



## Staff Report

### September 14, 2021

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**TO:** Honorable Mayor and Members of the Town Council  
**FROM:** Merrill Buck, Town Engineer  
**DATE:** September 8, 2021  
**RE:** Resolution Authorizing a Multi-Way STOP at Taylor Road and Walnut Street

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#### Recommendation

Staff recommends that the City Council adopt a resolution authorizing the installation of a multi-way (all-way) stop controlled intersection on Taylor Road at the intersection of Walnut Street.

#### Background and Discussion

*Authority and Criteria* - The authority to install STOP signs is delegated to local agencies under California Vehicle Code Section 21355.

The decision to install a multi-way stop is based upon an engineering study that considers criteria outlined in Section 2B.07 of the California Manual on Uniform Traffic Control Devices (MUTCD). See Attachment 1 of this report for a summary of findings from an engineering study at the intersection of Taylor Road and Walnut Street.

While subjective and considering optional criteria allowed under the MUTCD, the results of the engineering study suggest that a multi-way stop at this intersection is warranted. Summarized below are the primary arguments for the installation.

- There have been two accidents in just the last three months. Left unaddressed, there is no reason to believe that this trend won't continue.
- Crosswalks are typically 10-feet wide, starting at the edge of the cross street. This places the back of the crosswalk, where cars stop, 10-feet back from the intersection. The crosswalk at Walnut Street is 19-feet back from the edge of the cross street. Being this far back creates a sight-distance problem if vehicles stop 19-feet back, or a potential pedestrian conflict, if vehicles drive through the crosswalk before stopping. The crosswalks can't be easily moved because they are built with decorative brick thermoplastic and align with curb ramps. An all-way stop will resolve the sight distance problem and make it safer for pedestrians.
- There is a significant left-turning conflict from Walnut Street (on the cul-de-sac/park side) turning northbound on Taylor Road, during peak hour traffic. Vehicles on Taylor Road stack up in the northbound direction as they wait for the signal at Horseshoe Bar Road to turn green. Meanwhile cars are accelerating in the southbound direction after

leaving the intersection. Entering the intersection from Walnut Street while waiting for a gap to open in the slower-moving northbound direction puts vehicles at risk of being hit by faster-moving southbound traffic.

- There is a high potential for vehicle/pedestrian conflicts given that the ACE Hardware Store operates on two sides of Taylor Road and pedestrians must cross the street to get from one side to the other.
- Vehicles parallel parking on Taylor Road have a similar problem exiting their parking stalls – they need to wait for a gap before exiting. Relying upon a mirror, or trying to look over your shoulder with adjacent, higher-speed traffic can be difficult.
- The intersection of Taylor Road at Walnut Street is far enough back from Horseshoe Bar Road, that northbound cars will have enough stacking room to queue between light cycles such that it will not lead to missed green lights.

*Design Considerations* – Because Taylor Road is a major arterial roadway, that would typically have a signal instead of a STOP to regulate traffic, staff is recommending that permanent red reflective tape be applied to the pole. (See Attachment C). This is a highly effective technique that will help drivers recognize the stop sign, especially at night, and will give an added measure of safety to the high number of pedestrians crossing at this location.

*Implementation* – If approved, staff is recommending that the stop signs be installed as a change order to the Boyington Road Paving and Digout Repairs project that is currently under construction. This project is utilizing Sierra Traffic Markings as a striping subcontractor. They are fully capable of installing the new stop signs and poles, “all-way” plaques, thermoplastic legends and temporary advanced-warning signs and flags alerting drivers to the changed conditions.

### **CEQA Requirements**

This action is exempt pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15301(c), minor alteration of existing highways and streets involving negligible expansion of use.

### **Financial and/or Policy Implications**

The cost for installing an all-way STOP controlled intersection on Taylor Road at Walnut Street is estimated to be approximately \$5,000. Funding for these improvements can be made from Transportation Funds identified in the Public Works Budget.

### **Attachments**

- A. Resolution
- B. Engineering Study
- C. Design Considerations

**TOWN OF LOOMIS**

**RESOLUTION 21 - \_\_\_\_**

**A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF LOOMIS  
AUTHORIZING A MULTI-WAY STOP AT TAYLOR ROAD AND WALNUT STREET**

WHEREAS, the authority to install STOP signs is delegated to local authorities under California Vehicle Code Section 21355; and

WHEREAS, criteria and policy guidelines for the installation of a multi-way stop is defined in Section 2B.07 of the California Manual on Uniform Traffic Control Devices (MUTCD); and

WHEREAS, the MUTCD states that the decision to install a multi-way stop control should be based upon an engineering study; and

WHEREAS, an engineering study of the intersection at Taylor Road and Walnut Street was performed and it was determined that the intersection meets the criteria for the installation of a multi-way stop.

NOW, THEREFORE, BE IT RESOLVED, that the Council of the Town of Loomis hereby authorizes a multi-way stop at the intersection of Taylor Road and Walnut Street.

PASSED AND ADOPTED this 14<sup>th</sup> day of September 2021 by the following vote:

AYES:  
NOES:  
ABSENT:  
ABSTAINED:

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
Town Clerk

**MULTI-WAY (ALL-WAY) STOP SIGN - ENGINEERING STUDY EVALUATION**

California Manual on Uniform Traffic Control Devices

Section 2B.07

Location: Taylor Road at Walnut Street

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 controls are typically used where the volume of traffic on the intersecting roads is approximately equal. The decision to install multi-way stop control should be based on an engineering study which considers the following criteria:

- A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal. **(Not applicable)**
- B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions. **(Potentially Satisfied)**

**Seeking longer term data from the Sheriff's Department, but staff is aware of two crashes within the past three months, representing a rate of eight accidents per 12-month period.**

- C. Minimum volumes: **(Not Satisfied)**

- 1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and

**Based upon the Town's 2014 Transportation Plan the Average Daily Traffic (ADT) on Taylor Road at Walnut Street totals 9,935 vehicles per day. This is well above the 300 vehicles per hour over 8 hours threshold.**

- 2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but

**The traffic volumes for both approaches of Walnut Street mid-day totaled about 100 vehicles per hour with the average delay reaching about 30 seconds.**

- 3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.
- D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

**Not applicable. The posted speed limit on Taylor Road is 25 MPH. The 85<sup>th</sup> percentile speed is 30 MPH.**

## DESIGN CONSIDERATIONS

D. Option: Other criteria that may be considered in an engineering study include:

1. The need to control left-turn conflicts; **(Satisfied)**

**Left-turn conflict have to do with reducing the number or severity of potential vehicle-to-vehicle conflicts associated with left-turn movements. The left-turning movement from Walnut Street (on the cul-de-sac/park side) to northbound Taylor Road is a particularly challenging movement to make during peak hour traffic. Taylor Road is at capacity, with cars stacking up in the northbound direction as they wait for the signal at Horseshoe Bar Road to turn green. Meanwhile cars are accelerating in the southbound direction after leaving the intersection. Entering the intersection while waiting for a gap to open in the slower-moving northbound direction puts the turning vehicle at risk of being hit by faster-moving southbound traffic. Not entering the intersection can lead to significant delays as northbound Taylor Road drivers don't recognize the desire of the left-turning vehicle to want to enter without the left-turning vehicle showing their intention by entering the intersection first.**

2. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes; **(Satisfied)**

**The intersection is adjacent to ACE Hardware, a high pedestrian generator, which operates on both sides of Taylor Road. Pedestrians must cross Taylor Road to get from one store to the other.**

3. 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; **(Satisfied)**

**The crosswalk at Walnut Street is 19-feet back from the edge of the travel lane on Taylor Road. Typically crosswalks are striped at 10-feet back. Being this far back creates a sight-distance problem if the vehicle stops 19-feet back, or a potential pedestrian conflict if the vehicle drives through the crosswalk before stopping at a more typical distance of 10-feet back. The crosswalks can't be easily relocated because it has been built with decorative brick thermoplastic and aligns with curb ramps. An all-way stop would resolve both the sight-distance problem and the pedestrian conflict problem.**

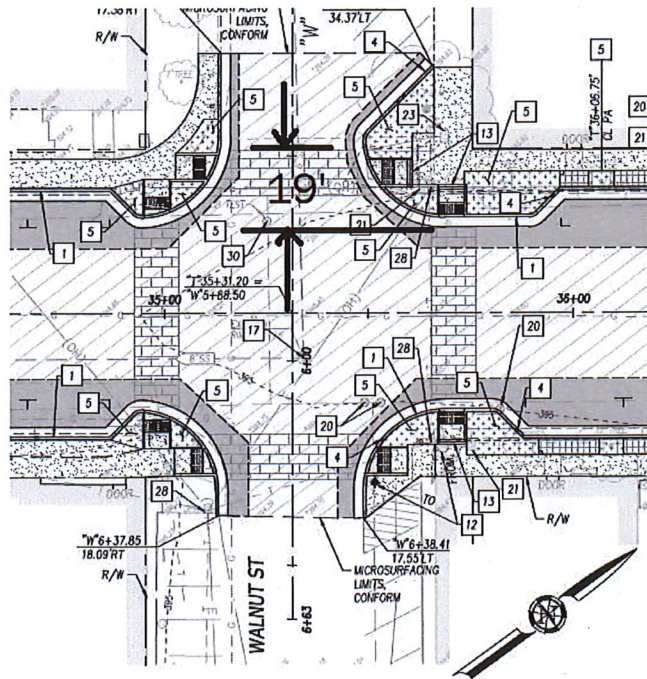
4. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection. **(Not Applicable)**

### Staff Recommendation:

A multi-way stop at this intersection is recommended given that the accident history is occurring at a rate that is on track to exceed 5 accidents over a 12-month period, along with satisfying three categories of optional criteria including, the inability for left turning vehicles heading northbound on Taylor Road to safely maneuver into a gap, the limited sight visibility due to the crosswalk being further back than normal, and the high potential for pedestrian conflicts due to the ACE Hardware Stores being a high pedestrian traffic generator.



Permanent reflective red tape to be placed on stop sign pole



Back of crosswalk 19-feet back from edge of Taylor Road resulting in poor sight distance