



## STAFF REPORT

DATE: June 8, 2021

### **DISCUSSION**

**AGENDA ITEM:** Converting 32nd Street North to One-way Street

**SUBMITTED BY:** Jack Griffin, City Engineer

**REVIEWED BY:** Kristina Handt, City Administrator  
Chad Isakson, Assistant City Engineer

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**ISSUE BEFORE COUNCIL:** Should the city council approve the conversion of 32nd Street North, between Lake Elmo Avenue and Klondike Avenue, to a westbound one-way street with parking allowed on one side of the street?

**BACKGROUND:** On December 16, 2020, the city council approved the plans and specifications for the Old Village Phase 5 and 6 Street and Utility Improvements. The improvements include the reconstruction of 32nd Street North, from Lake Elmo Avenue to 33rd Street, within a limited 40-foot wide right-of-way. The approved design includes post construction street widths that prohibit on-street parking per the current city parking standards. The post construction street width along 32nd Street North will be 24-feet wide, from Lake Elmo Avenue to Lambert Avenue, and 20-feet wide, from Lambert Avenue to Klondike Avenue. Current parking standards allow parking on one-side for a 24-foot wide street, and both sides for a 32-foot wide street.

On March 16, 2021, as part of the public improvement hearing for the project, a petition was received from property owners in the project area, requesting the conversion of 32nd Street North to a westbound one-way street with parking allowed on one side. Following the public improvement hearing, council directed staff to review the potential conversion of 32nd Street North together with options that may be considered to accommodate on-street parking.

**PROPOSAL DETAILS/ANALYSIS:** The attached technical memorandum was prepared by a Professional Traffic Engineer from SEH, and provides a review of the options available for the use and parking along 32nd Street North, from Lake Elmo Avenue to Klondike Avenue, following its reconstruction in 2021. The analysis includes a review, together with potential impacts and considerations, to convert this segment of roadway to a westbound one-way street; to remain two-way traffic with no parking; and to remain two-way traffic with parking on one side.

The memorandum includes a recommendation to keep 32nd Street North as two-way traffic while allowing parking on one side. The memorandum discusses the ability to navigate the narrow street with two-way traffic due to its projected low traffic volumes consisting of primarily localized traffic. The memorandum further recommends that the parking be allowed on the south side of the roadway due to physical constraints along some portions of the street. Steep slopes along the north side will make snow storage and passenger side vehicle access difficult.

At the workshop, staff will be available to present the findings and recommendations from the one-way conversion traffic analysis and to answer any further questions on the various alternatives.

**OPTIONS:**

- 1) Make no changes to the approved project design, leaving 32nd Street North as two-way traffic with no on-street parking.
- 2) Direct staff to allow parking along the south side of 32nd Street North with two-way traffic and sign the post constructed street accordingly.
- 3) Direct staff to convert 32nd Street North to a westbound one-way street with parking on one side.

**ATTACHMENTS:**

- 32nd Street North One-way Analysis Technical Memorandum dated May 28, 2021.



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## DRAFT MEMORANDUM

TO: Jack Griffin, PE  
City Engineer – City of Lake Elmo

FROM: Chad Jorgenson, PE (IA, MN, SD), PTOE

DATE: May 28, 2021

RE: 32nd Street N One-way Analysis  
SEH No. LAKMO 151537

This technical memorandum provides the findings of the analysis of 32<sup>nd</sup> Street North for conversion to a one-way roadway. This technical memorandum will cover the advantages and disadvantages of several 32<sup>nd</sup> Street N roadway alternatives.

### INTRODUCTION

32<sup>nd</sup> Street N is currently being reconstructed between 33<sup>rd</sup> Street North and Lake Elmo Avenue. The proposed roadway will be 24 feet wide east of Lampert Avenue and 20 feet wide west of Lampert Avenue. Due to the narrow cross section of the roadway, it was proposed that on-street parking be prohibited along 32<sup>nd</sup> Street N; however, many residents along the street have requested that on-street parking remain in place.

In addition to the narrow cross section, there are some significant slopes on the north side of 32<sup>nd</sup> Street N, which make snow storage and passenger side vehicle access along the roadway difficult.

This study will cover the advantages and disadvantages of the following roadway alternatives along 32<sup>nd</sup> Street:

- Two-way traffic with no parking
- Two-way traffic with parking on one side
- One-way westbound traffic with parking on one side

### DATA COLLECTION

24-hour volume counts were obtained at 3 locations in April 2021 by the City of Lake Elmo. The three locations and their 24-hour volumes are below:

- 32<sup>nd</sup> Street N west of Lake Elmo Avenue – 140 vehicles per day (vpd)
- 32<sup>nd</sup> Street N south of 33<sup>rd</sup> Street N – 120 vpd
- 33<sup>rd</sup> Street N west of Lake Elmo Avenue – 260 vpd

Directional traffic volumes were not recorded as part of the 24-hour volume counts; therefore, it is assumed that 50% of the traffic is going each direction.

Engineers | Architects | Planners | Scientists

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## TRIP GENERATION

To estimate the number of cut through trips on 32<sup>nd</sup> Street N, trip generation estimates were made of the homes along 32<sup>nd</sup> Street N, Klondike Avenue, Lampert Avenue, and 33<sup>rd</sup> Street N to determine the expected ADT from local trips only. Trip generation estimates were based on the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10<sup>th</sup> Edition. The ITE trip generation rate for single family homes is 9.44 trips per day. **Table 1** shows the number of homes on each roadway and the estimated trips on each roadway.

**Table 1 – Trip Generation Estimates**

Roadway	Number of Homes	Estimated Trips
32 <sup>nd</sup> St N	22	210
Klondike Ave	9	85
Lampert Ave	12	115
33 <sup>rd</sup> St N	22	210

Based on the trip generation estimates for the area roadways, either end of 32<sup>nd</sup> Street N would be expected to have an ADT between 100 and 200 vpd. Therefore, the existing counts of 140 and 120 vpd likely include very few cut through trips, indicating that 32<sup>nd</sup> Street N is currently used primarily by local traffic.

## ONE-WAY ANALYSIS

32<sup>nd</sup> Street N was analyzed as a westbound one-way street between Lake Elmo Avenue and Klondike Avenue to determine the impact on other area roadways. If a one-way were implemented, we recommend that the one-way end at Klondike Avenue to allow the vehicles to access the Klondike Avenue dead end roadway without significant rerouting. Additionally, if 32<sup>nd</sup> Street was converted to a westbound one-way from Lake Elmo Avenue to Lampert Avenue, traffic volumes would increase significantly along Lampert Avenue. Below is a summary of the one-way analysis.

- Based on the existing ADT counts, up to 70 eastbound trips per day would be added to 33<sup>rd</sup> Street N and Lampert Avenue N.
- An increase of 70 vehicles per day is a relatively low number when spread throughout the day but may be noticeable to residents along these streets, especially Lampert Avenue, which likely has less than 100 vpd currently.
- Because most of the traffic is local, it is more likely that drivers will shift their travel patterns before entering the neighborhood so that they enter off of Lake Elmo Avenue rather than having to reroute through the neighborhood.
- Parking on the one-way or two-way roadway would likely need to be on the south side of the roadway due to the retaining walls and slopes on the north side of the roadway. This will decrease parking capacity due to the close spacing of residential driveways on the south side of the roadway.

What does  
this mean?

Parking should be on north side with limitations?

## ANALYSIS OF ALTERNATIVES

The advantages and disadvantages of the following roadway alternatives were analyzed. **Table 2** summarizes the advantages and disadvantages of each option.

- Two-way traffic with no parking
- Two-way traffic with parking on one side
- One-way westbound traffic with parking on one side

**Table 2 – Alternatives Analysis**

Alternative	Advantages	Disadvantages
Alternative 1: Two-way, No Parking  Meets city parking standards	<ul style="list-style-type: none"> <li>- Provides dedicated space for vehicles in both directions (no rerouting)</li> <li>- Better snow removal/storage</li> <li>- Emergency vehicle access can be accommodated</li> </ul>	<ul style="list-style-type: none"> <li>- No on-street parking provided</li> </ul>
Alternative 2: Two-way, one side parking	<ul style="list-style-type: none"> <li>- Provides two-way traffic (no rerouting)</li> <li>- Provides on-street parking</li> </ul>	<ul style="list-style-type: none"> <li>- Vehicles will need to weave around parked vehicles, likely not a major concern with the low ADT</li> <li>- Reduced snow removal/storage when vehicles are parked in roadway compared to Alternative 1</li> <li>- Emergency vehicle access may be impaired in winter; prohibit parking during the winter months</li> </ul>
Alternative 3: One-way westbound, one side parking	<ul style="list-style-type: none"> <li>- Provides on-street parking</li> <li>- Provides dedicated space for the one-way traffic</li> <li>- No sight distance issues at Lake Elmo Avenue</li> </ul>	<ul style="list-style-type: none"> <li>- Requires eastbound vehicles to reroute to 33<sup>rd</sup> St N and Lampert Ave</li> <li>- Reduced snow removal/storage when vehicles are parked in roadway compared to Alternative 1</li> <li>- Emergency vehicle access may be impaired in winter; prohibit parking during the winter months.</li> </ul>

## RECOMMENDATION

Based on the results of our analysis and after conversations with City staff, it is recommended to keep 32<sup>nd</sup> Street a two-way street and allow parking on the south side of the roadway. To help with snow removal and storage operations, parking along 32<sup>nd</sup> Street should be banned during the winter months. Additionally, emergency service providers should be consulted before implementing this recommendation.

c: Chad Isakson – City of Lake Elmo  
 Scott Haupt – SEH  
 Tom Sohrweide – SEH