

MEMO

From: Eric R Hanson, PE

Cc: File

Date: February 2, 2024

Re: Traffic Control Review – ST-012-2024 S Whitney Street Reconstruction

This memo is written in response to public input that was received at a public information meeting to discuss the reconstruction of South Whitney Street from East College Drive to Jean Avenue. The neighborhood raised concerns regarding traffic speed through the Whitney neighborhood and near misses with pedestrians, students, and pets. City staff responded by indicating that we would review the South Whitney Street corridor for safety improvements.

Existing Condition:

South Whitney Street has no intersection control between East College Drive and the Holy Redeemer School, just south of Jean Avenue. Intersecting with South Whitney Street is Charles Avenue at a T intersection (no control), East Marshall Street at a four-way intersection (stop control), Church Street at a four-way intersection (yield control), and Jean Avenue at a T intersection (stop control).

One block to the east of South Whitney Street is the Avera medical campus, one-half block west on Church Street is the First Lutheran Church, and on the south end of South Whitney Street is Holy Redeemer School.

Corridor Review:

Speed control is typically most effectively achieved by reducing lane width of the street. For South Whitney Street, it was determined that a lane width reduction was not feasible. The existing and proposed lane width is 20-FT on each side of the center median. The 20-FT width supports a 12-FT driving lane and an 8-FT parking lane. During public input sessions, the neighborhood advised that the road width could not be decreased due to the "tight" feeling that currently exists. City staff did consider a reduction of 1-FT to a 19-FT lane width but determined that the width is already less than ideal for winter snow removal activities.

Also analyzed was the geometry and sight obstructions at every side street intersection of South Whitney Street between East College Drive and Jean Avenue. Except for its intersection with East Marshall Street, South Whitney Street is the clear “through” street in this neighborhood. Both Charles Avenue and Jean Avenue are T-intersections and Church Street occupies a significantly smaller footprint, especially on the east side of South Whitney Street.

The intersection of South Whitney Street and East Marshall Street is more confusing to motorists due to the size of the intersection and the way it is paved. East Marshall Street is a 45-FT road that intersects South Whitney Street, which occupies 60-FT as measured from outside curb to outside curb. Further, East Marshall Street is “paved through” the intersection with the crown of East Marshall Street carrying through the intersection. This gives the appearance that East Marshall Street is the priority street. It also gives the feel that East Marshall Street is the priority street because the vehicles on South Whitney must drive up and over the crown of East Marshall Street.

There are also some sight obstructions at the intersection of East Marshall Street and South Whitney Street that should be noted. When stopped on the western leg of E. Marshall Street and looking north, there is a significant hedge line that obstructs vision. The same holds true when stopped on the eastern leg of E. Marshall Street and looking to the south. The vegetation is not a city ordinance violation, yet it does pose some obstruction to long range view down the street.

It is the conclusion of City Engineering Department staff that due to the geometry of the intersection; we do support the addition of stop signs on South Whitney Street, at its intersection with East Marshall Street. To summarize the Engineering Department support for the addition of signage, resulting in the four-way stop condition at the intersection of S. Whitney Street and E. Marshall Street:

- When East Marshall Street was reconstructed, it was paved through the intersection and this can cause confusion when South Whitney Street is the through movement.
- During some parts of the year there could be sight issues due to bushes and or shrubs in the sight lines that could block drivers’ view of cross traffic on South Whitney Street. Stopping vehicles on South Whitney Street will allow drivers and all users on East Marshall Street to safely cross the intersection.
- This area has the potential for a large amount of pedestrian traffic with its proximity to Avera Medical Center and Holy Redeemer School.



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From Section 2B.7 of the MnMUTCD - *Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.*

From Section 2.B7 of the MnMUTCD, criteria that can be considered for a multi-way stop includes locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop. Also, an intersection of two residential collector (through streets) of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Based on the items listed above and the excerpt from the MnMUTCD, the Public Works Division feels that multi-way stop control is warranted at the intersection of South Whitney Street and East Marshall Street.