

# Traffic



## Traffic Engineering Study

### Walker Farms - Whitestown, Indiana

Traffic Volume and Speed Study

**PREPARED BY:**

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## Summary

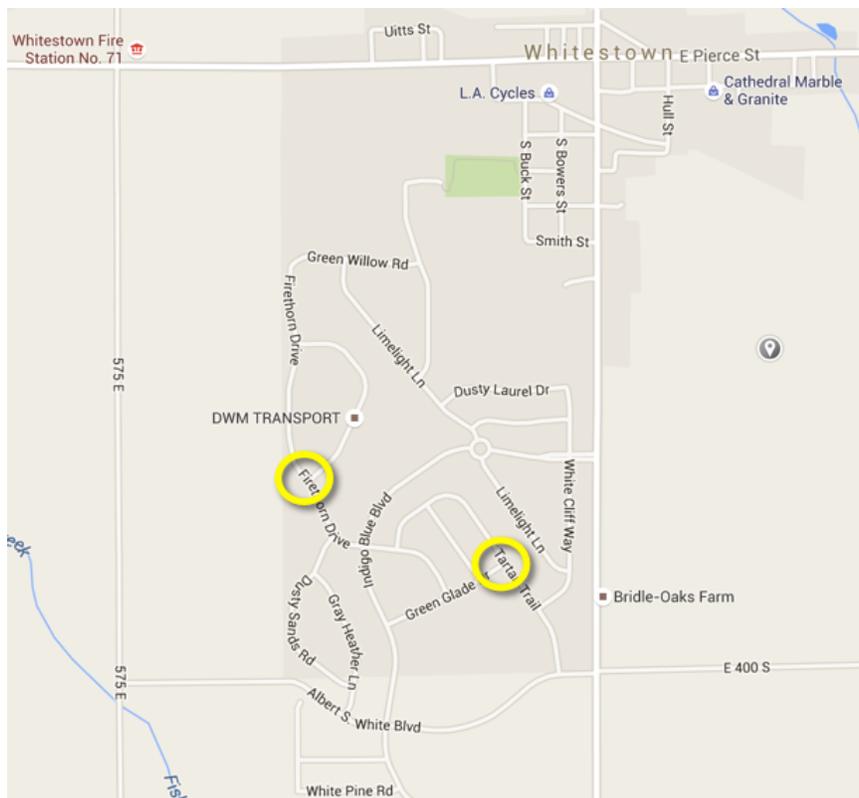
Traffic data was collected as part of analyzing safety concerns in the Walker Farms subdivision in Whitestown, Indiana. Traffic data included hourly volumes and vehicles speeds. The two intersections analyzed were:

1. Roundlake Lane at Firethorn Drive
2. Tartan Trail at Green Glade Drive

Traffic control at these two intersections currently consists of stop sign control for the minor approach (only). In order to consider all-way stop sign control, the Indiana Manual of Uniform Traffic Control Devices (MUTCD) requires specific threshold volumes be satisfied. These two locations do not satisfy the required threshold volumes for installation of an all-way stop sign traffic control.

Furthermore, the MUTCD states that all-way stop sign control shall not be installed as a traffic calming device. Exceptions to the traffic volume threshold criteria include accident history of a nature that could be mitigated by installation of all-way stop sign control.

Looking at existing speed data, average speeds hovered around 20 mph, which is the posted speed limit. The 85th percentile speeds were in the mid-20s for the north-south approaches at each intersection. That said, there does appear to be a number of vehicles traveling well above the posted speed limit. While a small minority, these outliers are memorable for residents and can be a problem if you are walking on or near the roadway when they pass.



Looking at the surrounding roadway network, the intersections of concern are certainly "local" and do not seem to present a clear path for someone trying to 'cut-through' in order to avoid major intersections. The volumes are also consistent with a local roadway classification and are representative of the number of homes in the area. In that regard, the vehicles speeding on these roads more than likely live somewhere within the neighborhood.

## Recommendations

To help slow speeds, there are a few options that have proven effective in similar situations:

Public neighborhood meeting – describing the situation and who is likely speeding. This provides an opportunity for residents to discuss the issue amongst themselves (facilitated by someone from the Town). Hopefully, everyone becomes more aware of the situation, their surroundings, and recognizes the posted speed limit. Very helpful as an outlet for residents, however, up to individuals if speeds actually do indeed decline.

Random patrols – a patrol car traveling through a couple times a day may reinforce the speed limit.

Speed trailer or permanent speed display sign – Placed mid-block between intersections, the trailer or sign displays the real time speed of an approaching car. Usually the numbers flash if the speed limit is exceeded. The permanent speed display signs often fade into the background for drivers after some time as they get use to them. Therefore a mobile speed trailer moved around from time to time can sometimes be more effective.

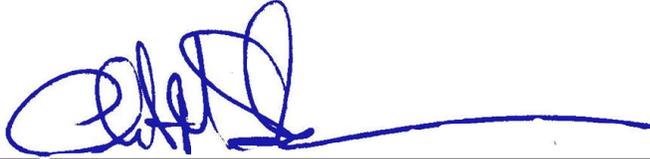
Striping – painting a centerline and a fog line (designating a 10- or 11-foot lane) would give the perception of being more enclosed rather than having a wide open road. These are generally effective for a 2- or 3-mph reduction. The flip-side is the on-going maintenance of the striping as well as the impact to on-street parking. Depending on the roadway width, striping would likely reduce the parking on at least one side, which is usually not well received.

Permanent Traffic Calming – This is a great option particularly if the road is already scheduled for reconstruction so the added cost is minimized. Potential options could include speed humps, intersection bump-outs, or simply reconstructing to a narrower road. Speed humps (not speed “bumps”) are generally effective although residents have to drive over them every day plus they have the potential to create additional noise for houses adjacent to the humps (due to braking and accelerating). Intersection bump-outs reduce the street width at the intersection, therefore reducing the feeling of a wide-open road. They are effective for a few mph reduction and also reduce the crossing distance for pedestrians on the sidewalks. Be aware of potential drainage issues and snow plowing issues in the winter. If residents park on the street, it can also create a weaving effect as drivers shift around parked cars. These options are more expensive (and more expensive to get rid of later if the residents change their minds). For permanent calming solutions like these, public meetings are recommended to discuss and vote on the options. At least 50% should be in favor, with often 60% or higher as the threshold before they are installed. Some communities have policies that construct them initially, but they assess the residents if they are to be removed later.

Finally, if techniques have been found effective in neighboring or adjacent subdivisions, continuity within the Town is an important consideration for addressing situations such as described herein..

## Certification

I certify this Traffic Analysis has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering.



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Date



## **Existing Traffic Data**

Separate Attachment (available via download)

- Existing Hourly Traffic Volume Data
- Existing Hourly Speed Data