

# Talbridge Traffic Calming Study

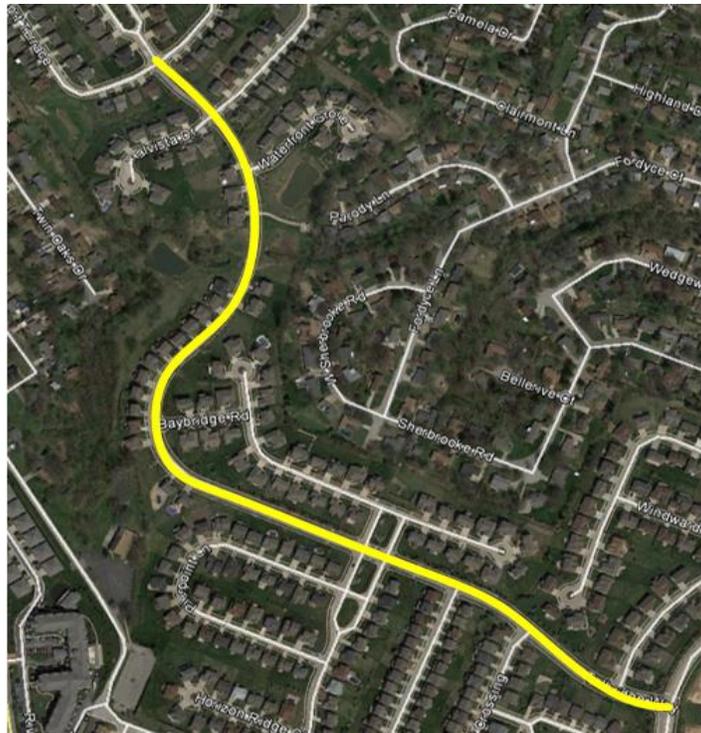
## Introduction

The Engineering Department, per request of the residents of Talbridge's subdivision, evaluated a .8 mile segment of Talbridge Way from Fairgrounds Rd to Shorewind Trl. This evaluation was to determine if traffic calming elements were warranted on Talbridge Way.

## Existing Roadway and Traffic Conditions

Talbridge Way is the main local roadway in the Talbridge Subdivision with a 2 lane divided and undivided profile. There is a median strip constructed for half the length of Talbridge Way starting from Fairgrounds Rd and ending at Baybridge Rd. The second half of Talbridge Way has no median strip lined with numerous driveways. The posted speed limit in the study limits is 25mph. The layout of the roadway contains horizontal and vertical curves, but the curves do not require warning signs or chevrons.

The average daily traffic (ADT) for this .8mile segment is approximately 380 vehicles per day. A satellite photo of the study limits can be seen below.



Satellite Photo of Study Limits of Talbridge Way

### ***Talbridge Subdivision Traffic Calming Meeting***

On 10/13/16, a traffic calming presentation/meeting was held at the St. Charles Police Department. Mailers were sent to 440 residents located in the Talbridge subdivision. A dynamic message board was deployed at the Talbridge Way and Fairgrounds Rd intersection advertising the meeting information. 17 Talbridge residents attended the meeting and were presented with information on traffic calming and the policy that the City follows. Residents were able to ask questions during the presentation. A question was asked, and discussion occurred, on installing stop signs to slow drivers down. Engineering explained that this is not the intent of a stop sign. Stop signs are installed to give gaps in traffic so the other street traffic can turn, geometrically retrains, and determination of who was the right-of-way. A stop sign is not considered a traffic calming solution.

### ***Talbridge Traffic Calming Survey***

Mailers, media outreach, and a dynamic message board were used to advertise the online Talbridge Traffic Calming Survey which was available from 10/21/16 to 11/4/16. There were 151 surveys taken (with no questions skipped). This represents approximately 38% of Talbridge households. The survey results are listed below.

1) *Traffic issues such as speeding or congestion are significant problems within my neighborhood:*

<i>Strongly Disagree</i>	<i>10.60%</i>
<i>Disagree</i>	<i>11.26%</i>
<i>Neutral</i>	<i>15.89%</i>
<i>Agree</i>	<i>33.11%</i>
<i>Strongly Agree</i>	<i>29.14%</i>

2) *The streets in my neighborhood are walkable, safe & pedestrian friendly:*

<i>Strongly Disagree</i>	<i>4.64%</i>
<i>Disagree</i>	<i>13.91%</i>
<i>Neutral</i>	<i>13.25%</i>
<i>Agree</i>	<i>41.72%</i>
<i>Strongly Agree</i>	<i>26.49%</i>

3) *Traffic accidents occur frequently within my neighborhood:*

<i>Strongly Disagree</i>	<i>41.06%</i>
<i>Disagree</i>	<i>35.76%</i>
<i>Neutral</i>	<i>21.19%</i>
<i>Agree</i>	<i>1.99%</i>
<i>Strongly Agree</i>	<i>0.00%</i>

4) *Traffic calming devices (such as chicanes, chokers, bulb outs, pavement legends & striping) would be useful to solving traffic issues in my neighborhood:*

Yes 65.56%

No 34.44%

5) *A chicane would be useful on Talbridge Way:*

Yes 47.68%

No 52.32%

6) *A bulb-out would be useful on Talbridge Way:*

Yes 35.10%

No 64.90%

7) *A choker would be useful on Talbridge Way:*

Yes 35.77%

No 66.23%

8) *Pavement legends would be useful on Talbridge Way:*

Yes 64.24%

No 35.76%

9) *Lane striping would be useful on Talbridge Way:*

Yes 41.72%

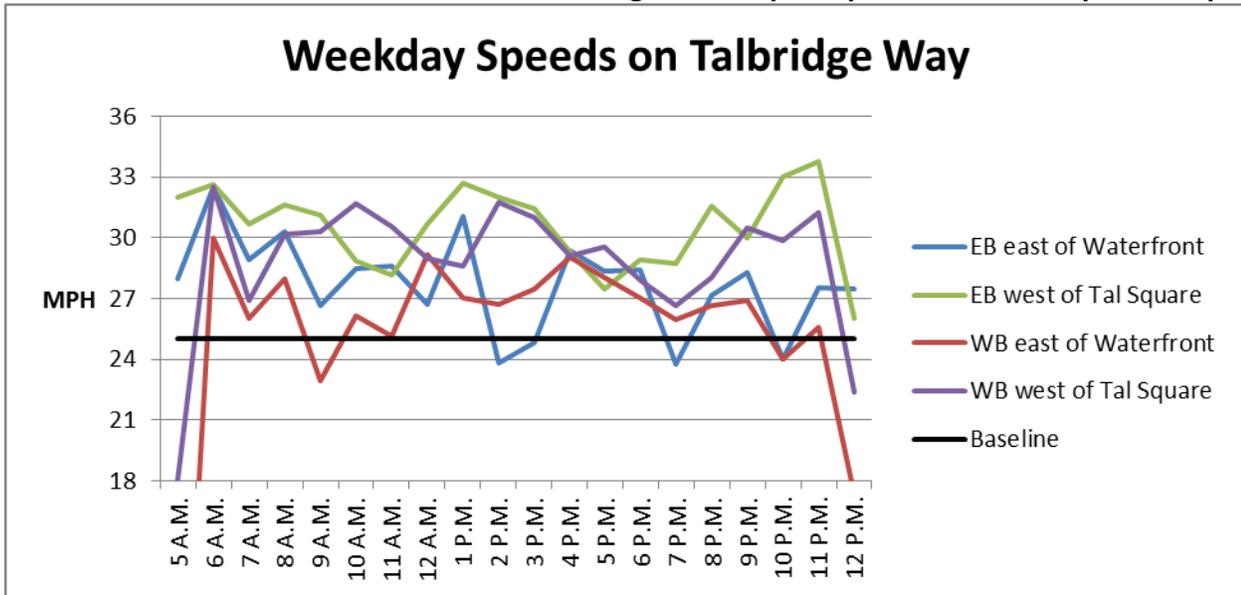
No 58.28%

### **Traffic Calming Eligibility**

The eligibility criteria are broken up into nine categories. Each category is scored and cumulatively added all categories together for an overall score. A score of greater than **fifty-five (55) points** is required for the location to be eligible for traffic TOTAL calming.

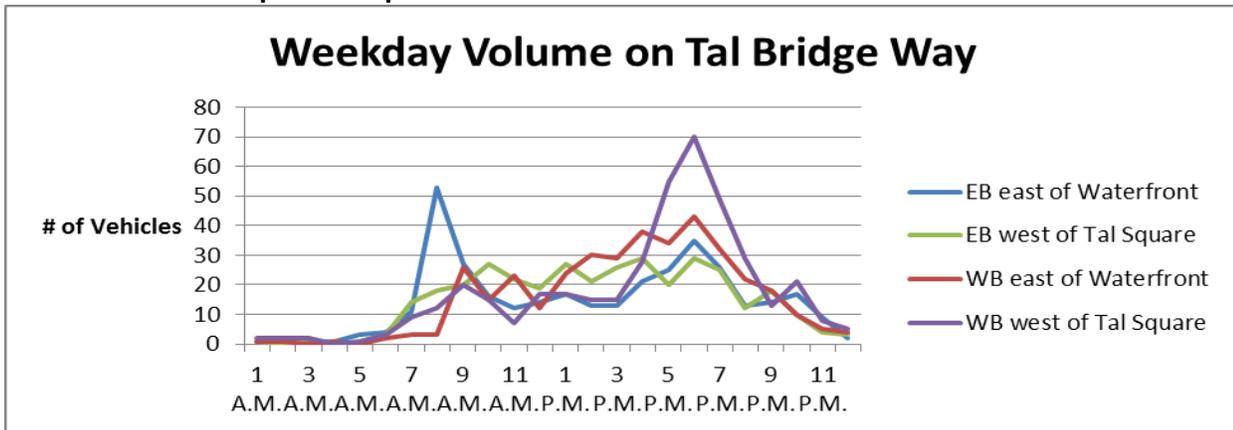
- 1) **Accidents** – The last 3 full years of available accident data for the section of street for which traffic calming is being requested will be examined. 10 points will be awarded for each accident that is susceptible to correction by traffic calming devices. (30 points maximum)
  - a. **By using the St. Charles City crash database, there were three crashes that occurred between the years of 2014 to 2016. None of the crashes are creditable and would not be resolved by any traffic calming solutions. 0 pts**

- 2) **Speed Violation Rate** – Percentage of vehicles traveling over the speed limit on the subject street. One point is awarded for each percentage point of vehicles traveling over the speed limit. (30 points maximum)
- a. **Traffic counters were placed on Talbridge Way at two locations (east of Waterfront and west of Talbridge Square) to capture east and westbound traffic speeds. Weekday and weekend counts were taken and analyzed. It was found that 33% of vehicles were traveling over the post speed limit of 25mph. 30 pts**



- 3) **Traffic Volume** – Average Daily Traffic (ADT) on the busiest section of the subject street divided by 300. (10 points maximum)
- a. **Traffic counter data shown to be average daily traffic of 380 vehicles/day. 1 pt**
- 4) **Increase in Traffic Volume** – The current ADT will be compared to the ADT from previous ADT data. The intent is to measure increases in traffic volumes related to factors outside the neighborhood, not increases in traffic volumes due to the development of the subdivision in which the subject street is located. The difference between the current traffic volume and the previously measured traffic data is calculated and divided by 100. If traffic volumes have decreased, a score of 0 is assigned. If there is no previous ADT data then score of 5 is given. (20 points maximum)
- a. **No previous counts or traffic study could be found to compare existing counts. 5 pts**
- 5) **Schools** – Five points for each private or public elementary school on the subject street or within project area.
- a. **No schools within the studied area. 0 pts**

- 6) **Other Pedestrian areas** – Five points for each individual pedestrian oriented facility, such as a park, on the subject street.
- a. **Midblock and park pedestrian facilities were found within the study area. 5 pts**
- 7) **Driveway Density** – Density is expressed in terms of the number of driveways per mile. Driveways are defined as private accesses to the public roadway, serving up to 8 lots. Public roads and private roads are not considered driveways. One point per 10 driveways per mile rate. For example, a density of 50 driveways per mile would receive a score of 5 points. (10 points maximum)
- a. **19 driveways were found in the study area. 2 pts**
- 8) **Other** – Five points will be awarded for the absence of sidewalks and 5 points will be awarded for the absence of street lights. Also, five points if street is utilized by high school age kids driving to and from school which makes for a noticeable increase in traffic during times before and after school.
- a. **Sidewalks line both sides of Talbridge Way with the study area. Streetlights are provided according to City’s standard lighting policy. Peak hours are normal compared to other subdivisions. AM Peak is 7am to 9am and PM Peak is 5pm to 7pm. 0 pts**



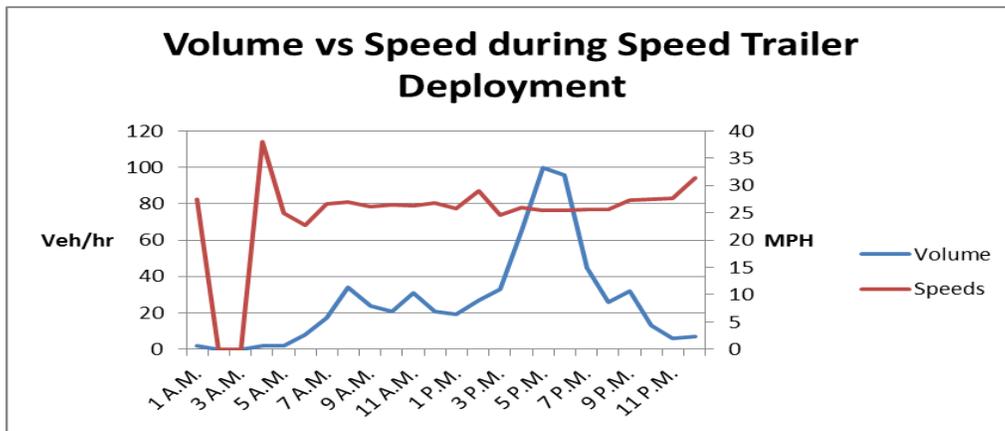
- 9) **Alleys** – Deduct 20 points for alleys due to low traffic volumes and low speeds.
- a. **No alleys were found in the study area. 0 pts**

**Total Score = 43 pts**

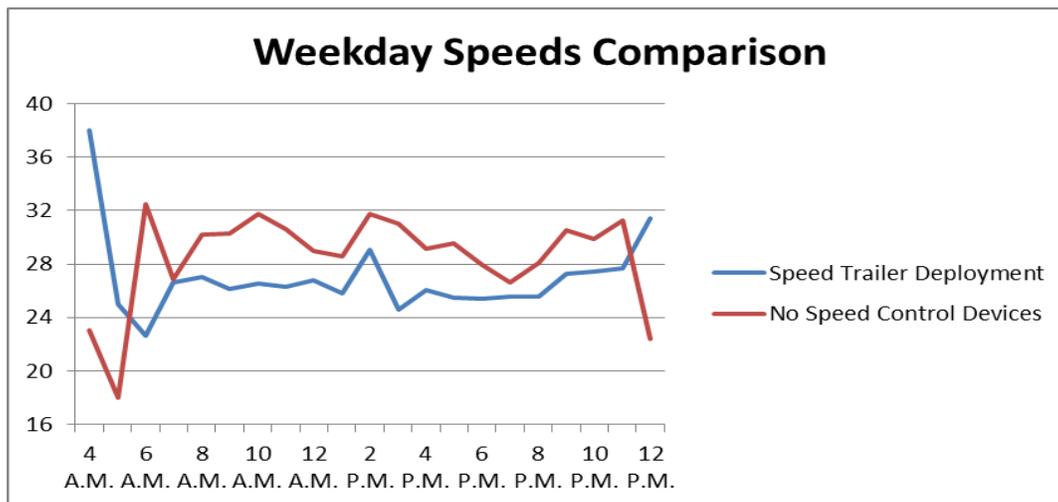
***Speed Trailer Deployment***

The St. Charles Police Department deployed a speed limit feedback trailer on westbound Talbridge Way east of Talbridge Square from last week of August to first week of September in 2016. A traffic counter was placed on Talbridge Way just east of the trailer on Wednesday, August 31<sup>st</sup>. Speeds

averaged around 27 mph during the deployment. Some correlation is seen between vehicle volume and speeds. Speeds and volumes of westbound traffic are shown in the graph below.



The traffic speeds were compared between the speed limit feedback trailer deployment and no speed control devices in place. The average speed during the speed limit feedback trailer deployment was 27 mph and the average speed while no speed control devices were in place was 28 mph. See the comparison graph below.



**Recommendations**

From the survey, 62% of the Talbridge residents that took the survey agree that speeding is a significant issue on Talbridge Way. 65% of the residents agree that traffic calming devices would resolve traffic issues within the subdivision.

The speed violation rate had the highest score on the traffic calming edibility form. The other factors had little to no scores. The traffic calming edibility form scored a total of 43 points which does not meet edibility.

The speed limit feedback trailer did show some improvement in making drivers comply with the 25 mph speed limit during the deployment. This is a typical result for the application since it is a new device and brings awareness to the drivers. Over months of time, studies show that drivers will go back to their old driving habits if not enforced with consequences. Speed feedback signs are not a good candidate for a traffic calming device on local roadways such as Talbridge Way. The same daily road users become dull to the important message that the flashing feedback sign is displaying unless enforced. In the traffic calming policy guide, speed feedback signs are only installed on arterial and collector roadways. Talbridge Way is a local residential roadway. Talbridge Way could be views as a cut through street from Veteran Memorial Parkway or MO 94, but there is not a direct connection. Only local drivers (daily users) would utilize this option.

According to City's polices when subdivisions are built, the main roadway(s) into the subdivision must incorporate some type of traffic calming device(s) approved by the City's Engineer. Talbridge Way does incorporate a traffic device such as the median strip for half its length. The median strip divides the roadway and constricts the lane width to help reduce speeding. Constricting the lane width causes drivers to pay more attention in navigating the roadway.

Staff recommends not installing any traffic calming devices on Talbridge Way. Even though over 38% of the residents took the survey, only 22% of residents are accounted for agreeing a traffic calming device(s) should be implemented. The traffic calming edibility form totaled 38 points which is not over the minimum threshold of 55 points making Talbridge Way inedible. The speed limit feedback trailer did have an effect on driver's speed in that short amount of time. Permanently installing a speed feedback sign, driver's compliance with the 25 mph speed limit would decrease over time since the majority of drivers are daily users. Talbridge Way currently has a traffic calming device installed in the roadway. In November 2016, four additional 25 mph speed limit signs were installed on Talbridge Way to help improve driver's awareness of the roadway speed limit.

According to Federal Highway Administration (FHWA), 94% of traffic related deaths are due to human behavior. Staff believes the best way to resolve speeding on Talbridge Way is through educating the daily users through subdivision meetings, events, activities, door hangers, yard signs, etc. Staff are available to help with these educating activities.