



mesa·az Transportation Advisory Board Report

Date: July 21, 2020
To: Transportation Advisory Board
From: Stephan Bach, Senior Transportation Engineer
Subject: Speed Limit Change - Guadalupe Road, Signal Butte Road to east City limits, Council District 6

Purpose and Recommendation

Guadalupe Road east of Signal Butte Road is a fully improved, 88-foot wide arterial street with three travel lanes in each direction, a two-way left turn lane, and bike lanes. It is located within the Sunland Springs Village neighborhood and dead ends at Yellow Wood, approximately 4,600 feet east of Signal Butte Road.

As part of a traffic calming strategy, staff recommends decreasing the existing 45 mph speed limit on aforementioned segment of Guadalupe Road to 35 mph. See **Figure 1** for a location map.

Background

City staff evaluated Guadalupe Road east of Signal Butte Road at the request of a citizen who was concerned with speeding and the lack of safe pedestrian crossing locations. This roadway segment is located within a residential neighborhood and dead ends at Yellow Wood to the east. Traffic volumes are very low for this type of street with only 1,600 vehicles per day (2018 data). Guadalupe Road is not expected to connect to Meridian Road in the foreseeable future. The current speed limit is 45 mph, which is typical for arterial streets in the City of Mesa.

The Sunland Springs Village neighborhood is located east of Signal Butte Road on both the north and south side of Guadalupe Road. This retirement community has facilities (community centers, pools, pickle ball courts and a golf course) located on both sides of Guadalupe Road and residents cross this wide road to use these facilities. As a result, heavy pedestrian, bicycle and golf cart traffic is present. A video recording revealed that most crossings occurred at/near Springwood Boulevard and Guadalupe Road. 97 pedestrians, 95 bicyclists, and 193 golf carts were counted on December 6th, 2019. 41 pedestrians, 40 bicyclists, and 108 golf carts were crossing Guadalupe Road at/near Wattlewood the same day, which is half as much as on Springwood Boulevard.

A speed study from September 2018 revealed that Guadalupe Road between Signal Butte Road and Springwood does not have speeding issues based on the current speed limit of 45 mph. The average speed for east- and westbound traffic was recorded as 39.2 mph and 30.6 mph, respectively. The 85th percentile speeds for east- and westbound traffic on the same day was 46.5 and 39.6 mph.

Staff completed a 3-year crash analysis and no speed related crashes were reported during that timeframe. A bike crash occurred at Wattlewood in 2017, when a cyclist rode on wrong side of the street, and in 2018 a landscape vehicle was hit by a cyclist between Springwood and Wattlewood. No other crashes were reported.

Based on staff's observations it was determined that Guadalupe Road east of Signal Butte Road warrants a lower speed limit. Due to its surrounding land use, the associated pedestrian and bicycle activity, and the very low traffic volumes, it functions more like a collector than an arterial road.

In order to adjust the posted speed limit to that of a typical collector road, the speed limit on Guadalupe Road east of Signal Butte Road is recommended to be reduced to 35 mph. However, changing the speed limit alone is unlikely to have a significant impact on speeds. Roadway design and the surrounding environment play a significant role as drivers often base their speed according to the "feel" of the road. Therefore, in addition to the speed limit reduction, staff is also proposing to restripe Guadalupe Road east of Signal Butte Road to reduce the number of travel lanes from three to one per direction and to provide an all way stop at Springwood Boulevard. East-west traffic currently does not have to stop at this intersection and there are no marked crosswalks. In addition to installing an all way stop, the City will provide marked crosswalks on all four legs of the intersection. The main reason for choosing this intersection over Wattlewood is that this is where most crossings occur and where the community clubhouse is located. In addition, the destination/origin of the majority of those individuals crossing at Wattlewood is the clubhouse area at Springwood Boulevard and Signal Butte Road. Thus, the all way stop at Springwood Boulevard can serve most of the crossings. See **Figure 2** for the proposed configuration of the intersection.

At Wattlewood and Guadalupe Road, the distance for pedestrians to cross Guadalupe Road (i.e., the time they are exposed to vehicles) will be reduced significantly with the proposed striping changes. The elimination of travel lanes will also make it easier to negotiate a gap in traffic. See **Figure 3** for the proposed striping layout.

Currently, Guadalupe Road has a speed limit of 45 mph from the west City limits to the east City limits per Section 10-4-3 of the Mesa City Code. To reduce the 45-mph speed limit on Guadalupe Road east of Signal Butte Road to 35 mph, as discussed in this report, these boundaries will be modified within Section 10-4-3, and the 35-mph speed limit will be established by means of Ordinance and amendment of Section 10-4-5 of the Mesa

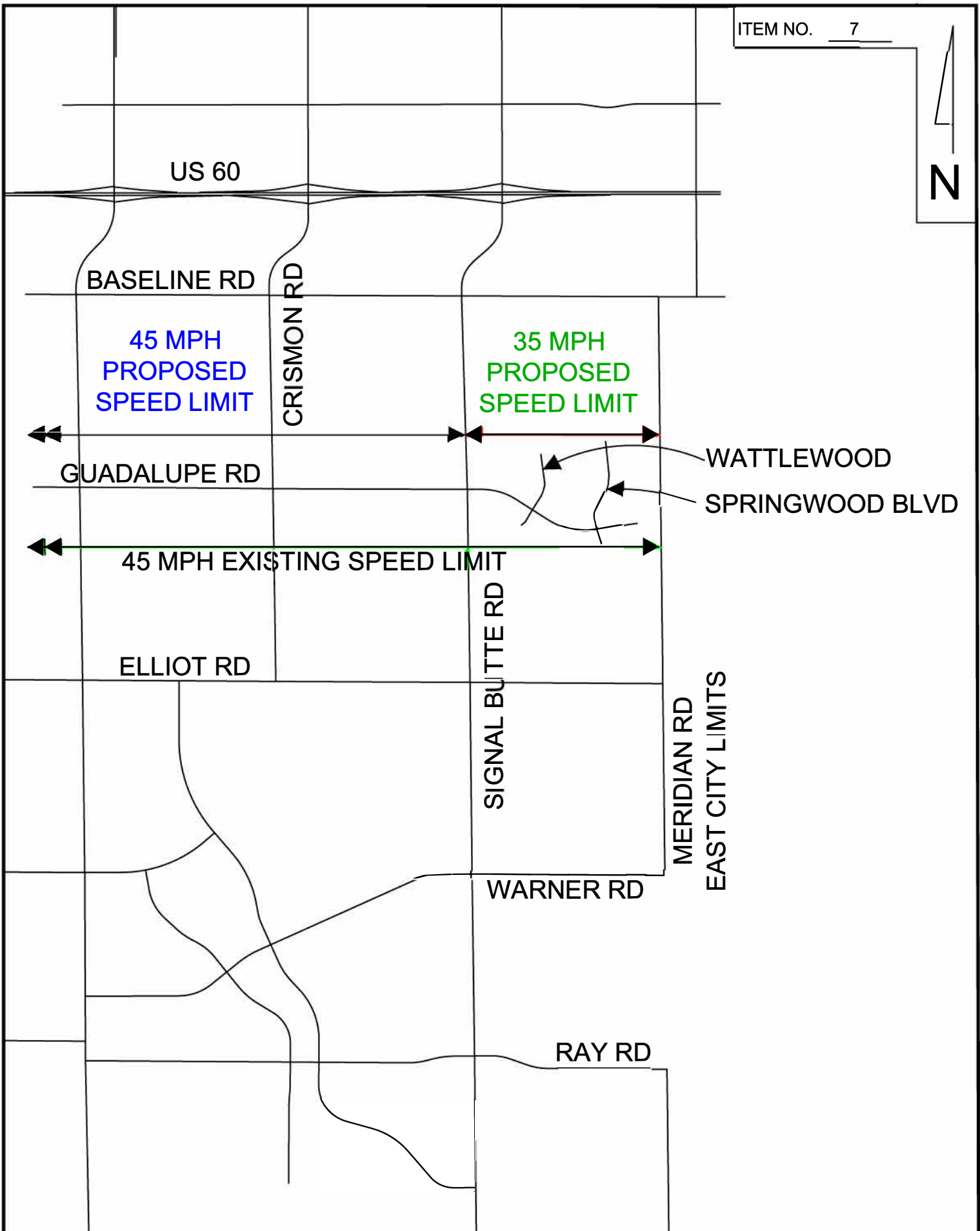
City Code.

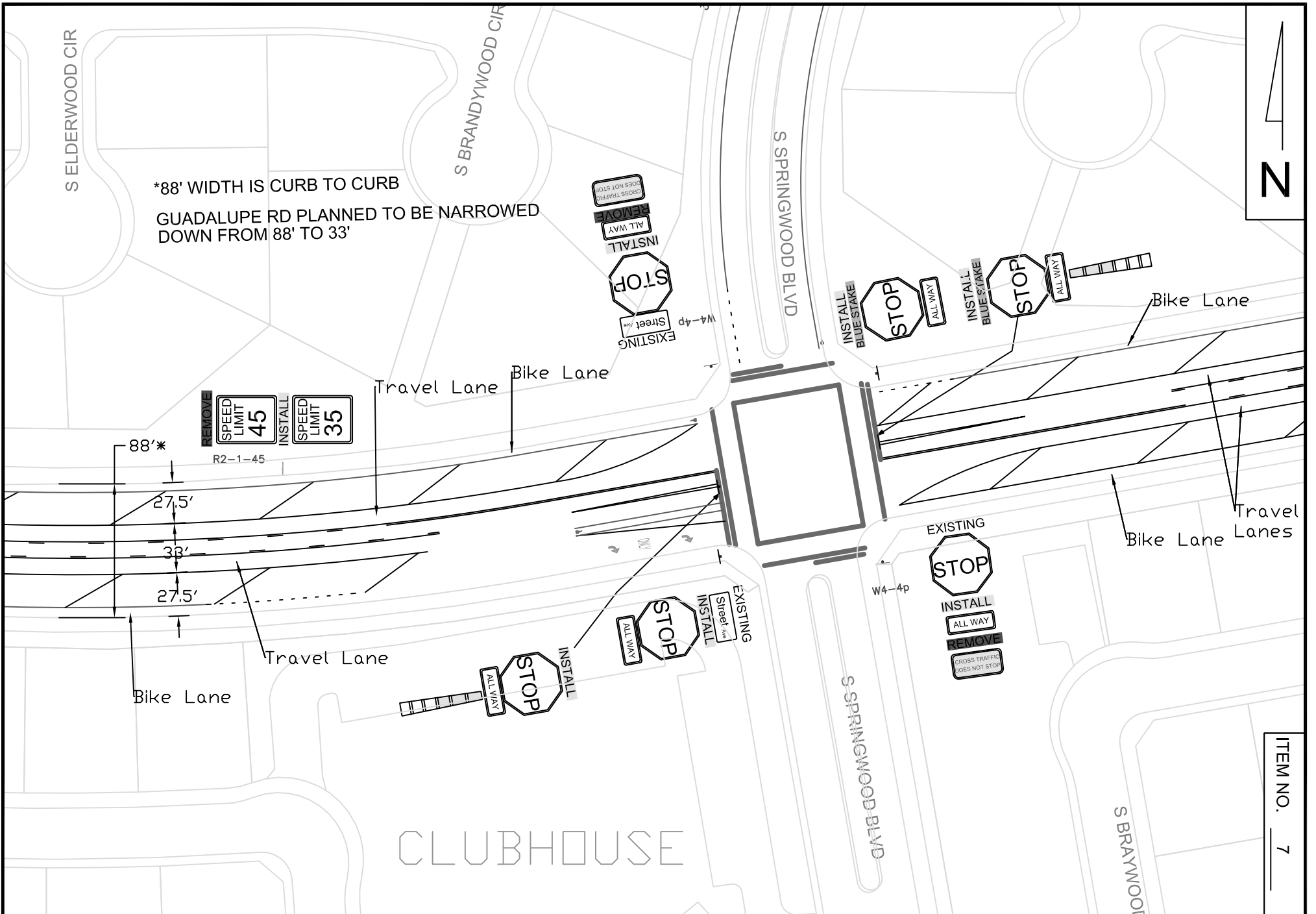
Alternatives

One alternative is to make no changes to the posted speed limit. However, considering the surrounding residential land use, low traffic volumes, and the need for pedestrian crossings, a speed limit of 35 mph is most appropriate and reasonable.

Fiscal Impact

The approximate cost for this project is \$4,000. The fiscal impact is not considered as a contingent factor for the implementation of the speed limit reduction.

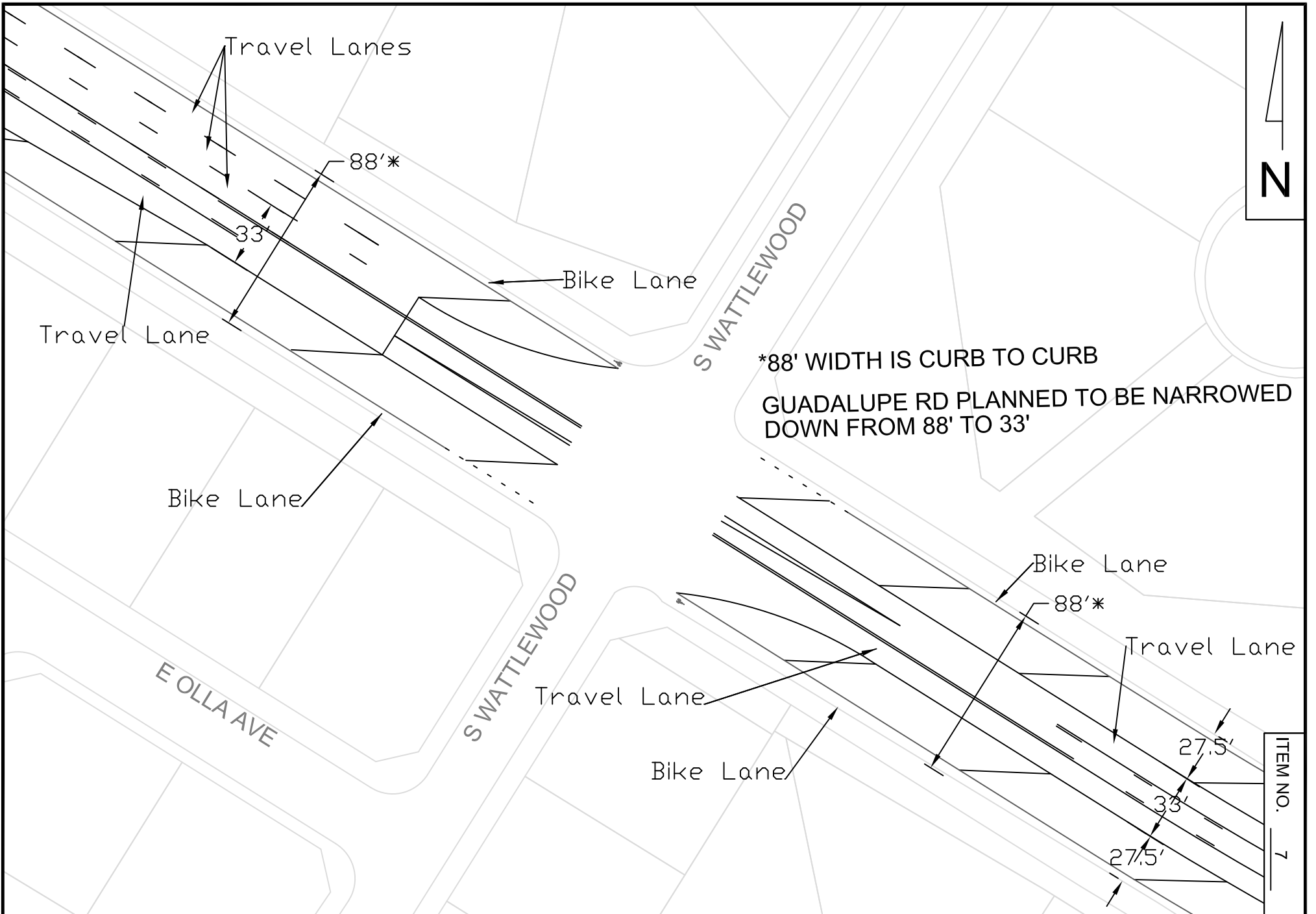




*88' WIDTH IS CURB TO CURB
 GUADALUPE RD PLANNED TO BE NARROWED
 DOWN FROM 88' TO 33'



ITEM NO. 7



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