

MEMORANDUM

DATE: June 12, 2025

TO: Brendan McLaughlin, Village of Clarendon Hills

FROM: Liz Jensen, CBBEL

SUBJECT: Video Traffic Observations – Southbound Prospect Avenue
Prospect Avenue at Park Avenue
Clarendon Hills, Cook County, Illinois
(CBBEL Project No. 230068.0001)

The Village of Clarendon Hills conducted a pilot study from May 12th to May 18th to determine the effects of closing the southbound channelized right turn lane at the Prospect Avenue and Park Avenue intersection located in downtown Clarendon Hills. The Clarendon Hills Police Department placed barricades at the entry and exit points for the southbound right turn lane and placed GoPro cameras to supplement the existing surveillance video stream to capture the effects of the new southbound lane configuration. The Village requested that CBBEL review the GoPro camera streams and the supplemental real-time camera data during the closure to determine if southbound vehicle queuing was consistent with the previous capacity analysis performed in 2023.

The previous CBBEL study collected traffic counts and analyzed the capacity analysis at the Prospect Avenue and Park Avenue intersection for the AM peak period, PM peak period, and the Saturday mid-day peak period. Based on the capacity analysis, the longest 95th percentile queue for the southbound approach with a proposed single lane occurs during the PM peak period at 135 feet for a single lane approach; this would place the back of the queue at the raised midblock crossing on Prospect Avenue.

Peak Period Video Observations

The 2023 traffic counts showed a directional volume distribution for Prospect Avenue with the northbound movements being heavier in the morning peak period and the southbound movements being similarly heavier in the evening peak period. This same traffic pattern was observed in the video data for the pilot study. CBBEL reviewed the available video data and focused on the May 14th (Wednesday) and May 17th (Saturday) videos to make the following detailed observations:

During the AM peak period (May 14, 2025), southbound vehicles momentarily queued to approximately 170 feet directly after the railroad gates released southbound traffic once a freight train passed the Prospect Avenue at-grade crossing. The southbound queuing dispersed quickly (less than 2 minutes) and traffic returned to a more evenly distributed arrival rate. The southbound queuing in the morning peak period after Metra trains passed the Prospect Avenue at-grade crossing resulted in shorter queues as compared to the freight train crossing.

During the PM peak period (May 14, 2025), many Metra trains were observed with the resulting southbound queuing. There was an instance where two Metra trains passed (one



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right after the other going opposite directions), it resulted in a queue of about 170 ft to 180 ft from the stop bar and it took about 2 minutes for the queuing to dissipate. On May 14th, there were two school buses traveling southbound and once they arrived at the all-way stop intersection of Prospect Avenue and Park Avenue, the southbound queue did not move for approximately 40 seconds; the resulting southbound queue extended to the upstream intersection with Ann Street and took about 3 minutes for the queuing to clear. Reviewing the video data from the additional camera at the intersection, one of the school buses dropped school children off at the triangle causing the 40 second delay.

The Saturday mid-day peak (May 17, 2025) was observed as well from the video data, the southbound queuing did reach approximately 140 feet three times during the peak period but dissipated quickly. A freight train was observed during peak period and after the train passed, the railroad gates released southbound traffic with no significant queueing identified.

Conclusions

Southbound traffic queuing was generally impacted by the railroad gate down time, delivery vehicles blocking the lane, drivers backing up from diagonal parking spots, and school buses dropping off students as well as a few uber drivers waiting for/dropping off their customers. When these items were not present, the queueing was limited even with the barricades blocking the channelized right turn lane.

The southbound queuing in the video showed slightly longer queues after the railroad gates released southbound traffic as compared to the capacity analysis (approximately 180 ft compared to the calculated 95th percentile queue of 135 ft) because the capacity analysis does not model the vehicle arrival rate being affected by the railroad crossing. Even with this model limitation, the resulting queue difference is less than two cars.

Potential safety issues can arise when vehicles are queued over the railroad tracks. The only instance of vehicles stopping on the tracks was from a delivery truck blocking the southbound receiving lane at Prospect Avenue and Ann Street. It should also be noted that while the school bus dropped students off at the triangle, the video showed the resulting queue getting close to the railroad tracks but not on the tracks; this may be due to drivers purposely stopping at the Prospect Avenue and Burlington Avenue intersection and this could still be a safety concern as well.

