

**Traffic Impact Report
and
FDOT Traffic Count**

Mr. William P. Horn
William P. Horn Architects
915 Eaton Street
Key West, Florida 33040

June 9, 2011

Re: Higgs Beach – Traffic Impact Statement

Dear Bill:

Traf Tech Engineering, Inc. has completed the following three tasks associated with the proposed enhancements to Clarence Higgs Beach located in the City of Key West in Monroe County, Florida.

- o Trip Generation
- o Existing Level of Service on Atlantic Boulevard
- o Traffic Safety

Clarence Higgs Beach is a recreational beach located on the Atlantic Ocean along Atlantic Boulevard between Reynolds Street and White Street on the south area of the City of Key West. Figure 1 on the following page depicts the location of the subject recreational beach. The total area designated to Higgs Beach is approximately 15 acres. The beach is bifurcated by Atlantic Boulevard. The sandy beach areas are located on the south side of the roadway as well as a restaurant, a pedestrian walkway, beach tables, parking areas, and other beach amenities. On the north side of Atlantic Boulevard, six asphalt tennis courts, two small parking lots, a playground, a dog park, and an FAA antenna site are found. Volleyball courts are provided on the north and south sides of Atlantic Boulevard. Attachment A contains a site plan depicting the existing conditions on Higgs Beach.

Trip Generation

The trip generation for the existing conditions at Higgs Beach was based on information contained in the Institute of Transportation Engineer’s (ITE) *Trip Generation* manual (8th Edition). According to the subject ITE manual, the most appropriate “land use” category for the subject beach is ITE’s Land Use 415 – Beach Park. Table 1 documents the existing trip generation for Higgs Beach.

TABLE 1 Trip Generation Summary Clarence Higgs Beach – Key West, Florida				
Land Use	Size	Vehicle Trips per Day		
		Weekday	Saturday	Sunday
Beach Park	15 acres	450	1,000	1,030

SOURCE: ITE *Trip Generation Manual* (8th Edition)



TrafTech
ENGINEERING, INC.

BEACH LOCATION MAP

FIGURE 1
Higgs Beach
Key West, Florida

As indicated in Table 1, it is estimated that Higgs Beach is currently generating approximately 450 daily trips on regular weekdays, approximately 1,000 trips per day on Saturdays, and approximately 1,030 daily trips on Sundays.

Since the proposed enhancements to Higgs Beach (refer to Attachment A) consist of improvements to the parking areas, additional pedestrian walkways, open green space, a visitors center, and improved beach amenities, the proposed enhancements to Higgs Beach are not anticipated to increase traffic flow along Atlantic Boulevard or nearby local streets.

The trip generation equations for the existing Higgs Beach, given by ITE, are:

BEACH PARK (Land Use 415)

Weekday Daily Trips

$$T = 29.81 (X)$$

Where T = average weekday vehicle trip ends (vehicle trips per day)

X = size in acres

Saturday Daily Trips

$$T = 66.47 (X)$$

Where T = average Saturday vehicle trip ends (vehicle trips per day)

X = size in acres

Sunday Daily Trips

$$T = 68.52 (X)$$

Where T = average Sunday vehicle trip ends (vehicle trips per day)

X = size in acres

Existing Level of Service on Atlantic Boulevard

According to FDOT records, Atlantic Boulevard near Higgs Beach carries approximately 5,400 vehicles per day (refer to Attachment B). Based on FDOT's *Generalized Annual Average Daily* capacity tables¹, Atlantic Boulevard has a level of service "D" capacity of approximately 10,700 vehicles per day. Therefore, Atlantic Boulevard is currently operating at approximately 50% of its vehicular carrying capacity, which is considered to be excellent. Therefore, the proposed enhancements to Higgs Beach are not anticipated to degrade the operating conditions of Atlantic Boulevard or nearby local streets.

Traffic Safety

As shown in the existing conditions site plan (refer to Attachment A), all parking areas (north and south sides of the roadway) can be accessed from any point along Atlantic Boulevard, which is undesirable from a safety standpoint. Moreover, the driveway that provides access to the small parking lot located west of the tennis courts has restricted

¹ 2009 FDOT Quality/Level of Service Handbook

sight visibility (a vehicle exiting from the subject parking lot cannot see traffic heading south on Reynolds Avenue). This condition is undesirable from a safety standpoint.

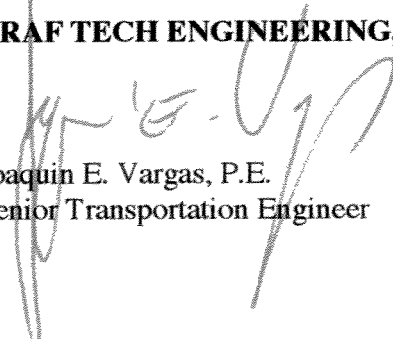
The proposed enhancements to Higgs Beach eliminate the existing safety concerns described above. All parking areas are well defined and are accessed via well-spaced driveways. Driveways located north and south of the roadways either align with each other or are well spaced in order to eliminate undesired conflicts. In short, the proposed beach enhancements provide significant safety improvements to traffic traveling along Atlantic Boulevard or accessing the various parking areas located north or south of the roadway.

In summary, the proposed enhancements to Higgs Beach are not anticipated to increase traffic flow along Atlantic Boulevard, are not anticipated to degrade the operating conditions of Atlantic Boulevard or nearby local streets, and will significantly improve safety to traffic traveling along Atlantic Boulevard or accessing the various parking areas located north or south of the roadway.

Please give me a call if you have any questions relative to the information provided herein.

Sincerely,

TRAF TECH ENGINEERING, INC.



Joaquin E. Vargas, P.E.
Senior Transportation Engineer

ATTACHMENT B
Traffic Counts (Source: FDOT)

County: 90
 Station: 0004
 Description: ATLANTIC BLVD, 200' E WHITE ST
 Start Date: 01/20/2009
 Start Time: 0000

Time	Direction: E					Direction: W					Combined Total
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
0000	9	5	5	5	24	2	2	1	3	8	32
0100	3	3	2	1	9	2	0	2	1	5	14
0200	5	2	4	2	13	0	1	0	2	3	16
0300	3	2	1	3	9	2	1	0	1	4	13
0400	1	2	5	6	14	2	1	2	2	7	21
0500	2	6	6	4	18	2	3	3	6	14	32
0600	3	9	14	17	43	5	8	19	28	60	103
0700	17	20	24	15	76	35	36	35	58	164	240
0800	26	33	28	35	122	67	79	68	65	279	401
0900	32	28	47	44	151	36	39	33	52	160	311
1000	39	39	67	61	206	45	44	36	45	170	376
1100	49	57	38	50	194	32	58	47	34	171	365
1200	35	44	44	61	184	56	45	55	42	198	382
1300	54	56	54	57	221	53	40	53	52	198	419
1400	47	44	61	70	222	48	59	49	39	195	417
1500	66	52	53	66	237	47	33	52	53	185	422
1600	68	72	62	67	269	42	45	41	56	184	453
1700	86	76	55	49	266	45	38	37	44	164	430
1800	38	35	36	32	141	36	45	22	38	141	282
1900	18	36	22	18	94	19	18	12	16	65	159
2000	23	25	23	20	91	18	19	13	12	62	153
2100	14	28	23	21	86	13	12	5	4	34	120
2200	23	12	14	9	58	6	5	2	2	15	73
2300	14	14	3	4	35	8	4	6	2	20	55
24-Hour Totals:	2783					2506					5289

Peak Volume Information

	Direction: E		Direction: W		Combined Directions	
	Hour	Volume	Hour	Volume	Hour	Volume
A.M.	0915	158	0800	279	0800	401
P.M.	1630	291	1330	212	1615	474
Daily	1630	291	0800	279	1615	474

County: 90
 Station: 0004
 Description: ATLANTIC BLVD, 200' E WHITE ST
 Start Date: 01/21/2009
 Start Time: 0000

Time	Direction: E					Direction: W					Combined Total
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
0000	11	4	4	8	27	5	4	3	2	14	41
0100	5	3	3	1	12	1	0	2	1	4	16
0200	2	0	3	2	7	0	0	0	0	0	7
0300	1	1	4	2	8	2	1	0	3	6	14
0400	2	2	5	2	11	2	0	0	2	4	15
0500	1	7	6	6	20	1	4	6	7	18	38
0600	5	7	10	10	32	5	11	21	13	50	82
0700	20	8	18	25	71	32	46	45	58	181	252
0800	37	42	38	35	152	67	64	76	45	252	404
0900	43	30	31	37	141	42	52	43	42	179	320
1000	38	51	53	45	187	35	38	46	43	162	349
1100	55	50	62	68	235	42	63	52	55	212	447
1200	45	39	51	50	185	44	41	52	50	187	372
1300	55	53	47	60	215	58	42	65	51	216	431
1400	47	58	63	52	220	56	45	48	37	186	406
1500	65	60	62	68	255	34	56	45	48	183	438
1600	65	71	72	80	288	42	45	31	33	151	439
1700	96	67	65	39	267	52	43	52	45	192	459
1800	58	40	29	28	155	31	36	25	18	110	265
1900	25	26	32	25	108	7	4	6	15	32	140
2000	26	27	23	11	87	12	13	12	18	55	142
2100	22	20	15	28	85	19	18	5	9	51	136
2200	22	12	13	9	56	8	9	8	5	30	86
2300	9	10	10	3	32	6	5	3	2	16	48
24-Hour Totals:	2856					2491					5347

Peak Volume Information

	Direction: E		Direction: W		Combined Directions	
	Hour	Volume	Hour	Volume	Hour	Volume
A.M.	0815	158	0745	265	0745	407
P.M.	1615	319	1330	217	1645	488
Daily	1615	319	0745	265	1645	488

County: 90
 Station: 0004
 Description: ATLANTIC BLVD, 200' E WHITE ST
 Start Date: 01/22/2009
 Start Time: 0000

Time	Direction: E					Direction: W					Combined Total
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
0000	7	5	3	1	16	3	3	3	2	11	27
0100	4	1	2	3	10	3	4	3	2	12	22
0200	1	4	0	0	5	1	1	1	1	4	9
0300	1	2	1	2	6	1	1	0	1	3	9
0400	4	1	0	5	10	2	1	2	1	6	16
0500	3	5	6	2	16	1	2	3	5	11	27
0600	7	4	15	9	35	9	7	11	19	46	81
0700	21	19	21	20	81	25	43	46	65	179	260
0800	32	28	33	24	117	78	79	68	57	282	399
0900	38	22	36	38	134	47	38	43	43	171	305
1000	49	44	54	42	189	42	55	54	46	197	386
1100	64	47	57	53	221	45	38	57	44	184	405
1200	49	46	68	50	213	46	55	48	32	181	394
1300	44	44	62	53	203	36	55	48	49	188	391
1400	49	59	61	52	221	55	46	48	39	188	409
1500	65	62	67	59	253	43	42	45	54	184	437
1600	60	76	76	46	258	46	55	48	32	181	439
1700	97	75	69	59	300	37	44	56	45	182	482
1800	51	50	41	28	170	21	28	32	33	114	284
1900	31	26	26	24	107	22	12	14	16	64	171
2000	26	23	25	21	95	18	20	13	12	63	158
2100	21	22	25	22	90	8	9	11	8	36	126
2200	16	20	16	14	66	7	9	8	5	29	95
2300	17	10	6	4	37	5	4	4	7	20	57
24-Hour Totals:	2853					2536					5389

Peak Volume Information

	Direction: E		Direction: W		Combined Directions	
	Hour	Volume	Hour	Volume	Hour	Volume
A.M.	0915	145	0745	290	0745	403
P.M.	1700	300	1315	207	1700	482
Daily	1700	300	0745	290	1700	482