



## Agenda Item Summary

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### **Submitted By**

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Village Engineer

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### **Reviewed By**

LKS

### **Agenda Item Title**

**A Motion to Concur with the Transportation Commission's Recommendation to Upgrade from Two-Way, North-South STOP Signs to All-Way STOP Signs at the Intersection of Kenilworth Avenue and Lexington Street; and Direct Staff to Prepare the Necessary Ordinance**

### **Overview**

The Village of Oak Park received a traffic calming petition for the intersection of Kenilworth Avenue and Lexington Street. The Village conducted crash analysis and traffic studies for the intersection. The Transportation Commission voted four to two to recommend upgrading to all-way STOP signs at the intersection of Kenilworth Avenue and Lexington Street at its April 22, 2019 meeting. Staff does not concur with the Transportation Commission's recommendation as there are no speeding issues, intersection crash rate is below the critical crash rate for the area, and no abnormal geometry at this intersection.

### **Recommendation**

Motion to Upgrade from a two-way STOP sign to an all-way STOP sign.

### **Staff Recommendation**

Deny the Motion (the Transportation Commission's Recommendation) and retain the Two-Way STOP sign.

### **Fiscal Impact**

Staff estimates it will cost less than \$1,500 to install signage and related pavement markings to upgrade from two-way STOP signs to an all-way STOP controlled at this intersection. There are available funds in the FY2019 General Fund, Public Works - Street Services, account no. 1001-43740-761-560634 for this work.

### **Background**

On October 31, 2018, the Village of Oak Park received a petition to install a traffic calming device at the intersection of Kenilworth Avenue and Lexington Street. Residents representing 67.0% of the street frontage of the petitioning blocks signed the petition; which is above the 51% requirement. The petition was certified as a valid petition.

In the letter of explanation, the residents suggested the intersection be upgraded from two-way to all-way STOP-controlled intersection. Reasons provided for the petition are: concern for pedestrian safety at the

intersection especially children and families as they walk to and from Lincoln School; heavy traffic on Lexington Street due to motorists looking for alternatives to Garfield Street, Roosevelt Road and Harvard Street during drop-off and pick-up time periods; and speeding vehicles. See Attachment A for a copy of the letter of explanation. See Attachment B for copies of the written public testimony received by the Village for this item.

A directional twenty-four hour traffic volume and speed study was conducted on Thursday, March 14, 2019 for the 900 and 1000 blocks of Kenilworth Avenue and 830 and 900 blocks of Lexington Street. The results were analyzed and then summarized (see Attachment F). Staff also reviewed the crash history of the intersection and generated a collision diagram based on the crash reports (see Attachment H).

The petition was reviewed by the Transportation Commission at its April 22, 2019 meeting. Staff gave a presentation on the issue including: background on the petition, history of traffic control devices at the intersection, analysis of the collected traffic data and collision diagram. Area residents provided public testimony on the item. After hearing Staff's presentation and public testimony, the Transportation Commission deliberated on the item. The approved minutes for the April 22, 2019 Transportation Commission meeting are included as Attachment I.

At the April 22, 2019 meeting, the Transportation Commission voted four to two in favor of recommending to upgrade the intersection of Kenilworth Avenue and Lexington Street from two-way, north-south STOP controlled to all-way STOP controlled intersection and to refresh continental crosswalk pavement markings at all four legs of the intersection.

Staff does not concur with the Transportation Commission's recommendation to upgrade the intersection to all-way STOP-controlled. Based on the collected data, there does not appear to be a speeding issue, there is not a high crash rate to warrant an upgrade to all-way STOP signs. Staff is concerned a driver traveling on this section of Lexington Street, encountering STOP signs at three successive intersections may deem the STOP sign at Kenilworth Avenue unnecessary. The driver may decide not to fully stop (roll through) the intersection or increase their speed between the intersections to make up for lost time. As a result, pedestrians and motorists traveling on Kenilworth Avenue may feel a false sense of security with a STOP sign at Lexington Street.

Staff recommends installing continental crosswalk markings on all four legs of the intersection for increased visibility of pedestrians. Staff also recommends the installation of pedestrian crossing signs for eastbound and westbound Lexington traffic at Kenilworth Avenue to warn motorists of crossing pedestrians.

## ANALYSIS SECTION

### Geometry of the Intersection and Neighborhood Context (Attachments C & D)

See Attachment C for digital aerial photographs of the Kenilworth Avenue and Lexington Street intersection and the neighboring area; as well as an up-close aerial view of the intersection. Both Lincoln School and Carroll Park is one block south of the intersection. The Harvard Congregational Church is less than a block to the south of the intersection. The CTA Blue Line Oak Park station is two blocks to the east and one and a half blocks to the north of the intersection.

Attachment D shows the traffic control devices on Lexington Street between Maple Avenue and Oak Park

Avenue as well as neighboring east-west streets, Garfield Street, Harvard Street, and Fillmore Street. Attachment E is Lincoln School's Safe Walking Routes to School map with the Kenilworth Avenue and Lexington Street highlighted with a yellow box.

#### Traffic Study - Volume and Speed (Attachments F & G)

Reviewing the 24-hour volumes (Attachment F), the average daily traffic on the 900 and 1000 blocks of South Kenilworth Ave was 188 and 267 vehicles, respectively. The Kenilworth Avenue volumes fall below the 800 to 1,200 vehicle range for typical average daily traffic volume on the Village's residential streets. For the 830 and 900 blocks of Lexington Street, the average daily traffic was 1,763 vehicles and 1,696 vehicles, respectively.

Lexington Street volumes are above the typical 800 to 1,200 vehicle range for average daily traffic volume on the Village's residential streets. There a couple of factors contributing to the elevated volumes for Lexington Street in this area. They are: 1) congestion on Garfield Street at Oak Park Avenue for eastbound traffic especially during AM peak hours, and 2) Harvard Street is temporarily closed to vehicle traffic between Kenilworth Avenue and Grove Avenue during Lincoln School drop-off and pick-up time periods per the Lincoln School Traffic Safety Plan. As a result, some motorists use alternate east-west routes, which include Lexington Street, to avoid those areas.

As one of its construction projects for this year, the Village is scheduled to modify the Garfield traffic signals at Oak Park Avenue to provide a protected left turn phase to alleviate congestion at this intersection. It is expected this improvement will be completed by September 2019 . Village staff anticipates that a portion of the traffic that currently travels on Lexington Street will migrate to Garfield Street thus reducing traffic volumes on Lexington Street.

Regarding vehicular speeds, it is an accepted traffic engineering practice to set the speed limit to the 5 mile per hour increment above or below the 85th percentile speed. Village Staff holds the opinion that the majority of drivers will drive at or near the posted speed limit. In addition, it is an accepted fact that the speed indicated on speedometers can vary up to 2 percent above or below the actual speed of the vehicle.

By definition, the 85th percentile speed is the speed at which 85 percent of the vehicles are traveling at or less than. Conversely, 15 percent of the vehicles will be traveling faster than the 85th percentile speed. It has already been stated that speed limits are typically set to the 5 mile per hour increment above or below the 85th percentile speed. This implies that it is expected that approximately 15 percent of vehicles will be traveling faster than the speed limit, if the speed limit is the 5 mile per hour increment below the 85th percentile speed.

Looking at the 85th percentile speeds for all four blocks of the intersection (the 900 and 1000 blocks of South Kenilworth Avenue and the 830 and 900 blocks of Lexington Street, the directional speeds for the four blocks range between 24 and 25 miles per hour. The 24-hour survey showed that 10.6% of the northbound vehicles and 17.0% of the southbound vehicles on the 900 block of South Kenilworth Avenue were traveling faster than the posted 25 mph speed limit. For the 1000 block of South Kenilworth Avenue, the percentage of vehicles traveling faster than the posted 25 mph speed limit were 14.9% for northbound traffic and 15.1% for southbound traffic.

Looking at the 85th percentile speeds for the 830 & 900 blocks of Lexington Street, the 24-hour survey showed that 10.5% of the eastbound vehicles and 15.0% of the westbound vehicles on the 830 block of Lexington Street were traveling faster than the posted 25 mph speed limit. For the 900 block of Lexington Street, the percentage of vehicles traveling faster than the posted 25 mph speed limit were 15.6% for eastbound traffic and 17.6% for westbound traffic. Based on the collected traffic data, it appears there is not a speeding issue on any of the four blocks studied.

Attachment G provides a summary of the number of pedestrians crossing any of the Kenilworth Avenue and Lexington Street intersection's four legs during the 7:00AM-9:00AM and 2:00PM-4:00PM time periods. Also included in the summary is the number of vehicles traveling through the intersection during these same time periods. For the morning peak hour, 57 pedestrians crossed Kenilworth Avenue at the intersection while 82 vehicles traveled on Kenilworth Avenue through the intersection. During the same time period, 25 pedestrians crossed Lexington Street at the intersection while 729 vehicles traveled on Lexington Street through the intersection.

In the afternoon two hour time period (2PM-4PM), 18 pedestrians crossed Kenilworth Avenue while 100 vehicles traveled along Kenilworth Avenue through the intersection. During the same time period, 11 pedestrians crossed Lexington Street at the intersection while 616 vehicles traveled along Lexington Street through the intersection.

#### Crash History - Collision Diagram (Attachment H)

Thirty-six months of vehicle crash reports covering the period of January 2016 through December 2018 were reviewed for the Kenilworth Avenue and Lexington Street intersection. Please see Attachment H for the collision diagram.

In 1997, the intersection was studied as part of the Village-wide traffic study. The Kenilworth Avenue and Lexington Street intersection was north-south STOP-controlled intersection. The number of reported crashes at the intersection in the 36 month period ending December 1996 totaled zero, while the average daily traffic was 1,802 vehicles. The 1997 crash rate for the Kenilworth Avenue and Lexington Street intersection was calculated to be 0.000 accidents per million entering vehicles (Acc/MEV). This crash rate is then compared to the critical crash rate for the particular section of the Village's area-wide traffic study. For the south section of the area-wide traffic study (I-290 Expressway to Roosevelt Road and Harlem Avenue to Austin Boulevard), the critical crash rate was 0.94 Acc/MEV. If an actual accident rate exceeds the critical crash rate then it is highly probable that the accidents were caused by factors other than chance.

The number of reported crashes that occurred at the Kenilworth Avenue and Lexington Street intersection for the thirty-six months ended December 31, 2018 totaled zero. The average daily traffic for the intersection as determined as part of the 2019 traffic study was 1,959 vehicles. From this data, the 2018 crash rate for the Kenilworth Avenue and Lexington Street intersection is calculated to be 0.000 Acc/MEV. This crash rate is below the critical crash rate as determined in the area-wide traffic study of 1997. In conclusion, there does not seem to be a problem with vehicle crashes at the intersection of Kenilworth Avenue and Lexington Street.

NOTE: On February 20, 2019, a right angle collision occurred at the intersection of Kenilworth Avenue and Lexington Street. The crash involved a southbound vehicle which according to the driver stopped and then started to proceed through the intersection as he did not notice a vehicle traveling westbound on Lexington

Street. The motorist in the westbound vehicle approaching Kenilworth Avenue saw the southbound vehicle appear across Lexington Street. She braked and skidded on the snowy pavement, striking the southbound vehicle.

Including the abovementioned crash in the intersection's crash rate would raise it to 0.466 Acc/MEV. This revised crash rate for the intersection is still below the critical crash rate of 0.94 Acc/MEV for this area of the Village.

### **Alternatives**

Deny the Commission's recommendation and the intersection remains two-way, north-south STOP-controlled on Kenilworth Avenue at Lexington Street.

### **Previous Board Action**

N/A.

### **Citizen Advisory Commission Action**

The Transportation Commission recommended the following:

1. Upgrade from two-way, north-south STOP signs to all-way STOP signs at the intersection of Kenilworth Avenue and Lexington Street.
2. Install or refresh continental crosswalk pavement markings on all four legs of the Kenilworth Avenue and Lexington Street intersection.

The motion passed with a vote of four to two.

### **Anticipated Future Actions/Commitments**

Subject to consensus of the Village Board, staff will submit an Ordinance to the Village of Oak Park Board for adoption for the installation of the east-west STOP signs on Lexington Street at Kenilworth Avenue at a future Board meeting.

### **Intergovernmental Cooperation Opportunities**

None at this time.