



June 14, 2016

City of Gainesville
Public Works Department
Attn: Mr. Stefan Broadus
P.O. Box 490 – MS 58
Gainesville, FL 32627

**Subject: NW 8th Avenue Project
Segment B – 3-Lane Proposal, Cross Slope Summary**

Dear Mr. Broadus:

As a follow-up to our previous conversation, if the bike lanes are added and the travel lane lines are shifted per the 3-lane configuration proposal this would shift the lane stripes 5' which would put the pavement cross slope breaks in the center of the travel lanes. When pavement cross slope breaks are not located on the lane lines, the most desirable location is in the center of the travel lane so as not to be located in proximity of the vehicular wheel path.

The algebraic difference of cross slopes between adjacent travel lanes should not exceed 0.04 per Florida Greenbook (Section C.7.b.2) and shall not exceed 0.06 per FDOT PPM (Volume 1, Chapter 25, Table 25.4.6). A preliminary analysis of the cross slopes and pavement breaks shows that we will not exceed the 0.04 maximum allowable by Florida Greenbook thereby satisfying the applicable cross slope criteria of both documents.

CES has contacted the FHWA Road Diet program director to discuss other cases where a 4-lane undivided section was converted to a 3-lane section with bike lanes and a two-way left turn lane through striping modifications only, thereby creating a situation with cross slope breaks in the center of the newly striped lanes. The program director stated that this has been discussed in the past and has been implemented on some projects, but there is not any specific criteria in their guidelines addressing this type of design. In the case of NW 8th Ave., they stated that due to the nature of the roadway, low posted speed limit, and the fact that the PPM and Florida Greenbook cross slope criteria is met, that there is nothing prohibiting us from proceeding with this proposed design.

Based on our engineering judgement, since this is a low speed roadway (posted 35 MPH), the pavement breaks will be shifted to the center of the travel lanes, and the existing cross slopes satisfy the cross slope design criteria, we do not expect any adverse conditions to be created by shifting the travel lanes to accommodate the 3-lane configuration.

Sincerely,
Comprehensive Engineering Services, Inc.

A handwritten signature in blue ink that reads "Robert L. Sykes".

Robert L. Sykes, P.E.
CES Engineer of Record