



LEE ENGINEERING

Memorandum

TO: Alex Perry, P.E.
Project Manager
EMC Engineering Services, Inc.

FROM: Joseph T. Short, P.E. (79093), PTOE
President
Lee Engineering, LLC (TBPE F-450)

RE: NRH Tidal Wave Auto Spa and Brakes Plus PUD Application

DATE: May 12, 2020

This memorandum presents information on estimated peak hour trips by the proposed automobile care center (Brakes Plus) and the impact of these trips on the adjacent roadway network. The proposed automobile care center will be located on the northeast corner of Davis Boulevard and Precinct Line Road along with the proposed car wash (Tidal Wave Auto Spa).

In 2018, Lee Engineering submitted a Traffic Impact Analysis (TIA) report on the proposed car wash (Tidal Wave Auto Spa). In April 2020, Lee Engineering prepared trip generation estimates for the proposed developments (car wash and automobile care center). Based on the trip generation estimates, the proposed automobile care center is predicted to generate:

- Seven inbound and four outbound trips during the weekday AM peak hour
- Seven inbound and eight outbound trips during the weekday PM peak hour
- Six inbound and six outbound trips during the weekend peak hour

The assumed trip distribution from the 2018 TIA report is shown in **Table 1**. Please note that this TIA report assumed 20% outbound traffic making a southbound left turn from Driveway 2 on to Precinct Line Road. The proposed striping plan developed for Precinct Line Road does not allow a southbound left turn movement from Driveway 2 on to Precinct Line Road. Therefore, 20% outbound traffic (southbound left turn) from Driveway 2 was diverted to southbound right turn for the purpose of this memo.

Table1: Assumed Directional Distribution

Intersection	NBT	NBR	SBL	SBR	EBL	WBL	WBR
Davis Blvd and Driveway 1		40%	20%				(20%)
Davis Blvd and Precinct Line Rd	40%	20%				(80%)	
Precinct Line Rd and Driveway 2				(80%)	20%		20%

Inbound Percentage; (Outbound Percentage)

Lee Engineering estimated the additional peak hour turning movements at the site driveways and the intersection of Davis Boulevard and Precinct Line Road generated by the proposed automobile care center using the trip generation estimates, as mentioned earlier, and trip distribution percentages presented in Table 1. These trips are shown in **Table 2**. **Table 3** shows the site traffic (inbound + outbound) at the study intersections.

Table 2: Peak Hour Trips

Peak Hour	Intersection	NBT	NBR	SBL	SBR	EBL	WBL	WBR
AM	Davis Blvd and Driveway 1		3	1				(1)
	Davis Blvd and Precinct Line Rd	3	1				(3)	
	Precinct Line Rd and Driveway 2				(3)	1		1
PM	Davis Blvd and Driveway 1		2	1				(2)
	Davis Blvd and Precinct Line Rd	3	1				(6)	
	Precinct Line Rd and Driveway 2				(6)	2		1
Weekend	Davis Blvd and Driveway 1		3	1				(1)
	Davis Blvd and Precinct Line Rd	2	1				(5)	
	Precinct Line Rd and Driveway 2				(5)	1		1

Table 3: Peak Hour Site Traffic

Intersection	AM Peak Hour	PM Peak Hour	Weekend Peak Hour
	Total	Total	Total
Davis Blvd and Driveway 1	5	6	4
Davis Blvd and Precinct Line Rd	7	10	8
Precinct Line Rd and Driveway 2	5	9	7

Trips presented in Tables 2 and 3 are not expected to impact the traffic operations on the adjacent street network.

If you have any questions regarding this memorandum, please contact me at (972) 456-9092.