



To: Mr. Marc Gauthier  
Atlantic Housing Partners, LLC  
200 E. Canton Avenue, Suite 102  
Winter Park, FL 32789

Date: January 17, 2019

## Memorandum

Project #: 63227.00  
From: Karl Krichbaum  
Project Manager  
Re: Technical Memorandum – Beasley Property Traffic Impacts

The purpose of this memorandum is to summarize the traffic impacts created by the proposed Beasley Property Development located in Seminole County. The project is geographically located in the northeast quadrant at the intersection of SR 434 and Beasley Road. For the purpose of this analysis, the proposed Development will consist of 99 apartments with a build-out year of 2020. Consistent with the revised Conceptual Plan, the project will have full access to Beasley Road with a right only lane exiting the project.

The proposed land use is Mid-Rise Multi Family (three stories) which corresponds to ITE land use category ITE 221. For a conservative analysis, at maximum, the projected density for the site is 99 units. This produces 538 Daily trips. A summary of the trip generation is provided in Table 1.

For comparison, the current zoning allows for permitted uses within the C-1, CS, and CN land use designations. An example of another allowable land use of these designations is a grocery store which is categorized in the Institute of Transportation Engineers (ITE) Trip Generation Manual as “Supermarket, ITE 850”. For a conservative analysis, the Daily trip generation is based on a floor area ratio (FAR) of 0.35 even though Seminole County allows a FAR of 0.65. This equates to a building size of 70,589 square feet. The associated trip generation for this land use produces a Daily trip generation of 7,538 trips or 14 times the proposed multi-family use.

Table 1  
Beasley Property  
Trip Generation Summary

*Maximum Allowable Land Use*

*AM Peak*

Land Use	ITE Code	Size	/ Units	Daily	AM Peak Hour		
				Total	Total	Enter	Exit
Supermarket	850	70,589	SF	7,538	270	162	108
<b>Total</b>				<b>7,538</b>	<b>270</b>	<b>162</b>	<b>108</b>

*PM Peak*

Land Use	ITE Code	Size	/ Units	Daily	PM Peak Hour		
				Total	Total	Enter	Exit
Supermarket	850	70,589	SF	7,538	652	333	320
<b>Total</b>				<b>7,538</b>	<b>652</b>	<b>333</b>	<b>320</b>

*Proposed Land Use*

*AM Peak*

Land Use	ITE Code	Size	/ Units	Daily	AM Peak Hour		
				Total	Total	Enter	Exit
Mid-Rise Multi Family	221	99	DU	538	36	9	27
<b>Total</b>				<b>538</b>	<b>36</b>	<b>9</b>	<b>27</b>

*PM Peak*

Land Use	ITE Code	Size	/ Units	Daily	PM Peak Hour		
				Total	Total	Enter	Exit
Mid-Rise Multi Family	221	99	DU	538	44	27	17
<b>Total</b>				<b>538</b>	<b>44</b>	<b>27</b>	<b>17</b>

*Source:*

Institute of Transportation (ITE) Trip Generation Manual 10th Edition.

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Landmark Center Two  
Orlando, FL 32801-4326  
P 407.839.4006

Access to the property on Beasley Road is a proposed left in/right out only. This restriction will prevent motorists utilizing internal roadways to navigate further south. There is no proposed access to SR 434. SR 434 is designated as ACCESS Class 3 by the Florida Department of Transportation (FDOT). The minimum connection spacing for roadways of this class is 440 feet. Therefore, the requirement is to have a minimum of 880 feet between Beasley Road and the existing driveway to the north (Burnsed Place) not including the width of a driveway to the project. The current spacing between Beasley Road and Burnsed Place is approximately 454 feet, therefore, project driveway connection to SR 434 is not contemplated to be allowed by the FDOT.

Per Seminole County, the average annual daily traffic (AADT) capacity for SR 434 is 60,000. The pre-development daily background traffic for future year 2020 is 40,210 vehicles with a remaining capacity of 19,790 vehicles. The post development daily traffic, with project trips included, for future year 2020 is 40,748 with a remaining capacity of 19,252 vehicles. To improve the Beasley Road/ SR 434 intersection, it is recommended that a 3-lane section is constructed from the proposed project entrance to SR 434 and the southbound left turn lane on SR 434 is extended from approximately 230 feet to 415 feet to accommodate vehicular queue. This provides 240 feet of deceleration to safely channel traffic from southbound through mainline traffic. The recommended improvements prescribed above are subject to FDOT review.

If you have any questions and / or comments, please don't hesitate to contact us at (407) 839-4006.

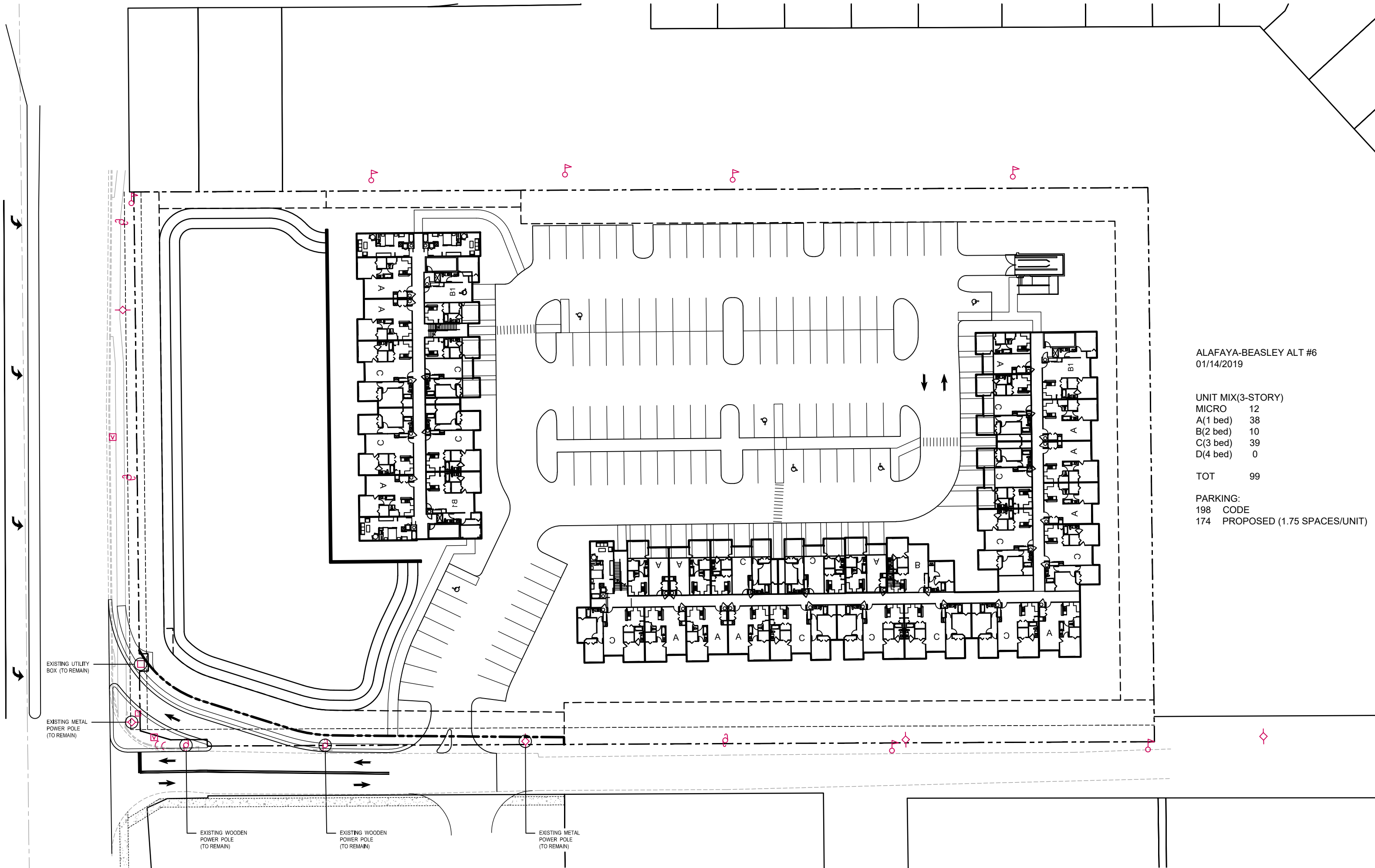
Regards,  
VHB, INC.



Karl Krichbaum  
Project Manager

*Attachments:*

*Site Plan*  
*Synchro 10 Summary Sheet*  
*Turning Movement Counts*



ALAFAYA-BEASLEY ALT #6  
01/14/2019

UNIT MIX(3-STORY)

MICRO	12
A(1 bed)	38
B(2 bed)	10
C(3 bed)	39
D(4 bed)	0

TOT 99

PARKING:  
198 CODE  
174 PROPOSED (1.75 SPACES/UNIT)

Intersection

Int Delay, s/veh 5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕ ↕ ↕			↕ ↕ ↕		
Traffic Vol, veh/h	3	0	1	11	0	21	15	2508	17	70	1553	1
Future Vol, veh/h	3	0	1	11	0	21	15	2508	17	70	1553	1
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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	230	-	-	230	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	1	12	0	22	16	2640	18	74	1635	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2872	4474	818	3483	4465	1329	1636	0	0	2658	0	0
Stage 1	1784	1784	-	2681	2681	-	-	-	-	-	-	-
Stage 2	1088	2690	-	802	1784	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	18	1	274	~ 7	1	125	191	-	-	~ 57	-	-
Stage 1	55	133	-	12	46	-	-	-	-	-	-	-
Stage 2	207	45	-	312	133	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	0	274	-	0	125	191	-	-	~ 57	-	-
Mov Cap-2 Maneuver	28	0	-	43	~ -24	-	-	-	-	-	-	-
Stage 1	50	0	-	~ 11	42	-	-	-	-	-	-	-
Stage 2	156	41	-	-	0	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.2	14.5
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	191	-	-	-	~ 57	-	-
HCM Lane V/C Ratio	0.083	-	-	-	1.293	-	-
HCM Control Delay (s)	25.5	-	-	-	\$ 336.7	-	-
HCM Lane LOS	D	-	-	-	F	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-	6.4	-	-

Notes

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

# Roadway Count Summary

*Vanasse Hangen Brustlin, Inc.*

County Seminole City Oviedo  
 Intersection SR 434 & Beasley Road  
 Date Thursday, March 29, 2018 7:00 AM  
 Time Period 7:00 to 9:00 All Vehicles

VHB Project #: 63227

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	235	0	12	311	1
7:15 - 7:30	2	295	1	14	418	2
7:30 - 7:45	0	280	2	15	473	0
7:45 - 8:00	0	306	2	17	611	0
8:00 - 8:15	0	306	6	15	559	0
8:15 - 8:30	0	287	4	17	498	0
8:30 - 8:45	0	296	0	18	618	1
8:45 - 9:00	0	292	1	13	636	1
	2	2,297	16	121	4,124	5

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	1	0	0	5
7:15 - 7:30	0	0	0	1	0	3
7:30 - 7:45	0	0	0	0	0	7
7:45 - 8:00	1	0	0	1	0	1
8:00 - 8:15	0	0	2	1	0	7
8:15 - 8:30	2	0	1	0	0	3
8:30 - 8:45	0	0	0	1	0	1
8:45 - 9:00	0	0	1	1	0	6
	3	0	5	5	0	33

North / South	2	2,311	63			
SR 434						
East / West						
Beasley Road						
Peak Hour						
8:00 - 9:00	2					
Peak Hour Factor	0					
0.95						
Total Pk Hr Volume	4					
3,594						

# Roadway Count Summary

*Vanasse Hangen Brustlin, Inc.*

County Seminole City Oviedo  
 Intersection SR 434 & Beasley Road  
 Date Thursday, March 29, 2018 7:00 AM  
 Time Period 16:00 to 18:00 All Vehicles

VHB Project #: 63227

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	400	0	12	362	0
16:15 - 16:30	4	510	1	19	319	1
16:30 - 16:45	2	556	0	10	303	0
16:45 - 17:00	2	586	0	11	354	0
17:00 - 17:15	4	610	1	20	390	1
17:15 - 17:30	2	638	0	13	405	0
17:30 - 17:45	7	607	0	14	374	0
17:45 - 18:00	4	503	1	21	389	1
	26	4,410	3	120	2,896	3

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	1	1	0	2
16:15 - 16:30	0	0	0	0	0	3
16:30 - 16:45	0	0	0	0	0	5
16:45 - 17:00	1	0	0	0	0	6
17:00 - 17:15	1	0	1	0	0	1
17:15 - 17:30	1	0	0	0	0	2
17:30 - 17:45	0	0	0	1	0	5
17:45 - 18:00	0	0	0	0	0	1
	3	0	2	2	0	25

North / South	1	1,523	58			
SR 434						
East / West						
Beasley Road						
Peak Hour						
16:45 - 17:45	3					
Peak Hour Factor	0					
0.96						
Total Pk Hr Voume	1					
4,058						