the dune or no more than 30 degrees from perpendicular. New walkovers cannot be placed closer than 150 feet to the nearest walkover. (2) Walkovers must be supported on posts embedded to a sufficient depth to provide structural stability. These posts may not be encased in concrete. (3) Walkovers cannot exceed four feet in width when serving single-family homes or six feet in width otherwise. (4) Walkovers must be elevated at least two feet above the highest point of the dune and dune vegetation and must extend to the seaward toe of any existing dune and dune vegetation. (5) Walkovers must be constructed in a manner that minimizes short-term disturbance of the dune system. Any dune vegetation destroyed during construction must be replaced with similar native vegetation that is suitable for beach and dune stabilization.

The proposed design plans should be modified. The "Illustrative Site Plan", The "Perspective Site Plan", and "Scene Six-View from Beach toward Social Club" show planted palm trees within the natural dune line. Please remove them and replace with native Florida dune vegetation per LDC Sec. 14-3(a)(2). Examples of appropriate vegetation include, but are not limited to, sea oats, railroad vine, panic grass, beach elder, and dune sunflower.

Pedestrian Oriented Development: The proposed plan currently does not meet the Old San Carlos Blvd. – Crescent St. Master Plan in that the predominant usage for the street level area on Crescent Street is parking. The proposed plan provides for no street level activity along Crescent Street. Please consider adding street level commercial or hotel ancillary uses in the AE zoned area of Crescent Street which would act like liner buildings in front of the proposed parking area.

Utilities: No information has been provided by the applicant from the utility providers as to the availability (capacity) of utilities to serve the proposed project. Per LDC Sec. 10-154(7)(j) a statement indicating the proposed method intended to provide water, sewer, electricity, telephone, refuse collection, and street lighting, including but not limited to, a plan showing the location and size of all water mains and services, fire hydrants, sewer mains and services, and pumping stations, together with plan and profile drawings showing the depth of utility lines and points where utility lines cross one another or cross storm drain or water management facilities. Please provide letters of availability from the utility service providers.

Lee Tran/Mass Transit/Lee County: The project narrative provides that “The proposed site design also includes a trolley pull off near the intersection of Fifth and Crescent Streets and under the proposed hotel building should Lee Tran desire to add a stop in this location.” Has the applicant coordinated with Lee Tran?

The application proposes an overhead pedestrian crossing of Estero Boulevard. Has the applicant coordinated this aspect of the proposed project with Lee County Department of Transportation (DOT)? Please provide evidence of coordination with DOT and Lee Tran such as review memorandums.

Schedule of Deviations: Deviation #1 does not provide number of hotel units but only “SF of guest units.” Staff notes that the subject property does not meet the location that is eligible for exceptional circumstances as described in the comprehensive plan (Policy 4-C-6). Please revise the deviation to refer to 34-1803(a)(1).

The justification provided for Deviation #2 has not convinced staff of the need for this requested Deviation.

Traffic Impact Statement:

- 1) In the Trip Generation forecasts in Appendix C, for the Pre-Demolition scenario, it is unclear why there are two separate lines for the same Land Use 826 – these sizes should be combined into a single line item. For the Build Per Code scenario, it is unclear why there are two separate retail uses, especially since this is a conceptual scenario. In general, Land Use 820 is used for large retail areas, such as malls or big-box general retailers. For this site, Land Use 826 Specialty Retail, would be more appropriate for all general retail uses on the site for all three scenarios.
- 2) The report applies reductions to trip generation forecasts based on foot and bicycle traffic, but does not explain how these percentages were arrived at. Additionally, the reductions applied to the Proposed Development (55% during AM and PM) are higher than the reductions applied to the Pre-Demolition and Build Per Code (47% AM; 46% PM) conditions.
- 3) The internal capture calculations were not included – just the rate information available in Trip Generation Handbook, 3rd Edition. Given the higher internal capture rates for the Proposed Development, it is preferable for the calculation spreadsheets to be included in the report.
- 4) The Build Per Code scenario should be reviewed for feasibility – it has a very large retail size that may technically fit on the site, but would not allow room for other necessities, such as parking, open space requirements or setbacks. Trip generation comparisons with this scenario should be considered cautiously because of this, and the

comparison between the Pre-Demolition and Proposed Development scenarios should be looked at closer because they are reasonable expectations for the site.

- 5) The report did not state the basis for the proposed trip generation (i.e. based on existing traffic patterns), but just provided a statement as to how the trips were distributed.
- 6) The report focuses more on the trip generation comparison between the Build Per Code and Proposed Development scenarios, citing the reduction of trips the Proposed Development would have. The difference in trips is not as significant when comparing to the Pre-Demolition scenario, and the Proposed Development is forecast to generate significantly more trips during the AM peak hour.
- 7) It appears that only PM peak hour operational analyses were performed. Typically both AM and PM operational analyses are performed, especially when there is a significant increase in forecast traffic during the AM peak hour.

Attachment B
Trip Generation Spreadsheets
(with Internal Capture Calculations)

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EXHIBIT 3 - EXPANDED

INDEPENDENT RESORT

PRE-DEMOLITION DEVELOPMENT PROGRAM - TOTAL PROJECT

TRIP GENERATION⁽¹⁾

Hotel	LUC	SIZE	AM PEAK HOUR				Destination			Origin	PM PEAK HOUR				Destination			Origin	DAILY				Destination			Origin														
			In	Out	Total	%	To - From	From - To	To - From		From - To	In	Out	Total	%	To - From	From - To		In	Out	Total	%	To - From	From - To																
			Unbalanced ICR							Unbalanced ICR							Unbalanced ICR																							
Beachside Resort Hotel	330	66 Occupied Rooms	22	9	31	⁽⁵⁾					14	18	32	⁽⁶⁾						206	206	412	⁽⁷⁾																	
Trips			22	9	31						14	18	32							206	206	412																		
Internal Capture ⁽²⁾			0	1	1	3.2%	0%	14%			2	3	5	16%	17%	16%				35	33	68	17%	17%	16%															
Non-Auto Trip Reduction ⁽³⁾			12	5	17	55%					8	10	18	55%						113	113	226	55%																	
Pass-by - Automobile trips ⁽⁴⁾			0	0	0	0%					0	0	0	0%						0	0	0	0%																	
External			10	3	13						4	5	9							58	60	118																		
Retail																																								
Bayside Retail	820	24.2 Gross Leasable Area 1000 SF	41	25	66	⁽⁸⁾					111	121	232	⁽⁸⁾						1,350	1,350	2,700	⁽⁸⁾																	
Bayside Specialty Retail	826	22.45 Gross Leasable Area 1000 SF	8	8	16	⁽⁹⁾					33	42	75	⁽¹⁰⁾						499	499	998	⁽¹⁰⁾																	
Beachside Specialty Retail	826	8.3 Gross Leasable Area 1000 SF	3	3	6	⁽⁹⁾					18	23	41	⁽¹⁰⁾						197	196	393	⁽¹⁰⁾																	
Trips			52	36	88						162	186	348							2046	2045	4,091																		
Internal Capture ⁽²⁾			1	0	1	1.1%	4%	0%			3	2	5	1.4%	2%	5%				33	35	68	1.7%	2%	5%															
Non-Auto Trip Reduction ⁽³⁾			23	16	39	45%					73	84	157	45%						921	920	1,841	45%																	
Pass-by - Automobile trips ⁽⁴⁾			5	4	9	10%					16	19	35	10%						205	205	410	10%																	
External			28	20	48						86	100	186							1,092	1,090	2,182																		
			In	Out	Total	%					In	Out	Total	%						In	Out	Total	%																	
TOTAL			74	45	119						176	204	380							2,252	2,251	4,503																		
INTERNAL CAPTURE ⁽²⁾			1	1	2	2%					5	5	10	3%						68	68	136	3%																	
NON-AUTO TRIP REDUCTION ⁽³⁾			35	21	56	47%					81	94	175	46%						1,034	1,033	2,067	46%																	
DRIVEWAY VOLUME			38	23	61						90	105	195							1,150	1,150	2,300																		
PASS-BY - AUTOMOBILE TRIPS ⁽⁴⁾			5	4	9	8%					16	19	35	9%						205	205	410	9%																	
NET NEW EXTERNAL AUTOMOBILE TRIPS			33	19	52						74	86	160							945	945	1,890																		

Footnotes:

- (1) Trip generation estimate based on ITE Trip Generation (9th Edition) using Trafficware software.
- (2) ITE, Trip Generation Handbook - An ITE Proposed Recommended Practice (3rd Edition), Chapter 6 - Trip Generation for Mixed-Use Development.
- (3) Reduction reflects pedestrian and bicycle trips to / from immediate vicinity.
- (4) ITE average retail pass-by rate capped at 10% for retail and specialty retail uses.
- (5) ITE LUC 330 Resort Hotel fitted curve equation applied.
- (6) ITE LUC 330 Resort Hotel fitted curve not provided by ITE - Average rate applied.
- (7) ITE does not offer weekday trip generation rates for LUC 330 Resort Hotel. A custom rate has been developed based on the PM peak hour and weekday rates for LUC 310 Hotel.
 - a) The PM peak hour rate for LUC 310 Hotel is 0.70 trips per occupied room.
 - b) The PM peak hour rate for LUC 330 Resort Hotel is 0.49 per occupied room.
 - c) The PM peak hour rate for LUC 330 Resort Hotel is 70% of the PM peak hour rate for LUC 310 Hotel.
 - d) The weekday trip generation rate for LUC 330 Resort Hotel is derived by multiplying the weekday trip generation rate for LUC 310 Hotel (8.92) by 0.70.
 - e) The resultant weekday trip generation rate for LUC 330 Resort Hotel is 6.24.
- (8) ITE LUC 820 Shopping Center fitted curve equation applied.
- (9) ITE does not offer AM peak hour trip generation rates for LUC 826 Specialty Retail. A custom rate has been developed based on the AM and PM peak hour rates for LUC 820 Shopping Center.
 - a) The PM peak hour rate for LUC 820 Shopping Center is 3.71 trips per 1,000 GSF.
 - b) The PM peak hour rate for LUC 826 Specialty Retail is 2.71 trips per 1,000 GSF.
 - c) The PM peak hour rate for LUC 826 Specialty Retail is 73% of the PM peak hour rate for LUC 810 Shopping Center.
 - d) The AM peak hour trip generation rate for LUC 826 Specialty Retail is derived by multiplying the AM peak hour trip generation rate for LUC 820 Shopping Center (0.96) by 0.73.
 - e) The resultant AM peak hour trip generation rate for LUC 826 Specialty Retail is 0.70.
- (10) ITE LUC 826 Specialty Retail fitted curve equation applied.

EXHIBIT 4 - EXPANDED

INDEPENDENT RESORT

BUILD PER CODE DEVELOPMENT PROGRAM - TOTAL PROJECT

TRIP GENERATION⁽¹⁾

Hotel	LUC	SIZE	AM PEAK HOUR				Destination To - From	Origin From - To	PM PEAK HOUR				Destination To - From	Origin From - To	DAILY			Destination To - From	Origin From - To	
			In	Out	Total	%			In	Out	Total	%			In	Out	Total			%
Bayside Resort Hotel	330	48 Occupied Rooms	17	7	24	⁽⁵⁾			10	14	24	⁽⁶⁾			150	150	300	⁽⁷⁾		
Beachside Resort Hotel	330	70 Occupied Rooms	23	9	32	⁽⁵⁾			15	19	34	⁽⁶⁾			219	218	437	⁽⁷⁾		
Trips			40	16	56				25	33	58			369	368	737				
Internal Capture ⁽²⁾			0	2	2	3.6%	0%	14%	4	5	9	16%	17%	16%	63	59	122	17%	17%	16%
Non-Auto Trip Reduction ⁽³⁾			22	9	31	55%			14	18	32	55%			203	202	405	55%		
Pass-by - Automobile trips ⁽⁴⁾			0	0	0	0%			0	0	0	0%			0	0	0	0%		
External			18	5	23				7	10	17			103	107	210				
Retail																				
Bayside Retail	820	156.71 Gross Leasable Area 1000 SF	127	78	205	⁽⁸⁾			389	421	810	⁽⁸⁾			4,547	4,547	9,094	⁽⁸⁾		
Beachside Specialty Retail	826	67.16 Gross Leasable Area 1000 SF	23	24	47	⁽⁹⁾			81	102	183	⁽¹⁰⁾			1,456	1,455	2,911	⁽¹⁰⁾		
Trips			150	102	252				470	523	993			6003	6002	12,005				
Internal Capture ⁽²⁾			2	0	2	0.8%	4%	0%	5	4	9	0.9%	2%	5%	59	63	122	1.0%	2%	5%
Non-Auto Trip Reduction ⁽³⁾			68	46	114	45%			212	235	447	45%			2,701	2,701	5,402	45%		
Pass-by - Automobile trips ⁽⁴⁾			15	10	25	10%			47	52	99	10%			600	600	1,200	10%		
External			80	56	136				253	284	537			3,243	3,238	6,481				
TOTAL			<u>190</u>	<u>118</u>	<u>308</u>				<u>495</u>	<u>556</u>	<u>1,051</u>			<u>6,372</u>	<u>6,370</u>	<u>12,742</u>				
INTERNAL CAPTURE ⁽²⁾			2	2	4	1%			9	9	18	2%		122	122	244	2%			
NON-AUTO TRIP REDUCTION ⁽³⁾			90	55	145	47%			226	253	479	46%		2,904	2,903	5,807	46%			
DRIVEWAY VOLUME			<u>98</u>	<u>61</u>	<u>159</u>				<u>260</u>	<u>294</u>	<u>554</u>			<u>3,346</u>	<u>3,345</u>	<u>6,691</u>				
PASS-BY - AUTOMOBILE TRIPS ⁽⁴⁾			15	10	25	8%			47	52	99	9%		600	600	1,200	9%			
NET NEW EXTERNAL AUTOMOBILE TRIPS			<u>83</u>	<u>51</u>	<u>134</u>				<u>213</u>	<u>242</u>	<u>455</u>			<u>2,746</u>	<u>2,745</u>	<u>5,491</u>				

Footnotes:

- (1) Trip generation estimate based on ITE Trip Generation (9th Edition) using Trafficware software.
- (2) ITE, Trip Generation Handbook - An ITE Proposed Recommended Practice (3rd Edition). Chapter 6 - Trip Generation for Mixed-Use Development.
- (3) Reduction reflects pedestrian and bicycle trips to / from immediate vicinity.
- (4) ITE average retail pass-by rate capped at 10% for retail and specialty retail uses.
- (5) ITE LUC 330 Resort Hotel fitted curve equation applied.
- (6) ITE LUC 330 Resort Hotel fitted curve not provided by ITE - Average rate applied.
- (7) ITE does not offer weekday trip generation rates for LUC 330 Resort Hotel. A custom rate has been developed based on the PM peak hour and weekday rates for LUC 310 Hotel.
 - a) The PM peak hour rate for LUC 310 Hotel is 0.70 trips per occupied room.
 - b) The PM peak hour rate for LUC 330 Resort Hotel is 0.49 per occupied room.
 - c) The PM peak hour rate for LUC 330 Resort Hotel is 70% of the PM peak hour rate for LUC 310 Hotel.
 - d) The weekday trip generation rate for LUC 330 Resort Hotel is derived by multiplying the weekday trip generation rate for LUC 310 Hotel (8.92) by 0.70.
 - e) The resultant weekday trip generation rate for LUC 330 Resort Hotel is 6.24.
- (8) ITE LUC 820 Shopping Center fitted curve equation applied.
- (9) ITE does not offer AM peak hour trip generation rates for LUC 826 Specialty Retail. A custom rate has been developed based on the AM and PM peak hour rates for LUC 820 Shopping Center.
 - a) The PM peak hour rate for LUC 820 Shopping Center is 3.71 trips per 1,000 GSF.
 - b) The PM peak hour rate for LUC 826 Specialty Retail is 2.71 trips per 1,000 GSF.
 - c) The PM peak hour rate for LUC 826 Specialty Retail is 73% of the PM peak hour rate for LUC 810 Shopping Center.
 - d) The AM peak hour trip generation rate for LUC 826 Specialty Retail is derived by multiplying the AM peak hour trip generation rate for LUC 820 Shopping Center (0.96) by 0.73.
 - e) The resultant AM peak hour trip generation rate for LUC 826 Specialty Retail is 0.70.
- (10) ITE LUC 826 Specialty Retail fitted curve equation applied.

EXHIBIT 5 - EXPANDED
INDEPENDENT RESORT
PROPOSED DEVELOPMENT PROGRAM - TOTAL PROJECT
TRIP GENERATION⁽¹⁾

Hotel	LUC	SIZE	AM PEAK HOUR				Destination To - From	Origin From - To	PM PEAK HOUR				Destination To - From	Origin From - To	DAILY					
			In	Out	Total	%			In	Out	Total	%			In	Out	Total	%		
Hotel																				
Bayside Resort Hotel	330	290 Occupied Rooms	78	31	109 ⁽⁵⁾			61	81	142 ⁽⁶⁾			905	905	1,810 ⁽⁷⁾					
Trips			78	31	109			61	81	142			905	905	1,810					
Internal Capture ⁽²⁾			3	3	6	5.5%		6	7	13	9.2%		98	69	167	9.2%				
Restaurant			3	3	6	5.5%	4%	9%	6	7	13	9.2%	71%	68%	96	68	164	9.1%	71%	68%
Retail			0	0	0	0%	0%	14%	0	0	0	0.0%	17%	16%	2	1	3	0.2%	17%	16%
Non-Auto Trip Reduction ⁽³⁾			43	17	60	55%			34	45	79	55%			498	498	996	55%		
Pass-by - Automobile trips ⁽⁴⁾			0	0	0	0%			0	0	0	0%			0	0	0	0%		
External			32	11	43				21	29	50			311	339	650				
Restaurant																				
Beachside Restaurant	932	19.75 Gross Floor Area 1000 SF	117	96	213 ⁽⁸⁾			117	78	195 ⁽⁸⁾			1,256	1,255	2,511 ⁽⁸⁾					
Beachside Bar	925	1.96 Gross Floor Area 1000 SF	0	0	0 ⁽⁹⁾			15	7	22 ⁽¹⁰⁾			111	111	222 ⁽¹¹⁾					
Trips			117	96	213			132	85	217			1367	1366	2,733					
Internal Capture ⁽²⁾			3	3	6	2.8%		8	7	15	6.9%		80	116	196	7.2%				
Hotel			3	3	6	2.8%	6%	3%	7	6	13	6.0%	5%	7%	68	96	164	6.0%	5%	7%
Retail			0	0	0	0%	50%	14%	1	1	2	0.9%	29%	41%	12	20	32	1.2%	29%	41%
Non-Auto Trip Reduction ⁽³⁾			64	53	117	55%			73	47	120	55%			752	751	1,503	55%		
Pass-by - Automobile trips ⁽⁴⁾			0	0	0	0%			0	0	0	0%			0	0	0	0%		
External			50	40	90				52	32	84			547	519	1,066				
Retail																				
Bayside Specialty Retail	826	1.8 Gross Leasable Area 1000 SF	0	1	1 ⁽¹²⁾			2	3	5 ⁽¹³⁾			40	40	80 ⁽¹³⁾					
Internal Capture ⁽²⁾			0	1	1			2	3	5			40	40	80					
Hotel			0	0	0	0%			1	1	2	40%			21	14	35	44%		
Restaurant			0	0	0	0%	4%	0%	0	0	0	0%	2%	5%	1	2	3	3.8%	2%	5%
Retail			0	0	0	0%	8%	13%	1	1	2	40%	50%	29%	20	12	32	40.0%	50%	29%
Non-Auto Trip Reduction ⁽³⁾			0	0	0	45%			1	1	2	45%			18	18	36	45%		
Pass-by - Automobile trips ⁽⁴⁾			0	0	0	0%			0	0	0	0%			0	0	0	0%		
External			0	1	1				1	2	3			21	20	41				
TOTAL			195	128	323			195	169	364			2,312	2,311	4,623					
INTERNAL CAPTURE ⁽²⁾			6	6	12	4%		15	15	30	8%		199	199	398	9%				
NON-AUTO TRIP REDUCTION ⁽³⁾			107	70	177	55%		108	93	201	55%		1,268	1,267	2,535	55%				
DRIVEWAY VOLUME			82	52	134			72	61	133			845	845	1,690					
PASS-BY - AUTOMOBILE TRIPS ⁽⁴⁾			0	0	0	0%		0	0	0	0%		0	0	0	0%				
NET NEW EXTERNAL AUTOMOBILE TRIPS			82	52	134			72	61	133			845	845	1,690					

Footnotes:

- (1) Trip generation estimate based on ITE Trip Generation (9th Edition) using Trafficware software.
- (2) ITE, Trip Generation Handbook - An ITE Proposed Recommended Practice (3rd Edition), Chapter 6 - Trip Generation for Mixed-Use Development.
- (3) Reduction reflects pedestrian and bicycle trips to / from immediate vicinity.
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 - a) The PM peak hour rate for LUC 310 Hotel is 0.70 trips per occupied room.
 - b) The PM peak hour rate for LUC 330 Resort Hotel is 0.49 per occupied room.
 - c) The PM peak hour rate for LUC 330 Resort Hotel is 70% of the PM peak hour rate for LUC 310 Hotel.
 - d) The weekday trip generation rate for LUC 330 Resort Hotel is derived by multiplying the weekday trip generation rate for LUC 310 Hotel (8.92) by 0.70.
 - e) The resultant weekday trip generation rate for LUC 330 Resort Hotel is 6.24.
- (8) ITE LUC 932 High-Turnover (Sit-Down) Restaurant fitted curve not provided by ITE - Average rate applied.
- (9) ITE does not offer AM peak hour trip generation rates for LUC 925 Drinking Place. An AM peak hour trip generation rate of 0 is assumed for LUC 925 Drinking Place.
- (10) ITE LUC 926 Drinking Place fitted curve not provided by ITE - Average rate applied.
- (11) ITE does not offer weekday trip generation rates for LUC 925 Drinking Place. A weekday trip generation rate of 113.4 is used (assumes PM peak hour rate is 10% of the weekday).
- (12) ITE does not offer AM peak hour trip generation rates for LUC 826 Specialty Retail. A custom rate has been developed based on the AM and PM peak hour rates for LUC 820 Shopping Center.
 - a) The PM peak hour rate for LUC 820 Shopping Center is 3.71 trips per 1,000 GSF.
 - b) The PM peak hour rate for LUC 826 Specialty Retail is 2.71 trips per 1,000 GSF.
 - c) The PM peak hour rate for LUC 826 Specialty Retail is 73% of the PM peak hour rate for LUC 810 Shopping Center.
 - d) The AM peak hour trip generation rate for LUC 826 Specialty Retail is derived by multiplying the AM peak hour trip generation rate for LUC 820 Shopping Center (0.96) by 0.73.
 - e) The resultant AM peak hour trip generation rate for LUC 826 Specialty Retail is 0.70.
- (13) ITE LUC 826 Specialty Retail fitted curve equation applied.

Attachment C

Existing Traffic Distribution
On Road Network Under Study

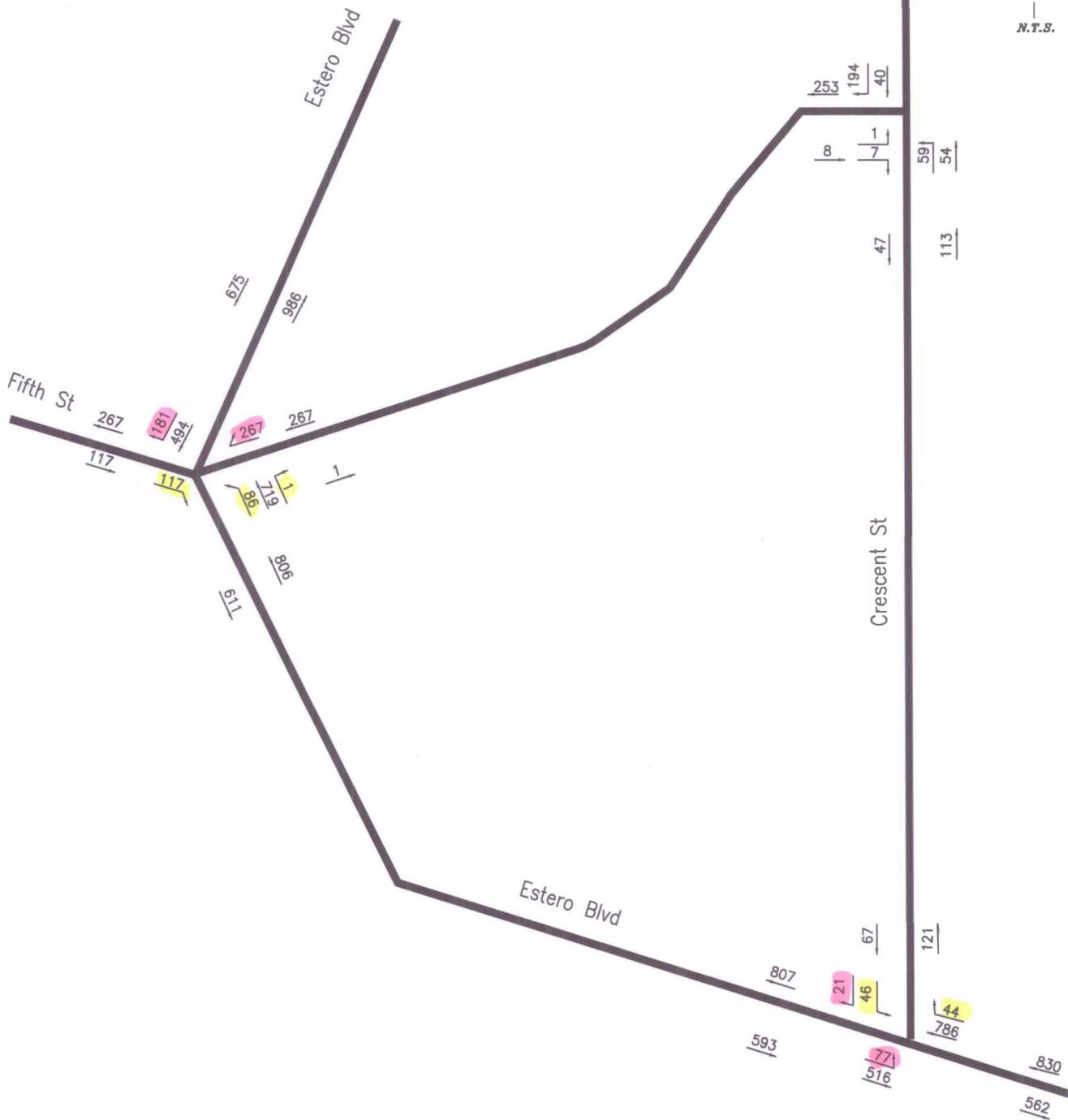
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E-MAIL: dpafm@dplummer.com





Trips entering and exiting study road network - From Estero Blvd. north = 546 trips - 65%

Trips entering and exiting study road network - From Estero Blvd. south = 294 trips - 35%



INDEPENDENT RESORT

EXISTING 2016
TRAFFIC VOLUMES
PM PEAK HOUR

16537/32A/0217

8

DAVID PLUMMER & ASSOCIATES, INC.

TRANSPORTATION • CIVIL • STRUCTURAL • ENVIRONMENTAL

Memorandum

To: Tina Ekblad
From: Deven Long
Date: November 10, 2017
RE: **Independent Resort Rezoning Traffic Impact Statement - #16537
Response to Town of Fort Myers Beach Transportation Comments**
cc: John Hafner, Adam Olson, Chris Flagg, Tom Torgerson, Amanda Brock, Russell Schropp, Stephen Leung

DPA is in receipt of Town of Fort Myers Beach Development Review comments for the above referenced Project provided by Tetra Tech (Attachment A) and Spikowski Planning Associates (Attachment B). DPA would like to offer the following response to the review comments.

Tetra Tech Review Comments

- 1. The response provided still does not adequately explain why Land Use 820 would be acceptable for some portions of the site and Land Use 826 would be acceptable for other portions under the various scenarios. Given the average sizes of developments utilized by ITE to develop trip generation rates, Land Use 826 would be more appropriate for the entire retail portion of the pre-demolition and proposed development scenarios.**

Response

For the Pre-Demolition Development, the bayside property was characterized by a traditional shopping plaza that, in the opinion of the applicant, reflects the ITE description of Shopping Center (LUC 820) more appropriately than Specialty Retail (LUC 826). Similarly, the beachside retail uses reflect the ITE description of Specialty Retail (LUC 826) more appropriately than Shopping Center (LUC 820). In addition, using a mix of both land uses avoids the extremes of assuming 100% general retail (high trip generation) or 100% specialty retail (low trip generation).

For the Build Per Code Development, a mix of the two retail uses was considered more appropriate than assuming 100% general retail or 100% specialty retail.

It was agreed during the 9/26/17 meeting with Town Staff and in subsequent email correspondence

that assuming a mix of specialty and general retail uses is appropriate for the Pre-Demolition and Build Per Code Developments.

- 2. There is no dispute that a portion of the visitors to the site would arrive by either foot or bicycle. However, an explanation or basis is still not provided as to how these rates were selected, or why they would be different between the various scenarios, especially since no pass-by reductions are allowed for Land Use 826. Again, to provide a consistent, objective comparison between the various speculative scenarios, consistent methodology should be used for all evaluations. A basis for these rates should also be provided and documented in the report – as they are provided currently, they appear arbitrary by nature.**

Response

Consistent methodology and assumptions were utilized when referencing the combined non-auto and pass-by trip reductions. For the Per-Demolition, Build Per Code, and Proposed Development scenarios, the total combined non-auto and pass-by trip reduction rate was 55% for the overall trip generation during all time periods.

Modifications for trip reduction rates were performed to accommodate the supplemental Existing (Occupied) Development scenario for two reasons.

1. Public beach parking trip generation is 100% vehicular trips by nature and cannot benefit from a non-auto trip reduction.
2. It was necessary to reduce non-auto trip reduction rates for the beachside bar (PM and weekday time periods). A net reduction rate of 55% results in negative trips for this particular land use, which is not appropriate.

- 3. Internal capture calculations should be revised based on modifications to trip generation forecasts and bike\pedestrian reductions discussed above.**

Response

Internal capture calculations have been revised in response to changes in the Build Per Code Development parameters and are included in the revised report dated November 10, 2017. Internal capture calculations are also included for the supplemental Existing (Occupied) Development scenario.

DPA would like to note that the internal capture calculations are performed prior to non-auto trip reductions and, therefore, are an independent calculation.

- 4. Feasible developments should be considered for all development scenarios – otherwise there is no point in performing the comparison, as the results do not provide an objective basis of comparison.**

Response

As agreed during the 9/26/17 meeting with Town Staff, the Build Per Code Development has been revised to reflect reasonably feasible parameters that would better allow room for other necessities, such as parking, open space requirements, and setbacks.

- 5. The response is sufficient – adequate information on trip distribution based on existing traffic patterns is provided.**

Response

This comment is acknowledged.

- 6. The comparison between trip generation forecasts for the various scenarios should be revised in conjunction with revisions to trip generation forecasts and trip reductions, as appropriate.**

Response

Trip generation comparisons and subsequent analysis has been revised in conjunction with revisions to trip generation forecasts and trip reductions. These updates are reflected in the revised report dated 11/10/17.

- 7. The response provided is accepted.**

Response

This comment is acknowledged.

Spikowski Planning Associates Review Comments

- 1. Traffic Impact Statement (TIS):** The technical aspects of the traffic impact statement are being reviewed for the town by the consulting firm Tera Tech; here I would like to add some broader observations.

The LDC requires that a traffic impact statement “survey current and anticipated traffic conditions and public transportation in order to identify potential traffic problems posed by the proposed development.” (LDC 10-286(a)).

The applicant’s TIS addresses many important points, such as expected traffic at each intersection and the development’s expected compliance with the town’s minimum level-of-service standard. The TIS then concludes that this development “will not significantly or adversely impact the Time Square roadway circulation system” (without defining ‘significantly’ or ‘adversely’). In support of its conclusion, the TIS contains analyses showing that the proposed development will generate fewer vehicle trips than two specific scenarios: 17% fewer trips than “Pre-Demolition Development” and 71% fewer trips than “Build Per Code Development.”

There are several problems with this approach. Foremost, the TIS does not contain the required analysis of “current and anticipated traffic conditions,” which would portray the traffic impacts of the proposed development when it is added to the existing traffic on the street network. Instead, the proposed development is compared to two specific scenarios (neither of which are “current conditions”).

Response:

Since the Town’s LDC only provides general guidance for requirements regarding traffic impact statements, the adopted methodology relies on using Lee County standards to assess the traffic impacts of the Proposed Development. This was agreed upon during the methodology meeting held with DPA and Town Staff.

Traffic Study Guidelines for Planned Development Rezoning (AC 13-17) is the governing code outlining the requirements for a zoning traffic impact statement in Lee County. Per AC 13-17, the minimum analysis required is reflective of the development allowed by the proposed zoning. However, standard practice accepted by Lee County is to perform analysis for both the current zoning (Build Per Code Development) and the proposed zoning (Proposed Development). These two scenarios, which are reflected in the ZTIS, are typically the minimum requirements for rezoning applications in Lee County. These two scenarios provide the critical points of comparison to demonstrate the traffic impacts of a proposed rezoning versus the traffic impacts allowed under the current zoning.

Per AC 13-17, an impact is considered significant if Project volumes exceed 10% of the LOS "C"

service volumes for a given roadway. An impact is considered adverse if traffic conditions with Project volumes exceed the adopted LOS standard. In the revised report, the conclusion remains the same; the Proposed Development will not significantly or adversely impact the Times Square roadway circulation system (based on Lee County Standards)

Current traffic conditions were surveyed as part of existing turning movement counts which were adjusted to reflect peak season conditions. Furthermore, a projected growth rate was applied to the existing volumes to develop future background volumes without any development located on the subject property. Project traffic associated with the Pre-Demolition, Build Per Code, and Proposed Development scenarios were then added to future background volumes to assess the associated traffic impacts. These items were included in the original report.

To address the request made by the reviewer during the 9/26/17 meeting and in subsequent email correspondence, supplemental analysis has been performed to reflect the Existing (Occupied) Development. This analysis includes the trip generation of the Existing (Occupied) Development, Project traffic volumes, and a comparison to the other development scenarios (see revised report dated 11/10/17).

The first scenario, “Pre-Demolition Development,” includes traffic from existing development on the site (as it should), but also includes traffic from previously existing beach-front hotels and Seafarer’s Mall as they existed before Hurricane Charley. This scenario should not be substituted for current traffic conditions; in the intervening years, Lee County purchased the properties that formerly contained those beach-front hotels and Seafarer’s Mall. The beach properties are now Crescent Beach Family Park; future plans for the Seafarer’s Mall site are still unknown. Traffic that might have been generated from those properties is not relevant to this application.

Response:

The Pre-Demolition provides the historic perspective of Times Square that existed for decades until Hurricane Charley. It allows those familiar with the Pre-Demolition Development to have a sense of scale as compared to the Proposed Development. The Proposed Development will generate less traffic than the Pre-Demolition Development that used to be on the subject property which is a finding that many Town residents will be able to directly relate to and can easily process.

The second scenario, “Build Per Code Development,” is described as development to the “maximum potential level of development on the subject property allowed under current zoning.” This idea of this scenario is intriguing and might be relevant as a supplement to the TIS, but as presented it is extremely misleading - current zoning allows nowhere near the amount of developed assumed for this scenario, as pointed out in Tetra Tech’s review comments. These development levels would not be practical even if the existing CPD zoning

on the bay side were replaced by Downtown zoning. The extensive constraints on developing this site without CPD zoning are demonstrated by several pages of analysis submitted by the applicant in support of Deviation #1. Regrettably, this portion of the TIS succeeds only in generating smoke; it fails to shed light on traffic impacts of the proposed development.

Response

As agreed during the 9/26/17 meeting with Town Staff, the Build Per Code Development has been revised to reflect reasonably feasible parameters (allowed under the current zoning) that would better allow room for other necessities, such as parking, open space requirements, and setbacks.

As stated previously, the current zoning (Build Per Code Development) provides the primary point of comparison to assess traffic impacts associated with proposed rezoning. The main purpose of a zoning TIS is to identify whether or not the proposed zoning causes additional impacts when compared to current zoning. For the Proposed Development, it does not cause additional impacts and produces less traffic than what is technically allowed (in terms of generated traffic) under the current zoning.

The third scenario, analyzed in the TIS is the proposed development, including the 290 rooms in the hotel. This scenario also includes ancillary uses: 23,505 square feet of retail, bars, and restaurants- a fraction of the 117,081 square feet of ancillary resort and commercial space that is proposed in this application. The third scenario also does not include traffic from up to 225 people who will be able to use the beach facility while not guests of the resort. If any of these discrepancies are justifiable, the TIS should explain why.

Response

The ITE description of a resort hotel includes provisions for sleeping accommodations, restaurants, cocktail lounges, retail shops, and guest services. Therefore, the ancillary resort and commercial space cited by the reviewer is accounted for by the ITE land use code for Resort Hotel.

For the purposes of the traffic study, the commercial recreation facility is considered to be a supporting use to the Independent Resort and the beachside restaurant and bar. As a standalone use without the resort, restaurant and bar, and the beach, it would not serve as an attraction. Patrons will be attracted to the facility for the uses already accounted for in the trip generation estimates.

The proposed CPD includes an impressive variety of features that will minimize traffic impacts from the proposed development, including all-valet parking; employee parking off-site; closing existing access points on Estero Boulevard and Crescent Street; a commitment to build sidewalks; extensive on-site resort amenities for guests; and thoughtful accommodations for pedestrians and public transit. Still, the TIS needs to fulfill its basic

purpose of comparing current traffic conditions with anticipated conditions when the development, as proposed, is fully occupied.

Response:

The revised TIS dated 11/10/17 provides all analysis required for a typical zoning TIS (including supplemental analysis) reflective of the adopted methodology and additional requests made by Town Staff and reviewers.

- 2. Roundabout: A roundabout at the foot of the Sky Bridge is not contemplated by this application. If a roundabout were constructed, incoming traffic would be able to turn immediately left on Fifth Street and enter this resort without traveling on Estero Boulevard and then needing to turn left on Crescent Street. The traffic impacts of the report on Estero Boulevard would be greatly reduced with a roundabout.**

Florida DOT may be able to willing to construct this roundabout and may be able to do so within the existing right-of-way, thus reducing travel on Estero Boulevard without any direct involvement from this developer. However, it is also possible that additional right-of-way would be required, for instance a corner of former Ocean Jewels building, which this application proposes to retain and upgrade. In the event, an opportunity would have been lost to determine any such right-of-way needs before upgrades are made to that building.

Response:

The study of a roundabout at the foot of the bridge would be more appropriately addressed by FDOT's San Carlos Boulevard PD&E Study.

Attachment A

Town of Fort Myers Beach Development Review Comments
Tetra Tech

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EXCEEDING
CLIENT
EXPECTATIONS

From: Matt Noble [<mailto:matt@fmbgov.com>]

Sent: Wednesday, August 30, 2017 2:49 PM

To: Tina Ekblad <tekblad@m-da.com>

Cc: Kara Stewart <Kara@fmbgov.com>; Messner, Brett <Brett.Messner@tetrattech.com>; Nelson, Daniel <Danny.Nelson@tetrattech.com>; Bill Spikowski <bill@spikowski.com>

Subject: Missing TetraTech Comments

Good afternoon. TetraTech's comments are below, sorry for the confusion.

Master Concept Plan:

1. No proposed utilities or connections to existing utilities are shown.
2. Please advise, if grading, landscaping, paving, or other applications are performed which would interfere with the existing drainage pattern, a proposed grading plan, including spot elevations, and a stormwater management plan, are required.
3. Tidal water elevations and FFE do not appear to be provided.

Parking Requirements:

4. There does not appear to be any mention of the proposed number of accessible parking spaces. The Americans with Disabilities Act (ADA) may require additional accessible parking spaces be provided. It appears as though there are 362 parking spaces proposed as part of this project, split between multiple facilities. If this were one parking facility, a total of at least 8 accessible parking spaces would need to be provided. But it is imperative that the number of parking spaces required to be accessible is to be calculated separately for each parking facility.

Patty,

Please see below:

1. The response provided still does not adequately explain why Land Use 820 would be acceptable for some portions of the site and Land Use 826 would be acceptable for other portions under the various scenarios. Given the average sizes of developments utilized by ITE to develop trip generation rates, Land Use 826 would be more appropriate for the entire retail portion of the pre-demolition and proposed development scenarios.
2. There is no dispute that a portion of the visitors to the site would arrive by either foot or bicycle. However, an explanation or basis is still not provided as to how these rates were selected, or why they would be different between the various scenarios, especially since no pass-by reductions are allowed for Land Use 826. Again, to provide a consistent, objective comparison between the various speculative scenarios, consistent methodology should be used for all evaluations. A basis for these rates should also be provided and documented in the report – as they are provided currently, they appear arbitrary by nature.
3. Internal capture calculations should be revised based on modifications to trip generation forecasts and bike\pedestrian reductions discussed above.

4. Feasible developments should be considered for all development scenarios – otherwise there is no point in performing the comparison, as the results do not provide an objective basis of comparison.
5. The response is sufficient – adequate information on trip distribution based on existing traffic patterns is provided.
6. The comparison between trip generation forecasts for the various scenarios should be revised in conjunction with revisions to trip generation forecasts and trip reductions, as appropriate.
7. The response provided is accepted.

Matthew A. Noble, AICP
Principal Planner
Town of Fort Myers Beach
(239)765-0202 Ext. 1305
matt@fortmyersbeachfl.gov

Beginning May 3rd: New email address Matt@fmbgov.com. Please add to your contact list and remove previous Matt@fortmyersbeachfl.gov.

Attachment B

Town of Fort Myers Beach Development Review Comments
Spikowski Planning Associates

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EXCEEDING
CLIENT
EXPECTATIONS



Town of Fort Myers Beach

Dennis Boback
Mayor

Tracey Gore
Vice Mayor

Bruce Butcher
Council Member

Anita Cereceda
Council Member

Joanne Shamp
Council Member

Tina M. Ekblad
C/O Morris Depew
2891 Center Pointe Drive, Unit 100
Fort Myers, FL. 33916

August 4, 2017

RE: DCI17-0001 Sufficiency Review

Dear Tina,

Town staff has reviewed the proposed Commercial Planned Development rezoning information that was submitted to the Town on July 12th, 2017, and the Town finds that additional information is required before the application can be reviewed and scheduled for the required public hearings.

Please respond to each sufficiency review comment. If you do not provide the requested supplements or corrections within 60 calendar days of this letter, the Code requires that this application be considered withdrawn. If additional time is needed, the applicant may ask for additional time. Please feel free to contact me if you have any questions.

Sincerely,

COMMUNITY DEVELOPMENT DEPARTMENT

Matthew A. Noble
Principal Planner

POLICY 4-C-4 BUILDING HEIGHTS: The Land Development Code shall limit the height of new buildings under most conditions to two stories above flood elevation (exceptions may include the buildback situations (see Policies 4-D-1 and 4-E-1), and different heights may be applied to officially designated redevelopment areas such as Times Square, Red Coconut/Gulf View Colony, and Villa Santini Plaza). In those few cases where individual parcels of land are so surrounded by tall buildings on lots that are contiguous (or directly across a street) that this two-story height limit would be unreasonable, landowners may seek relief through the planned development rezoning process, which requires a public hearing and notification of adjacent property owners. The town will approve, modify, or deny such requests after evaluating the level of unfairness that would result from the specific circumstances and the degree the specific proposal conforms with all aspects of this comprehensive plan, including its land-use and design policies, pedestrian orientation, and natural resource criteria. Particular attention would be paid to any permanent view corridors to Gulf or Bay waters that could be provided in exchange for allowing a building to be taller than two stories. In each case, the town shall balance the public benefits of the height limit against other public benefits that would result from the specific proposal.

This application should be amended to add one or more new deviation requests that would specify the maximum height in stories and in feet of each building that would exceed the LDC's height limit for this property, and to use the LDC's terminology for counting stories in all diagrams, in narrative justifications for deviations, and on the Master Concept Plan. For instance, the main resort building will contain three full stories that sit on top of an extremely tall ground story of stacked parking; the LDC deems this to be a four-story building (see LDC 34-631(a)(1)). Architectural features above the top story may exceed the height limit measured in feet only if they meet the size limits in 34-631(b)(2). Rooftop decks do not qualify for this special allowance; the "rooftop private event area" shown on sheet C-103 of the Master Concept Plan is presumably a rooftop deck.

TRAFFIC IMPACT STATEMENT (TIS): The technical aspects of the traffic impact statement are being reviewed for the town by the consulting firm Tetra Tech; here I would like to add some broader observations.

The LDC requires that a traffic impact statement "survey current and anticipated traffic conditions and public transportation in order to identify potential traffic problems posed by the proposed development." (LDC 10-286(a)).

The applicant's TIS addresses many important points, such as expected traffic at each intersection and the development's expected compliance with the town's minimum level-of-service standard. The TIS then concludes that this development "will not significantly or adversely impact the Times Square roadway circulation system" (without defining 'significantly' or 'adversely'). In support of its conclusion, the TIS contains analyses showing that the proposed development will generate fewer vehicle trips than two specific scenarios: 17% fewer trips than "Pre-Demolition Development" and 71% fewer trips than "Build Per Code Development."

Ms. Kara Stewart
August 2, 2017
Page 11 of 19

There are several problems with this approach. Foremost, the TIS does not contain the required analysis of “current and anticipated traffic conditions,” which would portray the traffic impacts of the proposed development when it is added to existing traffic on the street network. Instead, the proposed development is compared to two specific scenarios (neither of which are “current conditions”).

The first scenario, “Pre-Demolition Development,” includes traffic from existing development on the site (as it should), but also includes traffic from previously existing beach-front hotels and Seafarer’s Mall as they existed before Hurricane Charley. This scenario should not be substituted for current traffic conditions; in the intervening years, Lee County purchased the properties that formerly contained those beach-front hotels and Seafarer’s Mall. The beach properties are now Crescent Beach Family Park; future plans for the Seafarer’s Mall site are still unknown. Traffic that might have been generated from those properties is not relevant to this application.

The second scenario, “Build Per Code Development,” is described as development to the “maximum potential level of development on the subject property allowed under current zoning.” This idea of this scenario is intriguing and might be relevant as a supplement to the TIS, but as presented it is extremely misleading – current zoning allows nowhere near the amount of development assumed for this scenario, as pointed out in Tetra Tech’s review comments. These development levels would not be practical even if the existing CPD zoning on the bay side were replaced by Downtown zoning. The extensive constraints on developing this site without CPD zoning are demonstrated by several pages of analysis submitted by the applicant in support of Deviation #1. Regrettably, this portion of the TIS succeeds only in generating smoke; it fails to shed any light on traffic impacts of the proposed development.

The third scenario analyzed in the TIS is the proposed development, including the 290 rooms in the hotel. This scenario also include ancillary uses: 23,505 square feet of retail, bars, and restaurants – a fraction of the 117,081 square feet of ancillary resort and commercial space that is proposed in this application. The third scenario also does not include traffic from up to 225 people who will be able to use the beach facility while not guests of the resort. If any of these discrepancies are justifiable, the TIS should explain why.

The proposed CPD includes an impressive variety of features that will minimize traffic impacts from the proposed development, including all-valet parking; employee parking off-site; closing existing access points on Estero Boulevard and Crescent Street; a commitment to build sidewalks; extensive on-site resort amenities for guests; and thoughtful accommodations for pedestrians and public transit. Still, the TIS needs to fulfill its basic purpose of comparing current traffic conditions with anticipated conditions when the development, as proposed, is fully occupied.

ROUNDABOUT: A roundabout at the foot of the Sky Bridge is not contemplated by this application. If a roundabout were constructed, incoming traffic would be able to turn immediately left on Fifth Street and enter this resort without traveling on Estero Boulevard and then needing to turn left on Crescent Street. The traffic impacts of the resort on Estero Boulevard would be greatly reduced with a roundabout.

Florida DOT may be able to willing to construct this roundabout and may be able to do so within the existing right-of-way, thus reducing travel on Estero Boulevard without any direct involvement from this developer. However, it is also possible that additional right-of-way would be required, for instance a corner of the former Ocean Jewels building, which this application proposes to retain and upgrade. In this event, an opportunity would have been lost to determine any such right-of-way needs before upgrades are made to that building.

FLOODPLAIN ISSUES: FEMA's changes to the floodplain maps for Fort Myers Beach in 2008 eroded the town's ability to continue improving its original pedestrian-oriented spine along Estero Boulevard. The most significant change was moving landward the line that separates the VE zones (where new buildings have to be elevated much higher to resist wave velocity) from the AE zones which apply to the rest of the town. In AE zones, it is still possible to build ground-floor retail shops and restaurants, even though they have to be "dry floodproofed." In VE zones, the ground floor of new buildings can be used for parking and storage but little else.

The 2008 changes moved the dividing line from just seaward of Estero Boulevard to just landward. The original FEMA proposal would have moved the line much further landward; the town's formal intervention and engineering input was enough to reduce the amount of land being changed considerably but not enough to keep the north side of Estero Boulevard out of a VE zone.

However, FEMA offers landowners a continuing opportunity to challenge the floodplain boundaries on their land. Given proper engineering justification, FEMA will immediately revise the floodplain maps. Two landowners near the subject property have recently obtained such revisions for their land: 150 Old San Carlos (Winds building) and 1028 Fifth Street (Teeki Hut building). Both properties were removed from the VE zone and placed back into an AE zone. The same logic and data that supported those revisions would seem to support a similar revision that would move the VE zone boundary back to Estero Boulevard in front of this development, which could allow this CPD application to place pedestrian-oriented uses along the sidewalk on the north side of Estero Boulevard, as discussed in the next section.

ESTERO BOULEVARD ISSUES (NORTH SIDE) (including Deviation #3): The front of the main resort complex abuts the sidewalk on the north side of Estero Boulevard. If constructed, the current design would be a significant inhibiting factor for the town's numerous to revitalize the immediate area. Even before Seafarer's Mall was demolished and McDonalds moved out, the north side of this block suffered from the dilapidated Helmerich Plaza, whose driveway and dismal appearance seemed to repel pedestrians. The situation has only gotten worse.

All previous proposals for redeveloping this property included continuous shops on the ground floor along Estero Boulevard. In recent years, the promise of this concept has nearly been extinguished, first due to the change to the FEMA boundaries, and later to the chilly reception to a coastal protection structure that might have loosened FEMA restrictions for the entire Times Square area. The suggestion above about petitioning FEMA to adjust the VE boundary for this site offers reasonable prospects for resurrecting this concept. My suggestion is that any approval of this CPD conditionally authorize ground-level shops and entertainment along the north side of Estero Boulevard and offer the town's support for FEMA map revisions that could make this