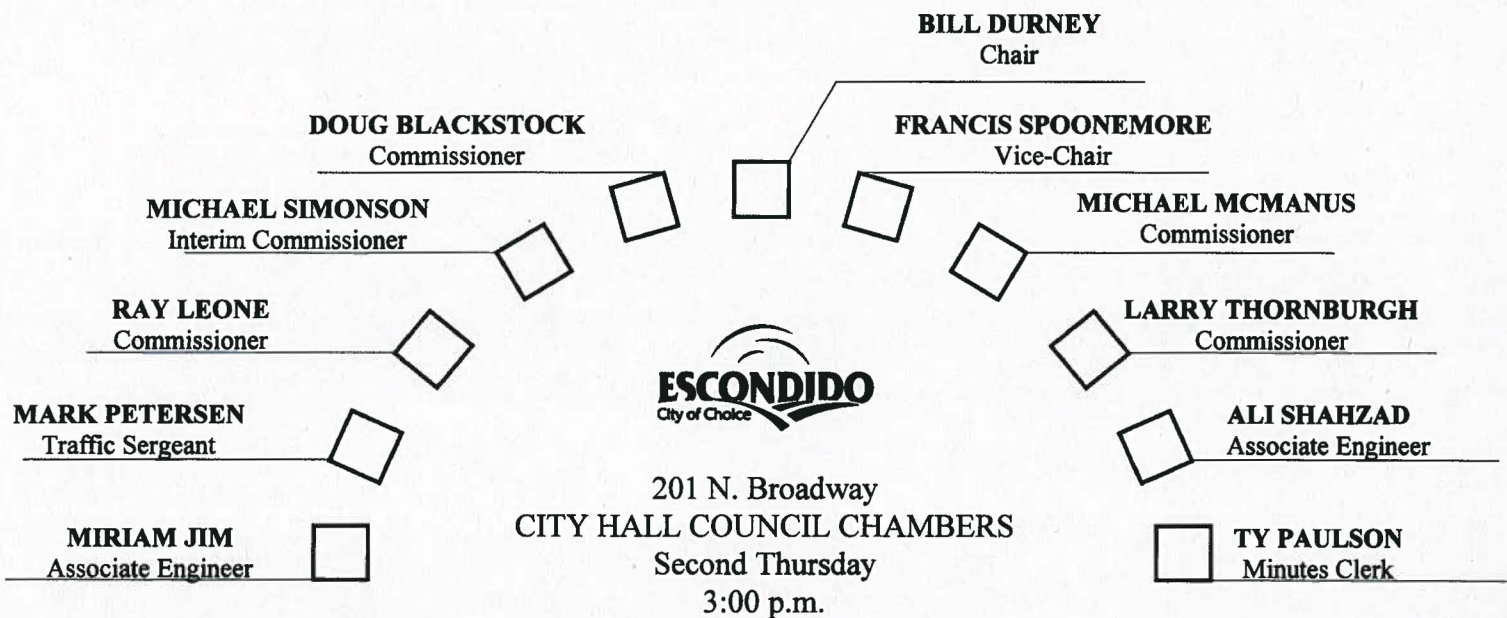


CITY OF ESCONDIDO

Transportation & Community Safety Commission



AGENDA

July 13th, 2017

Page | 1

- A. FLAG SALUTE
- B. ROLL CALL AND DETERMINATION OF QUORUM
- C. ORAL COMMUNICATIONS* (At this time, members of the public are encouraged to speak to the Commission concerning items not already on this agenda. A time limit of three [3] minutes per speaker and a total time allotment of fifteen [15] minutes will be observed.)

The Brown Act provides an opportunity for the members of the public to directly address the Commission on any item of interest to the public, before or during the Commission's consideration of the item. If you wish to speak regarding an agenda item, please fill out a speaker's slip and give it to the minute's clerk who will forward it to the Chairman.

If you wish to speak concerning an item not on the agenda, you may do so under "Oral Communications" which is listed on the agenda.

The City of Escondido recognizes its obligation to provide equal access to public meetings to those qualified individuals with disabilities. Please contact the Human Resources Department (839-4643) with any requests for reasonable accommodation, to include sign language interpreter, at least twenty-four (24) hours prior to the meeting.

D. APPROVAL OF MINUTES OF JANUARY 12th, 2017 MEETING

E. CONSENT ITEMS – Staff will provide Overview for single vote - No Items

F. NEW BUSINESS

1. Revised Crosswalk Policy for Mid-Block Crosswalks

Source: Staff
Recommendation: Receive and File report
Previous action: None.

2. Valley Parkway Signal Coordination Travel Times

Source: Staff
Recommendation: Receive and File report
Previous action: None.

3. Stop Signs – Rincon Avenue & N. Ash Street

Source: Staff
Recommendation: Approval
Previous action: None.

4. Speed Surveys – Various Citywide

Source: Staff
Recommendation: Approval
Previous action: On-going new surveys of expired segments.

G. OLD BUSINESS

1. An overview of various projects involving the City.

Source: Staff

Written or verbal reports may be presented on the following topics:

- a. Traffic Signals in Design: El Norte/Fig & East Valley Pkwy/Date – Design 100% complete, NEPA revalidation received from Caltrans. Construction

Authorization of funds and Modified E-76 approved – Out to Bid this fall. Felicita/Escondido Blvd LTP signal modification – Design in progress, awaiting ATP Fund Authorization.

- b. Traffic Signals – in Planchek: Hotel Traffic Signal on La Terraza Blvd. (2nd check). Centre City/Mission signal modification. El Norte/Bike Path crossing near bridge over flood control channel (Planchek in progress). Under Construction: North Ash/ Vista Ave., North Ash/Sheridan Avenue, El Norte/Vista Verde Way, Centre City/Washington signal modification, Emmanuel Faith Traffic Signal on Encino/17th Ave. (to be constructed) Construction Finished: Harmony Grove/Citracado Pkwy., County/City Signal on Boyle/Bear Valley Pkwy. (pending Maintenance Agreement).
- c. FY 15/16 TMPL Project Progress – Gamble St. Radar Signs, N. Broadway Radar Sign installation - All Complete.
- d. Centre City Pkwy ICM I-15 corridor and 9th Avenue corridor – Traffic signal timing synchronization implementation. All Complete – Caltrans making some adjustments to ramp signals.

H. SCHOOL AREA SAFETY

- a. Construction at Central Elementary – Temporary bus zone.
- b. Construction at Orange Glen Elementary – New crosswalk striping by school district
- c. TMPL Projects for 2017/18 schools zone crosswalks presented at October TCSC
- d. Future bond projects coordination.

I. COUNCIL ACTION* (A briefing on recent Council actions on Commission related items.)

- a. Bicycle Masterplan Amendment - Missing Link Presentation (April 2017).
- b. Ordinance 2017-04 amending Traffic Code Article 5, Section 142, of Chapter 28.

J. ORAL COMMUNICATIONS* (At this time, members of the public are encouraged to speak to the Commission.)

K. TRANSPORTATION COMMISSIONERS* (Commissioners may bring up questions or items for future discussion.)

L. ADJOURNMENT

In order for the Transportation Commission to take action or conclude discussion, an item must appear on the agenda which is posted 72 hours in advance of the meeting. Therefore, all items brought up under the categories marked with an asterisk () can have no action. Such items can be referred to staff or scheduled for a future agenda.

AVAILABILITY OF SUPPLEMENTAL MATERIALS AFTER AGENDA POSTING: Any supplemental writings or documents provided to the Commission regarding any item on this agenda will be made available for public inspection in the Engineering Office located at 201 N. Broadway during normal business hours, or in the Council Chambers while the meeting is in session.



**CITY OF ESCONDIDO
TRANSPORTATION and
COMMUNITY SAFETY COMMISSION**

Commission Report of: July 13th, 2017

Item No.: F1

Location: Citywide

Initiated By: Staff

Request: Approval of City of Escondido Updated Crosswalk Policy for Mid-Block Crosswalks

Background:

Chronology:

On July 9, 2015 Transportation and Community Safety Commission was presented with the City of San Diego policy which was approved in June of 2015 and a comparison of it with the City of Escondido Policy, Commission's approval was to proceed with the amendment of the COE Crosswalk Policy.

On October 8, 2015, Transportation and Community Safety Commission approved the "Basic Warrants" and "Points Warrants" Chapters of the new City of Escondido Crosswalk Policy. On January 14, 2016, Transportation and Community Safety Commission approved the new City of Escondido Crosswalk Policy that included Chapter 3 "Crosswalk Treatments".

On January 14, 2016, Transportation and Community Safety Commission approved the new City of Escondido Crosswalk Policy that included Chapter 3 "Crosswalk Treatments".

At the present July 13, 2017, Transportation and Community Safety Commission staff is presenting some changes to the New City of Escondido Crosswalk Policy approved on January 14, 2016. The changes are **highlighted** in the report for the commissioners.

Discussion & Purpose:

The purpose of the Updated Crosswalk Policy is to finalize City's Crosswalk Policy by revising the Basic Warrant and Treatment Chapters to provide more clarification of the policy. The proposed revisions are based on further evaluation of the requirements and better understanding of applicability of the treatment safety measures for City of Escondido's roadways and public safety needs.

The proposed revisions are:

- 1). **Basic Warrant Chapter:** Section 1.1 "Pedestrian Volume Warrant" has been revised to clarify the threshold of 10 more pedestrians applies during the peak pedestrian period. Section 1.5 has been revised to allow for providing lighting in case of inadequate lighting at the proposed crosswalk location.
- 2). **Treatment Chapter:** Crosswalk safety measure requirements to specify the Rectangular Rapid Flashing Beacon (RRFB) as a preferred treatment for crosswalks on low to mid-volume roadways. Measure D requiring Signal or HAWK warrant analysis and traffic calming measures has been added to mirror the City of San Diego Policy. The proposed revisions are reflected in the treatments table and measures.

1. Basic Warrants

All of the Basic Warrants must be met in order for an uncontrolled location to be considered for marked crosswalk.

1.1. Pedestrian Volume Warrant

Pedestrian Crossing Volume should be 10 pedestrian per hour or more during the peak pedestrian hour.

1.2. Approach Speed Warrant

The 85th percentile approach speed must be equal to or lower than 40 MPH, unless a HAWK or a pedestrian signal will be installed.

1.3. Nearest Controlled Crossing

The proposed location must be farther than 250 feet from the nearest controlled pedestrian crossing in City of Escondido downtown area and farther than 400 feet from the nearest controlled pedestrian crossing in other areas.

1.4. Visibility Warrant

The motorist must have an unrestricted view of all pedestrians equal or greater than the "Stopping Sight Distance" needed for the 85th percentile speed. Any other sight restrictive features will require special attention.

1.5. Illumination Warrant

The proposed location must have adequate existing lighting or adequate lighting shall be provided prior to the installation of the crosswalk.

1.6. Accessibility Warrant

The proposed location must have existing accessibility to disabled pedestrians or accessibility improvements shall be included as part of the project.

2. Points Warrants

Point warrants are the number of points a location gets along with the Basic Warrants to qualify for a marked crosswalk. A proposed location that meets all the Basic Warrants requires a minimum of 16 points on the Points Warrants to justify an uncontrolled crossing.

2.1. Pedestrian Volume Warrant

No. of Pedestrians (Peak Hour)	Points	Total Available Points
11-30	2	10
31-60	4	
61-90	6	
91-100	8	
Over 100	10	

All effort will be made to count the actual latent demand. However, when not possible to observe and count the latent crossing demand, the counted number of pedestrians will be increased by 30% in the following locations.

- Areas such as commercial areas and high density residential areas
- Where a pedestrian traffic generator exists within 600 feet of the proposed crosswalk
- Other locations with potential latent demand based on engineering judgement

2.2. General Condition Warrant

Condition	Points	Total Available Points
The nearest controlled pedestrian/bicycle crossing is greater than 600 feet from the proposed crosswalk	3	12
The proposed crosswalk will position pedestrians to be seen better by motorists (applicable to uncontrolled intersections only)	2	
An existing bus-stop is located within 100 feet of the proposed crosswalk	2	
The proposed crosswalk will establish a midblock crossing and channelize the flow where pedestrian crossing is spread over a long stretch of road	2	
Other safety related factors	3	

2.3. Gap Time Warrant

Average Number of Vehicular Gaps per Five-Minute Period	Points	Total Available Points
0-0.99	0	8
1-1.99	2	
2-2.99	4	
3-3.99	8	
4-4.99	4	
5-5.99	2	
6 or over	0	

3. Treatments

If a proposed crossing location meets the criteria set by both the Basic and Point warrants, the next step is to evaluate the most appropriate crossing treatment(s) to be installed with the marked crosswalk.

Using paragraphs 09 and 09a of section 3B.18 of the new 2014 CA-MUTCD as a guideline, and also considering City of San Diego proposed treatments for different cross sections, ADTs and speed limits, the following treatment thresholds are proposed to be added to the new City of Escondido Crosswalk Policy.

ADT Cross Section	<1500	1500 - 5000	5000-12000	>12000
Two-lane roads (without TWLTL)	Std.	Std. + RRFB**	Std. + RRFB ** + one from (A)	D
Two-lane roads (with TWLTL)	Std. one measure from (B)	For SL < 35 Std. + RRFB** For SL ≥ 35 Std. + RRFB** + one measure from (B)	Std. + RRFB** + one measure from (B)	D
Four Lanes or more	N/A	Std. + RRFB ** + one measure from (C)	For SL < 35 Std. + RRFB** + one measure from (C) For SL ≥ 35 Measure D	Signal or HAWK

* SL: Speed Limit of the roadway

** RRFB (Rectangular Rapid Flashing Beacons), or other approved flashing beacon.

Std.: Advanced yield lines with associated Yield Here to Pedestrians (R1-5, R1-5a) signs should be placed 20 to 50 feet in advance of the crosswalk, adequate visibility should be provided by parking prohibitions, pedestrian crossing (W11-2) warning signs with diagonal downward pointing arrow (W16-7p) plaques should be installed at the crosswalk, and a high-visibility crosswalk marking pattern should be used. All Signing and Striping shall comply with CA-MUTCD standards.

MEASURES:

(A)

1. Raised Crosswalk or other traffic calming treatment in accordance with C.O.E. TMPL Guidelines
2. Speed Radar Feedback Signs for both approaches

(B)

1. Raised Crosswalk
2. Speed Radar Feedback Signs for both approaches
3. Pedestrian refuge islands

(C)

1. Road Diet
- 2 Raised Crosswalk
3. Speed Radar Feedback Signs for both approaches
- 4 Pedestrian refuge islands
5. Road Diet

- (D) 1. A Traffic Signal is required if the CA MUTCD warrants are met and it is recommended by a traffic engineering study. Otherwise at least one of the following is required.
 2. HAWK Hybrid Beacon if the CA MUTCD warrants are met.
 3. Horizontal deflection traffic Calming treatment (**) with RRFBs if the City of Escondido's Traffic Calming Guidelines are met to include:

- a. Pedestrian refuge islands & Bulbouts
- b. Road Diet
- c. Roundabouts

(**) Horizontal deflection treatments include, but are not limited to: roundabouts, pedestrian refuge islands, and pedestrian bulb-outs.

FOR REFERENCE ONLY: from previously approved policy in January 2016.

Using paragraphs 09 and 09a of section 3B.18 of the new 2014 CA-MUTCD as a guideline, and also considering City of San Diego proposed treatments for different cross sections, ADTs and speed limits, the following treatment thresholds are proposed to be added to the new City of Escondido Crosswalk Policy.

ADT Cross Section	<1500	1500 - 5000	5000-12000	>12000
Two-lane roads (without TWLTL)	Std.	Std. + one measure from (A)	For SL* < 35 Std + two measures from (A) ----- For SL ≥ 35 Signal or HAWK	Signal or HAWK
Two-lane roads (with TWLTL)	Std. + one measure from (B)	For SL < 35 Std. + one measures from (B) ----- For SL ≥ 35 Signal or HAWK	For SL < 35 Std + two measures from (B) ----- For SL ≥ 35 Signal or HAWK	Signal or HAWK
Four Lanes or more	Std. + one measure from (C)	For SL < 35 Std. + two measures from (C) ----- For SL ≥ 35 Signal or HAWK	Signal or HAWK	Signal or HAWK

* SL: Speed Limit of the roadway

Std.:

Advanced yield lines with associated Yield Here to Pedestrians (R1-5, R1-5a) signs should be placed 20 to 50 feet in advance of the crosswalk, adequate visibility should be provided by parking prohibitions, pedestrian crossing (W11-2) warning signs with diagonal downward pointing arrow (W16-7p) plaques should be installed at the crosswalk, and a high-visibility crosswalk marking pattern should be used. Details for the high-visibility crosswalk marking patterns will be presented to TCSC in April.

Measures:

(A)

1. Rectangular Rapid Flashing Beacon (RRFB) and Flashing Beacon at School Zones
2. Raised Crosswalk
3. Speed Radar Feedback Signs for both approaches

(B)

1. Rectangular Rapid Flashing Beacon (RRFB) and Flashing Beacon at School Zones
2. Raised Crosswalk
3. Speed Radar Feedback Signs for both approaches
4. Pedestrian refuge islands

(C)

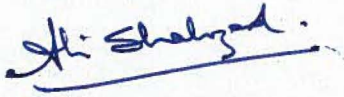
1. Rectangular Rapid Flashing Beacon (RRFB) and Flashing Beacon at School Zones
2. Raised Crosswalk
3. Speed Radar Feedback Signs for both approaches
4. Pedestrian refuge islands
5. Road Diet

Recommendation: Approval of the updated City of Escondido Crosswalk Policy.

Necessary Council Action: Council Approval

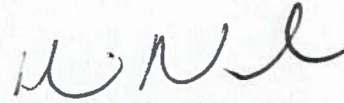
Respectfully submitted,

Prepared by:



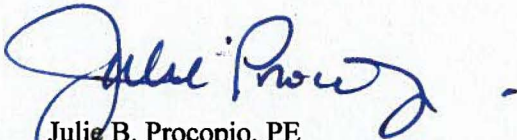
Ali Shahzad, PE
Associate Engineer/Traffic Division

Reviewed by:



Homi Namdari, PE
Assistant City Engineer

Approved by:



Julie B. Procopio, PE
Director of Engineering Services/City Engineer



CITY OF ESCONDIDO

TRANSPORTATION and COMMUNITY SAFETY COMMISSION

Commission Report of: July 13th, 2017

Item No.: F2

Location: West Valley Parkway from Juniper Street to Centre City Parkway

Initiated By: City Staff

Subject: Valley Parkway Corridor Traffic Signal Coordination

Background:

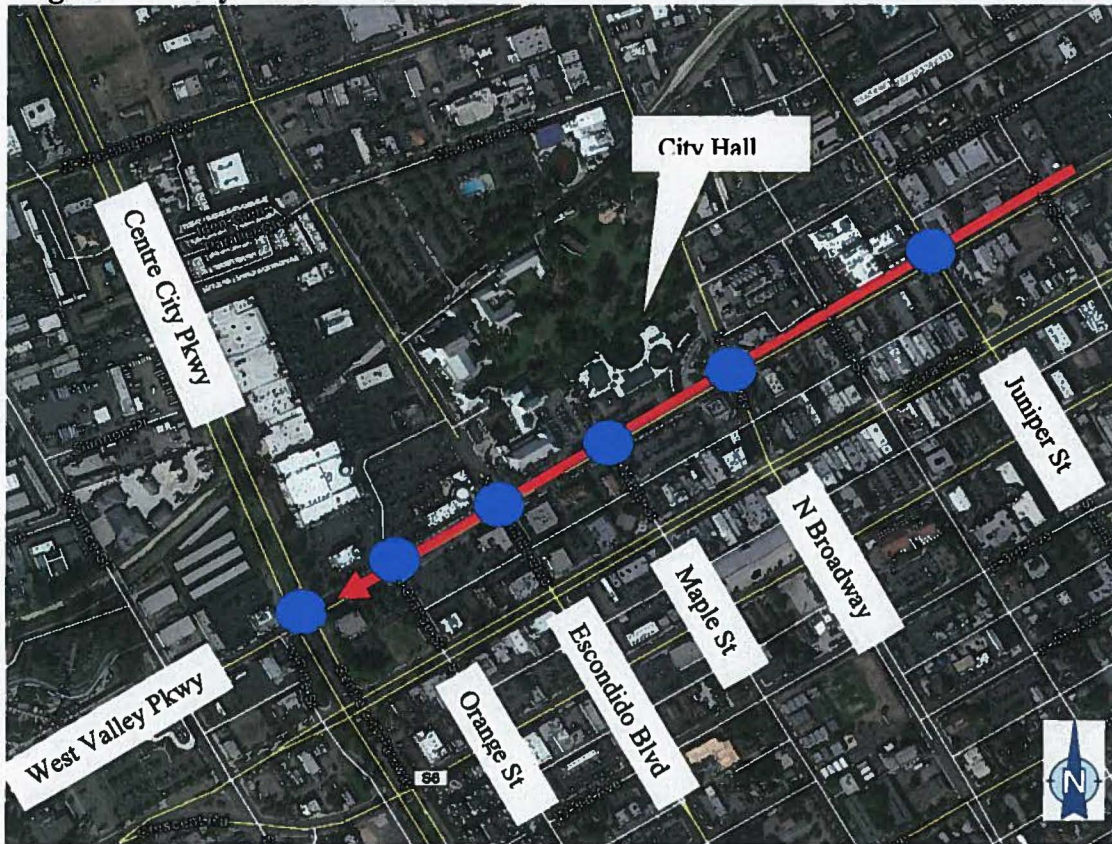
Traffic signal coordination was implemented along the segment of Valley Parkway, between Juniper Street and Centre City Parkway, in November 2016. This traffic signal timing coordination effort included assessments of intersection configuration, peak hour traffic conditions (AM, Midday, and PM), existing signal timing and phasing, as well as pedestrian and bicycle timing requirements per 2014 CA MUTCD.

Valley Parkway is a one-way street in the westbound direction and is a major thoroughfare connecting the eastern part of town to I-15 freeway and the commercial area around there. The six (6) signals in the Valley Parkway corridor are listed below and shown in Figure 1:

1. Juniper Street
2. N. Broadway
3. Maple Street
4. Escondido Boulevard
5. Orange Street/Signature Pavilion
6. Centre City Parkway

Turning movement counts were collected at the study intersections in May 2016 for the three peak periods. A model was developed in SYNCHRO (version 8.0) to prepare optimized timing plans for the study intersections. The optimized timing plans were implemented and fine-tuned in the field and minor modifications were incorporated.

Figure 1: Study Intersections



Discussion:

The goals of this signal timing coordination project were 1) to provide traffic progression along the Valley Parkway corridor in peak periods and 2) to update the signal timings to meet the CA MUTCD requirements.

The six study intersections were running in two separate groups of cycle length before the project. Based on the evaluation of the existing traffic volumes and timing requirements, new cycle lengths were recommended to allow for signal coordination through these intersections. Cycle lengths at Centre City Parkway were kept unchanged in order to maintain signal coordination along the Centre City Parkway corridor. Shorter cycle lengths were recommended at some intersections in order to reduce side street delay while still providing traffic progression on West Valley Parkway. The before and after cycle lengths at the study intersections are shown on Table 1.

Some base signal timing values were updated to meet the latest CA MUTCD requirements. These updates included: 1) increasing minimum green times for bike clearance; 2) updating yellow times per latest requirements, and 3) revising pedestrian crossing times based on the 3.5 feet/second pedestrian walk speed (previous standard was 4 feet/second).

Table 1: Before and After Cycle Lengths

Intersection	AM		Midday		PM	
	Before (s)	After (s)	Before (s)	After (s)	Before (s)	After (s)
Juniper St.	85	85	90	100	105	100
N Broadway	85	85	90	100	105	100
Maple St.	85	85	90	100	105	100
Escondido Blvd.	120	85	100	100	125	100
Orange St/Signature Pavilion	120	85	100	100	125	100
Centre City Pkwy	120	120	100	100	125	125

The before and after average travel time for the three study time periods are summarized in Table 2. The results indicated an average travel time saving of 12% to 28% during each of the peak periods along the study corridor with the implemented signal coordination plans. It is estimated that the new timing plans resulted in total travel time saving of approximately 75 hours per day along the corridor.

Table 2: Before and After Travel Time Comparisons

Comparison	AM			Midday			PM		
	Before	After	Change	Before	After	Change	Before	After	Change
Average Travel Time (s/veh)	152	128	- 24 (16%)	170	122	- 48 (28%)	187	165	- 22 (12%)
Traffic Volumes (veh. in 2-hr peak period)	2,800			2,350			2,350		

Conclusions:

The project has successfully accomplished the following:

1. Reduced travel time during the peaks by providing traffic progression along the study corridor
2. Updated signal timings to meet the latest CA MUTCD requirements
3. Reduced delay for side street traffic by shortening peak period cycle lengths at some of the study intersections

Necessary Council Action: Note and File report.

Prepared by:

Miriam Jim, P.E., T.E.
 Associate Engineer/Traffic Division

Reviewed by:

Homi Namdari, P.E.
 Assistant City Engineer

Approved by:

Julie Procopio, P.E.
 Director of Engineering Services/City Engineer



CITY OF ESCONDIDO
TRANSPORTATION and
COMMUNITY SAFETY COMMISSION

Commission Report of: July 13th, 2017

Item No.: F3

Location: Intersection of Rincon Avenue and Ash Street.

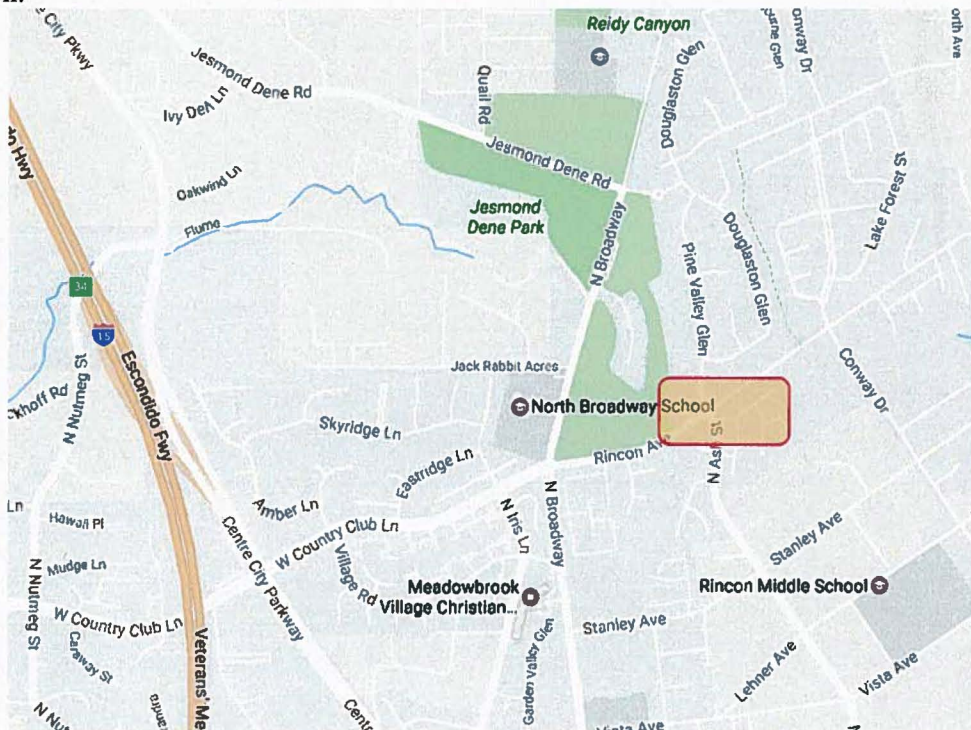
Initiated By: Ms. Madison Steinberg, Resident of Escondido, Brookside Community

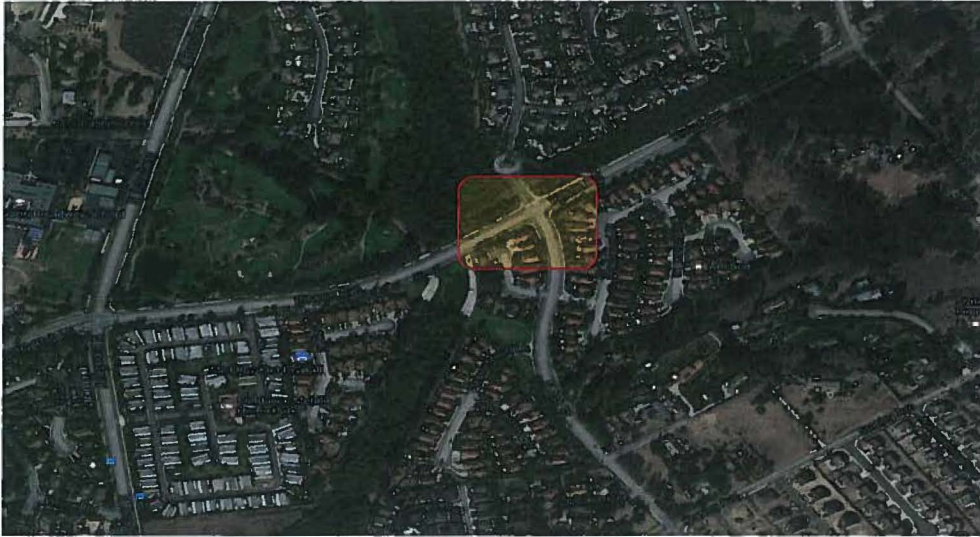
Request: Approval of All-Way Stop Control (AWSC) at the intersection of Rincon Avenue and N. Ash Street/Pine Valley Glen.

Background:

At the request of Ms. Madison Steinberg, a resident of Brookside Community, traffic engineering staff evaluated the intersection of N. Ash Street and Rincon Avenue for all-way stop control.

Location:





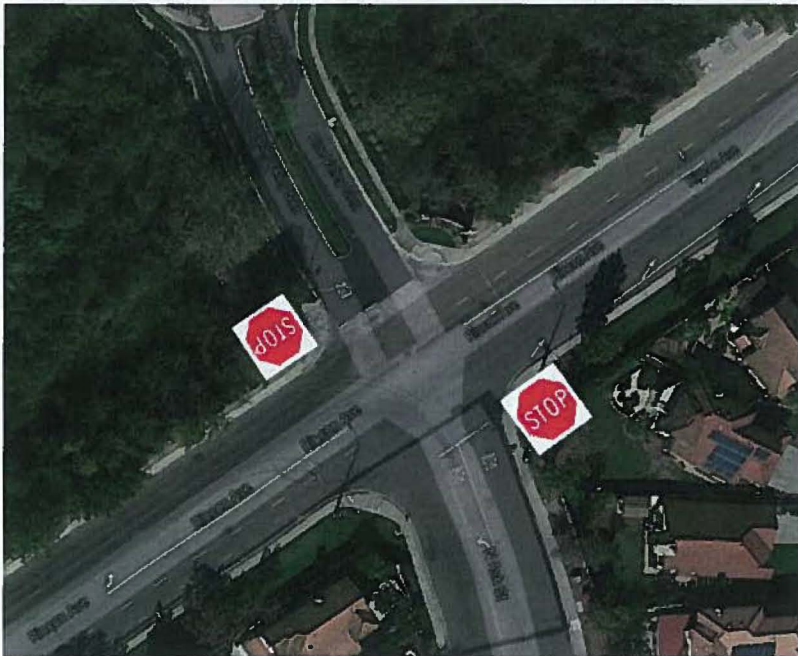
Picture: Location.

Existing conditions:

Rincon Avenue is classified as a Collector with a posted speed of 45 MPH. The street consists of four lanes with a middle turn lane west of Ash Street. The number of lanes is reduced to two east of Ash Street. On-street parking is not allowed.

Ash Street is a two-lane undivided Local Collector with Two Way Left Turn (TWLT)-lane in the middle. The posted speed limit is 35 MPH. Currently N/B Ash is Stop-controlled at intersection.

Pine Valley Glen is one of the two main entrances to the gated community of Brookside.



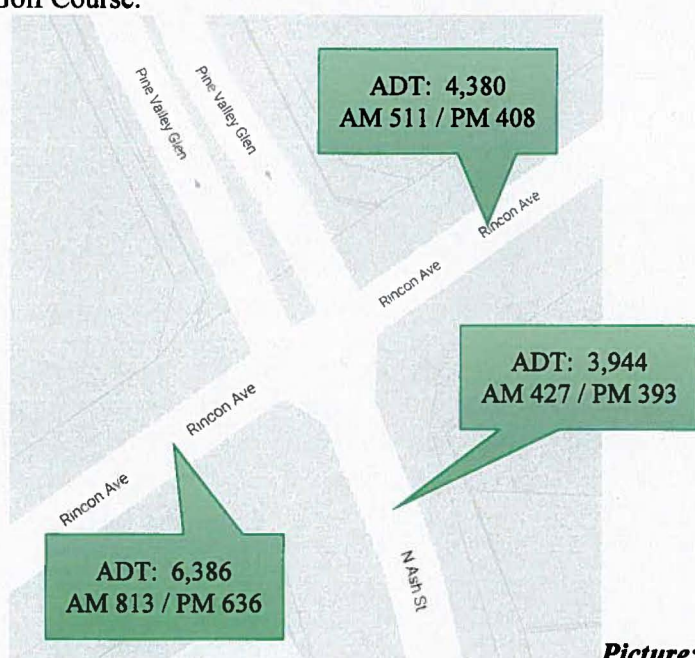
Picture: Existing Stop-signs.

The latest traffic counts indicated that the traffic volume on Rincon Avenue is 6,380 vehicles per day between Ash Street and N. Broadway and 4,320 vehicles per day between Ash Street and Conway Drive. Traffic volume on Ash Street (South of Rincon) is 3,940 vehicles per day. All Segments operate at Level of Service A.

Rincon Avenue's ADT's break down to a peak hour traffic volume that varies from 511 (from Ash to Conway) to 813 (from B 'way to Ash) vehicles/hour during AM, and 408 (from Ash to Conway) to 636 (from B 'way to Ash) vehicles/hour during PM peak hours.

N. Ash Street's peak hour traffic volume from the ADT's count report is 427 vehicles/hour during AM and 393 vehicles/hour during PM peak.

This intersection is in close proximity to North Broadway School, Rincon Middle School and Reidy Creek Golf Course.



Picture: Average Daily and Peak Hour Traffic (2015).

Warrant analysis:

Per CA-MUTCD 2014 (Revision 2, effective April 7th, 2017) section 2B.06 and 2B.07 and for the purpose of warrant analysis, intersection volumes, crash history and speed studies were reviewed.

Traffic volumes (ADT and hourly) are based on counts conducted in February 19th, 2015.

It was determined that Criterion C of Section 2B.07 of the California Manual on Uniform Traffic Control Devices (CA MUTCD) warrants multiway stop applies.

"The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

Section 2B.07 Multi-Way Stop Applications per CA-MUTCD

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 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.

Multi-Way Stop Warrant Analysis:

B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Crash records were collected for the intersection and each accident was reviewed to determine whether it was related to the intersection control and if it was susceptible to correction by adding Stop-Signs to eastbound and westbound Rincon Avenue. There were 3 collisions in 2013 (All Violation of Right of Way) and 2 collisions (one collision was violation of right of way) in 2016. – **Warrant Not Met.**

C1. Minimum volumes: per Traffic Survey, dated 05/23/2012 the 85th-percentile approach speed of the major-street traffic was 47 MPH and thus exceeds 40 mph. Therefore the minimum vehicular volume warrants are 70 percent of the values provided in Items C1 and C2:

- The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 210 vehicles per hour (70% of 300) for any 8 hours of an average day. **Condition is Met.**

C.2 The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 140 units per hour (70% of 200) for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 21 seconds per vehicle during the highest hour. – **Condition is Met.**

Existing delays to minor-street vehicular traffic (Ash Street) are **23.8 seconds** per vehicle during AM and 16.4 seconds during PM hours from Synchro Report - **This delay meets and exceeds the 21 seconds per vehicle limit** (70% of 30 second delay) that warrants the Stop-sign at this location.

C.3 is a condition that is in support of C1 & C2. – **Condition is Met - As posted speed is 45 MPH.**

Minimum traffic volumes are met for 8 hours.

Time	Rincon (Broadway to Ash) Major approach	Rincon (Ash to Conway) Major approach	Ash (Stanley to Rincon) Minor approach
07:00 AM – 08:00 AM	808	511	415
08:00 AM – 09:00 AM	454	236	271
12:00 PM - 1:00 PM	287	190	198
1:00 PM - 2:00 PM	422	346	248
2:00 PM - 3:00 PM	403	316	233
3:00 PM - 4:00 PM	435	296	315
4:00 PM - 5:00 PM	439	325	368
5:00 PM - 6:00 PM	636	343	372
6:00 PM - 7:00 PM	432	330	274
7:00 PM - 8:00 PM	283	200	156
Min. Volume Warrants	8 hr. exceed 210/hr.	8 hr. exceed 210/hr.	8 hr. exceed 140/hr.

Table: Traffic volumes for major and minor street approaches (02/2015). Volume exceeds minimums for 8 hours per day.

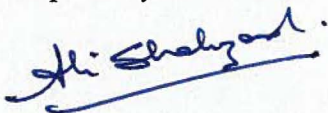
Recommendation:

Approve staff recommendation to install Stop-Signs (R1-1) on Eastbound and Westbound Rincon Avenue to create an All-way Stop controlled intersection, and install ALL WAY Plaques (R1-3P) to all 4 approaches.

Necessary Council Action: Approve a resolution to amend the schedule of stop signs to include two new stop signs on Rincon Avenue to provide for an all-way stop control at the intersection of N. Ash Street and Rincon Avenue.

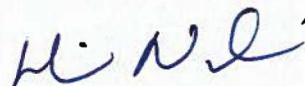
Respectfully submitted,

Prepared by:



Ali M. Shahzad, PE (Traffic)
 Associate Engineer/Traffic Division

Reviewed by:



Homi Namdari, PE (Civil)
 Assistant City Engineer

Approved by:



Julie B. Procopio, PE (Civil)
 Director of Engineering Services/City Engineer



CITY OF ESCONDIDO
TRANSPORTATION and
COMMUNITY SAFETY COMMISSION

Commission Report of: July 13th, 2017

Item No.: F4

Location: Various locations Citywide

Initiated By: City Staff

Request: Recommend approval to the City Council of updated Engineering & Traffic Surveys (E&TS) for posted speeds on various street segments Citywide.

Background & Survey Methodology:

To satisfy the requirements of Section 40802(b) of the California Vehicle Code (CVC), Engineering and Traffic Surveys are required by the State of California to establish speed limits and to enforce those limits using radar or other speed measuring devices. These surveys must be updated periodically (every 5, 7 or 10 years, depending upon specific criteria) to ensure the speed limits reflect current conditions as dictated by the 2016 California Vehicle Code (CVC). The surveys must be conducted in accordance with applicable provisions of Section 627 "Engineering and Traffic Survey" of the California Vehicle Code (CVC), following procedures outlined in the California Manual on Uniform Traffic Control Devices (CA-MUTCD) dated November 7, 2014.

A brief description of the procedure is presented below:

1. Measurement of Actual Prevailing Speeds

The actual speed of 100 vehicles on each street segment was measured using a calibrated radar meter. Both directions of travel were surveyed. From this data, the prevailing or 85th percentile speed (speed at or below which 85 percent of the vehicles sampled were traveling), ten miles per hour pace speed (increment of ten miles per hour containing the greatest number of measurements) and percent of vehicles in the pace were determined.

2. Accident Records

From the accident reports, the number of accidents for each segment was used to calculate the accident rate, which is defined as the number of accidents per million vehicle miles (acc/mvm) of travel on that segment. The accident rate for each segment was then compared to the most recent statewide average for similar type roads. This information is shown on the survey summary sheets.

3. Traffic and Roadside Conditions

Each route was driven and notation made of its features, especially those not readily apparent to reasonable drivers, as well as those that might be combined with other factors to justify downward or upward speed zoning. These features are listed in the survey summary sheets for each segment.

4. Residential Density

A comprehensive review of the residential density was not done, but information regarding the adjacent land use to the roadway segments was noted and included in the survey summary sheets.

5. Pedestrian and Bicyclist Safety

The accident records were used to evaluate the pedestrian and bicyclist safety aspects of the roadway segments.

6. School Zones

Proximity to schools was taken into account to evaluate the speeds through the roadway segments.

The standard used followed procedures outlined in the California Manual on Uniform Traffic Control Devices (CA-MUTCD) Section 2B.13, Nov. 07, 2014 Edition. Rev 2 April 07, 2017).

Standard:

When a speed limit is to be posted, it shall be established at the nearest 5 mph increment of the 85th-percentile speed of free-flowing traffic, except as shown in the two Options below.

Option:

1. The posted speed may be reduced by 5 mph from the nearest 5 mph increment of the 85th-percentile speed, in compliance with CVC Sections 627 and 22358.5. See Standard below for documentation requirements.

2. For cases in which the nearest 5 mph increment of the 85th-percentile speed would require a rounding up, then the speed limit may be rounded down to the nearest 5 mph increment below the 85th percentile speed, if no further reduction is used. Refer to CVC Section 21400(b).

Discussion & Purpose:

Per California Vehicle Code Section 22354, in order for a posted speed limit to be legally enforceable by the Police Department radar detection, it must be all of the following:

- 1) Between 25 mph and 65 mph,
- 2) Supported by an engineering speed survey, and
- 3) Ratified by City Council by resolution or ordinance.

The guidelines for preparing an engineering speed survey are found within the California Manual on Uniform Traffic Control Devices (CA-MUTCD) 2014 edition, a document published by the Federal Highway Administration and modified by CALTRANS for use in California. The 85th percentile speed (the speed at which 85% of drivers drive at or below) is often referred to as the critical speed; it is the primary speed that determines what drivers believe to be safe and reasonable. When determining speed limits, the California MUTCD gives guidance that states, *"The speed limit should be established at the nearest 5 mph increment of the 85th-percentile speed of free-flowing traffic."*

Additional guidance from the MUTCD California states, *"The establishment of a speed limit of more than 5 mph below the 85th percentile speed should be done with great care as studies have shown that establishing a speed limit at less than the 85th percentile generally results in an increase in collision rates; in addition, this may make violators of a disproportionate number of reasonable majority of drivers."*

Although conditions on the roadway such as width, curvature, surface conditions and any other readily apparent features do not provide a basis for downward speed zoning, the CA-MUTCD states that local authorities may consider residential density, as well as pedestrian and bicycle safety.

Recommendation:

As part of the City of Escondido's speed survey program, staff has performed speed surveys at **10 segment** locations, with data being collected for each segment.

Based on the above guidelines, all of the surveyed segments were evaluated and speed limits recommended. The overview of the Speed Surveys is presented in Table 1; the last column shows the recommended speed limits on all study segments.

For speed surveys 2, 5, 6, 8 and 9, the recommended speed limit is set based on the 85th-percentile speed of the new speed survey.

For speed survey 1, 3, 4, 7 and 10 the recommended speed limit reflects a reduction of 5mph from the 85th-percentile speed based on **Option 2** in the MUTCD standard, as delineated above. In this case, then, the posted speed limit will not change.

Table 1 - Overview of Speed Surveys

Segment No.	Street Name	Segment		Previous Speed Survey	Posted Speed Limit (MPH)	Classification	85 th Percentile (MPH)	CA-MUTCD Recommended Speed Limit (MPH)	Speed Limit to be posted, per Traffic Engineer
		From	To			Design Speed			
1	S Andreasen Dr	Auto Park Way	South End/Citracado	11/30/10	35	C 40	39	40	35
2	Andreasen Dr	Mission	Auto Park Way	11/30/10	35	C 40	37	35	35
3	Ash	El Norte	Lincoln	12/08/10	35	C 40	42	40	35(25WCAP)
4	Ash	Lincoln	Mission	12/08/10	35 25 (WCAP)	M 50	39	40	35(25WCAP)
5	Ash	Mission	Washington	12/08/10	35	M 50	37	35	35(25WCAP)
6	Citracado	Auto Park Way	Andreasen	05/11/10	40	M 50	41	40	40
7	Valley Parkway	El Norte Pkwy	Citrus Ave	10/28/10	45 25 (WCAP)	P 50	50	50	45(25WCAP)
8	Valley Parkway	Midway	Rose	06/22/10	35 25 (WCAP)	M 50	37	35	35(25WCAP)
9	Valley Parkway	Harding	Ash (SR78)	06/22/10	35	M 50	36	35	35
10	5th Ave	Juniper	Date	06/22/10	25	C Design speed 25, grade separation	31	30	25

* Indicates new established speed survey which requires City Council approval.

** Indicates round down the speed limit to the lower five miles per hour increment, per CVC 21400 (b), or higher than average collision rate.

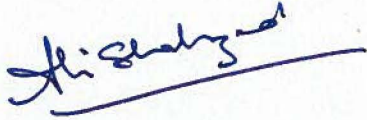
↓ Indicates speed going down.

↑ Indicates speed going up.

Necessary Council Action: None as all are re-certifications and existing speed limits remain.

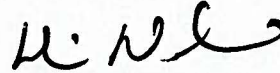
Respectfully submitted,

Prepared by:



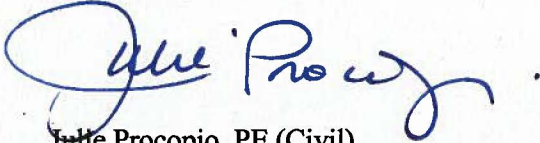
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