CITY OF MARGATE
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ENGINEERING PLAN REVIEW COMMENTS

Permit Number:	DRC 2020 –338 Melaleuca Drive
Address:	603 Melaleuca Drive, Margate, FL
Permit Type:	DRC – Traffic Statement Review
Utility:	N\A
Project Number:	N\A
Contractor:	T.B.D.
Review Date:	May 17, 2021
Revision Number:	3rd Review
Reviewer:	Randy L. Daniel, P.E., PMP, CFM
Review Result:	Rejected
Contact:	Margate Care for Heroes, LLC Miryam Jimenez 954-608-4067

D.E.E.S.\ Engineering Review

The Director of the Department of Environmental and Engineering Services, or his qualified designee, has conducted a review of the submitted documentation in accordance with Article IV, Chapter 31 of the City of Margate is Code of Ordinances and finds the following:

PREAMBLE

The Department of Environmental and Engineering Services (DEES) is concerned with the quality of the Traffic Study (TS) that continues to be submitted in support of this project. The first TS was submitted on August 25 2020 and stated that the "the proposed residential rehabilitation facility is expected to generate a decrease of -14 daily trips, zero (0) change in a.m. peak–hour trips , and minus one (-1) p.m. peak hour trip". After two reviews and as many revised studies, the latest April 27, 2021 version acquiesces in paragraph 7 that "the project site is expected to generate 70 additional daily trips".

The property is currently zoned as R-1/R-3 and the request is to change the zoning to CF-1. The CF-1 zoning district allows development up to 4 stories and whilst this particular project may not utilize a 4 story building, the fact that one is allowed behooves the applicant to analyze impacts from such possible future developments. The TS does not take into account the maximum development impact that is allowed under a CF-1 zoning district change.

A. TRAFFICWAYS

For ease of reference the comments on the October 21st 2020 TS are italicized below. Comments on the April 27 revision are in red.

1. *Paragraph 3 of the TS states that "an analysis of trips expected to be generated by both the prior and the proposed developments was conducted". Please provide the details of the analysis and the results that compared the prior development with the proposed; clearly illustrate the increase/decrease in trip counts in accordance with the selected parameters.*

   Comment: Completed; the net increase in daily trips is 70.

   New Comment: The Study continues to defend the use of an independent variable that has "the largest and best supporting database" although that variable may not necessarily represent the MAXIMUM impact. Staff comments dated 10/13/2021, in reference to the August 2020 TS indicated that City Code required use of design parameters with MAXIMUM IMPACT. Design parameters with the "most statistical validity" are not controlling. Rewrite or modify this section section accordingly.

2. *Section 31-37 in the City's code clearly requires that "a proposed development shall be presumed to have the maximum impact permitted under applicable land development regulations…" Replace average value with the value that has the greatest impact for use in Table 1.*

   Comment: Completed; the maximum impact of proposed development is based on the controlling independent variable "employees", which results in the maximum number of 70 total new trips for proposed use of existing facility.

3. *Please explain how the data in Table 1 was derived from Tables 2-13.*

   Comment: Completed; explanation provided.

4. *Tables 2 -13 indicate that the greatest impact to the trip generation characteristic, of the four (4) characteristics analyzed, is the **number of employees**, with an associated number of 144 new daily trips generated. Accordingly, please reconcile the number of new trips generated by employees (144) and the number recorded in table 1 (31).*

   Completed. The maximum impact of proposed development is based on the independent variable "employees", which results in the maximum number of 70 total new trips for proposed use of existing facility.

5. *Paragraph 5 speaks to "common practice of traffic engineering around the nation" in regards to the decision to use "dwelling units as the independent variable" in the analysis. Please provide supporting documentation for this claim.*

   Comment: Completed; the claim was deleted.

6. *Both Policy 2.1.2 in Element II - Transportation of the City's Comprehensive plan (pp II-80 /II-81) and Section 31-48 (C) of the City's Code of Ordinances require the Level of Service (LOS) for Local Roads to be "C". Melaleuca Drive is a local road but the Traffic Statement inaccurately states that LOS "D" shall be the Level of Service required for local roads. Please redo the analysis using LOS "C".*

   Comment: Completed.

7. *Melaleuca Drive is not a signalized roadway, yet Table 4 of the TS references "State Signalized Arterials". Please redo analysis and omit references to signalized intersections. Melaleuca Drive is not an arterial road.*

   Comment: Not Completed; although the October TS designation of arterial road for Melaleuca Drive is not used in the April 27 version, the April TS continues to reference Table 4 for signalized arterial roads; Melaleuca Drive is not an arterial road.

   New Comment: Redo analysis and delete any reference to table 4; Redo analysis using the percentage of ADT contributed by the project.

   Arterial roadways by definition have limited access and provide for greater vehicle capacity. Melaleuca Drive is categorized as a Local Road; it does not have limited access. The data from table 4 is for Arterials and Freeways, which is not applicable to Melaleuca Drive nor to this project.

   The local road system, in comparison to collectors and arterial systems primarily provide access to land adjacent to the collector network and serves travel over relatively short distances. According to the 2004 Edition of "A policy on Geometric Design of Highways and Streets", 80% of local roads have ADT of less than 400 vehicles.

   The April TS attempts to calculate the % increase in ADT (475 used in April TS) and presents this increase as 1.89%. However, the % increase in ADT appears to be irrelevant. It is possible that the author intended to calculate the project's contribution to ADT, and this may be determined as follows:

   The total number of trips for the project is expected to be 144.
   The % of ADT due to the project = 144/400 x 100
   = 36 %

8. *Parking is not required for the Traffic Statement and should be removed. Parking requirements are stipulated in Section 33.3 of the City Code of Ordinances.*

   Comment: Completed; section on parking removed.

9. *In the April 27 version, the author asserts that in respect of the ITE variables "dwelling units is the independent variable with the most statistical validity based on the size of the supporting database", and suggests that despite what the other ITE variables may conclude, "we have continued to use dwelling units as the independent variable in our analysis".*

   This may be construed as poor engineering judgement.

10. *The logic in paragraphs 8 and 11 of the April 27 2021 TS appears flawed.*

Paragraph 8: "Because clients arrive and depart by means of chauffeurs and will not drive themselves, the actual maximum net new trips generated by the development is expected to be lower than that estimated by using any of the ITE rates".

Chauffer driven clients will double the traffic trips not lower them: every client drop off will be accompanied by a vehicle entering and departing the property, and hence twice as many trips would occur as opposed to self-driving clients who parked their vehicles on site. The ITE land use code 620 already accounts for residents who do not drive. Accordingly, paragraph "8" should be deleted in its entirety or modified.

Paragraph 11: "Traffic signals reduce the capacity of a given roadway as they introduce stops. Therefore applying the reduction factors to the "signalized roadway "capacity is a conservative estimation of a local roadway's capacity".

It may be deemed poor engineering to utilize an inappropriate design parameter (signalized roadways) to create a conservative design. To be clear the use of signalized roadway parameters in the analysis of the local roadway that has no traffic signals is unacceptable.

The idea that is also conveyed in this paragraph is that local roads do not have stops; this of course is not correct.

Moreover, Section 31-45 in the City Code requires that traffic analyses must be technically sound. Based on the foregoing this Traffic Study cannot be considered to be technically sound.

B. POTABLE WATER AND WASTEWATER

Previously addressed in 1st Review.

C. DRAINAGE

Previously addressed in 1st Review.

D. SOLID WASTE

Previously addressed in 1st Review.

E. RECREATION

Not applicable to this development