



# KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

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## MEMORANDUM

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Date: September 9, 2016

Project #:  
19323.03

To: Francis Franco

From: William Oliver, Jennifer Musselman, Miranda Barrus

Project: Lake-Sumter MPO Traffic Management System

Subject: Review of the Waterbrooke Traffic Impact Study

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At the request of Lake-Sumter MPO, Kittelson & Associates, Inc. (KAI) was retained for a review of a traffic impact analysis for the Waterbrooke residential project in Clermont, Florida, and submitted by Littlejohn Engineering Associates, Inc. The following comments/questions have arisen from this review.

- General Format:
  - Include section and subsection headers consistent with the Lake-Sumter MPO requirements for traffic impact analyses. Some are missing, including Committed Developments, Existing Segment Geometry, Existing Intersection Geometry, Summary/Conclusions, etc.
- Existing Roadway and Traffic Conditions:
  - Please provide a graphic illustrating existing intersection and segment geometries.
  - Reiterate the LOS analysis methods used.
  - Revisit the 2016 AADT and peak hour/peak direction volumes for state/federal roadways. Values in Table 2.2 were checked against 2013 FTI volumes with an applied 3% growth rate and the numbers don't seem to line up.
- Future Roadway Conditions:
  - Will Emil Jahna Rd be gated to preclude circulation between SR 50 and Hartle Rd?
  - Large-scale developments sometimes create barriers to good local traffic circulation. The site plan appears to alter the access route for Magnolia Island Blvd and would close an apparently "informal"-but-popular off-road shortcut between Magnolia Island Blvd and Lost Lake Rd, requiring more circuitous travel

for residents of the area. Please discuss and illustrate the long-term public circulation plan for the area between Hancock Rd and Johns Lake (east-west) and Johns Lake Rd and SR 50 (south to north).

- Proposed Development and Trip Generation:
  - With respect to the two distribution models provided in the appendix, please explain how the general percentages mentioned in 4.2 were calculated.
  - In addition to Figures 4.3 – 4.6, please include diagrams specific to just the committed trips for ease of reviewing the background trips. Also, please include existing TMC's (AM & PM for Scenario 1 & 2) for the intersection at the Hartle Rd. extension. These volumes are indicated on these four figures but are missing from the appendix.
  - On Figure 4.3, the existing trips for US 27 @ Johns Lake Rd. should be 106 vs. 109 for the EBL movement. Also, the project trips for SR 50 @ Hartle Rd. should 221 vs. 37 for the NBR movement.
  - Please review volume inputs and calculations for Figures 4.3-4.6 for accuracy.
- Transportation Assessment:
  - For Tables 5.2 & 5.4, not including the required taper length may undermine the total required turn lane length resulting in more of the intersection turn lanes not meeting the requirement.
  - Please include all Synchro reports summarized in Table 5.6 in the Appendix. For example, SR 50 @ Hancock Rd. in Table 5.6 has an improved signal analysis, but the Synchro reports are not in the appendix.
- Mitigation Strategies:
  - Please provide a proportionate share calculation for the indicated intersections.
  - Please address mitigation strategies for the NB approach of US 27 @ Johns Lake Rd. and EB/WB approaches for Hancock at Johns Lake Rd.
- Conclusions:
  - Include a summary/conclusion of the TIS per Lake-Sumter MPO requirements.
- Appendices:
  - Include the TCMS spreadsheet per Lake-Sumter MPO requirements.

The Lake-Sumter MPO reviews traffic studies for the City of Clermont and reports the findings of the review and if appropriate, makes recommendations related to the traffic study. Approval of the traffic study and the overall project is the sole responsibility of the City.