



# 2023 Intersection Control Ranking System (ICRS) Report

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Washington  
County

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# Introduction

## Introduction

### Background and Purpose

The Intersection Control Ranking System (ICRS) is a County Board approved policy for prioritizing the installation of traffic control improvements on roadways under Washington County's jurisdiction. Traffic control improvements primarily include the installation of traffic signals and roundabouts, but may also include all-way stops, turn restrictions, or other modifications to improve traffic operations. The policy was originally adopted on November 11, 1994, and revisions were approved by the County Board on July 21, 2015.

The policy was originally adopted because Washington County's continued robust growth invariably leads to a growing number of requests to install traffic signals at intersections on the County roadway system. Since the County has limited funding and staff resources to deliver traffic signal projects, the ICRS was established to provide a data-driven process for identifying the intersections that may be the highest priorities for traffic control projects. The ICRS continues to serve that same purpose today, providing a fair and consistent benchmark for evaluating and prioritizing traffic control improvements countywide.

### How Intersections Are Chosen For Inclusion

Intersections that are included in the annual ICRS Report are selected by one of three methods:

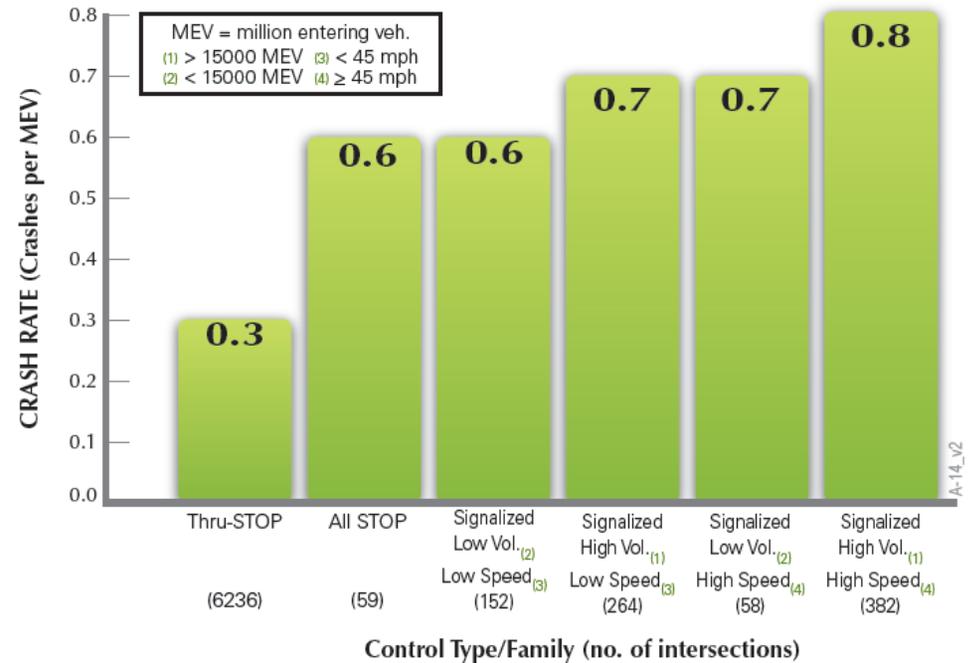
- County staff may include intersections based on observations by staff, or upon request of elected officials, residents, or roadway users.
- Cities or townships request that an intersection be included based their observations (the County may request assistance from the city or township in collecting the traffic data necessary to analyze the intersection).
- County staff may include an intersection that has been counted by a city, township, or private developer as part of an area traffic study to show where it ranks relative to the other intersections on the list.

Intersections that are selected to be included in the annual ICRS Report in any given year will not necessarily be included in future reports. For example, an intersection which is selected to be studied and included in the 2023 ICRS Report, but which ranks near the bottom of the prioritization list and does not meet traffic signal warrants, will likely not be included in the 2024 ICRS Report unless traffic volumes or patterns have changed significantly at that location. Intersections which are close to meeting traffic signal warrants will generally be kept on the list, but might not be counted every year.

# Traffic Signals Are Not Safety Devices

Although traffic signals are often perceived as a safety enhancement, statewide data shows that traffic signals actually tend to increase overall crash risk when installed at intersections. However, traffic signals are sometimes necessary to prevent unreasonable delays to certain movements, or to ensure the orderly operation of unusually complex traffic patterns. Traffic signals do have the potential to reduce the occurrence of certain crash types, but the overall number of crashes typically increases, especially rear-end crashes, so the expected benefits of the traffic signal must be carefully weighed against the expected increase in overall crashes.

For pedestrians, traffic signals can be useful devices to create gaps in vehicle traffic for pedestrians to cross when such gaps are unreasonably infrequent. However, although signals can limit delays for pedestrians to cross, the average delay to pedestrians usually increases substantially, as pedestrians must wait for the signal to change even during periods of low traffic volume. A pedestrian who finds the wait time to be unreasonable might choose to cross illegally against the signal, with potentially deadly consequences. Even at traffic signals, pedestrians rely on drivers to obey the indications and to properly yield to pedestrians when turning, but drivers may not see pedestrians when their attention is focused on other parts of the intersection. Of the nearly 3000 vehicle-pedestrian crashes in the metro area from 2019-2023, 42 percent occurred at signalized intersections.<sup>[1]</sup>



Note: Only for Trunk Highway Intersections

Intersection Crashes (1 of 2)

Source: 2004-2006 Minnesota TIS Crash Data

Source

[1] "Minnesota Crash Mapping Analysis Tool. Current Data from 1/1/2014-12/31/2023

# Traffic Signal Warrants Explained

Traffic signal warrants are prescribed by the Manual on Uniform Traffic Control Devices (MUTCD), which is the national document that provides a uniform policy for all traffic control devices on all public streets, roads, highways, and private streets that are open to public travel. The Minnesota MUTCD (MnMUTCD) is referenced in Minnesota Statute 169.06, is adopted by the Minnesota Commissioner of Transportation, and is binding on all roadways. The MnMUTCD is the legal standard of care used by courts when the use, misuse, overuse, or lack of traffic control devices is the subject of litigation.

Because traffic signals often increase overall crash rates and overall delay to users, traffic signal warrants are used as benchmark thresholds, below which a traffic signal might be expected to do more harm than good. There are nine warrants listed in the MnMUTCD, though many of them apply only in very unusual cases and thus are not usually evaluated. Below is a summary of the four warrants which are analyzed within Washington County's Intersection Control Ranking System (ICRS):



## [Warrant 1: Eight-Hour Volume](#)

Warrant 1 is most applicable to locations that have moderately high traffic throughout the entire day. Three categories are provided within this warrant, and each category provides a set of minimum traffic levels for the major and minor street, depending on the number of lanes. The minimum traffic must be met for eight hours within a given category for this warrant to be satisfied, though the eight hours need not be consecutive. This warrant is usually most applicable at the intersection of two regional roadways or entrances to commercial areas.

## [Warrant 2: Four-Hour Volume](#)

Warrant 2 is usually most applicable at intersections with collector streets that see daily sustained periods of very heavy traffic, such as during morning and evening peak periods, even if traffic levels are low throughout the remainder of the day. This warrant is evaluated by plotting the traffic volumes for the intersection approaches for each hour of the day on a graph and determining which hours, if any, exceed a prescribed set of minimum values. For this warrant to be satisfied, at least four hours of the day must be plotted above the minimum values prescribed.

## [Warrant 3: Peak Hour Volume](#)

Warrant 3 is usually most applicable at locations that have extremely high daily traffic peaks despite low volumes throughout the rest of the day. Metro agencies including Washington County do not normally consider this warrant alone to be sufficient justification to install a traffic signal, but it may be considered in combination with other factors including the severity of the peak delays and the availability of alternate routes. This warrant is evaluated by plotting the traffic volumes of the intersection approaches for each hour of the day on a graph and determining which hours, if any exceed a prescribed set of minimum values, which are higher than those used for evaluating Warrant 2. For this warrant to be satisfied, at least one hour of the day must be plotted above the minimum values prescribed.

## [Warrant 7: Crash Experience](#)

This warrant is intended to capture unusual situations where a high number of crashes has already occurred and where a signal is determined to be an effective strategy to reduce such crashes. Only certain crash types can be considered for this warrant, including right-angle crashes and left turns into oncoming traffic. Other crash types such as rear-ends, deer crashes, and sideswipe crashes are unlikely to be reduced with the installation of a traffic signal and therefore are not included. This warrant first requires adequate trial of other remedial measures which might include improving signing, clearing sight corners, adding or reconfiguring lanes, or other such strategies.

## [All-Way Stop Control Warrants](#)

The MnMUTCD also contains warrants for the installation of All-Way Stop control, which are also evaluated when such control might be an appropriate solution for the intersection.

## [Roundabouts in the ICRS](#)

The MnMUTCD does not contain warrants for roundabout control; however, common engineering practice dictates that traffic signal warrants or all-way stop warrants may be applied.

MnMUTCD website link:

<http://www.dot.state.mn.us/trafficeng/publ/mutcd/index.html>

# How the ICRS Works

## How Points Are Assigned

The Intersection Control Ranking System (ICRS) utilizes four of the traffic signal warrants from the Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD), along with traffic counts and recent crash data to prioritize intersections under County jurisdiction for traffic control improvements. As discussed on the previous page, traffic signal warrants define the minimum traffic conditions that should be present before a traffic signal is installed, to ensure that they are only installed in favorable situations that improve intersection operations. ICRS prioritization is based on the total number of points for each intersection, which are assigned as follows:

### Traffic Signal Warrant Points

This value is based on the number of hours that an intersection satisfies the following traffic signal warrants:

#### **Warrant 1: Eight-Hour Volume (Condition A, B, and A+B)**

*An intersection receives one point for each hour for which the traffic levels satisfy this warrant, up to a maximum of 12 points. Points are not cumulative across the three conditions. In other words, an intersection only receives the maximum points from Condition A, B, or A+B.*

#### **Warrant 2: Four-Hour Volume**

*An intersection receives one point for each hour for which the traffic levels satisfy this warrant, up to a maximum of 6 points.*

#### **Warrant 3: Peak Hour Volume**

*An intersection receives one point for each hour for which the traffic levels satisfy this warrant, up to a maximum of 4 points.*

### Crash History Points

This value is based on the most recent three years of correctable crash data at the intersection. Correctable crashes are crashes that are considered correctable by the installation of a traffic signal or roundabout. These typically include right-angle crashes (T-bone) and left turn crashes between vehicles traveling in opposing directions. Rear-end crashes, run-off-road crashes, and deer crashes, for example, are typically not considered correctable by a signal or a roundabout, and are therefore excluded in this analysis.

*An intersection receives one point for each correctable property damage or minor injury crash, and three points for each correctable fatal or serious injury crash during the three year period. The sum is then divided by three, to account for the three years of data.*

The traffic signal warrant points and the crash history points are then added together for an intersection total, and the intersections are ranked by total points using a spreadsheet.

### Further Analysis

Simply satisfying one or more traffic signal warrants or ranking highly on the ICRS prioritization list doesn't always mean that the installation of a traffic signal or roundabout is the best option at a particular location. For each intersection included in the ICRS, County staff evaluates the intersection for potential intersection improvements. Among the items the staff consider when analyzing intersections:

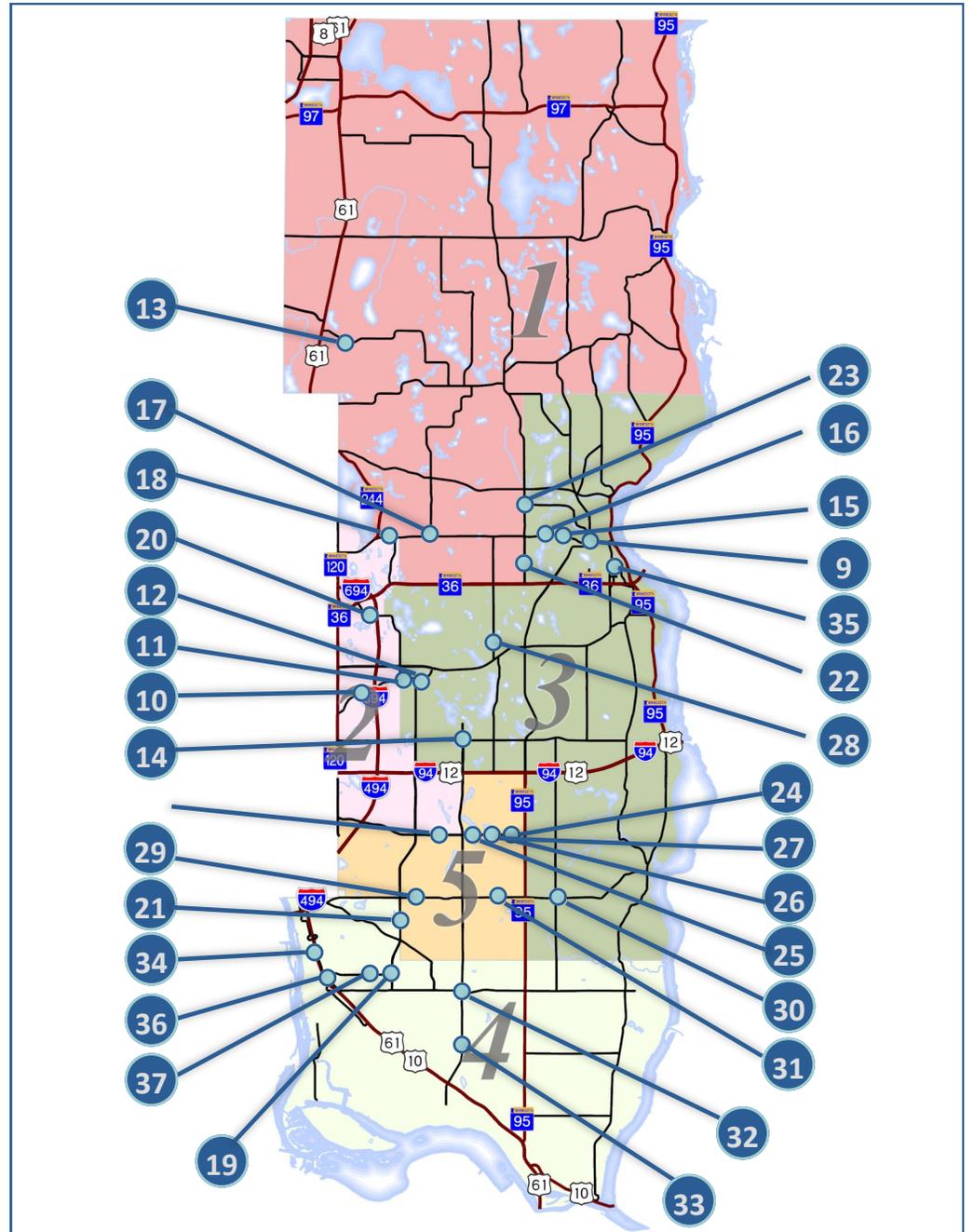
- Access spacing to adjacent intersections, and spacing from nearby traffic signals and/or roundabouts.
- Existing and future traffic volumes, and whether they're relatively balanced or unbalanced between the major and minor approaches.
- Types of traffic control at nearby intersections.

Often times other alternatives to traffic signals or roundabouts, such as signing and/or striping improvements, geometric improvements, or turn restrictions, may actually be the best option to improve intersection safety and/or mobility.

The ICRS policy also doesn't mean that the County will automatically install a signal or roundabout every year. There may be years when there are no intersections that are a priority for traffic control improvements, and there may be years when County staff determines that more than one intersection is a priority for improvements. The ICRS simply provides a way to prioritize intersections in a fair and consistent manner. County staff may also advance or postpone potential projects based on the Capital Improvement Plan (CIP) or other factors.

# Intersections Analyzed for 2023

A total of 29 intersections were included in the Intersection Control Ranking System (ICRS) Report for 2023. The following pages provide an in-depth look at each of the intersections that are included in the report. Because this report is prepared for the Washington County Board of Commissioners, the map located on the right side of this page shows the location of each of the intersections by Commissioner District, along with their corresponding page number.



# CSAH 5 (Owens Street) & CSAH 12 (Myrtle Street)

## Existing Conditions

The intersection of CSAH 5 (Owens Street) & CSAH 12 (Myrtle Street) is located in the City of Stillwater, and is currently controlled by an all-way stop. The intersection experiences delays during the peak hours, and congestion on the northbound and southbound approaches can sometimes exceed several blocks during the PM peak hour. The intersection is included in the ICRS Report because County staff have concerns about this congestion and how it affects the safety of nearby intersections, and because this intersection annually ranks at or near the top among intersections studied as part of the report.

### Traffic Signal Warrants, by the numbers:

Warrant 1A: **12 of 8 Required Hours**

Warrant 1B: **9 of 8 Required Hours**

Warrant 1(A+B): **12 of 8 Required Hours**

Warrant 2: **4 of 4 Required Hours**

Warrant 3: **0 of 1 Required Hours**

Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **13 of 8 Required Hours**

This intersection currently operates as an all-way stop.

Traffic Count Conducted in **2023**

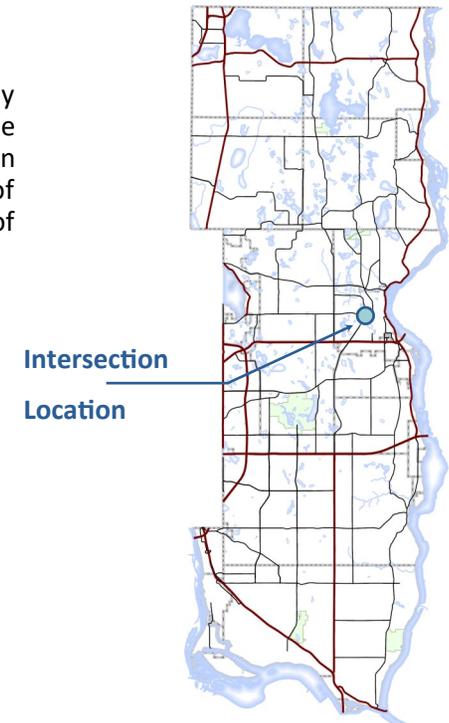
**2023 ICRS Rank: 4**

### ICRS Recommendation

The intersection currently meets Warrant 1A (Eight-Hour Volume - Minimum Vehicular Volume), Warrant 1B (Interruption of Continuous Traffic on the Major Approaches), (Warrant 1(A+B) (Combination of Warrants), and Warrant 2 (Four-Hour Volume), for traffic signal installation. However, even though this intersection clearly meets traffic signal warrants, the installation of a signal would pose numerous challenges:

- A traffic signal would increase speeds in the area when the lights are green.
- Narrow sidewalks and minimal right-of-way would make it difficult to install traffic signal poles and pedestrian push-buttons without obstructing the sidewalks under the current geometry.
- The existing intersection geometry would not function safely under traffic signal control, and modifying the lane arrangement would result in some loss of on-street parking.

County staff remain concerned about congestion in this area and its effect on safety, and remain ready to support an intersection improvement project at the CSAH 5 and CSAH 12 intersection if and when such a project is supported by the City. The County will continue to evaluate this intersection as traffic volumes continue to change as a result of growth and other area road projects.



# CSAH 6 (Stillwater Boulevard) & Hadley Avenue

## Existing Conditions

The intersection of CSAH 6 (Stillwater Boulevard) & Hadley Avenue is located in the City of Oakdale, and is currently controlled by an all-way stop. It experiences delays during peak hours. This intersection was included in the previous ICRS Reports because residents have observed congestion and crashes at this intersection, especially when traffic has been detoured through this intersection from nearby construction projects, and it has scored highly enough to remain in subsequent versions of this report.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **4 of 8 Required Hours**
- Warrant 1B: **1 of 8 Required Hours**
- Warrant 1(A+B): **4 of 8 Required Hours**
- Warrant 2: **2 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hour**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

- All-Way Stop: **14 of 8 Required Hours**
- This intersection currently operates as an all-way stop.

Traffic Count Conducted in **2019**

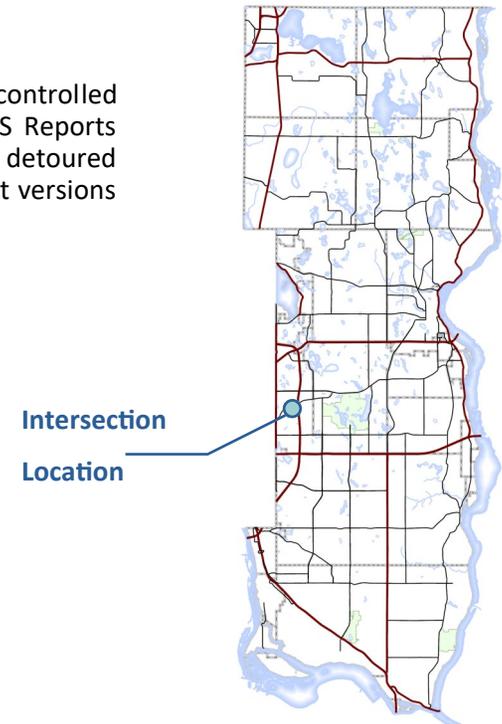
**2023 ICRS Rank: 11**

### ICRS Recommendation

In the 2019 and 2020 ICRS Reports, this intersection met Warrant 7 for traffic signal installation, which is for intersections that simultaneously meet certain crash and volume thresholds. Crashes have since declined so Warrant 7 is no longer met. It is recommended that this intersection remain an all-way stop at this time for the following reasons

- Modifying the intersection will require substantial right-of-way purchases and would encroach on existing residential parcels.
- Construction adjacent to this area along TH 120 (Century Ave) and at the CSAH 10/ I-694 interchange likely caused unusually high traffic volumes in this area during the 2019 traffic counting period, particularly along Hadley Avenue.

In the MnMUTCD, one condition of Warrant 7 says that a traffic control signal shall be considered after “an adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.” A second stop sign was added to the southbound approach late in 2018 to improve the visibility of the traffic control devices to southbound drivers. That addition appears have been effective at this location to address this particular crash issue.



# CSAH 6 (Stillwater Boulevard) & CSAH 13 (Ideal Avenue)/Helmo Avenue

## Existing Conditions

The intersection of CSAH 6 (Stillwater Boulevard) & CSAH 13 (Ideal Avenue)/Helmo Avenue is located on the border of the Cities of Oakdale and Lake Elmo, and is currently controlled as an all-way stop. It experiences minor delays during peak hours. This intersection is included in the ICRS Report because County staff have observed occasional but significant congestion on the southbound CSAH 13 approach during the PM peak hour in previous years, especially when affected by construction on or along nearby I-694.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **3 of 8 Required Hours**
- Warrant 1B: **0 of 8 Required Hours**
- Warrant 1(A+B): **2 of 8 Required Hours**
- Warrant 2: **3 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not met**

### All-Way Stop Warrant, by the numbers:

- All-Way Stop: **12 of 8 Required Hours**
- This intersection currently operates as an all-way stop

Traffic Count Conducted in **2022**

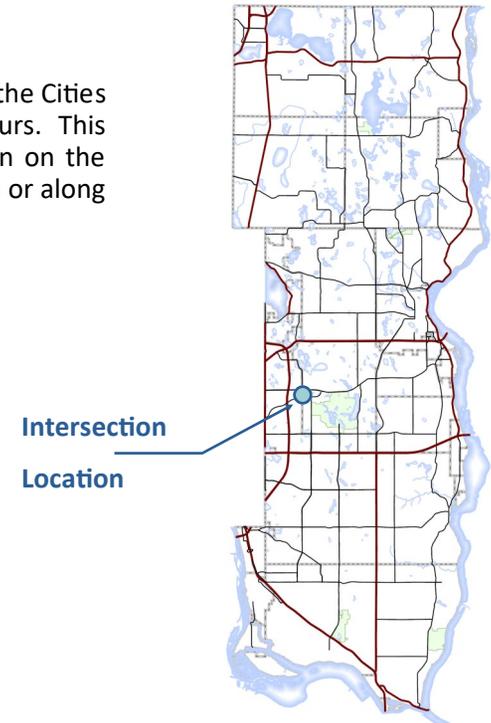
**2023 ICRS Rank: 13**

### ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal installation, although it is close to meeting Warrant 2 (Four-Hour Volume). It is not recommended for intersection control changes at this time due to the following reasons:

- Although the intersection currently experiences some minor congestion during peak hours, and has occasional longer backups during the PM peak hour, it is operating efficiently during the majority of the day.
- The intersection is currently operating safely, with a crash rate around the average rate for similar intersections on county roads statewide.
- The intersection currently does not meet any warrants for traffic signal installation. A traffic signal or roundabout would likely require acquisition of private property.

There is a Washington County Capital Improvement Project (CIP) to begin design in 2026 on CSAH 13 starting at this intersection. During that preliminary design the County will re-evaluate intersection improvements.



# CSAH 6 (Stillwater Boulevard) & CSAH 13 (Inwood Avenue)

## Existing Conditions

The intersection of CSAH 6 (Stillwater Boulevard) & CSAH 13 (Inwood Avenue) is located in the City of Lake Elmo, and is currently controlled as an all-way stop. It sometimes experiences delays during peak hours on the northbound, westbound, and eastbound approaches. This intersection is included in the ICRS Report because it is located in an area of the County that is experiencing increased development and traffic growth, and County staff have been interested in evaluating the intersection to determine any operational issues.

### Traffic Signal Warrants, by the numbers:

Warrant 1A: **5 of 8 Required Hours**

Warrant 1B: **1 of 8 Required Hours**

Warrant 1(A+B): **3 of 8 Required Hours**

Warrant 2: **4 of 4 Required Hours**

Warrant 3: **2 of 1 Required Hours**

Warrant 7: **Not Met**

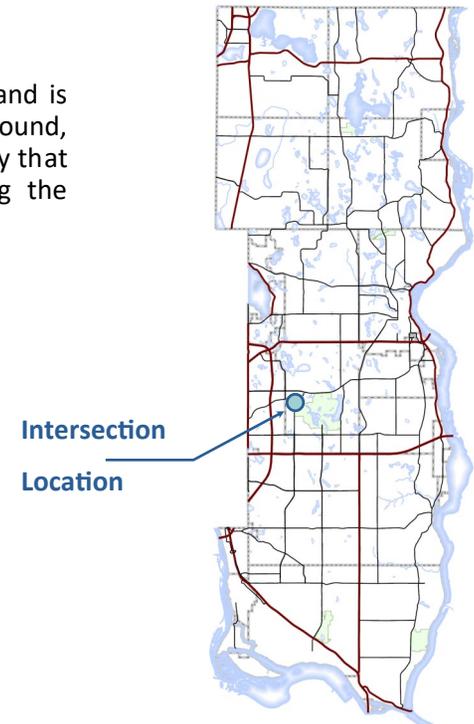
### All-Way Stop Warrant, by the numbers:

All-Way Stop: **14 of 8 Required Hours**

This intersection currently operates as an all-way stop

Traffic Count Conducted in **2019**

**2023 ICRS Rank: T7**



### ICRS Recommendation

Although the intersection currently meets Warrant 2 (Four-Hour Volume) and Warrant 3 (Peak Hour Volume) for traffic signal installation, it is not recommended for intersection control changes at this time due to the following reasons:

- Although the intersection currently experiences some minor congestion during peak hours, it is operating efficiently as an all-way stop during the majority of the day.
- The intersection is currently operating safely, with a crash rate around the average rate for similar intersections on county roads statewide. There were one reported crashes at this intersection during the 2020-2022 study period, and improvements were recently made to signing on the northbound approach to improve visibility.
- Installing a traffic signal or roundabout would require significant geometric changes to the roadway, which would be costly. Any such modifications would also likely require acquisition of private property.

For these reasons, it is recommended that this intersection remain an all-way stop at this time. The intersection will be evaluated as part of a pavement improvement project in 2024/2025.

# CSAH 8 (Egg Lake Road) & Goodview Avenue

## Existing Conditions

The intersection of CSAH 8 (Egg Lake Road) & Goodview Avenue is located in the City of Hugo, and is currently controlled as a two-way stop. The County was asked to evaluate this intersection because of the skew angle, which cause difficulties for drivers on southbound Goodview Avenue when trying to cross or turn onto CSAH 8, particularly during busy times of the day.

## Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **0 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

## All-Way Stop Warrant, by the numbers:

- All-Way Stop: **0 of 8 Required Hours**
- This intersection currently operates as a two-way stop.
- Traffic Count Conducted in **2019**

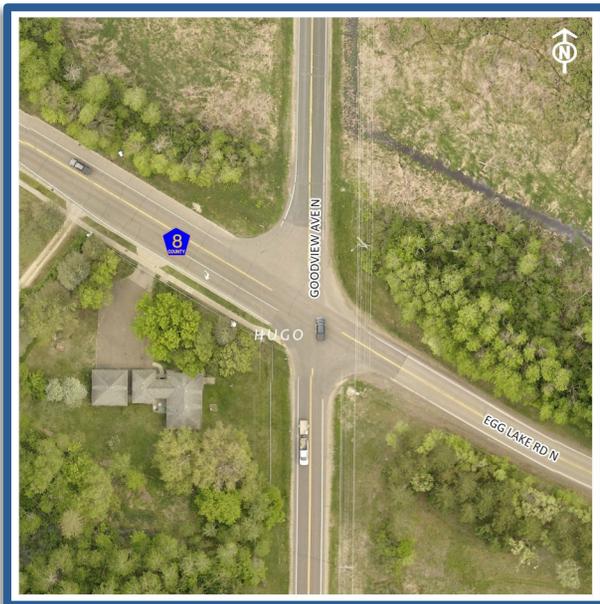
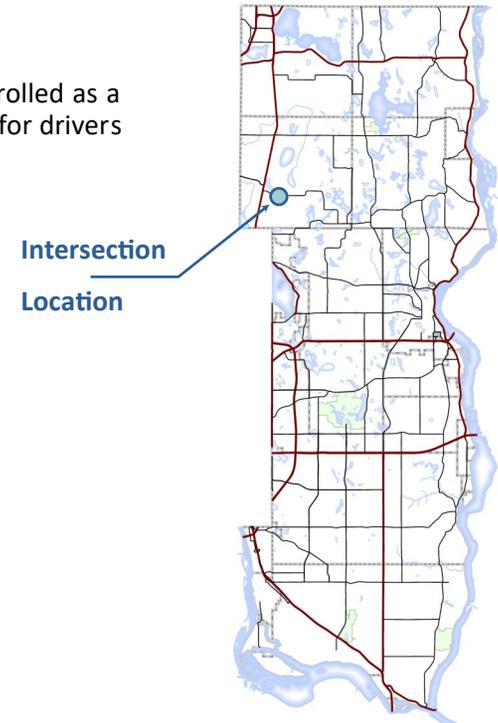
**2023 ICRS Rank: T26**

## ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal installation. It is recommended that the intersection remain sidestreet stop controlled at this time. The intersection operates efficiently during the majority of the day, and despite the skewed layout, the intersection is currently operating safely, with a crash rate around the average rate for similar intersections on county roads statewide. Under existing traffic volumes, the installation of a traffic signal would be expected to increase overall delay and increase the crash rate at the intersection.

The County acknowledges that the skew of this intersection poses challenges from a sight line perspective, and this intersection ranks highly in the County Road Safety Plan. Signing improvements were made in recent years to address safety concerns on this segment, including improved stop sign placement and installation of a new Stop Ahead sign for southbound traffic, as well as the installation of an electronic speed display beneath the Speed Limit 35 miles per hour sign approaching the intersection from the east.

Additional development in the area will require ongoing evaluation of this intersection.



# CSAH 10 (10th Street N) & CSAH 19 (Keats Avenue)

## Existing Conditions

The intersection of CSAH 10 (10th Street N) & CSAH 19 (Keats Avenue) is located in the City of Lake Elmo, and is controlled by an all-way stop. It currently experiences delays during peak hours. The north leg of the intersection serves as the entrance and exit for Lake Elmo Park Reserve, so it can experience surges in traffic, particularly during holiday weekends or park events such as the annual Bluegrass Festival. This intersection is located in an area of the County that is experiencing increased development and traffic growth, and has been affected often by incidents or construction on nearby Interstate 94. This intersection is included in the 2023 ICRS Report because it has ranked highly on previous versions of this report and because its large intersection size is atypical for all-way stop control.

### Traffic Signal Warrants, by the numbers:

Warrant 1A: **11 of 8 Required Hours**

Warrant 1B: **12 of 8 Required Hours**

Warrant 1(A+B): **12 of 8 Required Hours**

Warrant 2: **8 of 4 Required Hours**

Warrant 3: **0 of 1 Required Hours**

Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **14 of 8 Required Hours**

This intersection currently operates as an all-way stop

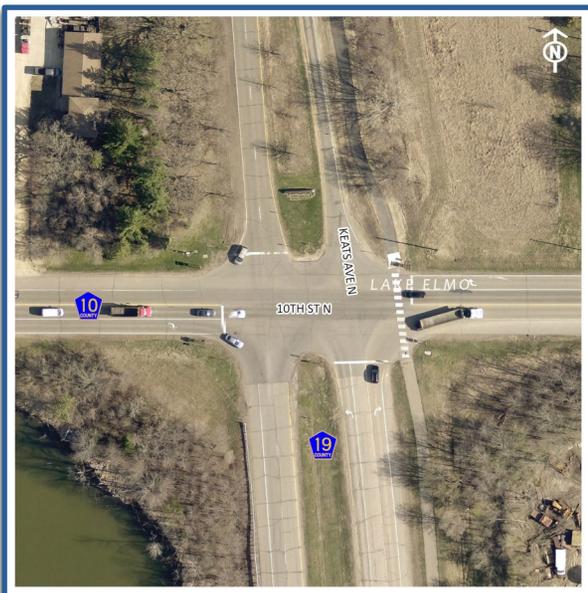
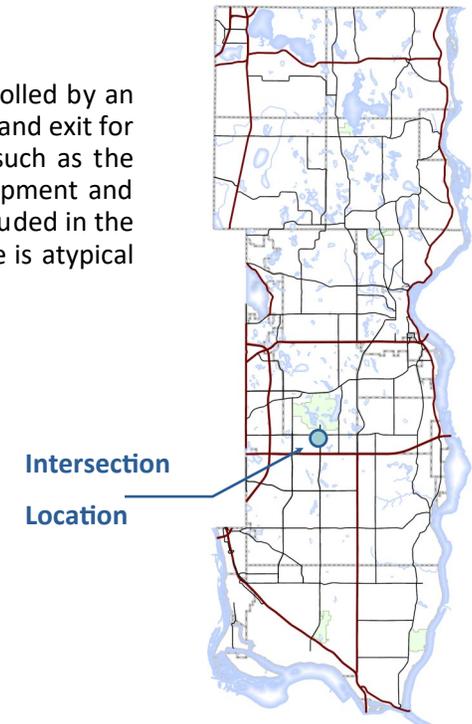
Traffic Count Conducted in **2019**

**2023 ICRS Rank: 3**

### ICRS Recommendation

The intersection currently meets Warrant 1A (Eight-Hour Volume - Minimum Vehicular Volume), (Warrant 1B (Interruption of Continuous Traffic on the Major Approaches), (Warrant 1(A+B) (Combination of Warrants), and Warrant 2 (Four-Hour Warrant). The all way stop intersection currently operates with a crash rate around the average rate for similar intersections on county roads statewide, and is operating efficiently during the majority of the day.

County staff acknowledge that the intersection currently does meet warrants and is ranked highly on the ICRS. The County has applied for funding for improvements at this intersection but has so far not been successful. Installing a roundabout or traffic signal at this intersection will require significant road work, and if would be prudent if the project also included addressing flooding issues west and south of the intersection. Therefore, a Capital Improvement Plan (CIP) project has been programed to begin design in 2027.



# CSAH 12 (Myrtle St W) & Brick Street/Birchwood Drive

## Existing Conditions

The intersection of CSAH 12 (Myrtle St W) & Brick St/Birchwood Dr is located in the City of Stillwater, and is currently controlled as a two-way stop. This intersection is included in the ICRS Report due to concerns raised by nearby residents related to observed speeds and difficulties crossing CSAH 12 as a pedestrian in this area. County staff agreed to review the intersection along with the nearby intersection of Interlachen Way and the overall pedestrian network in the area.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **4 of 8 Required Hours**
- Warrant 1B: **0 of 8 Required Hours**
- Warrant 1(A+B): **3 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

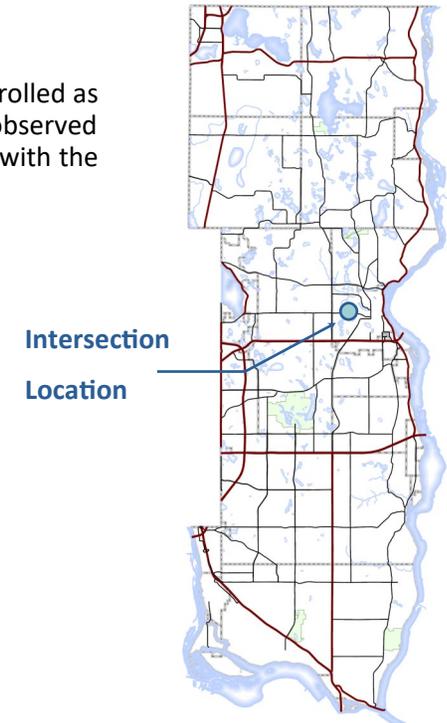
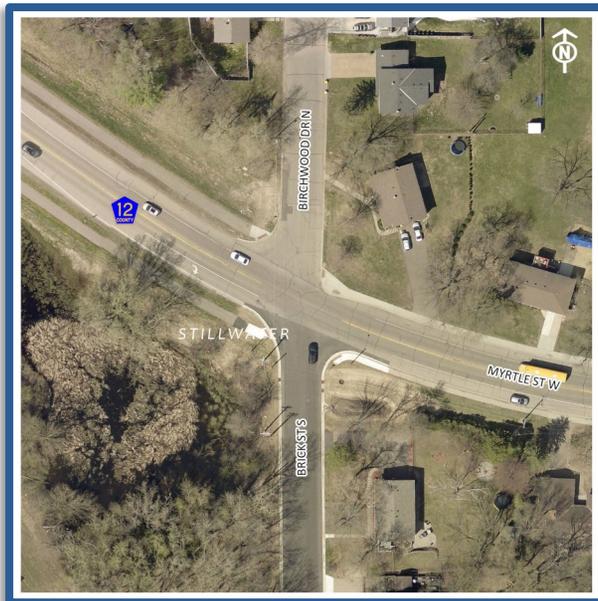
All-Way Stop: **0 of 8 Required Hours**

Traffic Count Conducted in **2023**

**2023 ICRS Rank: 15**

### ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal installation, however the area has been reviewed in depth by the County in response to pedestrian concerns related to crossing CSAH 12 and the lack of nearby controlled crossing locations in this area. County staff evaluated multiple options in this area, and an all way stop at CSAH 12 and Brick St/Birchwood is being considered by the County. Other more long-term treatments such as a pedestrian refuge island are being considered to help calm traffic speeds and allow pedestrians to cross in two short stages. Final decisions have not been made at this time however the county has initiated discussions with the city and residents regarding the potential conversion to all-way stop control.



# CSAH 12 (75th St N/Myrtle St W) & Interlachen Way/ Eagle Ridge Trail

## Existing Conditions

The intersection of CSAH 12 (75th Street N/Myrtle St W) & Interlachen Way/Eagle Ridge Trail is located in the City of Stillwater and Stillwater Township, and is currently controlled as a two-way stop. This intersection was included in the ICRS Report due to its proximity to CSAH 12 & Brick St/Birchwood Dr, in order to understand how it compares to the Brick street intersection with respect to vehicle and pedestrian volumes.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **0 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

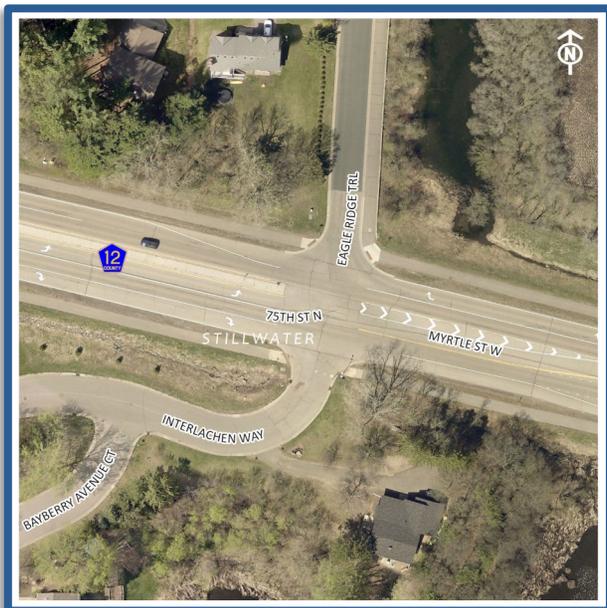
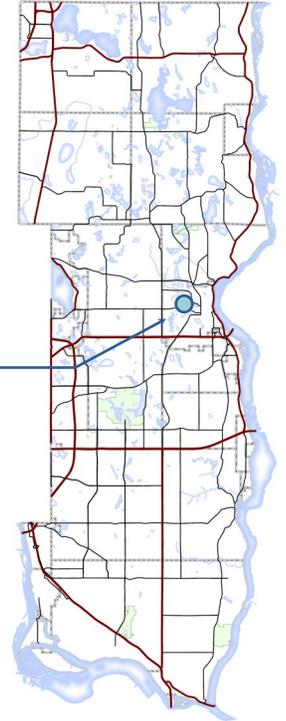
### All-Way Stop Warrant, by the numbers:

All-Way Stop: **0 of 8 Required Hours**

Traffic Count Conducted in **2023**

**2023 ICRS Rank: T26**

Intersection  
Location



### ICRS Recommendation

The intersection currently does not meet any warrants for any hour for traffic signal installation or all-way stop control. Requiring all CSAH 12 traffic to stop would be expected to increase the crash rate and delays at this location. It is therefore not recommended for intersection control changes at this time.

# CSAH 12 (75th Street N) & CSAH 9 (Jamaca Avenue)

## Existing Conditions

The intersection of CSAH 12 (75th Street N) & CSAH 9 (Jamaca Avenue) is located in the City of Grant, and is currently controlled as a two-way stop. The intersection currently experiences delays and queuing issues for right-turning vehicles on the southbound CSAH 9 approach during a 10-15 minute period in the morning, when the nearby schools have their arrival times.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **2 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **11 of 8 Required Hours**

Traffic Count Conducted in **2019**

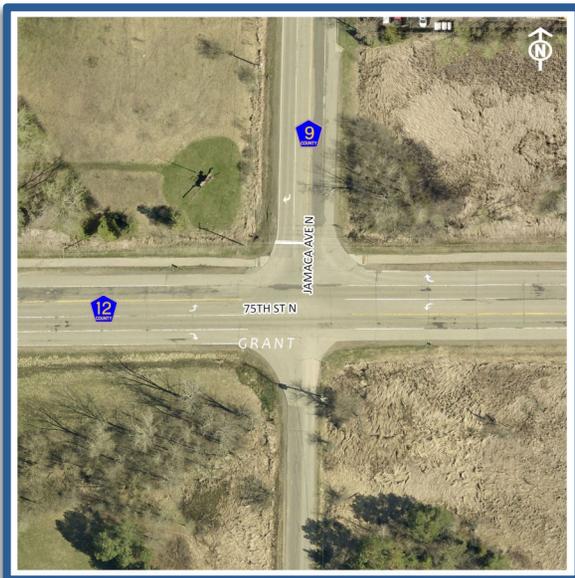
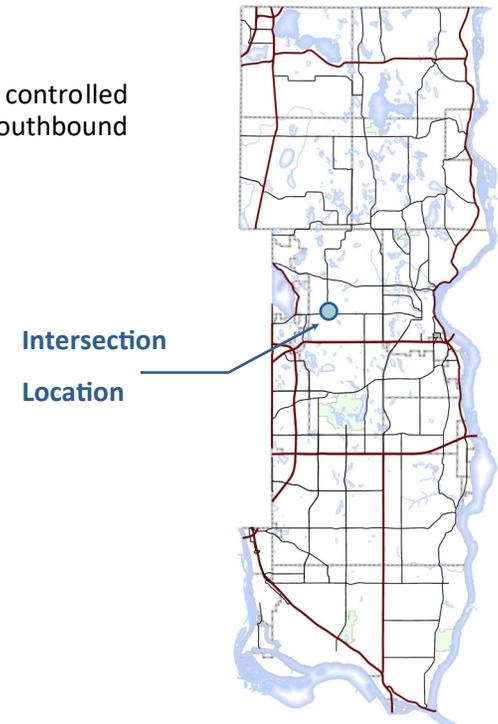
**2023 ICRS Rank: T20**

### ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal installation. It does meet the warrant for All-Way Stop, however it is not recommended for intersection control changes at this time due to the following reasons:

- Although it meets the All-Way Stop Warrant, most of the minor street volume turns right. Requiring all CSAH 12 traffic to stop would likely increase the crash rate on CSAH 12 while increasing delay to all movements.
- Although the intersection currently experiences some minor congestion on the southbound approach during the AM peak hour, the congestion typically lasts only 10-15 minutes.
- The intersection is far short of meeting traffic signal warrants. Installing a roundabout would require significant geometric modifications which would be costly, and would require acquisition of private property.

It is recommended that this intersection remain sidestreet stop controlled at this time. County staff is looking to install street lighting at this intersection as part of a pavement improvement project in 2024.



# CSAH 12 (Stillwater Road) & East Avenue/Hallam Avenue

## Existing Conditions

The intersection of CSAH 12 (Stillwater Road) & East Avenue/Hallam Avenue is located in the City of Mahtomedi, and is currently controlled as a two-way stop. The southbound East Avenue approach currently experiences delays at several times of the day, particularly during peak hours, during the arrival and dismissal times for nearby Mahtomedi schools, and during church services at St. Andrew's Church which is located immediately northeast of the intersection. The intersection also serves as the primary crossing location across CSAH 12 for residents of a nearby apartment complex to walk to and from the convenience store located in the northwest quadrant of the intersection. The County currently has a planned project for construction in 2024 for this intersection, including a signal system and turn lanes added on the sidestreets.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **3 of 8 Required Hours**
- Warrant 1B: **10 of 8 Required Hours**
- Warrant 1(A+B): **4 of 8 Required Hours**
- Warrant 2: **6 of 4 Required Hours**
- Warrant 3: **4 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

- All-Way Stop: **14 of 8 Required Hours**
- This intersection currently operates as an all-way stop

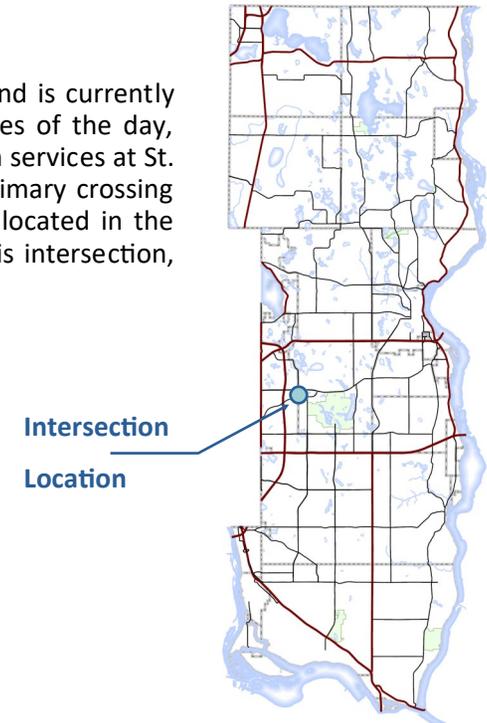
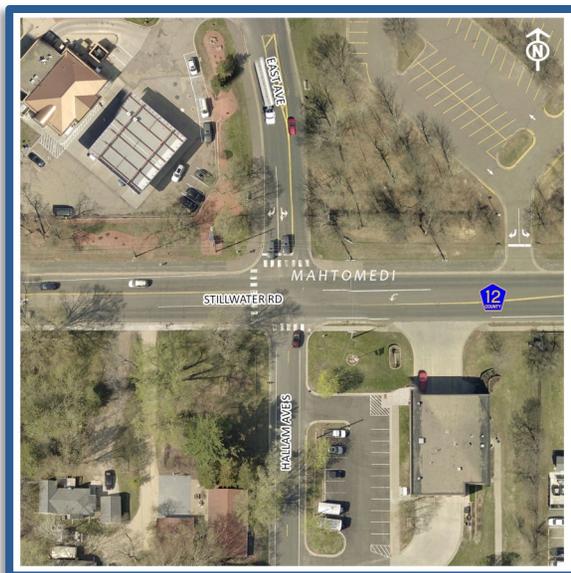
Traffic Count Conducted in **2019**

**2023 ICRS Rank: 2**

### ICRS Recommendation

The intersection currently meets Warrant 1B (Interruption of Continuous Traffic on the Major Approaches), Warrant 2 (Four-Hour Warrant), and Warrant 3 (Peak Hour Warrant).

The County, in partnership with the City of Mahtomedi, has completed final design and will install a traffic signal at this intersection as part of with the roadway improvement project in 2024. This project will also add dedicated right turn lanes on the sidestreets to help mitigate sidestreet delays and avoid unnecessary cycling of the new signal. The new signal will be coordinated with the existing signal just to the east at CSAH 12 and CSAH 29 to reduce the likelihood of congestion between the two intersections.



# CSAH 13 (Hinton Avenue S) & CR 74 (65th Street S)

## Existing Conditions

The intersection of CSAH 13 (Hinton Avenue S) & CR 74 (65th Street S) is located in the City of Cottage Grove, and is currently controlled as an all-way stop. This intersection is included in the 2023 ICRS Report because all-way stop controlled intersections with a large number of approach lanes similar to this one can sometimes have operational issues and/or create driver confusion. This intersection is also located in an area of the County that is experiencing increased development and traffic growth

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **3 of 8 Required Hours**
- Warrant 1B: **7 of 8 Required Hours**
- Warrant 1(A+B): **4 of 8 Required Hours**
- Warrant 2: **3 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

- All-Way Stop: **11 of 8 Required Hours**
- This intersection currently operates as an all-way stop

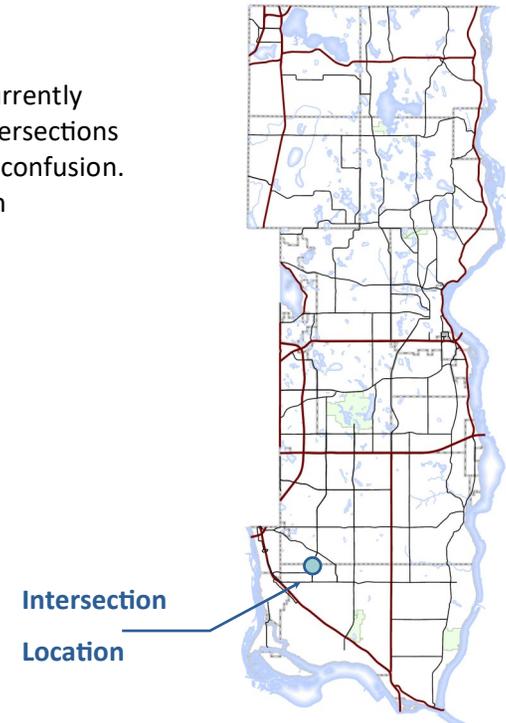
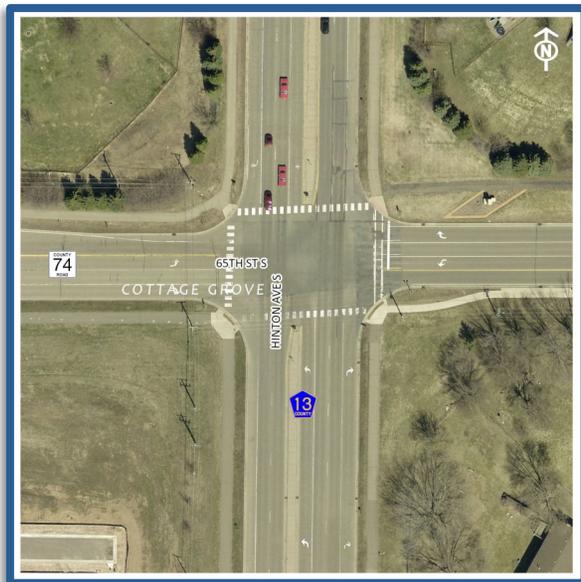
Traffic Count Conducted in **2023**

**2023 ICRS Rank: T7**

### ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal installation. It is one hour short of meeting Warrant 1B, and has experienced four correctable crashes in the 2020-2022 study period, making it close to meeting Warrant 7.

It is recommended that this intersection be monitored over the next few years as development continues in this area.



# CSAH 13 (50th Street N) & Hadley Avenue—East Junction

## Existing Conditions

The east junction of CSAH 13 (50th Street N) & Hadley Avenue is located in the City of Oakdale, and is currently controlled as a two-way stop. Left turns on the northbound Hadley Avenue approach sometimes experience delays during peak hours. The County was asked to evaluate this intersection as a part of the ICRS Report because the occasional delays on the northbound approach are becoming more frequent, and it scored has scored highly enough in previous years to remain in the report.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **5 of 8 Required Hours**
- Warrant 1B: **3 of 8 Required Hours**
- Warrant 1(A+B): **6 of 8 Required Hours**
- Warrant 2: **3 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **3 of 8 Required Hours**

Traffic Count Conducted in **2021**

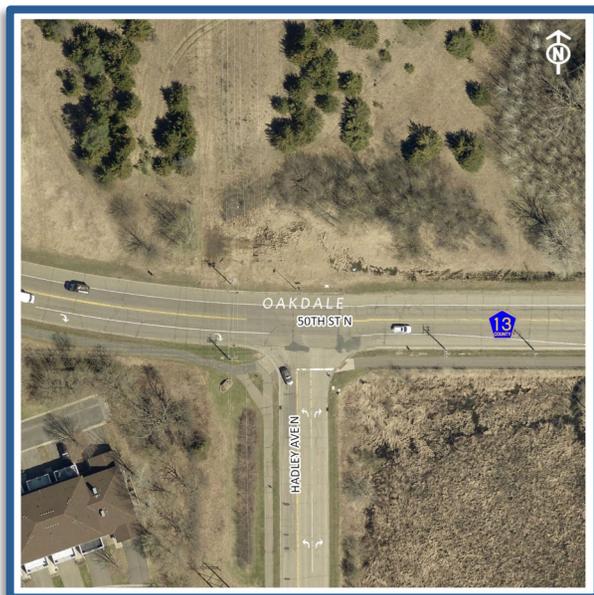
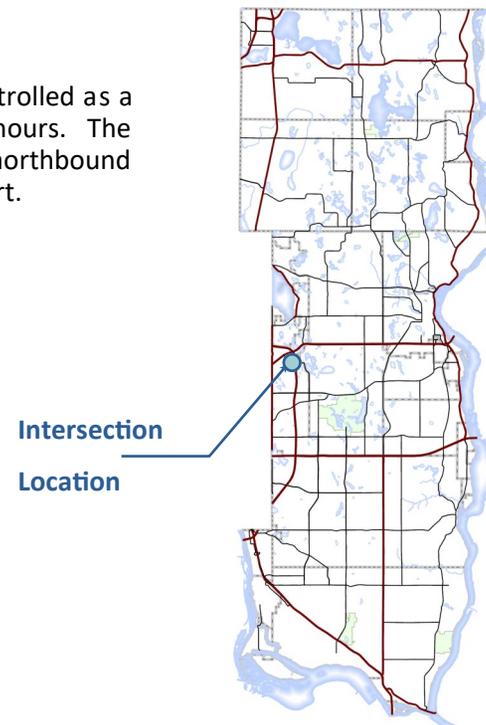
**2023 ICRS Rank: 10**

### ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal installation. The nearby TH36 & Hadley Avenue Interchange Project was completed in 2019, and a turning movement count taken in 2021 indicated that traffic volumes have rebounded to pre-pandemic levels at this intersection, reasonably matching volumes when this intersection was previously counted in 2017.

This intersection is not recommended for intersection traffic control changes at this time. While left turns from the northbound Hadley Avenue approach sometimes experience delays during peak hours, the delays are typically not excessive, and the intersection operates efficiently during the majority of the day. Also, the installation of a traffic signal would require the construction of a dedicated left-turn lane on CSAH 13.

It is recommended that this intersection remain sidestreet stop controlled at this time.



# CSAH 13 (Radio Drive) & Dale Road

## Existing Conditions

The intersection of CSAH 13 (Radio Drive) & Dale Road is located in the City of Woodbury, and is currently controlled as an all-way stop. Left turns from the Dale Road approach experienced delays during peak hours prior to the conversion of traffic control to all-way stop control; now, the stop-controlled approaches on Radio Drive can result in backups during peak hours. The City of Woodbury first requested that the County evaluate this intersection as part of the 2019 ICRS Report, and due to its high ranking it remains in the 2023 ICRS Report.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **1 of 8 Required Hours**
- Warrant 1B: **9 of 8 Required Hours**
- Warrant 1(A+B): **2 of 8 Required Hours**
- Warrant 2: **5 of 4 Required Hours**
- Warrant 3: **1 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

- All-Way Stop: **5 of 8 Required Hours**
- This intersection currently operates as an all-way stop
- Traffic Count Conducted in **2023**

**2023 ICRS Rank: 14**

### ICRS Recommendation

Traffic volumes in the most recent count show that the intersection meets Warrant 1B (Interruption of Continuous Traffic on the Major Approaches), and Warrant 2 (Four-Hour Warrant).

The County began preliminary design in 2023 on a roadway expansion project on CSAH 13 between Hargis Parkway and Military Road. As part of this project a roundabout are being considered for the Dale Road intersection, with the roundabout emerging as the preferred alternative. Final design and right-of-way acquisition are currently planned to begin in 2024/2025, with construction expected to take place in 2027.



# CSAH 15 (Manning Avenue) & 62nd Street N

## Existing Conditions

The intersection of CSAH 15 (Manning Avenue) & 62nd Street N is located on the border of the City of Grant and the City of Stillwater, and is currently controlled as a two-way stop. Left turns from the minor street approaches currently experience delays during peak hours. These delays vary based on seasonal traffic, including traffic entering the adjacent apple orchard. This intersection is included in the ICRS Report because County staff have heard from residents that increasing traffic volumes on CSAH 15 are making it more difficult to find gaps in traffic during busy times of the day.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **2 of 8 Required Hours**
- Warrant 1(A+B): **1 of 8 Required Hours**
- Warrant 2: **1 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hour**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **0 of 8 Required Hours**

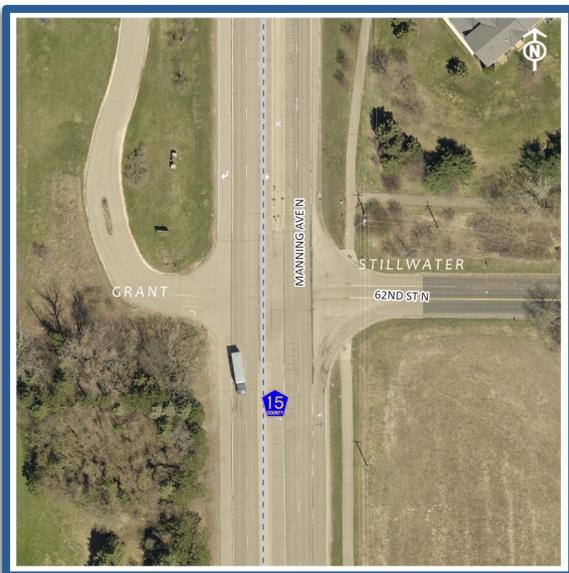
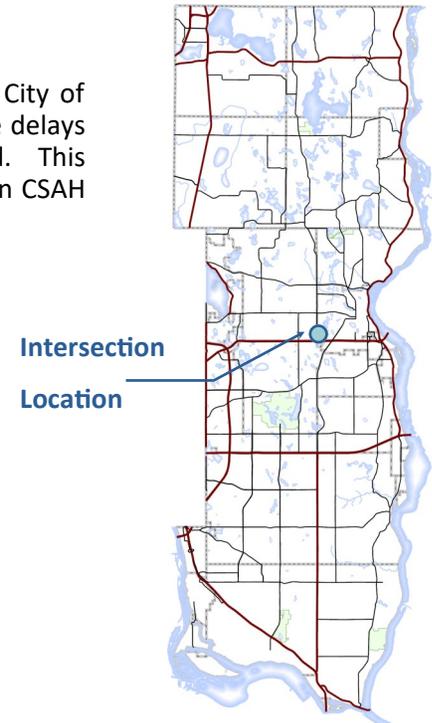
Traffic Count Conducted in **2022**

**2023 ICRS Rank: T20**

### ICRS Recommendation

It is expected that increasing traffic volumes and nearby development will cause this intersection to rank highly on the ICRS in the future. The east leg of this will likely be reconstructed in conjunction with adjacent development in the area. It is expected that a traffic signal could be warranted and installed at that time.

Construction of an interchange at TH 36 and Manning Avenue just south of this intersection was completed in 2022, with updated traffic counts taken after the new interchange was opened to traffic. The County will continue to observe the impact that adjacent interchange may have on this intersection in upcoming years.



# CSAH 15 (Manning Avenue) & CR 64 (McKusick Road)

## Existing Conditions

The intersection of CSAH 15 (Manning Avenue) & CR 64 (McKusick Road) is located on the border of the City of Grant and the City of Stillwater, and is currently controlled as a two-way stop. The westbound CR 64 and eastbound McKusick Road approaches currently experience delays, particularly during peak hours. This intersection is included in the ICRS Report because increasing traffic volumes on CSAH 15 are making it difficult to find gaps in traffic during busy times of the day.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **4 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **1 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **0 of 8 Required Hours**

This intersection currently operates as a two-way stop.

Traffic Count Conducted in **2023**

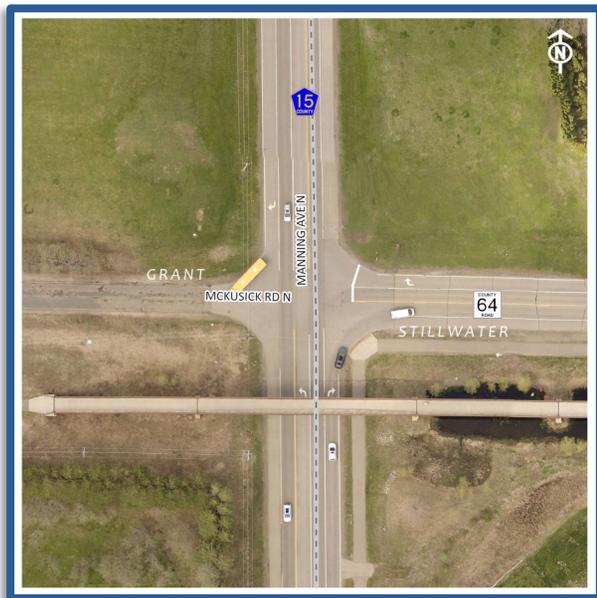
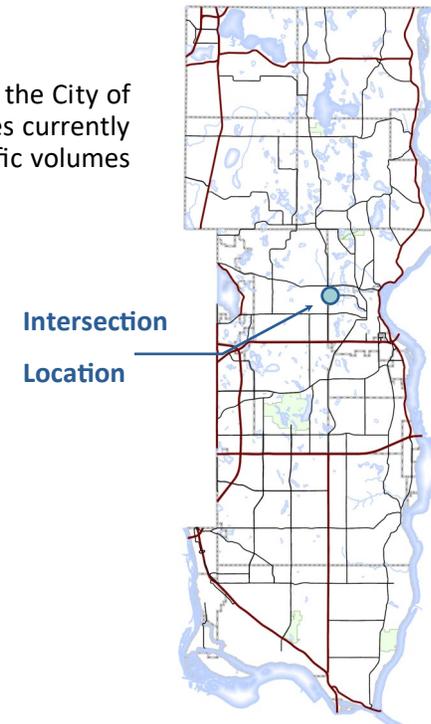
**2023 ICRS Rank: 16**

### ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal installation. The County collected updated counts at this intersection in 2023 to reflect any changes since last collected in 2020.

County staff expects that this intersection is a likely candidate for traffic signal installation in the future, and the Brown's Creek Trail Bridge was designed to accommodate a future traffic signal. Dedicated left turn lanes were installed on CSAH 15 in 2014 to improve safety and set up the CSAH 15 approaches to easily accommodate a future signal.

Installing a traffic signal would require significant geometric modifications to the westbound and eastbound approaches, which would need to be widened to accommodate left and right turn lanes so that a potential traffic signal could operate efficiently and safely. This widening would also likely require acquisition of private property. Because of the lengthy time required for property acquisition which must be preceded by concept design, the County will need to explore initiating concept design process to be prepared to proceed with a project at this intersection as traffic continues to grow.



# CSAH 16 (Valley Creek Road) & Settlers Ridge Parkway

## Existing Conditions

The intersection of CSAH 16 (Valley Creek Road) & Settlers Ridge Parkway is located in the City of Woodbury, and is currently controlled as an all-way stop. The County took over jurisdiction of this section of Valley Creek Road in 2019 and it was originally reviewed in 2021 as part of the ICRS. This intersection is included in the 2023 ICRS Report because all-way stop controlled intersections with a large number of approach lanes similar to this one can sometimes have operational issues and/or create driver confusion.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **8 of 8 Required Hours**
- Warrant 1B: **3 of 8 Required Hours**
- Warrant 1(A+B): **4 of 8 Required Hours**
- Warrant 2: **4 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

- All-Way Stop: **14 of 8 Required Hours**
- This intersection currently operates as an all-way stop

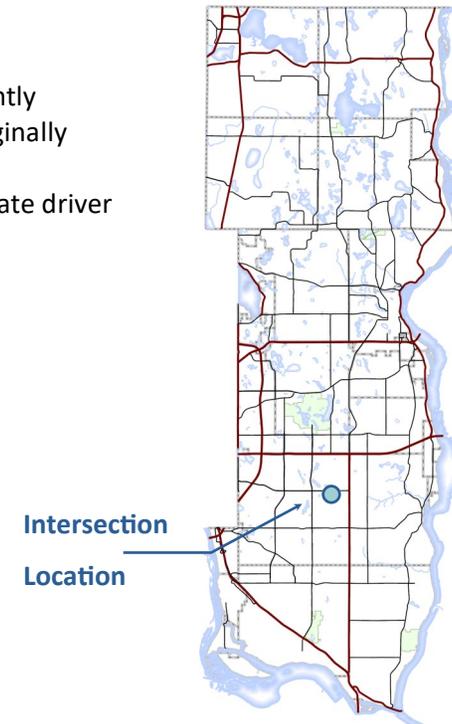
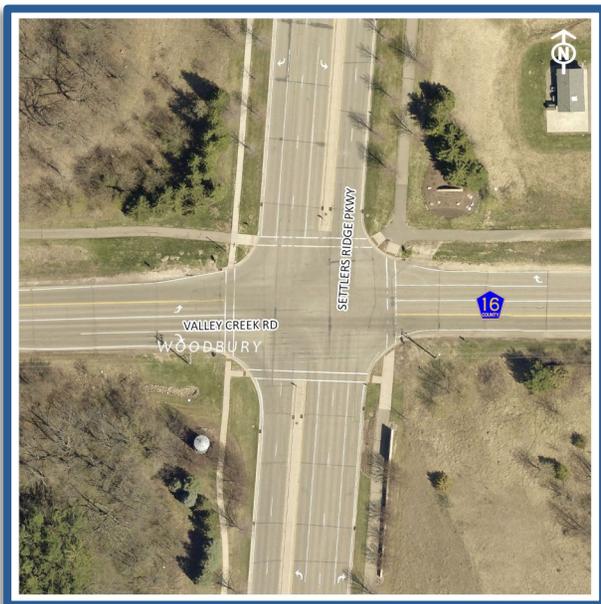
Traffic Count Conducted in **2019**

**2023 ICRS Rank: 6**

### ICRS Recommendation

The intersection currently meets Warrant 1A (Eight-Hour Volume - Minimum Vehicular Volume), and Warrant 2 (Four-Hour Warrant).

This intersection is a candidate for the installation of a roundabout or traffic signal in future years, and the County has initiated a study, programmed in the county's Capital Improvement Plan, of CSAH 16 from Interlachen Parkway to Manning Avenue which will develop a future vision for the corridor.



# CSAH 16 (Valley Creek Road) & Eagle Creek Lane

## Existing Conditions

The intersection of CSAH 16 (Valley Creek Road) & Eagle Creek Lane is located in the City of Woodbury, and is currently controlled as a two-way stop. This intersection is included in the 2023 ICRS Report due to concerns from local residents about crash history and difficulty in finding gaps in traffic to make turns from Eagle Creek Lane onto Valley Creek Road. This intersection ranked 1st in the 2022 ICRS.

### Traffic Signal Warrants, by the numbers:

Warrant 1A: **5 of 8 Required Hours**

Warrant 1B: **13 of 8 Required Hours**

Warrant 1(A+B): **11 of 8 Required Hours**

Warrant 2: **11 of 4 Required Hours**

Warrant 3: **4 of 1 Required Hours**

Warrant 7: **Was Met**

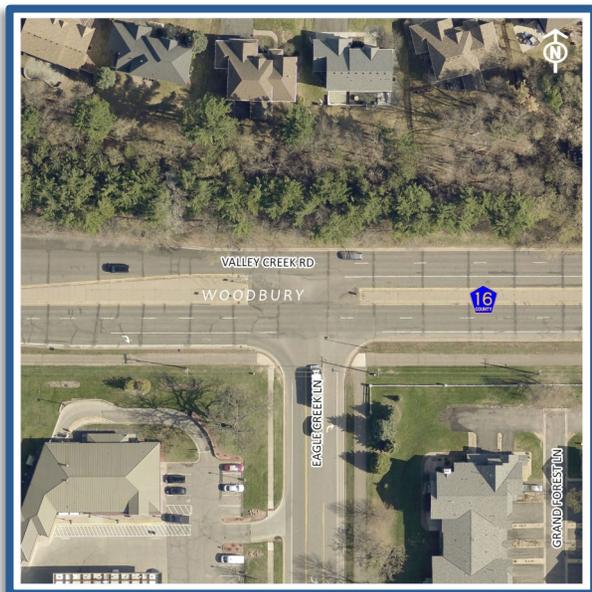
### All-Way Stop Warrant, by the numbers:

All-Way Stop: **10 of 8 Required Hours**

Traffic Count Conducted in **2022**

**2023 ICRS Rank: 1**

Intersection  
Location



### ICRS Recommendation

This intersection meets Warrant 1B (Interruption of Continuous Traffic on the Major Approaches), the combination Warrant 1(A+B), Warrant 2 (Four-Hour Warrant), Warrant 3 (Peak Hour Warrant), and Warrant 7 (Crash Experience), and ranks first in the most recent two editions of the ICRS. In addition, there is a history of crashes at this intersection that would be considered correctable by the installation of a traffic signal.

This intersection is only 550 feet from the nearby signal at the CSAH 16 (Valley Creek Road) and CSAH 19 (Woodbury Drive) intersection. This spacing is far short of county access spacing guidelines and presents a number of challenges.

County staff has initiated discussions with city staff to explore potential changes to improve safety at this intersection. There is upcoming watermain work that is to be completed in this area that will trigger roadway improvements to be implemented at the same time. The County has also initiated a study, programmed in the county's Capital Improvement Plan, of CSAH 16 from Interlachen Parkway to Manning Avenue which will develop a future vision for the corridor.

# CSAH 16 (Valley Creek Road) & Saint John's Drive

## Existing Conditions

The intersection of CSAH 16 (Valley Creek Road) & Saint John's Drive is located in the City of Woodbury, and is currently controlled as a two-way stop. Jurisdiction over this section of Valley Creek Road between Woodbury Drive and Manning Avenue (TH 95) was transferred to Washington County in 2018. At the time this roadway was transferred, there was a marked pedestrian crossing across the uncontrolled east leg. Safety research has demonstrated that providing crosswalk markings across multi-lane uncontrolled approaches, in the absence of other controls, significantly increases pedestrian crash risk. This intersection was originally included in the 2018 ICRS Report due to concerns regarding that unmarked crossing. That marked crossing has since been discontinued, yet this intersection has still scored highly enough to remain in subsequent editions of the ICRS Report to ensure annual crash monitoring and for comparison until new traffic counts are taken.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **2 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **1 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

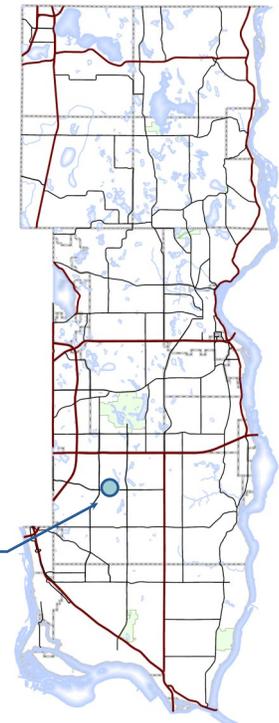
- All-Way Stop: **3 of 8 Required Hours**
- Traffic Count Conducted in **2018**

**2023 ICRS Rank: 17**

### ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal or all-way stop installation. However, there were four crashes at this intersection between 2018-2021 that could have potentially been corrected by the presence of either an all-way stop or traffic signal, all of which involved a northbound vehicle. Northbound drivers may have had a misperception that this intersection was an all-way stop, based on an evaluation of the crash data. The County therefore added supplemental plaques reading "CROSS TRAFFIC DOES NOT STOP" below the stop signs on the minor approaches in 2002 to reinforce that this intersection is only stop-controlled on the minor approaches. These signs were installed in conjunction with the installation of an all-way stop at the nearby intersection of CSAH 16 at Dancing Waters Parkway/Woodcrest Drive.

During the crash analysis period of 2019-2022 which included a portion after the additional warning plaques were installed, there has been no additional reported crashes. It appears that these additional plaques have been effective and the County will keep them in place. The County has also initiated a study, programmed in the county's Capital Improvement Plan, of CSAH 16 from Interlachen Parkway to Manning Avenue which will develop a future vision for the corridor.



# CSAH 16 (Valley Creek Road) & Dancing Waters Parkway/Woodcrest Drive

## Existing Conditions

The intersection of CSAH 16 (Valley Creek Road) & Dancing Waters Parkway/Woodcrest Drive is located in the City of Woodbury, and has been controlled by an all-way stop since 2022. This intersection was originally included in the 2018 ICRS Report because jurisdiction over this section of Valley Creek Road was transferred to Washington County, and due to the marked pedestrian crossing on the east leg. Safety research has demonstrated that providing crosswalk markings across multi-lane uncontrolled approaches, in the absence of other controls, significantly increases pedestrian crash risk compared to leaving the crossing unmarked. This intersection has scored highly enough to remain in the 2023 ICRS Report.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **1 of 8 Required Hours**
- Warrant 1B: **2 of 8 Required Hours**
- Warrant 1(A+B): **1 of 8 Required Hours**
- Warrant 2: **1 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not met**

### All-Way Stop Warrant, by the numbers:

- All-Way Stop: **7 of 8 Required Hours**
- This intersection currently operates as an all-way stop.

Traffic Count Conducted in **2018**

**2023 ICRS Rank: T18**

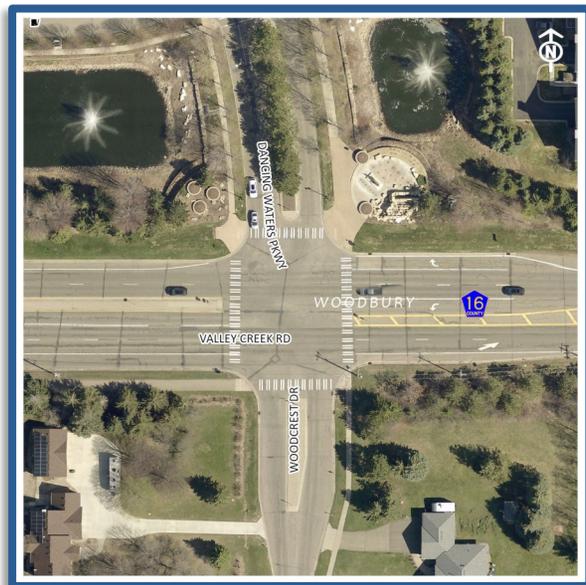
### ICRS Recommendation

This intersection currently does not meet any warrants for traffic signal installation. It is however close to meeting the warrant for an all-way stop.

The intersection is currently operating safely, with a crash rate below the average rate for similar intersections on county roads statewide. Despite the concern with the marked multi-lane crosswalk on the east leg, there were no pedestrian-related crashes during the 2019-2022 study period and only one crash in total.

Nonetheless, due to the crosswalk on the east leg, the lane configuration, and the overall traffic volumes at the intersection, the County converted the intersection from sidestreet stop control to all-way stop control in 2022 with the support of the City of Woodbury. A raised median was added to the east leg in 2023.

County staff will continue to monitor this intersection. This intersection is a candidate for the installation of a roundabout or traffic signal in future years, and the County has initiated a study, programmed in the county's Capital Improvement Plan, of CSAH 16 from Interlachen Parkway to Manning Avenue which will develop a future vision for the corridor.



# CSAH 17 (Lake Elmo Avenue N) & 39th Street N

## Existing Conditions

The intersection of CSAH 17 (Lake Elmo Ave N) & 39th St N is located in the City of Lake Elmo, and is currently controlled as a two way stop. This intersection is included in the ICRS Report because it is located in an area of the County that is experiencing rapid development and traffic growth, including the west leg of this intersection which was added in the last 3 years. The east leg serves mixed commercial uses including the Lake Elmo Fire Department. With the continued growth, the County has received complaints related to the safety and comfort of pedestrian routes from the new neighborhoods to destinations east of CSAH 17.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **0 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **0 of 8 Required Hours**

Traffic Count Conducted in **2023**

**2023 ICRS Rank: T26**

Intersection  
Location



### ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal installation. The County will continue to monitor this and nearby intersections as development continues, and continues to work with the city to develop a trail network in the area as parcels undergo development.

# CSAH 18 (Bailey Rd) & Featherstone Dr

## Existing Conditions

The intersection of CSAH 18 (Bailey Rd) & Featherstone Drive is located in the City of Woodbury, and is currently controlled as a two-way stop. The fourth leg of this intersection is the entrance and exit to the M Health Fairview Sports Complex, which sees high traffic volumes during events held here. This intersection is included in the 2023 ICRS Report because it is located in an area of the County that is experiencing increasing development and traffic growth, and drivers have shared concerns about delays and safety when large volumes of traffic exit the sports complex.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **0 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

- All-Way Stop: **0 of 8 Required Hours**
- This intersection currently operates as an all-way stop.

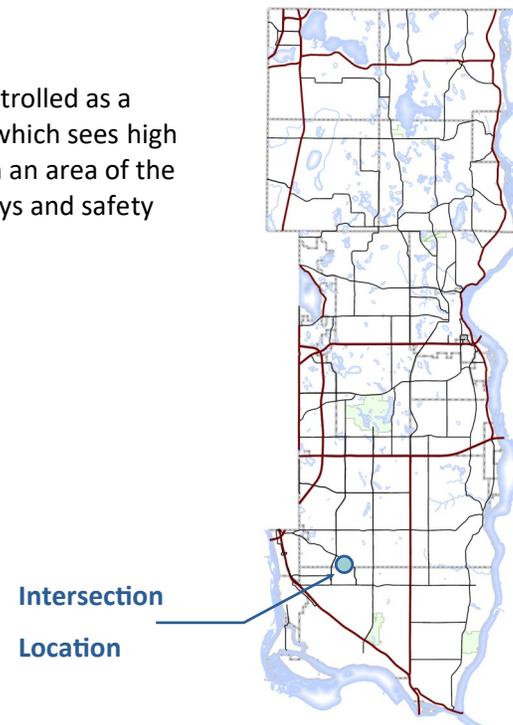
Traffic Count Conducted in **2019**

**2023 ICRS Rank: T24**

### ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal installation. It is therefore not recommended for intersection control changes at this time for the following reasons:

- The intersection is currently operating safely, with crash rate below the average rate for similar intersections on county roads statewide
- Although there is congestion during peak times, the overall intersection is operating efficiently.



# CSAH 18 (40th Street S) & CR 71 (Neal Avenue)

## Existing Conditions

The intersection of CSAH 18 (40th Street S) & County Road 71 (Neal Avenue) is located in the City of Afton, and is currently controlled by sidestreet stop control for the northbound and southbound CR 71 approaches. The intersection is in a rural area of the County, though it serves as a primary east-west connection for people traveling between Afton and Woodbury. This intersection is included in the 2023 ICRS Report due to local concerns that have been voiced regarding crashes at this intersection, even after additional countermeasures on the minor approaches were installed in 2019 and 2023.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **0 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **0 of 8 Required Hours**

Traffic Count Conducted in **2019**

**2023 ICRS Rank: T22**

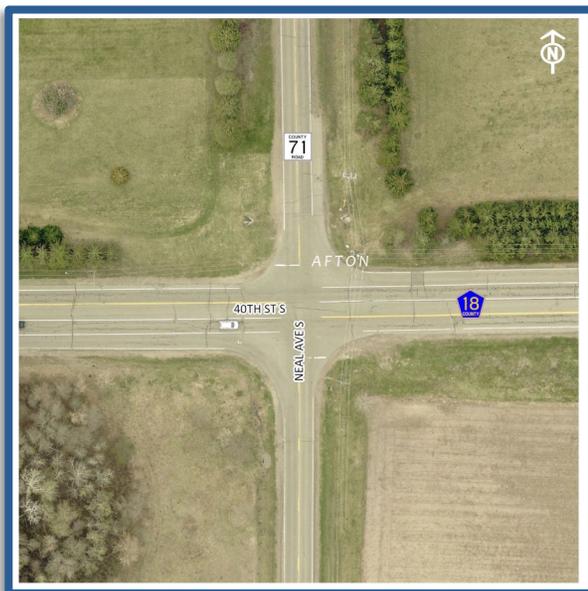
### ICRS Recommendation

This intersection was originally included in the 2019 ICRS report due to a crash that occurred during that year. In the summer of 2019, the northbound and southbound stop signs were relocated closer to the edge of the roadway so they would be more within the approaching driver's cone of vision. Also, red flashing beacons were added atop the stop signs on the northbound and southbound approaches to increase their conspicuity to approaching motorists, and experimental "Look Again" signage was added to the back sides of the in-place stop signs, since it appears several drivers stopped for the stop sign prior to pulling out in front of cross traffic.

It is recommended that this intersection remain two-way stop controlled at this time for the following reasons:

- The intersection volumes do not currently meet any signal warrants, failing to meet any warrant for a single hour.
- All-Way Stop warrants are not met for a single hour.

County staff upgraded the red flashing beacons to a more reliable solar LED system, with flashing red lights installed around the perimeter of the stop signs on the minor approaches. The County is also acquiring additional roadway easement to clear trees on private property to improve sight lines for southbound drivers. County staff will continue to monitor this intersection.



# CSAH 18 (Bailey Road) & Cottage Grove Drive/Settlers Ridge Parkway

## Existing Conditions

The intersection of CSAH 18 (Bailey Road) & Cottage Grove Drive/Settlers Ridge Parkway is located in the City of Woodbury, and is currently controlled by an all-way stop. This intersection is included in the 2023 ICRS Report because it is located in an area of the County that is experiencing increased development and traffic growth, and it has at times seen increases in crashes particularly when being used as a detour route for a construction projects on adjacent arterial routes. County staff were interested in evaluating the intersection to verify that it was operating safely and efficiently.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **0 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

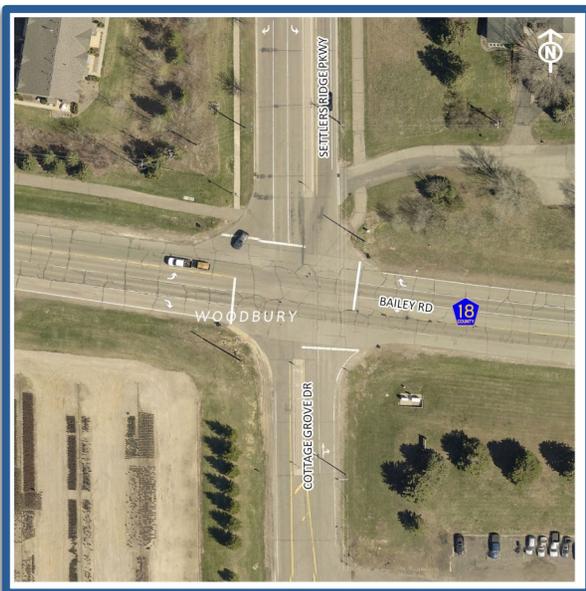
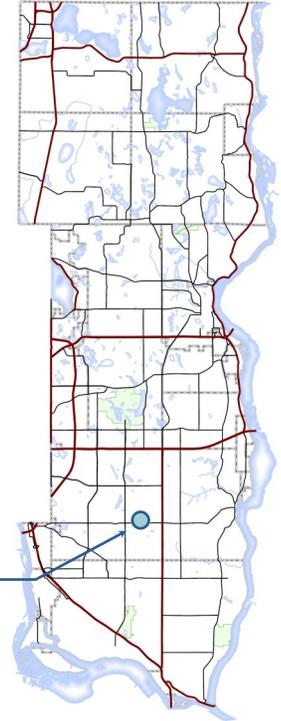
### All-Way Stop Warrant, by the numbers:

- All-Way Stop: **7 of 8 Required Hours**
- This intersection currently operates as an all-way stop.

Traffic Count Conducted in **2023**

**2023 ICRS Rank: T22**

Intersection  
Location



### ICRS Recommendation

The intersection currently does not meet any warrants for traffic signal installation, however it experienced five crashes in the 2020-2022 study period, with all five crashes falling in the category of crashes potentially correctible by the presence of a traffic signal. Washington County converted the intersection from sidestreet stop control to all-way stop control in 2022 with the support of the City of Woodbury, including red flashing beacons within the perimeter of the stop sign and overhead due to concerns about sight lines to the new stop signs, particularly for westbound drivers.

Washington County has been awarded \$2,000,000 in Highway Safety Improvement Planning funds to install a roundabout at this intersection. The County has started preliminary design on this project and construction is expected to begin in 2026.

# CSAH 19 (Keats Avenue) & 80th Street S

## Existing Conditions

The intersection of CSAH 19 (Keats Avenue) & 80th Street S is located in the City of Cottage Grove, and is currently controlled by an all-way stop. This intersection is included in the 2023 ICRS Report because it is located in an area of the County that is experiencing increased development and traffic growth, and the County has in past years received comments from the City of Cottage Grove and from residents regarding vehicles sometimes failing to stop.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **2 of 8 Required Hours**
- Warrant 1B: **4 of 8 Required Hours**
- Warrant 1(A+B): **5 of 8 Required Hours**
- Warrant 2: **4 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

- All-Way Stop: **7 of 8 Required Hours**
- This intersection currently operates as an all-way stop.

Traffic Count Conducted in **2018**

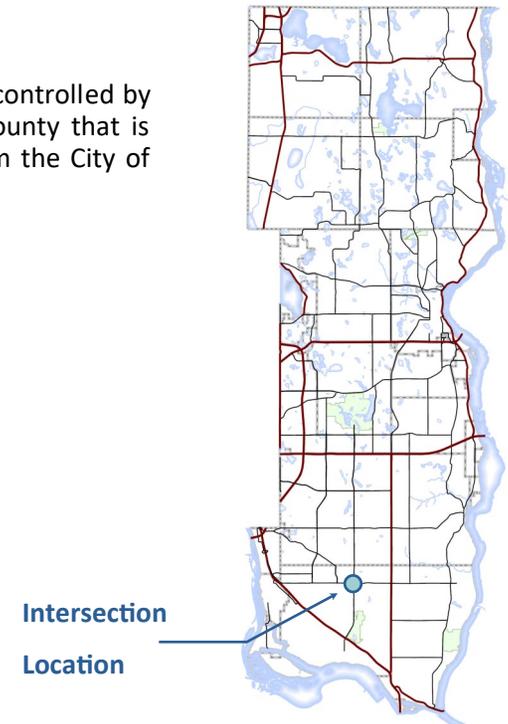
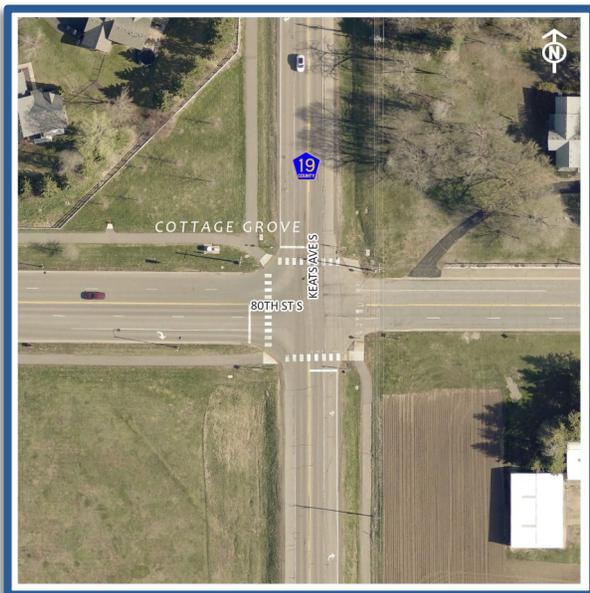
**2023 ICRS Rank: 9**

### ICRS Recommendation

The intersection currently meets Warrant 2 (Four-Hour Volume) for traffic signal installation but lacks left turn lanes, which would be essential for safe and efficient operation of a traffic signal.

This intersection has a Capital Improvement Plan (CIP) project that began preliminary design in January of 2024, with programmed construction in 2026, which will involve the construction of a roundabout. Until then, it is recommended that this intersection remain all-way stop-controlled. The intersection currently experiences some minor congestion during peak hours, but it is operating efficiently during the majority of the day. The intersection is also currently operating safely, with one total reported crash during the 2020-2022 study period.

In 2019, County staff added red flashing beacons for the northbound and southbound approaches to increase the conspicuity of the intersection control to approaching motorists and address concern that drivers were running the stop signs. These were upgraded to a more reliable solar LED system in 2023, with flashing red lights installed around the perimeter of the stop signs on the north and south approaches.



# CSAH 19 (Keats Avenue) & 90th Street S/Ravine Parkway

## Existing Conditions

The intersection of CSAH 19 (Keats Avenue) & 90th Street S/Ravine Parkway is located in the City of Cottage Grove, and is currently sidestreet stop controlled. This intersection is included in the 2023 ICRS Report because it is located in an area of the County that is experiencing increased development and traffic growth. Also, the County has received feedback in the past from area residents that this is a difficult intersection to navigate, particularly from the minor approaches, and that CSAH 19 is difficult to cross for vehicles, bicyclists, and pedestrians.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **2 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **0 of 8 Required Hours**

Traffic Count Conducted in **2019**

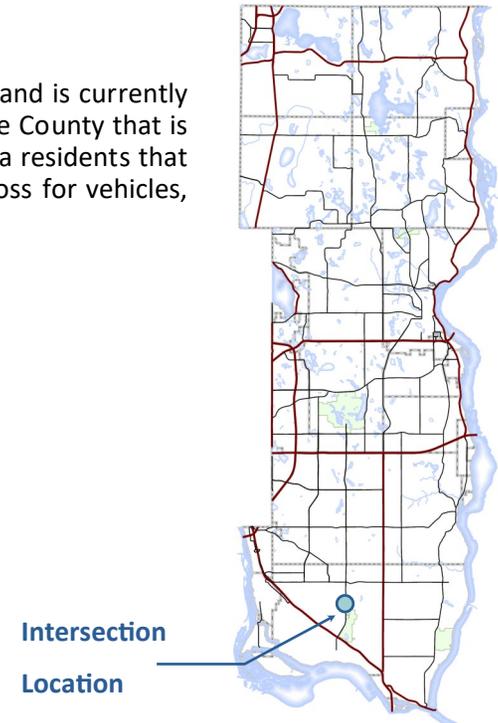
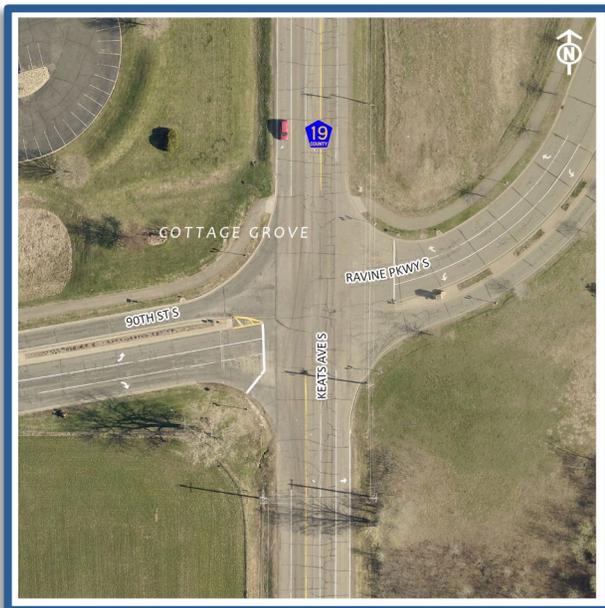
**2023 ICRS Rank: T18**

### ICRS Recommendation

This intersection is not recommended for intersection control changes at this time for the following reasons:

- The intersection currently does not meet any warrants for traffic signal installation.
- Although the westbound and eastbound approaches experience minor delays during portions of the day, the intersection is operating efficiently during the majority of the day.
- Under existing volumes, the installation of a traffic signal would be expected to increase overall delay and increase the crash rate at the intersection.

County staff will continue to monitor crash patterns at this intersection in future years. At this time, it will remain sidestreet stop controlled.



# CSAH 22 (Summit Avenue) & Saint Paul Park Road

## Existing Conditions

The intersection of CSAH 22 (Summit Avenue) & Saint Paul Park Road is located in the City of Saint Paul Park, and is currently controlled by sidestreet stop control. This intersection has been experiencing issues related to heavy truck traffic since truck access from the oil refinery to the Glen Road interchange was restricted in the early 2000's. The County has received requests for increased traffic control at this intersection over the years from residents and truck drivers, due to safety concerns related to the lack of gaps in traffic for loaded tanker trucks making left turns from St. Paul Park Road onto northbound CSAH 22.

### Traffic Signal Warrants, by the numbers:

Warrant 1A: **6 of 8 Required Hours**

Warrant 1B: **11 of 8 Required Hours**

Warrant 1(A+B): **11 of 8 Required Hours**

Warrant 2: **6 of 4 Required Hours**

Warrant 3: **1 of 1 Required Hours**

Warrant 7: **Not met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **9 of 8 Required Hours**

All-way stop is not recommended, because the proximity to adjacent intersections would be problematic.

Traffic Count Conducted in **2023**

**2023 ICRS Rank: 5**

### ICRS Recommendation

Prior to 2012, annual County analyses of this intersection did not indicate that the intersection was meeting traffic signal warrants. County staff took a different look at the intersection in late 2012, electing to count each semi truck as 3 equivalent passenger vehicles due to their size and acceleration characteristics. Using these criteria, the intersection meets several warrants for traffic signal installation. County staff now concur that the installation of a traffic signal could be beneficial at this location and could allow for the removal of the “no turn on red” restriction at the southbound exit ramp, which was installed to create gaps in traffic at St. Paul Park Road.

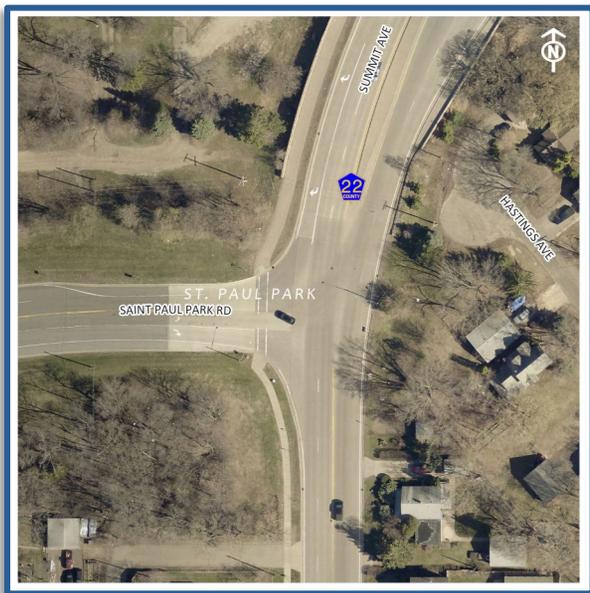
However, the City of St. Paul Park withheld support for a traffic signal at this location in early 2013, and asked that the County instead try and improve the operation of the traffic signals at the US 61/10 & CSAH 22 interchange<sup>1</sup>. The County subsequently completed a traffic signal improvement project in the interchange area in late 2016.

County staff remain ready to support proceeding with a traffic signal design and programming a signal installation at the CSAH 22 & Saint Paul Park Road intersection if and when such a project is supported by the City.

1. [https://www.republicaneagle.com/news/government/st-paul-park-city-council-opposes-fourth-stoplight-near-hwy-61-summit-avenue/article\\_e34b9938-38ce-5f1f-bf48-8a458f13cf79.html](https://www.republicaneagle.com/news/government/st-paul-park-city-council-opposes-fourth-stoplight-near-hwy-61-summit-avenue/article_e34b9938-38ce-5f1f-bf48-8a458f13cf79.html)



Intersection Location



# CSAH 23 (Orleans St E) & CSAH 24/3rd St S/Osman Ave N

## Existing Conditions

The intersection of CSAH 23 (Orleans St E) & 3rd St S/Osman Ave N is located in the City of Stillwater and Oak Park Heights, and is currently controlled by sidestreet stop control. This intersection was included in the 2019 ICRS Report because local residents have at times expressed concerns about safety and operations at this intersection, especially as it relates to sight lines and pedestrian crossings.

### Traffic Signal Warrants, by the numbers:

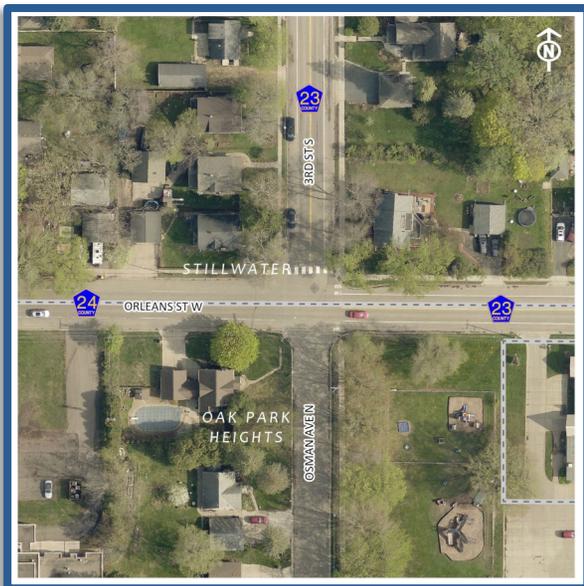
- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **0 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3B: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **0 of 8 Required Hours**

Traffic Count Conducted in **2023**

**2023 ICRS Rank: T24**



### ICRS Recommendation

This intersection currently does not meet any warrants for traffic signal or all-way stop installation. It is therefore not recommended for intersection control changes at this time due to the following reasons:

- The in-place traffic control serves the current level of traffic appropriately.
- The intersection is currently operating safely, with a crash rate at the average rate for similar intersections on County roads statewide. There was one reported, property damage crash at this intersection during the 2020-2022 study period.

The intersection is planned to remain sidestreet stop-controlled at this time.

# CSAH 38 (Maxwell Avenue) & Red Rock Road in Newport

## Existing Conditions

The intersection of CSAH 38 (Maxwell Avenue) & Red Rock Road is located in the City of Newport, and is currently controlled as a two-way stop. Traffic on the eastbound Red Rock Road approach sometimes experiences delays during peak hours due to southbound congestion extending from the I-494 interchange. The County was first asked to evaluate this intersection as a part of the 2018 ICRS Report due to difficulty for drivers on the Red Rock Road approach finding gaps, particularly due to the high volume of truck traffic in the area, as well as safety concerns, and it has scored well enough to remain included in subsequent reports.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **8 of 8 Required Hours**
- Warrant 1(A+B): **3 of 8 Required Hours**
- Warrant 2: **0 of 8 Required Hours**
- Warrant 3: **0 of 8 Required Hours**
- Warrant 7: **Not Met**

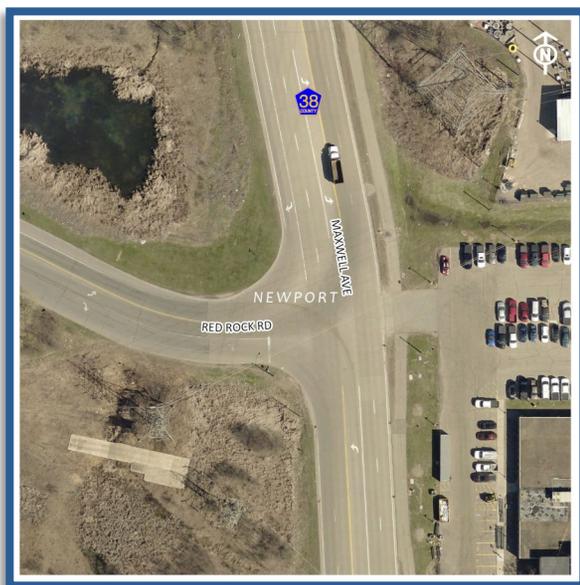
### All-Way Stop Warrant, by the numbers:

All-Way Stop: **0 of 8 Required Hours**

Traffic Count Conducted in **2023**

**2023 ICRS Rank: 12**

Intersection  
Location



### ICRS Recommendation

The intersection meets Warrant 1B (Interruption of Continuous Traffic on the Major Approaches) based on new counts taken in 2023.

There have been no crashes that would be considered correctible by a traffic signal during the 2020-2022 study period.

The Minnesota Department of Transportation recently completed a project to improve capacity on westbound I-494, west of the Wakota Bridge over the Mississippi River. This project, as well as changes in commuting patterns as a result of the pandemic, may have alleviated some of the congestion at the CSAH 38 and Red Rock Road intersection during peak hours. County staff will continue to monitor traffic levels and crashes at this location.

# County Road 74 (65th St S) & Harkness Ave S

## Existing Conditions

The intersection of CR 74 (65th St S) & Harkness Ave S is located in the City of Cottage Grove and is currently controlled by sidestreet stop control. This intersection is a four-legged intersection, with one of the sidestreets being the entrance and exit to Cottage Grove Elementary School. Delays sometimes occur during the morning and afternoon peak hour due to school pick up and drop off. There is also an increase in pedestrian traffic at these times, and congestion sometimes extends from the school site onto the County Highway.

### Traffic Signal Warrants, by the numbers:

- Warrant 1A: **0 of 8 Required Hours**
- Warrant 1B: **0 of 8 Required Hours**
- Warrant 1(A+B): **0 of 8 Required Hours**
- Warrant 2: **0 of 4 Required Hours**
- Warrant 3: **0 of 1 Required Hours**
- Warrant 7: **Not Met**

### All-Way Stop Warrant, by the numbers:

All-Way Stop: **0 of 8 Required Hours**

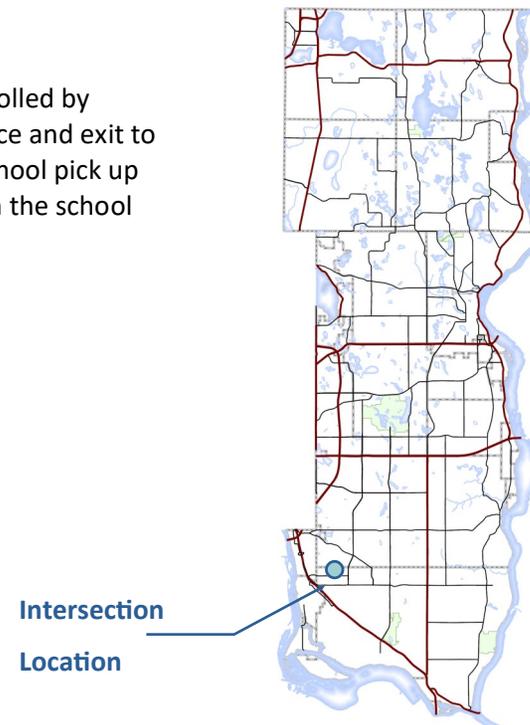
Traffic Count Conducted in **2023**

**2023 ICRS Rank: T26**

### ICRS Recommendation

This intersection currently does not meet any warrants for traffic signal installation. An all way stop may be considered at this intersection due to the peak operations of the intersection during school drop off and pick up times. The congestion that overflows onto the County road can cause obstructed visibility and an all-way stop may provide improved operations for cars entering and existing the school, but would increase delays and noise throughout the day.

The County is continuing to make multi-modal improvements along County Road 74 which includes a trail segment between Meadow Grass Avenue and Hadley Avenue planned for construction in 2024.



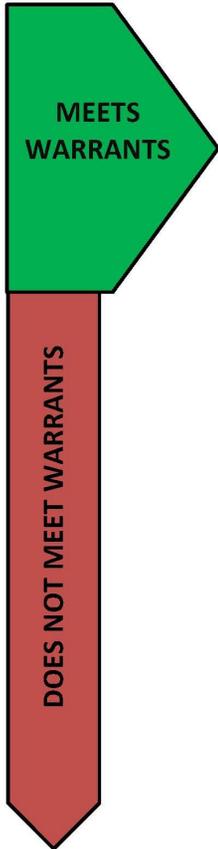
# Summary

Of the twenty-nine intersections that were included in the 2023 Intersection Control Ranking System (ICRS) Report, ten of them met one or more of the MnMUTCD traffic signal warrants. The chart below summarizes each of the ten intersections, including their rank in the ICRS, the warrants that were met at each location, and how each of the intersections is being addressed by Washington County Public Works.

ICRS Rank	Intersection	City and/or Township	Warrants Met	Status
1	CSAH 16 (Valley Creek Road) & Eagle Creek Lane	Woodbury	1B, 1(A+B),2,3,7	Washington County will continue discussions with the City of Woodbury to explore potential changes to improve safety at this intersection.
2	CSAH 12 (Stillwater Rd) & East Ave/Hallam Avenue	Mahtomedi	1B,2,3	Washington County in partnership with the City of Mahtomedi are in construction of a signal installation at this intersection to be completed fall of 2024.
3	CSAH 10 (10th Street N) & CSAH 19 (Keats Avenue)	Lake Elmo	1A,1B,1(A+B),2	A Capital Improvement Plan (CIP) project has been programed to begin design in 2027.
4	CSAH 5 (Owens St) & CSAH 12 (Myrtle Street)	Stillwater	1A,1B,1(A+B),2	County staff remain ready to support an intersection improvement project if and when such a project is supported by the City.
5	CSAH 22 (Summit Avenue) & St Paul Park Road	Saint Paul Park	1A, 1B, 1(A+B)	County staff remain ready to support a traffic signal if supported by the City.
6	CSAH 16 (Valley Creek Road) & Settlers Ridge	Woodbury	1A, 2	County staff are engaged in a corridor study which includes reviewing intersection improvements here.
7	CSAH 6 (Stillwater BLVD) & CSAH 13 (Inwood Avenue)	Lake Elmo	2,3	Intersection to remain an all-way stop and be reviewed with the pavement preservation project beginning in 2024.
8	CSAH 19 (Keats Avenue) & 80th Street S	Cottage Grove	2	Preliminary design of a roundabout at this intersection will kick off in 2024 with construction planned for 2026.
9	CSAH 38 (Maxwell Avenue) & Red Rock Road	Newport	1B	Washington County will continue to monitor this intersection to see if intersection improvements become necessary.
10	CSAH 13 (Radio Drive) & Dale Road	Woodbury	1B,2	County staff started preliminary design in 2023 for a corridor project that is reviewing the intersection improvement alternatives.

# 2023 Washington County Intersection Control Ranking System

2023 Rank	Intersection	Year Data Collected	MN MUTCD Traffic Volume Warrants (Hours Met)					Warrant Points	2020-2022 Correctable Crashes		Crash Points	Total ICRS Points	
			Warrant 1A	Warrant 1B	Warrant 1(A+B)	Warrant 2	Warrant 3		K & A	B, C, & PDO			
1	CSAH 16 (Valley Creek Rd) + Eagle Creek Ln	(1)	2022	5	12	11	6	4	22	0	10	3.3	25.3
2	CSAH 12 (Stillwater Rd) & East Ave/Hallam Ave		2022	3	10	4	6	4	20	0	4	1.3	21.3
3	CSAH 10 (10th St N) & CSAH 19 (Keats Ave)		2023	11	12	12	6	3	21	0	0	0.0	21.0
4	CSAH 5 (Owens St) & CSAH 12 (Myrtle St)		2023	0	4	11	6	3	20	0	2	0.7	20.7
5	CSAH 22 (Summit Ave) & St. Paul Park Rd		2018	6	11	11	3	0	14	0	2	0.7	14.7
6	CSAH 16 (Valley Creek Road) & Settlers Ridge		2023	8	3	4	4	0	12	0	1	0.3	12.3
T7	CSAH 6 (Stillwater Blvd) & CSAH 13 (Inwood Ave)		2021	5	1	3	4	2	11	0	1	0.3	11.3
9	CSAH 19 (Keats Ave) & 80th St S	(2)	2018	2	4	5	4	0	9	0	1	0.3	9.3
12	CSAH 38 (Maxwell Ave) & Red Rock Road	(2)	2018	0	8	3	0	0	8	0	0	0.0	8.0
14	CSAH 13 (Radio Dr) & Dale Rd	(2)	2021	0	4	1	2	0	6	0	2	0.7	6.7
T7	CSAH 13 (Hinton) & CR 74 (65th St)		2023	3	7	4	3	0	10	0	4	1.3	11.3
10	CSAH 13 (50th St N) & Hadley Ave - East Junction		2021	5	3	6	3	0	9	0	0	0.0	9.0
11	CSAH 6 (Stillwater Blvd) & Hadley Ave		2019	4	1	4	2	0	6	0	7	2.3	8.3
13	CSAH 6 (Stillwater Blvd) & CSAH 13 (Ideal Ave)/Helmo Ave		2022	3	0	2	3	0	6	1	2	1.7	7.7
15	CSAH 12 (Myrtle St W) at Brick St/Birchwood Dr		2023	4	0	3	2	0	6	0	0	0.0	6.0
16	CSAH 15 (Manning Ave) & CR 64 (McKusick Rd)		2023	0	4	0	1	0	5	0	1	0.3	5.3
17	CSAH 16 (Valley Creek Rd) & Saint John's Drive		2018	0	2	0	1	0	3	0	2	0.7	3.7
T18	CSAH 16 (Valley Creek Rd) & Dancing Waters/Woodcrest Dr		2018	1	2	1	1	0	3	0	1	0.3	3.3
T18	CSAH 19 (Keats Ave) & 90th St S/Ravine Pkwy		2019	0	2	0	0	0	2	0	4	1.3	3.3
T20	CSAH 12 (75th St N) & CSAH 9 (Jamaca Ave)		2019	0	2	0	0	0	2	1	0	1.0	3.0
T20	CSAH 15 (Manning Ave) & 62nd St N		2022	0	2	1	1	0	3	0	0	0.0	3.0
T22	CSAH 18 (Bailey Rd) & Cottage Grove Dr/Settlers Ridge Pkwy		2023	0	0	0	0	0	0	1	4	2.3	2.3
T22	CSAH 18 (40th St S) at CR 71 (Neal Ave)		2022	0	0	0	0	0	0	1	4	2.3	2.3
T24	CSAH 18 (Bailey Road) & Featherstone Dr		2023	0	0	0	0	0	0	0	1	0.3	0.3
T24	CSAH 23 (Orleans St E) & CSAH 24/3rd St S/Osman Orleans		2023	0	0	0	0	0	0	0	1	0.3	0.3
T26	CSAH 17 (Lake Elmo Ave N) & 39th St		2023	0	0	0	0	0	0	0	0	0.0	0.0
T26	CSAH 8 (Egg Lake Rd) + Goodview Ave		2023	0	0	0	0	0	0	0	0	0.0	0.0
T26	CSAH 12 (75th St N) & Interlachen Way/Eagle Ridge Trail		2023	0	0	0	0	0	0	0	0	0.0	0.0
T26	CR 74 & Harkness		2023	0	0	0	0	0	0	0	0	0.0	0.0



- NOTES:** A.) Warrants 1A (Eight-Hour Volume, Minimum Vehicular Volume), 1B (Eight-Hour Volume, Interruption of Continuous Traffic), and 1(A+B) (Combination of Eight-Hour Warrants) receive 1 point for each hour met, up to a maximum of 12 points. Warrant 1A, 1B, and 1(A+B) are not cumulative; the highest of these values is added to the total.
- B.) Warrant 2 (Four-Hour Volume) receives 1 point for each hour met, up to a maximum of 6 points.
- C.) Warrant 3 (Peak Hour Volume) receives 1 point for each hour met, up to a maximum of 4 points.
- D.) Warrant 7 (Crash Experience) receives 1 point per 3 years for each correctable crash over a 3 year study period, except for correctable fatal and "A" injury crashes which receive 3 points. The total is then divided by 3 to provide a value per year of data.
- 1) This intersection also meets Warrant 7: Crash Experience.
- 2) These intersections meet warrants, and were therefore moved above the dividing line, even though other intersections listed below rank higher in points.