

Memorandum

Date: June 5, 2015
To: Matthew Fagan.
From: Hans Giroux, Giroux & Associates
Subject: Wakerider Report Updated Traffic Impact Analysis

A recent traffic impact analysis update based upon a slightly more refined trip generation model has determined a very small increase in project related average daily trips (ADT) (2,085 ADT versus 2,201 ADT or a 5.6% increase). However, the most recent air quality impact analysis (December 11, 2013), had assumed a year 2015 build-out. Realistically, full project build-out will now not occur until year 2017 or beyond. Cleaner cars will off-set any small VMT increase for ROG, NOx and CO. Increases in VMT dependent emissions (PM-10, PM-2.5 and CO₂) will be minimal.

The CalEEMod 2013.2.2 emissions computer model was run for a 2017 build-out with the slightly increased VMT. Results were compared with the previous 2015 run at the “old” VMT. Differences were negligible seen as follows (lbs/day):

Source	ROG	NOx	CO	SO ₂	PM-10	PM-2.5	CO ₂
2015 (2,085 ADT)	10.4	15.4	54.4	0.1	6.4	1.9	10,684
2017 (2,201 ADT)	8.9	14.2	49.8	0.1	6.6	2.1	10,886
Exceeds AQMD Threshold*	No	No	No	No	No	No	n/a

*either with “old” ADT or current update

The CalEEMod model does not have an adequate algorithm to anticipate continued improvements in average fuel efficiency and in low carbon fuel standards. The slight predicted increase in GHG emissions associated with a small (5.6%) ADT increase from a 2015 to a 2017 build-out is artificial. The 2-year delay in expected build-out will actually reduce the GHG burden more than to off-set any small ADT increase.

Traffic noise is a direct function of various parameters (volume, speed, numbers of trucks, etc.). However, decibels are a logarithmic representation of sound pressure levels. It takes a large change in traffic volumes for example, to create even a marginally detectable increase in decibel levels. A 5.6% increase in ADT in the updated traffic impact analysis (TIA) from the previous TIA will increase noise levels by only 0.02 dB from the combined background plus project condition. Whereas the previous “project only” impact was calculated as +0.4 dB, the updated finding is +4.2 dB. The minimum perceptible amount by human observers in laboratory conditions is around +1.4 dB. In ambient environments, the detection threshold is around +3.0 dB. The updated TIA has negligible noise impact analysis consequences.