



July 26, 2024

City of New Port Richey
Robert Rivera
Public Works Director
6132 Pine Hill Road
Port Richey, FL 34668

Re: Madison Street & Massachusetts Avenue – All-way Stop Evaluation

Dear Robert,

FDC evaluated the Madison Street/Massachusetts Avenue intersection to determine if All-way Stop Control is warranted pursuant to section 2B.12 of the US Department of Transportation, Manual on Uniform Traffic Control Devices 2023, 11th Edition (MUTCD).

Section 2B.12 offers guidance for All-way Stop Control based on the following warrants:

- A. All-Way Stop Control Warrant A: Crash Experience
- B. All-Way Stop Control Warrant B: Sight Distance
- C. All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection
- D. All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)
- E. All-Way Stop Control Warrant E: Other Factors

These Warrants are evaluated below. Note that Section 2B.12 states that “Warrants are not a substitute for engineering judgement. The fact that a warrant for a particular traffic control device is met is not conclusive justification to install or not install all-way stop control.” For this analysis, data was extracted from a 7 day traffic count conducted by the City of New Port Richey.

A. All-Way Stop Control Warrant A: Crash Experience

- All-way stop control may be installed at an intersection where an engineering study indicates that:
 - a. For a four-leg intersection, there are five or more reported crashes in a 12-month period or six or more reported crashes in a 36-month period that were a type susceptible to correction by the installation of all-way stop control.
 - **12- month period: From the dates of 7/22/2022 to 5/14/2023, there were 6 reported crashes at the Massachusetts Avenue/Madison Street intersection (5 were of the type susceptible to correction by the installation of all-way stop control).**

- **36-month period: From the dates of 8/22/2020 to 5/14/2023, there were 13 reported crashes at the Massachusetts Avenue/Madison Street intersection (7 were of the type susceptible to correction by the installation of all-way stop control).**

Warrant A – Crash Experience criterion is met.

- b. For a three-leg intersection, there are four or more reported crashes in a 12-month period or five or more reported crashes in a 36-month period that were a type susceptible to correction by the installation of all-way stop control.

N/A – this is a four-leg intersection.

B. All-Way Stop Control Warrant B: Sight Distance

- All-way stop control may be installed at an intersection where an engineering study indicates that sight distance on the minor-road approaches controlled by a STOP sign is not adequate for a vehicle to turn onto or cross the major (uncontrolled) road.

Sight distance on the minor-road (Madison Street) appears adequate to turn onto or cross Massachusetts Avenue.

Warrant B – Sight Distance criterion is not met.

C. All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

- All-way stop control may be installed at locations where all-way stop control is an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal (see Chapter 4C) at the intersection or for the installation of yield control at a circular intersection.

N/A – this intersection is not transitioning to signal control or to yield control.

D. All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

- All-way stop control may be installed at an intersection where an engineering study indicates:
 - a. The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major-street approaches is at least 300 units per hour for each of any 8 hours of a typical day; and

Between the dates of 5/1/2023 and 5/4/2023 (beginning at 12:00AM - Hour 0):

- **Weekday average traffic count:**
 - **Hour 8-9: 340.75 vehicles**
 - **Hour 9-10: 368.5 vehicles**
 - **Hour 10-11: 400.25 vehicles**
 - **Hour 11-12: 421 vehicles**
 - **Hour 12-13: 411 vehicles**
 - **Hour 13-14: 491.5 vehicles**
 - **Hour 14-15: 455.5 vehicles**
 - **Hour 15-16: 445.5 vehicles**

In the 8-hour span from 8:00AM to 4:00PM, there were at least 300 vehicles per hour for each of those 8 hours.

Warrant D(a) - 8-Hour Volume criterion is met.

- b. The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor-street approaches is at least 200 units per hour for each of any of the same 8 hours.

Between the dates of 6/21/2021 and 6/24/2021 (beginning at 12:00AM - Hour 0):

- **Weekday average traffic count:**
 - Hour 4-5: 207.8 vehicles
 - Hour 5-6: 316.8 vehicles
 - Hour 6-7: 316.5 vehicles
 - Hour 7-8: 336.0 vehicles
 - Hour 8-9: 360.5 vehicles
 - Hour 9-10: 376.5 vehicles
 - Hour 10-11: 423.8 vehicles
 - Hour 11-12: 414.0 vehicles

In the span from 4:00AM to 7:00PM, there were at least 200 vehicles per hour (which exceeds the minimum 8 hour requirement).

Warrant D(b) - 8-Hour Volume criterion is met.

E. All-Way Stop Control Warrant E: Other Factors

- All-way stop control may be installed at an intersection where an engineering study indicates that all-way stop control is needed due to other factors not addressed in the other all-way stop control warrants. Such other factors may include, but are not limited to, the following:

- a. The need to control left-turn conflicts,

The City of New Port Richey provided crash data between April of 2019 to September of 2023.

Within this time period, there were five left-turn conflicts (Report Numbers: 88590427, 88590080, 88362122, 25571953, and 2581262).

Warrant E – Other Factors criterion is met.

- b. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where all-way stop control would improve traffic operational characteristics of the intersection, or

N/A – this is not an intersection of two primarily residential neighborhood collector streets.

- c. Where pedestrian and/or bicyclist movements support the installation of all-way stop control.

Richey Elementary School is less than 1,000 feet from the subject intersection and functions as a pedestrian attractor. The installation of all-way stop control would improve the safety of both the crossing guard and school children crossing this intersection.

Warrant E – Other Factors criterion is met.

Based on the warrant criteria listed in Section 2B.12 of the MUTCD and engineering judgement, this intersection meets the criteria for all-way stop control. Both the crash data and roadway trips exceed the minimum volume required to warrant the addition of stop signs on Massachusetts Avenue. Additionally, the intersection experiences numerous left-turn conflicts and is also in a location that attracts elementary school aged pedestrians. FDC recommends all-way stop control for the intersection of Massachusetts Avenue and Madison Street.

In addition adding stop bars and R1-1 signs to Massachusetts Ave., please include the supplemental 'All Way' (R1-3P) plate to all legs of the intersection.



Sincerely,

David Fleeman, PE

Director of Engineering