

URBANA TRAFFIC COMMISSION
Tuesday, May 10, 2016

MEMBERS PRESENT:

Michael Madigan, City Council Member, Ward 6, Chair
Craig Shonkwiler, Assistant City Engineer
Bob Fitzgerald for Pat Connolly, Police Chief

MEMBERS ABSENT:

None

OTHERS PRESENT:

John Collins, Operations Manager
Dave Boehm, 1708 Trails Drive
Grace Boehm, 1708 Trails Drive

The meeting began at 4:00 p.m.

Approval of Minutes:

Craig Shonkwiler moved to approve the minutes of the April 12, 2016 meeting. Bob Fitzgerald seconded the motion. The Commission voted 3-0 to approve the minutes of the April meeting.

Additions to the agenda:

There were no additions to the agenda.

Public Input

Those wishing to provide input preferred to do so at the time the topic was discussed.

Unfinished Business

There was no unfinished business.

New Business

Item #1- Discussion of speeding on Trails Drive at Myra Ridge Drive.

Gary Boehm discussed his observations of traffic flow as a resident at the corner of Trails Drive and Myra Ridge Drive. He said that vehicles appeared to travel at high speeds during the early morning, mid-day and end of the work day during the work week and during mid-morning and mid-evening on week-ends. With the number of pedestrians, particularly young children, in the area, he requested the installation of stop signs on Trails Drive at Myra Ridge Drive. Mr. Boehm indicated that from his understanding of the Manual on Uniform Traffic Control Devices (MUTCD), he did not think that the traffic volume would justify the installation of stop signs on Trails Drive, but he thought perhaps engineering judgment might allow the installation of signs because the volume of traffic appeared to be equal from all directions.

Craig Shonkwiler discussed the results of the speed study conducted on Trails Drive. He mentioned that a 30 mile an hour speed limit sign was posted on Trails Drive. He explained that the 85th percentile speed was used to set speed limits and determine speeding problems. He added that speeds within five miles of the 85th percentile were acceptable and not considered a speeding problem. He said that there were 131 vehicles travelling westbound and 191 vehicles travelling eastbound during the 24-hour period of the study. He stated that the 85th percentile speed for westbound traffic was 27.5 miles per hour and for eastbound traffic was 26.8 miles per hour. Mr. Shonkwiler said that eastbound traffic travelled at lower speeds since the curves to the west of Myra Ridge Drive slowed vehicles. He said the highest speed recorded was 40.9 miles per hour; the lowest speed recorded was 7.5 miles per hour; and both vehicles were westbound. He stated that 9.2% of the westbound vehicles exceeded the speed limit, which was not considered a high percentage violation rate.

Item #2- Discussion of traffic control on Trails Drive at Myra Ridge Drive.

Craig Shonkwiler reviewed the results of the stop sign study performed on Trails Drive for eastbound and westbound traffic. He added that the counters set at that intersection measured traffic volume and speed. Mr. Shonkwiler reviewed the results and compared them to the MUTCD warrants for installing multi-way stop sign installation. He said that no crashes had occurred at the intersection so it did not meet the warrant of five or more crashes per twelve-month period that could be corrected with the addition of traffic control. He added that there were no crashes reported at that intersection from 2011 to April 2016. He indicated that the vehicular volume average of 34 vehicles for the highest 8 hours on the major street (Trails Drive), and the combined vehicular, pedestrian and bicycle of 28 units for the highest 8 hours on the minor street (Myra Ridge Drive) did not meet the warrants of 300 vehicles on the major street and 200 units on the minor street for an 8-hour period. He reported that 85% of the traffic had an approach speed of 26.8 miles per hour for eastbound traffic and 27.5 miles per hour for westbound traffic, which did not exceed the posted speed limit. He recommended that no action be taken since the MUTCD

warrants were not met. He said that sometimes the number of crashes could be reduced by installing traffic control, but there were no crashes reported. He stated that he performed an intersection sight analysis at the northwest corner to determine whether or not there were any visibility issues, but there was enough sight distance for motorists to safely stop.

Mr. Boehm said that he understood that the standards needed to be met, but he thought that the volumes might have allowed for the installation of stop signs on Trails Drive.

Mrs. Boehm added that many vehicles slowed down or stopped on Trails Drive at Myra Ridge Drive because the drivers thought there should be stop signs there.

Mr. Shonkwiler said that engineering judgment might be considered when the numbers were close to the recommended warrants, but he said that was not the case at the intersection of Trails Drive and Myra Ridge Drive. He asked the residents to let staff know if conditions changed.

No further action was recommended.

Item #3- Discussion of traffic control on Smith Road at Michigan Avenue.

Craig Shonkwiler reviewed the stop sign study conducted to determine if stop signs were warranted on Smith Road at Michigan Avenue. He indicated that the crash reports from 2011 to April 2016 showed one crash had occurred in 2012 where a vehicle ran the stop sign and hit another vehicle at a right angle so the intersection did not meet the criterion of five or more reported crashes within a 12-month period. He discussed the volume of traffic—Smith Road had 154 vehicles per hour over an eight-hour period; Michigan Avenue had 25 units (vehicular, pedestrian and bicycle traffic) over an eight-hour period. He said that the volume of traffic did not meet the warrants as defined in the MUTCD. He stated that the 85% percentile speed was 35.3 miles per hour, which did not exceed the warrant limit of 40 miles per hour, but the maximum speed recorded was 63 miles per hour. He suggested that even though the intersection did not warrant stop signs on Smith Road, perhaps a Selective Traffic Enforcement Program (STEP) detail could monitor the area.

Michael Madigan asked if traffic speeds could be monitored and a STEP patrol assigned.

John Collins said that as the subdivision developed, speeds might slow down.

Bob Fitzgerald said that he would ask Andy Charles to assign a STEP detail on Smith Road. He said that the speed trailer had been set on Smith Road a couple of years ago.

Craig Shonkwiler asked if the speed trailer could be used.

Michael Madigan suggested that Chief Connolly determine whether STEP enforcement or the speed trailer would be better. He asked that the Police Department let the Recording Secretary know what action would be taken so the information could be relayed to the residents who requested the stop signs.

With no other business at hand, the meeting was adjourned at 4:29 p.m.

The next regularly scheduled Traffic Commission meeting is scheduled for Tuesday, June 14, 2016, at 4:00 p.m. at the Urbana Public Works Department, 706 South Glover Avenue, second floor conference room.

Respectfully submitted,
Barbara Stiehl
Recording Secretary

MUTCD 2009 Criteria for Multi-Way Stop Control Intersection

Intersection: Smith Road & Michigan Avenue
Major Street: Smith Road
Major Street Speed: 30 mph (prima facia)
Minor Street: Michigan Avenue
Minor Street Speed: 30 mph (prima facia)

Date: 5/6/2016
Analyst: Craig Shonkwiler
Agency: City of Urbana
Traffic Count Date: 11/3/2015

MUTCD Multi-way Stop Installation Guidance, Section 2B.07	Comment	Warrant Met?
A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.	Based on the hourly turning movement counts at this intersection; traffic signals warrants were not met.	No
B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.	One crash was reported in a 12-month period in 2012. There was one reported crash from 2011 through April 2016 at this location. The single crash was a right-angle collision and the violating unit was cited for failure to stop at a stop sign.	No
C. Minimum Volumes:		
1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and	The vehicular volume entering from the major street approaches averaged 154 vehicles per hour for the highest 8 hours and the combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor approaches averaged 25 units per hour for the same 8 hours.	No
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but		
3. If the 85 th -percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.	The 85 th -percentile approach speed of the major-street southbound traffic was 35.3 mph.	No
D. Where no single criterion is satisfied but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criteria C.3 is excluded from this condition.	None of the criteria are satisfied to 80 percent of the minimum values.	No

Conclusion:

No multi-way stop installation warrants were met. Multi-way stop signs are not recommended at this intersection.

MUTCD 2009 Criteria for Multi-Way Stop Control Intersection

Intersection:	Trails Drive & Myra Ridge Drive
Major Street:	Trails Drive
Major Street Speed:	30 mph
Minor Street:	Myra Ridge Drive
Minor Street Speed:	30 mph (prima facia)
Date:	5/6/2016
Analyst:	Craig Shonkwiler
Agency:	City of Urbana
Traffic Count Date:	9/30/2015

MUTCD Multi-way Stop Installation Guidance, Section 2B.07	Comment	Warrant Met?
<p>A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.</p>	<p>Based on the hourly turning movement counts at this intersection; traffic signals warrants were not met.</p>	No
<p>B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.</p>	<p>No crashes were reported from 2011 through April 2016.</p>	No
<p>C. Minimum Volumes:</p> <ol style="list-style-type: none"> 1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and 2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but 3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2. 	<p>The vehicular volume entering from the major street approaches averaged 34 vehicles per hour for the highest 8 hours and the combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor approaches averaged 28 units per hour for the same 8 hours.</p>	No
<p>D. Where no single criterion is satisfied but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criteria C.3 is excluded from this condition.</p>	<p>The 85th-percentile approach speed of the major-street eastbound traffic was 26.8 mph and westbound traffic was 27.5 mph.</p> <p>None of the criteria are satisfied to 80 percent of the minimum values.</p>	No

Conclusion:

No multi-way stop installation warrants were met. Multi-way stop signs are not recommended at this intersection.

MetroCount Traffic Executive Speed Histogram

SpeedHist-36 -- English (ENU)

Datasets:

Site: [2015-11] Myra Ridge & Trails (WB Trails)
Attribute: Urbana
Direction: 4 - West bound, A trigger first. Lane: 2
Survey Duration: 0:00 Wednesday, September 30, 2015 => 15:29 Thursday, October 01, 2015,
Zone:
File: 2015-1101Oct2015.EC2 (Plus)
Identifier: P134S18B MC56-L4 [MC55] (c)Microcom 19Sep03
Algorithm: Factory default axle (v4.06)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

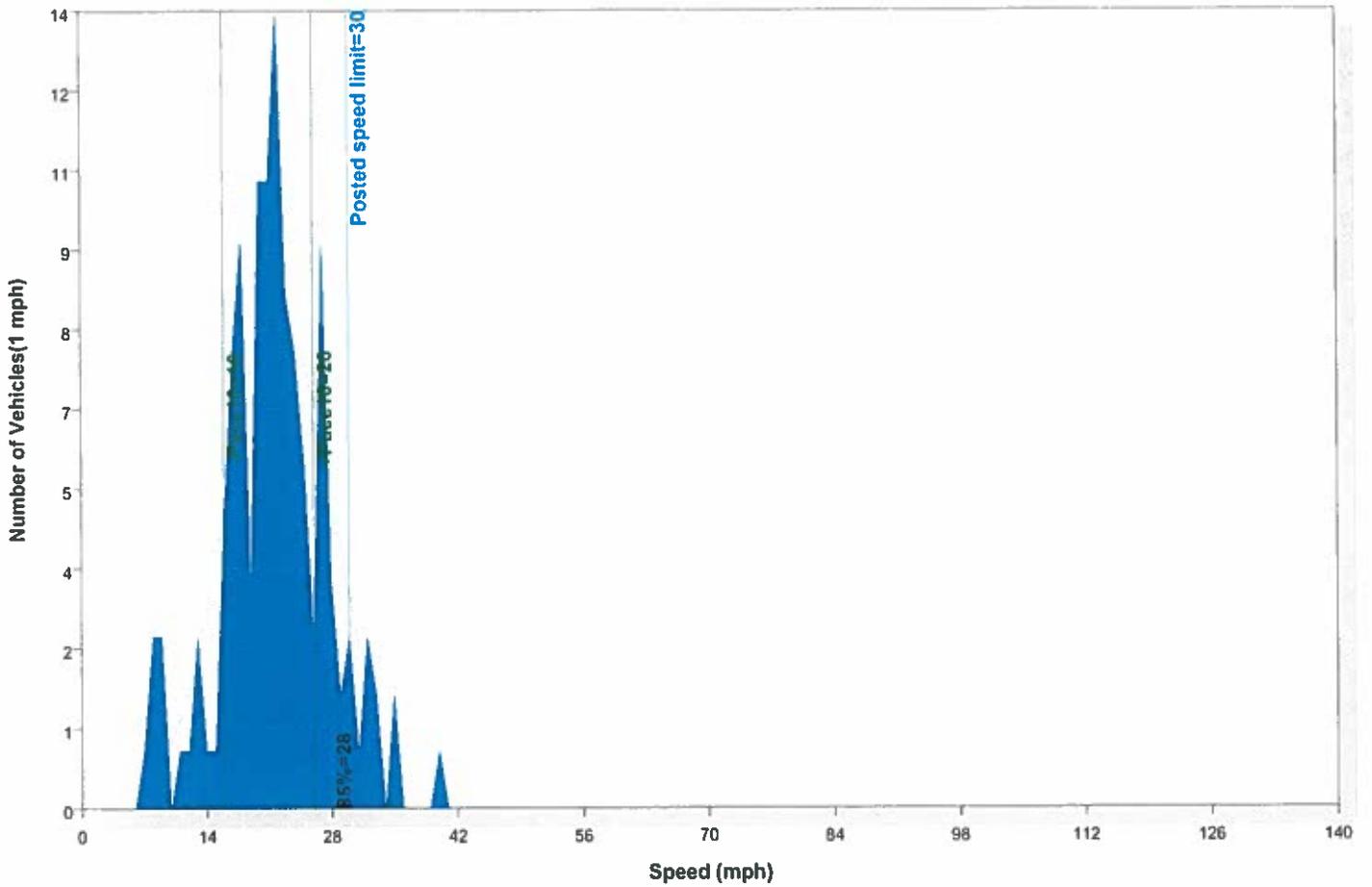
Filter time: 0:00 Wednesday, September 30, 2015 => 0:00 Thursday, October 01, 2015 (1)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range: 5 - 100 mph.
Direction: West (bound), P = West
Separation: Headway > 0 sec, Span 0 - 300 ft
Name: Default Profile - Urbana
Scheme: Vehicle classification (Scheme F)
Units: Non metric (ft, mi, ft/s, mph, lb, ton)
In profile: Vehicles = 131 / 229 (57.21%)

Speed Statistics

Direction: EW
Vehicles = 131
Posted speed limit = 30 mph, Exceeding = 12 (9.16%), Mean Exceeding = 33.26 mph
Maximum = 40.9 mph, Minimum = 7.5 mph, Mean = 22.2 mph
85% Speed = 27.5 mph, 95% Speed = 32.0 mph, Median = 22.1 mph
10 mph Pace = 16 - 26, Number in Pace = 89 (67.94%)
Variance = 35.77, Standard Deviation = 5.98 mph

Speed Histogram

SpeedHist-36(Non metric) Site:2015-11 2.0W
Description: Myra Ridge & Trails (WB Trails)
Filter time: 0:00 Wednesday, September 30, 2015 => 0:00 Thursday, October 01, 2015
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(5,100) Headway(>0) Span(0 - 300)
Scheme: Vehicle classification (Scheme F)



MetroCount Traffic Executive Speed Histogram

SpeedHist-35 -- English (ENU)

Datasets:

Site: [2015-13] Mrya Ridge & Trails (EB Trails)
Attribute: Urbana
Direction: 2 - East bound, A trigger first. Lane: 4
Survey Duration: 0:00 Wednesday, September 30, 2015 => 15:23 Thursday, October 01, 2015,
Zone:
File: 2015-1301Oct2015.EC4 (Plus)
Identifier: P047A8DG MC56-L4 [MC55] (c)Microcom 19Sep03
Algorithm: Factory default axle (v4.06)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Wednesday, September 30, 2015 => 0:00 Thursday, October 01, 2015 (1)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range: 5 - 100 mph.
Direction: East (bound), P = East
Separation: Headway > 0 sec, Span 0 - 300 ft
Name: Default Profile - Urbana
Scheme: Vehicle classification (Scheme F)
Units: Non metric (ft, mi, ft/s, mph, lb, ton)
In profile: Vehicles = 191 / 320 (59.69%)

Speed Statistics

Direction: EW
Vehicles = 191
Posted speed limit = 30 mph, Exceeding = 12 (6.28%), Mean Exceeding = 31.16 mph
Maximum = 33.2 mph, Minimum = 7.8 mph, Mean = 20.6 mph
85% Speed = 26.8 mph, 95% Speed = 30.2 mph, Median = 19.9 mph
10 mph Pace = 14 - 24, Number in Pace = 117 (61.26%)
Variance = 30.38, Standard Deviation = 5.51 mph

Speed Histogram

SpeedHist-35(Non metric) Site:2015-13.4.0E

Description: Mrya Ridge & Trails (EB Trails)

Filter time: 0:00 Wednesday, September 30, 2015 => 0:00 Thursday, October 01, 2015

Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E) Sp(5,100) Headway(>0) Span(0 - 300)

Scheme: Vehicle classification (Scheme F)

