



CITY COUNCIL STAFF REPORT

TO: Honorable Mayor and City Council **DATE:** June 4, 2018

FROM: Matthew Bronson, City Manager

PREPARED BY: Greg Ray, Public Works Director/City Engineer

SUBJECT: Traffic Improvements at Trouville Avenue and South 16th Street

RECOMMENDATION

Adopt the Resolution approving installation of all-way stop control at the intersection of South 16th Street and Trouville Avenue.

BACKGROUND

The Council identified Transportation and Traffic Safety as a Council Goal for 2017-18. At the February 20, 2018 City Council meeting, staff presented information on traffic safety improvements with a focus on specific streets including the South 16th Street. Crosswalk safety, intersection and general street lighting, bus stop safety, and vehicle speeds have been concerns identified by residents on South 16th Street with the intersection of South 16th Street and Trouville Avenue of particular concern. There is a school bus stop located on South 16th Street adjacent to the Mentone Basin Park between Mentone and Trouville Avenues and residents have requested a stop sign be placed at Trouville to reduce speeds and improve bus stop safety. Around the perimeter of the park, there is existing all-way stop control at Mentone Avenue and South 16th Street; a two-way stop in the east-west direction at South 16th Street and Trouville Avenue; a two-way stop at South 14th Street and Mentone Avenue in the north-south direction; and all-way stop control at South 14th Street and Trouville Avenue.

The Council provided policy direction on February 20 to install a stop sign at the corner of South 16th Street and Trouville given the proximity of the adjacent park and nearby bus stop. Staff subsequently hired a traffic engineering consultant to prepare an engineering study to document installation of all-way stop control. A copy of the study performed by Omni-Means/GHD Transportation Consultants on April 30, 2018 is included as Attachment 2. Even though installation of all-way stop control would not be warranted based on existing speeds or pedestrian volumes, the report concludes the Council could consider other factors such as the adjacent park and the nearby bus stop in deciding whether a stop sign is appropriate at this location. The findings of the Engineering Study indicated a potential sight distance restriction at the intersection and also noted that the school bus stop and associated students crossing South 16th Street at this intersection raise the concern that drivers may not be aware of the presence of a school bus and pedestrians when approaching the intersection. Pending Council action, the stop sign would be installed by the end of June.

FISCAL IMPACT

Depending on the Council's direction, costs for installation of all-way stop control and additional signage and striping is estimated to be \$3,000. These costs would be funded in the City's operating budget.

ALTERNATIVES

The City Council has the following alternatives to consider:

1. Adopt the Resolution approving installation of all-way stop control at the intersection of South 16th Street and Trouville Avenue; or
2. Provide alternative direction to staff.

PUBLIC NOTIFICATION

The agenda was posted in accordance with the Brown Act and copies of the meeting agenda and this report were provided to individuals who have recently approached the Council with traffic safety concerns in the area of South 16th Street and Trouville Avenue.

ATTACHMENTS

1. Resolution
2. Omni-Means/GHD Transportation Consultants Engineering Study

RESOLUTION NO. 18-___

**RESOLUTION OF THE CITY COUNCIL OF THE
CITY OF GROVER BEACH, CALIFORNIA,
APPROVING THE INSTALLATION OF ALL-WAY STOP CONTROL
AT THE INTERSECTION OF SOUTH 16TH STREET AND TROUVILLE AVENUE**

WHEREAS, on February 20, 2018, the City Council held a meeting to hear about traffic concerns at several locations within the City; and

WHEREAS, neighbors living near the intersection of South 16th Street and Trouville Avenue attended the meeting and expressed their concerns regarding safety at that intersection; and

WHEREAS, the majority of the comments from the neighborhood group indicated that the preferred solution would be an all-way stop sign at the South 16th Street and Trouville Avenue intersection; and

WHEREAS, South 16th Street, a two-lane, north-south street, is designated as a local street, serving as one of the many north-south streets crossing the city between Atlantic City Avenue in the north and The Pike in the south; and

WHEREAS, the average daily traffic volume on South 16th Street is approximately 2,600 vehicles per day, observed traffic speeds are near 28 mph (posted speed limit is 25 mph), and no accidents have been reported at the intersection in the past five years; and

WHEREAS, this intersection is adjacent to Mentone Basin Park, and is also near the school bus pick-up and drop-off for students attending Judkins Middle School, of which many cross South 16th Street on the way to or from the bus; and

WHEREAS, an Engineering Study was performed by Omni-Means/GHD Transportation Consultants on April 30, 2018; and

WHEREAS, the findings of the Engineering Study indicated that all-way stop control at the intersection was not warranted according to the California Manual of Uniform Traffic Control Devices; and

WHEREAS, the findings of the Engineering Study indicated a potential sight distance restriction at the intersection; and

WHEREAS, the findings of the Engineering Study also noted that the school bus stop and associated students crossing South 16th Street at this intersection raise the concern that drivers may not be aware of the presence of a school bus and pedestrians when approaching the intersection; and

WHEREAS, the City Council, listening to the concerns of the residents near this intersection regarding speeding and pedestrian safety, has determined that the City is best served by the establishment of all-way stop control given the proximity to an adjacent park and school bus stop.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Grover Beach, California, does hereby approve the establishment of all-way stop control at the intersection of South 16th Street and Trouville Avenue, and provides direction for City staff to move forward with the installation along with the following additional safety enhancements:

1. Install R1-1 "Stop" signs with R1-3P "All Way" signs under each stop sign.
2. Moving the Stop Limit lines on both of the Trouville Avenue approaches closer to the intersection to improve visibility for vehicles on South 16th Street.
3. Install W3-1 "Stop Ahead" signs on both the north and south approaches of South 16th Street.

Upon motion by _____ and second by _____ and on the following roll call vote:

AYES: Council Members -
NOES: Council Members -
ABSENT: Council Members -
ABSTAIN: Council Members -

the foregoing Resolution was **PASSED, APPROVED, and ADOPTED** at a Regular meeting of the City Council of the City of Grover Beach, California, this 4th day of June, 2018.

**** D R A F T ****

JOHN P. SHOALS, MAYOR

Attest:

DONNA L. McMAHON, CITY CLERK



Engineering Study

To: City of Grover Beach	Date: May 28, 2018
Attn: Greg Ray, Public Works Director/City Engineer	Project: South 16 th Street/Trouville Avenue Engineering Study
From: Jay Walter, PE TE	
Re: South 16 th Street and Trouville Avenue Intersection.	Job No.:
	File No.: C2495MEM001.DOCX
CC: Joe Weiland, P.E.	

I. Background

At the Grover Beach City Council meeting on February 20, 2018, which focused on traffic safety issues in the city, residents informed the Council that they had particular concerns about the intersection of South 16th Street and Trouville Avenue. Crosswalk safety, intersection and general street lighting, bus stop safety and vehicle speeds were concerns identified by residents near South 16th Street. This intersection is currently stop sign controlled only on the east & westbound Trouville Avenue approach. City staff noted that installation of all-way stop control would likely not be warranted based on existing speeds or pedestrian volumes, and the Council could consider other factors such as the adjacent park and the nearby bus stop in deciding whether a stop sign is appropriate at this location. After some deliberation, the City Council directed staff to install all-way stop control at this intersection. Omni-Means/GHD was contracted to conduct an Engineering Study to review applicable multi-way stop warrants provided in the *California Manual on Uniform Traffic Control Devices (California MUTCD) 2014 Edition* and other factors to document the City Council's decision to install all-way stop control.

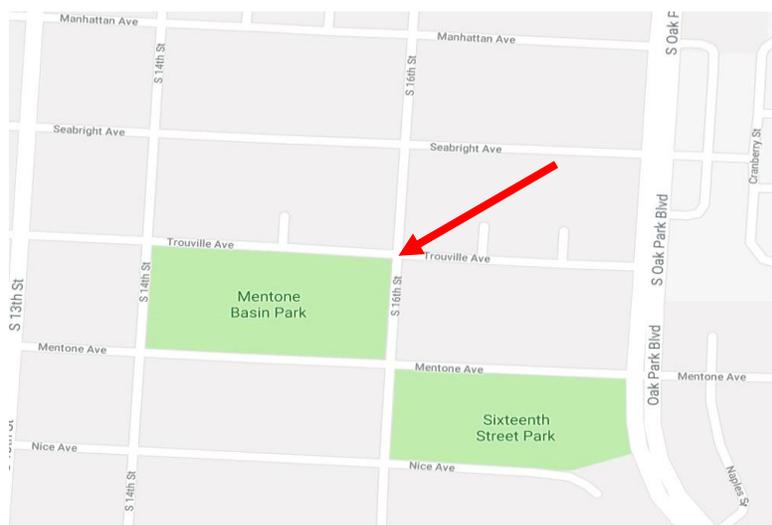


Figure 1: Vicinity Map

II. Existing Conditions

This intersection is currently stop sign controlled only on the east & westbound Trouville Avenue approach. There is a school bus stop located on South 16th Street adjacent to the Mentone Basin Park between Mentone and Trouville Avenues. Around the perimeter of the park, there is an existing four-way stop sign at Mentone Avenue and South 16th Street; a two-way stop in the east-west direction at South 16th Street and Trouville Avenue; a two-way stop at South 14th Street and Mentone Avenue in the north-south direction and a four-way stop at South 14th Street and Trouville Avenue. No pedestrian crosswalks exist at this intersection. The posted speed limit on South 16th Street is 25 mph.

III. Analysis

Accident Data

Recent 5-year accident data (2013-2017) was obtained from the City Police Department and Statewide Integrated Traffic Records System (SWITRS) for the study intersection. There were no reported accidents at the intersection of South 16th Street and Trouville Avenue in the last five years.

Traffic Volumes

Traffic counts were not obtained as the City Council had already approved the installation of all-way stop control. A field review observation of about an hour revealed low volumes of traffic on South 16th Street and Trouville Avenue, which would not likely be sufficient to meet the volume warrant criteria for all-way stop control.



Figure 2: Intersection of South 16th Street and Trouville Avenue

Approach Speeds

The posted speed limit along South 16th Street is 25 mph, but no Engineering & Traffic Survey has been conducted on South 16th Street. The City has relied on the CVC Section 40802 guidance that "local streets and roads" are exempt from the E&TS requirement and the speed limit in a residential neighborhood can be signed 25 MPH. The Police Department has used a radar trailer at this location and has recorded speeds near 28 mph.

Sight Distance

Available intersection corner sight distance (CSD) and stopping sight distance (SSD) was checked at the study intersection. The values are summarized in Table 1 and reveal restricted sight distance for vehicles at the intersection approaches, as well as for vehicles on South 16th Street.

Approach	Sight Distance	
	Measured Distance (ft)	Corresponding Speed (MPH)
Westbound on Trouville	140 (CSD)	<25
Eastbound on Trouville	153 (CSD)	<25
Southbound on 16 th	150 (SSD)	25

Caltrans Highway Design Manual Table 405.1A "Corner Sight Distance (7 1/2 Second Criteria)
Caltrans Highway Design Manual Table 201.1 "Sight Distance Standards

Table 1: Sight Distance

Orderly Traffic Flow

Based on a field review, there is no evidence of evasive maneuvers (skid marks, swerves) on the approaches to the intersection, which would indicate reasonable care is being used by drivers. There are also a number of similar intersections in the vicinity that have all-way stop control, which would suggest that drivers will not be surprised by all-way stop control here, or that it would create a disruption to orderly traffic flow in the area.

Multi-Way Stop Control Analysis – Guidance

The MUTCD covers all-way stop (a type of "multi-way" stop) application in Section 2B.07 Multi-Way Stop Applications: "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." It offers the following guidance on the application of multi-way stop control:

- 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.
- 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.



- C. Minimum volumes:
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
 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
 3. If the 85th-percentile approach speed of the major-street exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Item 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.

Criterion A: Where Traffic Control Signals are Justified

A traffic signal is not already warranted at this location, so Criterion A does not apply.

Criterion B: Accident History

A review of the recent available 5-year accident information indicates that there were no reported accidents at or near the intersection of South 16th Street and Trouville Avenue. Since the minimum number of accidents required to meet this warrant is five within a 12 month period, so Criterion B would not be met.

Criterion C: Traffic Volumes

Traffic counts were not obtained as the City Council has already approved the installation of all-way stop control. A field review observation of about an hour revealed low volumes of traffic on South 16th Street and Trouville Avenue, so Criterion C would not be met.

Criterion D: Combination of Criterion

A multi-way stop could be warranted 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. No Criterion are met, so Criterion D does not apply.

Multi-Way Stop Control Analysis – Optional Criteria

Section 2B.07 of the MUTCD includes four other criteria that may be considered in an engineering study to determine if the installation of multi-way stop control is warranted at an intersection:

- A. The need to control left-turn conflicts;
- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- C. 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; and



- D. An intersection of two residential neighborhood collectors (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Criterion A: Control Left-Turn Conflicts

Based on a field review and observation of low volumes, left-turn conflicts do not appear to be an issue. As noted earlier, there were no accidents involving a left-turning vehicle (or any other accidents) reported at the study intersection during the past 5 years.

Criterion B: Control Vehicle/ Pedestrian Conflicts

Currently the study intersection does not experience a significant amount of pedestrian activity with the exception of the school bus pick-up and drop-off location adjacent to Mentone Basin Park. Pedestrians will cross South 16th Street at this location. According to Lucia Mar District estimates, approximately 30 students use this bus stop location, which would not be considered a high pedestrian volume. Based on this estimate, Criterion B would not be satisfied.

Criterion C: Sight Distance

The Caltrans Highway Design Manual (HDM) Table 405.1B lists which types of sight distance are evaluated for various types of intersections. For the intersection of public streets, corner sight distance and stopping sight distance are evaluated.

Corner Sight Distance: Corner sight distance is the distance needed to provide 7.5 seconds for the driver on the crossroad to complete the necessary maneuver while the approaching vehicle travels at the assumed design speed of the main road. The speed limit on South 16th Street is 25 mph. As shown in Table 1 above, available corner sight distance is not adequate for the posted speed of 25 mph at the study intersection.

Stopping Sight Distance: Stopping sight distance is the distance needed to allow an approaching driver to notice, react and brake to avoid a collision. As shown in Table 1 above, the available stopping sight distance on South 16th Street approaching the study intersection is minimally adequate for the posted speed.

Criterion D: Intersection of Two Residential Collector Streets of Similar Design

Based on a field review, South 16th Street and Trouville Avenue are local streets of similar design and operating characteristics, where multi-way stop control might improve traffic operational characteristics of the intersection. Based on Council input and feedback at the February 20, 2018 meeting, this criteria could be considered met, as it is similar in nature to many other intersections in the area.

IV. Conclusion and Recommendations

The following presents our conclusions based on the analysis of the existing intersection conditions and the City Council's decision to approve all-way stop control.

- Based on using the established criteria in the Ca MUTCD, a multi-way stop warrant analysis concluded that the conversion to all-way stop control is currently not warranted.



- The data researched for this engineering study does not suggest that the posted speed limit can be reduced further below the existing 25 mph posted limit based on existing State law.
- The stopping sight distance (SSD) for northbound and southbound 16th Street traffic is just over 150 feet, which allows for minimal visibility of traffic waiting on Trouville Avenue to enter the intersection.
- The corner sight distance (CSD) for eastbound and westbound Trouville Avenue traffic is under 150 feet, which allows for less than adequate visibility of traffic on South 16th Street for vehicles waiting on Trouville Avenue to enter the intersection.
- The school bus stop and associated students crossing South 16th Street at this intersection raise concern that drivers may not be aware of them when approaching the intersection.
- The residents that made their concerns known at the February 20, 2018 City Council meeting live close to the intersection and have more frequent observations of the conditions that were taken into consideration when the City Council approved all-way stop control.

We recommend some other enhancements at this intersection be considered with the all-way stop installation.

- Consider asking the City Council to adopt a Resolution approving the all-way stop control that documents the reasoning behind it.
- Consider moving the Stop Limit lines on both the Trouville approaches closer to the intersection to improve visibility for vehicles on South 16th Street.
- Consider installing W3-1 “Stop Ahead” signs on both the north and south approaches of South 16th Street.
- Consider installing W11-2 “Pedestrian” signs with W16-9P “Ahead” signs on both the north and south approaches of South 16th Street.
- Consider installation of a painted crosswalk across 16th Street starting at the SW corner with Trouville Avenue to bring additional attention to the weekday school pedestrian crossings to take the school bus.
- If a painted crosswalk is installed, consider installing W11-2 “Pedestrian” with W16-7P “arrow” signs on both the east and west sides of the crosswalk.
- Continue strategic use of the Police Department’s speed radar trailer to help keep speeds close to the posted limit.

