

Seventh Street Process Committee

Questions and Staff Responses

May 15, 2020

1. Are we tracking speeds with the radar signs? Has speed changed?

Staff Response: The Ann Arbor Police Department (AAPD) does periodically pull data from these signs. Unfortunately, data pulled more recently than 2017 is not currently available to the Transportation team. This data is housed in a non-networked location within the Justice Center. The Transportation team will work with the AAPD to develop a long-range report on speeds using several years' worth of data once the state of emergency has been lifted, and staff can access files at the office.

2. Who decided the 25 mph for Waterworks Park area, and why does this not apply for West Park as well?

Staff Response: The speed limit in the Waterworks area was established by Traffic Control Order (TCO) # 3232, and the listed reason for implementation is:

“Residents are concerned over speeds on Seventh and the crossing of school students at waterworks park. Per Michigan Vehicle Code 257.629, prima facie speed limits of 25 mph adjacent to public parks are acceptable. This speed zone corresponds with the property lines of Waterworks Park.”

The establishment of this speed zone occurred prior to the tenure of the current transportation engineers and under the guidance of the previous City Engineer, Homayoon Pirooz. The physical files for this project are currently at City Hall. However, the best understanding is that the signage change was made because it was allowed under state law in hopes of slowing people driving vehicles and in response to resident requests. It was not a proven countermeasure or speed management best practice.

3. Do we know a safe recommended traffic volume for 7th? What is a safe speed? Can these two concerns be separated?

Staff Response: First and foremost, we must recognize that Seventh Street is an arterial and the only north-south corridor between Main Street and Maple Street which connects across the City. The volume of traffic, regardless of mode choice, is a function of the overall system and travelers not having parallel routes to select.

Safe travel can occur regardless of the volume of trips. While increases in the volume of trips may increase the possibility for conflict and crashes, due to the increased potential for conflict, there are many other factors involved in safety outcomes.

Speed is a determining factor in crash outcomes. Lower speeds decrease the severity of injuries incurred in a crash. Design elements to encourage reduced speeds are a tenant of Vision Zero and safe systems engineering practices. These items include modifications to the built

environment such as reduced lane widths and street elements such as pedestrian refuge islands and pedestrian gateway treatments, many of which the Seventh Street corridor already has in place.

Regarding separation of the two concerns, we need to look at the corridor in a holistic manner. The corridor serves a critical mobility function for the City and it serves a critical local access function for the adjacent neighborhoods. Any future work to be done in this corridor must take these aspects, along with all of the corridor characteristics, into account in order to develop projects or plans that serve the corridor.

4. Is 7th considered a local road or arterial? Can this be changed if it is arterial?

Staff Response: It is considered an arterial in the National Functional Classification System. It is listed as a Major Collector in the City's Standards and Specifications ("Orange Book"). It serves to connect two arterials, Scio-Church and Miller as it carries over 13,000 vehicles per day (vpd) according to traffic data. Those system linkages and usage patterns are consistent with the arterial classification. Changing the street classification from arterial to collector would not result in major changes to the operation and purpose of the facility.

5. Confirm that the light at Liberty and 7th has a leading pedestrian interval. Same for Stadium and also Pauline?

Staff Response: Leading pedestrian intervals have been installed at three intersections along Seventh Street (Liberty, Pauline, and Stadium).

6. Can we put in more stop signs? What are the regulations? What is local authority and what is MDOT? Does Seventh meet warrants for stop sign installation at any point?

Staff Response: Given the other questions/discussion raised here regarding speeds, this answer from our [Traffic Calming Guidebook](#) (p. 13) will be useful:

"By law, the purpose of a stop sign is to assign who has the right to go first, not to slow vehicles. The Michigan Manual of Uniform Traffic Control Devices (MMUTCD) prohibits the use of stop signs as a traffic calming device. Installing stop signs at all approaches to an intersection does not result in fewer collisions or slower traffic.

Possible consequences of installing unwarranted stop signs at all approaches to a residential intersection include:

- Increased motorist speeds to make up for lost time from the stop sign (often referred to as "speed spiking").
- Increased risk of rear end collisions.
- Increased likelihood of "rolling stops" at intersections, which increases risk of collision.
- Increased violations as frustrated drivers pay less attention to the requirement for a full stop."

According to the MMUTCD (section 2B.07), the following criteria should be considered:

“The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

- 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.
- 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.
- 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
 - 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.”

All locations on Seventh Street fall under the authority of the City of Ann Arbor, with the exception of Seventh/Huron (Huron is a state, or MDOT, trunkline).

The [Seventh Street Speed Management Study](#) (2017) performed a warrant analysis of Seventh and Madison, which is the only intersection of two major roads in the study corridor that was not already controlled by a traffic signal. The outcome was that an all-way STOP was not recommended. More details of this analysis can be found on pages 8-9 of the study.

7. Do game days and events change what can and should be done?

Staff Response: Game day traffic operations does not limit what can be done. Seventh Street intersections from Stadium to Huron are typically manually controlled by City staff and/or Michigan State Police (MSP) during post-game traffic management.

8. Can the turn lane from 7th to Madison be removed? And other turn lanes throughout the corridor?

Staff Response: In the prior considerations from years ago, the City Traffic Engineer indicated the lanes were needed to avoid queuing of vehicles behind turning vehicles. This was the basis for the lanes being installed initially and remaining in place today. Additionally, an all-way stop was evaluated in 2017 and it was determined that an all-way stop was not recommended at this location.

9. **What is the maximum volume of traffic (vehicles per hour?) along 7th that the typical signaled intersections can accommodate? How would that number change without turn lanes along 7th?**

Staff Response: Maximum bidirectional volume on Seventh Street is approximately 900 vehicles per hour, at cross-streets, such as Liberty, which carries slightly more traffic than Seventh Street. Left-turn volume from Seventh Street varies between 50 and 100 vehicles per hour. Northbound Seventh left-turn at Huron can peak at 150 vehicles per hour. Consideration of left-turn lane removal will need to include same-direction through volume, opposing volume and non-motorized users serviced by the same signal phase. Addition of a left-turn lane is typically considered a safety mitigation measure.

10. **Are there any examples of a high-volume, low-speed streets or is speed invariably tangled up with volume?**

Staff Response: The direct relationship between volume and speeds have been studied for uninterrupted flow facilities more than for controlled facilities. Studies in this area have shown that increases in density (vehicles/mile/lane) correspond to decreases in speeds. This relationship also exists on controlled corridors. The busiest corridors experience more congestion, which leads to lower speeds.

11. **Are there tools for metering traffic between signals that fall outside of (currently disallowed) traffic calming devices?**

Staff Response: We understand this question to be in relation to physical tools used to manage speed along a corridor. There are a variety of speed management tools that would fall into what could be considered a “major streets” traffic calming program. An example of this type of device would be a raised intersection. Staff could work with the Transportation Commission to plan a policy approach to developing and implementing a major streets traffic calming or speed management program for these types of corridors.

12. **Collect information on 7th and Huron, status for MDOT? What is the crash data and MDOT response regarding changes? Potential to restrict turns there?**

Staff Response: MDOT conducted a thorough review of the intersection during the Huron/Jackson reconstruction project. This review included safety (crash history) and operations analyses. The intersection was evaluated for several possible alternatives of signal phasing based on requests received by both the State and City. MDOT determined that the intersection did not have a significant correctable crash pattern that was worth addressing given the detrimental impact split phasing the intersection would have on level of service and progression on Huron Street. Per request from Councilmember Ramlawi, MDOT was asked to re-evaluate this intersection, especially from the Seventh Street northbound & southbound movements.

Limiting turns onto Seventh from Huron Street would require either a significant detour or would push turns onto neighborhood streets.

13. Update on “how speed limits are set” presentation to the Transportation Commission (per B. Parsons request)? When will this be conducted? Can staff share any information about this with the Committee?

Staff Response: Staff would be happy to make a presentation on how speed limits are set. This presentation hasn't been scheduled, especially in light of the uncertainty of the Transportation Commission's meeting schedule amidst the COVID-19 pandemic. This will be targeted as a June 2020 Transportation Commission agenda item.

Additional reference materials:

- a2gov.org/seventh
- OHM Speed Management Study 2017 - [summary of recommendations](#), more detailed information and a complete report are on the webpage
- [Toolbox of Options for Seventh](#) – prepared 2013
- Why not install a stop sign? Page 13 of the [Traffic Calming Guidebook](#).