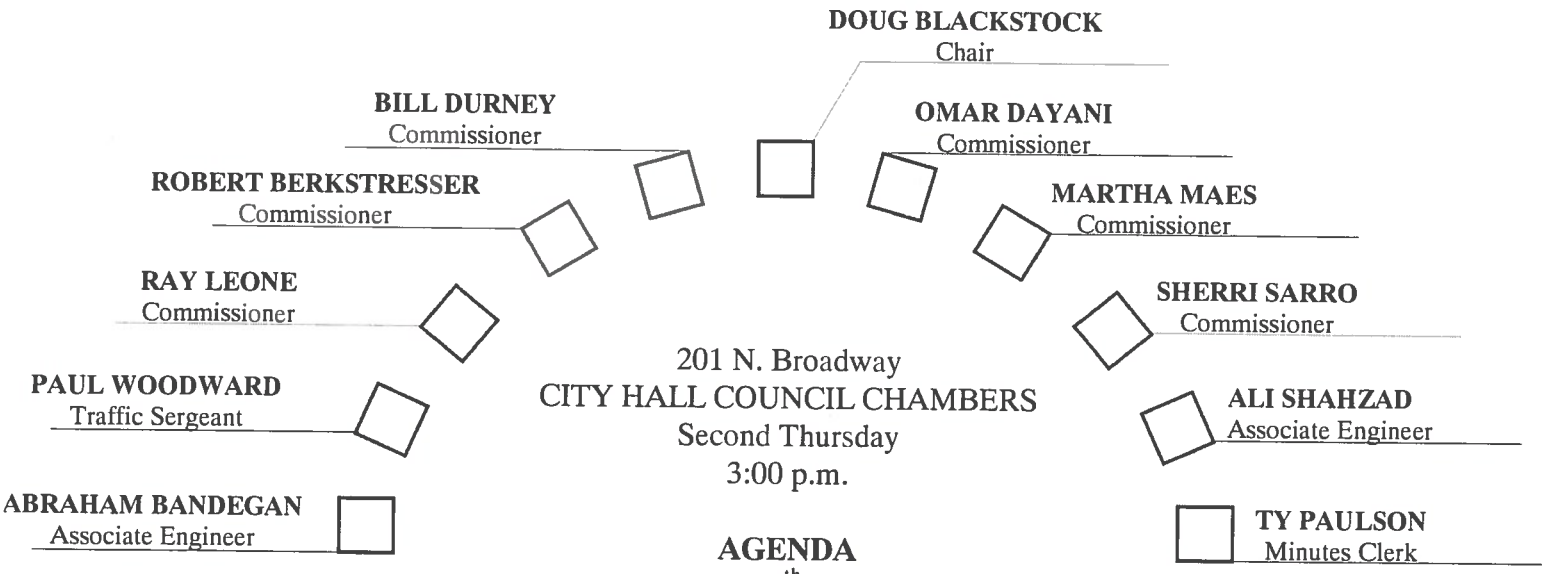
CITY OF ESCONDIDO

Transportation & Community Safety Commission



201 N. Broadway
CITY HALL COUNCIL CHAMBERS
Second Thursday
3:00 p.m.

AGENDA
July 10th, 2014

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 APRIL 10, 2014 MEETING

E. CONSENT ITEMS

1. Updated Striping Plan with bike buffers and additional eastbound lane on 9th Avenue from La Terraza Blvd. to Redwood Street for pavement maintenance activity.

   Source: Staff

   Recommendation: Approval

   Previous action: None

F. NEW BUSINESS

1. School Zone Safety Projects.

   Source: Bike Walk Escondido, COMPACT, and Staff

   Recommendation: Approval

   Previous action: None

2. Chestnut Street Traffic Calming Project.

   Source: Residents and Staff

   Recommendation: Approval

   Previous action: None

3. Eucalyptus Avenue Traffic Calming Project.

   Source: Richard Conwell, Staff

   Recommendation: Approve

   Previous action: Installation of Temporary Speed Radar Signs & Occasional Enforcement

4. Crosswalks on East Grand Avenue near Palomar Hospital Senior Citizen Signage, additional signage and striping, and All-Way Stop at E. Grand Ave. and Grape St.

   Source: Angela Hill & Staff

   Recommendation: Approve

Previous action: Installation of Crosswalk per CA-MUTCD standards, Street Light, ADA Ramps. Discussion on LED Rectangular Rapid Flashing Beacons.

5. Speed Surveys – Approve new batch of speed surveys, including changes to posted limits.

   Source: Staff

   Recommendation: Approval

   Previous action: None

   Recommendation: Approve

G. OLD BUSINESS

1. Project Status Update -- An overview of various projects involving the City.

   Source: Staff

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

a. MTS Rapid Bus deployment - San Diego Association of Governments (SANDAG) and the Metropolitan Transit System (MTS) launched a new Bus Rapid Transit service called "Rapid" along the I-15 corridor.

   Recommendation: Receive and file reports.

H. SCHOOL AREA SAFETY

1. Pedestrian Safety – Escondido Union School District - Nine (9) walk audits that were conducted by the school district.

   Source: Kimberly Israel, Project Director (EUSD Care Youth Project)

   Recommendation: None (informational).

I. ANY OTHER BUSINESS

1. Future Agenda Items -- A briefing of future agenda items proposed to be presented to the Transportation Commission.

   Source: Staff

   Recommendation: None (informational)

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

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

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

M. 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

MINUTES OF THE REGULAR MEETING OF THE TRANSPORTATION AND COMMUNITY SAFETY COMMISSION

April 10, 2014

The regular meeting of the Escondido Transportation and Community Safety Commission was called to order at 3:06 p.m., Thursday, by Chairman Blackstock, in the City Council Chambers, 201 North Broadway, Escondido, California.

Commissioners present: Chair Blackstock, Commissioner Leone, Commissioner Berkstresser, Vice-chairman Durney Commissioner Dayani, and Commissioner Sarro.

Commissioners absent: Commissioner Maes.

Staff present: Ali Shahzad, Associate Engineer; Beth Kassebaum, Department Specialist; Julie Procopio, Assistant Director of Public Works; Abraham Bandegan, Associate Engineer; Sergeant Nelson, Escondido Police Department; and Ty Paulson, Minutes Clerk.

ORAL COMMUNICATIONS:

MINUTES:

Moved by Commissioner Durney, seconded by Commissioner Berkstresser, to approve the minutes of the January 9, 2014, meeting. Motion carried unanimously.

CONSENT ITEMS:

1. Hospital Signage on Citracado West, East Valley Parkway south of Citracado Parkway.

Abraham Bandegan, Associate Engineer, referenced the staff report and noted staff recommended the Commission approve the sign installs for Palomar Hospital, which included way-finding signage along Valley Parkway, Citracado and Auto Parkway to North Citracado Parkway.

ACTION:

Moved by Commissioner Berkstresser, seconded by Commissioner Durney, to approve Consent Item 1. Motion carried unanimously.

NEW BUSINESS:

1. Traffic Management Toolbox

Abraham Bandegan, Associate Engineer, referenced the staff report and noted staff recommended the Commission review and approve the City of Escondido Toolbox.

ACTION:

Moved by Commissioner Dayani, seconded by Chairman Blackstock, to approve staff's recommendation. Motion carried unanimously.

2. Traffic management Process and 2014 Traffic Management Projects List (TMPL) Prioritization.

Abraham Bandegan, Associate Engineer, referenced the staff report and noted staff recommended the Commission review and approve the City of Escondido management process and 2014 Management Projects List (TMPL) Prioritization.

Commissioner Dayani asked if grants had been considered for the more expensive projects. Mr. Bandegan replied in the affirmative.

Commissioner Durney asked if staff was aware of what traffic calming items would be used for Chestnut and Eucalyptus Mr. Bandegan replied in the negative.

Commissioner Dayani felt the radar units were extremely affective in providing traffic calming.

Angela Hill, Escondido, expressed her concern with not being able to safely cross the street in the area of 511 East Grand Avenue, noting her concern with the high speeds of vehicles and limited visibility. She also stated that a vehicle hit her when she was crossing the street in this area.

Commissioner Dayani asked Ms. Hill if the accident occurred at a crosswalk. Ms. Hill replied in affirmative. Mr. Shahzad noted staff felt this area warranted a HAWK device. Commissioner Dayani suggested increasing police enforcement in the area for the present time.

Gisela Calderon and Arturo Velasco, Escondido, Members of CX3, noted that they belonged to a youth advocacy group who focused on helping improve health in the Mission Park area between Ash and Broadway and Valley Parkway and Lincoln. They stated that they were advocating for safe crosswalks at Mission and Ash, Washington and Ash, and Valley Parkway and Ash due to the

amount of students being jeopardized by traffic. They asked that the Commission support their efforts with Caltrans to install crosswalks.

Mr. Bandegan noted as a part of the City's repavement program, crosswalks at Ash and Mission, Lincoln, and El Norte Parkway would be installed as well as many other areas without crosswalks. Mr. Shahzad noted that as part of the repavement program crosswalks would be installed at all signalized intersections

Commissioner Dayani asked that the crosswalks cited on Ash be included in the pavement management plan.

Commissioner Sarro asked Ms. Calderon and Mr. Velasco to encourage students to use crosswalks.

Fari Sayre, Escondido, expressed her concern with not being able to safely cross the street in the area of 511 East Grand Avenue, noting her concern with the high speeds of vehicles and limited visibility. She then asked how long it would take to install a HAWK crosswalk. Mr. Shahzad noted that a HAWK system cost between $150,000 to $175,000, noting that the City would be applying for an HSIP grant.

Discussion ensued regarding the speed limit on Grand Avenue. Commissioner Leone and Commission Shahzad requested staff to look into posting the speed limit at prima facie due to the care facility housing seniors.

Richard Conwell, Escondido, thanked the City for installing active speed signs on Eucalyptus Avenue. He stated that he had videotaped 247 vehicles traveling on Eucalyptus in three hours, questioning how the City's traffic counts were calculated. He stated that individuals were continuing to speed given the statistics. He suggested installing speed bumps as well as an all-way stop at Hamilton and Eucalyptus.

Ronny Savage-Doll, Escondido, representing Rancho Verde Estates Neighborhood Watch, noted that they had over 200 families and encompassed Hamilton and Eucalyptus. She stated that their main concern was for the excessive speeds on Eucalyptus and the City not listening to the citizens. She asked that the City help provide traffic calming for the area.

Bob Gagliano, Escondido, suggested installing an all-way stop at Hamilton and Eucalyptus, noting his concern for excessive speeds of vehicles in the area and the number of accidents that had occurred to his property.

Commissioner Dayani asked if any stop sign warrants had been conducted for the subject intersection. Mr. Bandegan replied in the negative but noted staff would conduct a study for this area.

Dario Paggiarino, Escondido, expressed his concern for the pedestrians on the walkways on Eucalyptus due to the excessive speeds of vehicles. He noted that he had been passed in his vehicle while observing the speed limit. He questioned whether the radar speed signage had resulted in a decrease in individuals speeding, noting that according to the studies over 8,500 individuals were speeding on Eucalyptus in a 60-day period.

Commissioner Dayani suggested that the community create flyers informing the residents about the speeding issues.

Greg Birch, Escondido, stated that he supported the concept of the Traffic Calming Tool Box and commended the City on their efforts to provide safe routes to and from school. He expressed his view that Escondido Creek was underused and an under evaluated thoroughfare and applauded any work being done to improve these thoroughfares.

Patricia Borchmann, Escondido, commended the City for collaborating with the Bike/Walk organization. She stated that she was in favor of the Traffic Calming Tool Box. She indicated that she was a member of Reveal Escondido Creek and suggested the Commission consider Projects 6 and 7 and asked that they be allowed to provide a more detailed presentation about the Escondido Creek.

Kathleen Ferrier, San Diego, stated that she was the Chair of Bike/Walk San Diego and a member of Circulate San Diego, which was a merger of Walk San Diego and Move San Diego. She was in favor of the Traffic Calming Tool Box and requested that the language in the third class about being reserved for grant funding be removed, noting this appeared to be ranking by a cost category. She also encouraged the use the Traffic Calming Tool Box as an educational tool. She then referenced the TMPL List and noted that the proposed sidewalk improvements would significantly help but also recommended high-visibility sidewalks as part of this project. She stated that they had walked the Escondido Creek Trail and did not make a recommendation for a HAWK signal, feeling rapid flash beacons signs would be sufficient. She asked that her staff be able to meet with staff to discuss possible solutions.

Frank Fitzpatrick, Escondido, stated that he lived at the bottom of Eucalyptus Avenue, noting that any vehicle without using its brakes was traveling over 45 mph. He stated that in 1980s most of the speeders were residents, however, now a significant amount of traffic was generated from individuals cutting through to access Bernardo Elementary School, West Valley Parkway, and Del Dios. He invited the Police Department to use his property for enforcement. He also suggested using speed bumps to help slow traffic in the area.

Mark Haines, Escondido, thanked the City for the radar signage on Eucalyptus Avenue. He expressed his concern for the residents in the area being jeopardized by the speeding traffic. He noted that he had been passed in his

vehicle while observing the speed limit. He felt most of the speeding traffic was by individuals cutting through the area. He stated that Eucalyptus had numerous potholes due to the excessive traffic. He also stated that a police officer was welcome to use his driveway for traffic enforcement.

Margaret Davis, Escondido, felt most of the speeding traffic was by individuals cutting through the area. She suggested installing speed bumps on Hamilton and Eucalyptus if an all-way stop was not going to be installed.

Commissioner Sarro and staff discussed how funding mechanisms for traffic projects were brought before City Council. Ms. Procopio noted that there was no funding for traffic projects at this time.

Commissioner Sarro felt that City Council needed to be aware of the projects being identified. Commissioner Dayani concurred, feeling there would be more of a chance to fund the safety projects.

Commissioner Durney suggested taking the northbound radar signs on Eucalyptus Avenue and installing it on the southbound side as well as installing a stop sign half way down Eucalyptus. Mr. Shahzad noted that the radar signs could be relocated. He stated that an all-way stop at Eucalyptus and Hamilton had been in been reviewed in the past but did not meet the warrants. He noted that staff could reanalyze this along with a possible midblock stop sign. Commissioner Durney felt this would be a less costly solution for the subject area.

Commissioner Durney stated that he was in favor of Item No. 1, Item No. 3 and Item No. 4, which were school related and moving Item No. 2. to another priority level. He then referenced Item No. 6 and 7 and suggested using signage to help provide more safety. He felt this would help spread the funding around. He questioned whether the Grand Avenue crosswalk near the hospital should be eliminated, thereby requiring individuals to use the signalized intersection to cross the street.

Discussion ensued regarding reducing the lanes of travel on Grand Avenue in the area of the hospital.

The Commission consensus was for staff to look at alternatives for Grand Avenue in the area of the hospital.

Chairman Blackstock felt the public comments needed to be taken into consideration and for staff to re-evaluate the priority list for rankings.

Mr. Conwell asked if the City would accept funds from residents to pay for the installation of the stop signs at Eucalyptus and Hamilton as well as another stop sign on Eucalyptus. Commissioner Dayani noted the issue was whether the stop

signs met the traffic warrants. He also concurred with re-evaluating the subject area.

Commissioner Berkstresser asked if the City would allow residential funding for stop signs. Ms. Procopio replied in the affirmative.

Discussion ensued regarding removing the centerline on Eucalyptus.

ACTION:

Moved by Commissioner Dayani, seconded by Commissioner Sarro, to approve staff's recommendation. The motion included staff reviewing measures for Eucalyptus and Hamilton, and alternatives for the crosswalk at Grand Avenue near Villa Escondido. Motion carried. Ayes: Leone, Berkstresser, Blackstock, Dayani, and Sarro. Noes: Durney. (5-1)

3. City of Escondido – General Plan Chapter III – Mobility and Infrastructure insert for Commissioners Binder – A Brief Overview Presentation on "Complete Streets".

Ali Shahzad, Associate Engineer, referenced the staff report and requested input.

OLD BUSINESS:

1. Project Status Update – An overview of various projects involving the City

Ali Shahzad, Associate Engineer, provided the updates to the Commission and requested input.

a. Active Transportation Program Grant – Received

Julie Procopio, Assistant Director of Engineering, noted that they were submitting safe routes to school grant application for a planning grant as well as an infrastructure grant for some improvements on Juniper and Felicita.

SCHOOL AREA SAFETY

1. Pedestrian Safety – Reidy Creek School – Traffic Congestion - Received

Ali Shahzad, Associate Engineer, noted that the staff was working on "No Right Turn" at Reidy Creek as well as looking at the proposed alternate striping at North Broadway.

ANY OTHER BUSINESS:

1. Future Agenda Items – A briefing of future agenda items proposed to be

presented to the Transportation Commission.

Commissioner Durney asked if the photo enforcement signs would be taken down. Mr. Shahzad replied in the affirmative.

COUNCIL ACTION:

Mr. Shahzad noted that City Council approved limited time parking signage for 2- to 3-hour parking on Lincoln Avenue and on 9th Avenue.

ORAL COMMUNICATIONS: None.

Tom Stigler, Escondido, asked if the minutes were available for this meeting and where he could access them. Mr. Shahzad noted that the minutes and agenda could be accessed on the City's website.

Frank Fitzpatrick, Escondido, asked if the City was communicating with the County regarding funding for Citracado Parkway from I-15 to Palomar Hospital. Ms. Procopio replied in the affirmative and noted that the City was working with SANDAG and the County for funding sources for Citracado Parkway as well as looking at Tiger Grant funding and an economic development grant. Commissioner Durney asked if this only encompassed the extension near the hospital and not the area from I-15 to Valley Parkway. Ms. Procopio replied in the affirmative.

TRANSPORTATION COMMISSIONERS: No discussion.

ADJOURNMENT:

Chairman Blackstock adjourned the meeting at 5:21 p.m. The next meeting of the Commission would be held July 10, 2014, at 3:00 p.m. in City Council Chambers, 201 North Broadway, Escondido.

Ali Shahzad, Associate Engineer

Ty Paulson, Minutes Clerk

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TRANSPORTATION and
COMMUNITY SAFETY COMMISSION

Commission Report of: July 10th, 2014 **Item No.: E1**

Location: 9th Ave. from La Terraza Blvd to Redwood St

Initiated By: City Staff

Subject: Approve Striping Cross Section for 9th Ave

Background:

In order to better implement the current City of Escondido General Plan goal of "Complete Streets" to accommodate all modes of traffic including pedestrians and bicyclists, City Staff plans to design new striping plans for streets as they are being resurfaced.

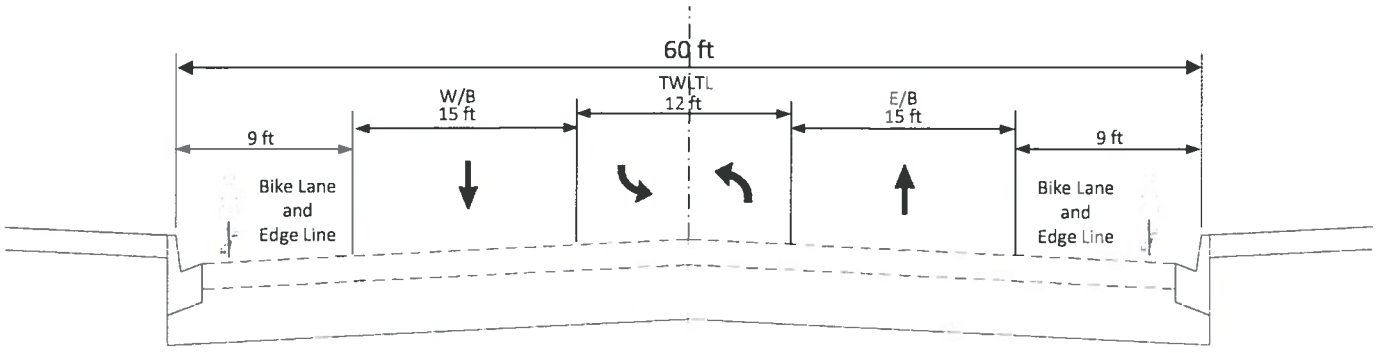
Discussion & Purpose:

One of the roadways that is scheduled to be resurfaced during the FY13/14 and FY14/15 City Street Rehabilitation Project is 9th Ave between La Terraza Blvd and Redwood St. According to the City of Escondido Bicycle Master Plan, the street is categorized to accommodate Class II bike-lanes. Engineering staff has designed new striping cross-sections on this street.

The roadway has different cross section widths at different sections. The new striping design is in compliance with standards given in CA-MUTCD2012, index 301.2 of Highway Design Manual and its guidelines. The guidelines state: *"Reduction of Cross Section Elements Adjacent to Class II Bikeways: There are situations where it may be desirable to reduce the width of the lanes in order to add or widen bike lanes or shoulders. In determining the appropriateness of narrower traffic lanes, consideration should be given to factors such as motor vehicle speeds, truck volumes, alignment, bike lane width, sight distance, and the presence of on-street parking. When on-street parking is permitted adjacent to a bike lane, or on a shoulder where bicycling is not prohibited, reducing the width of the adjacent traffic lane may allow for wider bike lanes or shoulders, to provide greater clearance between bicyclists and driver-side doors when opened.".*

Based on the guideline and the specific alignment plan approved by City Council for 9th Ave, narrower lane widths were chosen for the purpose of traffic management and also to accommodate the necessary width for the Class II bike-lanes. Also a new E/B lane was added to the corridor to add to the capacity and improve the Level Of Service (LOS) on the street. With future widening of 9th Ave a second W/B lane will be added. Existing and proposed striping cross sections are shown in the next exhibits.

The proposed striping cross sections has been shared with two of the City's Neighborhood Groups during their June meetings for their information and WIN and S Tulip neighborhood groups expressed their support for the project.

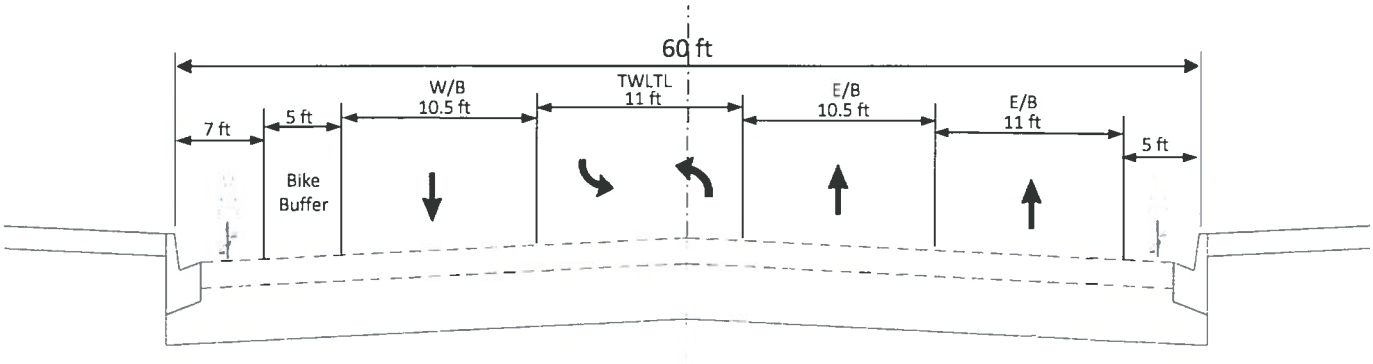


Existing

9th Ave

Striping Cross Section (typical)

NOT TO SCALE



Proposed

9th Ave

Striping Cross Section (typical)

NOT TO SCALE

Recommendation:

Approve the proposed new striping cross-section for 9th Ave between La Terraza Blvd and Redwood St

Necessary Council Action: None

Respectfully submitted,

Prepared by:

Abraham Bandegan, TE, PTP
Associate Engineer/Traffic Division

Reviewed by:

Julie B. Procopio, PE
Assistant Director of Public Works

Approved by:

Edward N. Domingue, PE (Civil)
Director of Public Works/City Engineer

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TRANSPORTATION and
COMMUNITY SAFETY COMMISSION

Commission Report of: July 10th, 2014 **Item No.: F1**

Location: Citywide

Initiated By: Bike-Walk Escondido, EUSD and Staff

Request: Review and Approve Designs for School Zone Safety Projects High Ranked on 2014 TMPL for Implementation

Background:

"City of Escondido Traffic Management Policy" was adopted by Transportation and Community Safety Commission (TCSC) on January 9th 2014. As stated in the policy, Traffic Management Projects List (TMPL) was drafted by City staff in June and the projects on the list were evaluated and preliminarily prioritized. TMPL was reviewed by the Commission in April 2014 and the Commission approved TMPL projects prioritization process and projects' rankings. TCSC also directed staff to further evaluate the projects on the list and prepare plans for the top ranked projects. Staff was directed to report back to the Commission with the plans for final review and budget approval at the July 2014 meeting. This item is for projects ranked 1 and 3 on the TMPL which are school zone safety related projects.

Discussion & Purpose:

Project 1: Installation of 13 crosswalks at 4 high priority school zone intersections

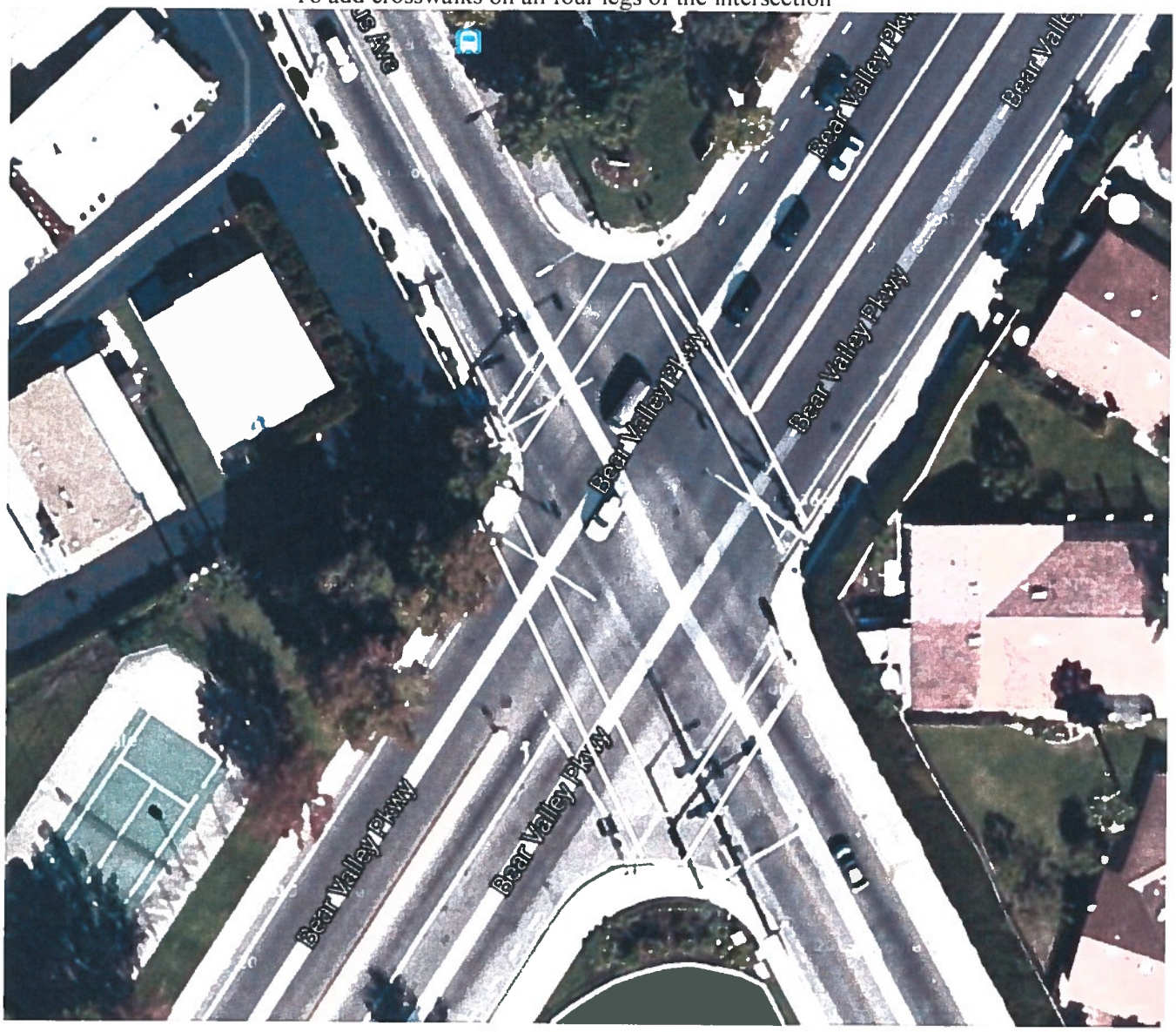
Based on a preliminary assessment of seven elementary and middle school zones during walk audits conducted by Escondido Union School District (EUSD), valuable data related to pedestrian and bicyclists circulation in the study areas was provided by EUSD for staff review. After evaluating each location, City staff selected four intersections for implementing transverse crosswalks on all or some legs of the intersections to enhance safer pedestrian crossing. Installation of crosswalks on the selected intersections was ranked 1st on TMPL after prioritization and the Commission directed staff to move forward with the projects' design and cost estimate. Below are the selected intersections.

- Washington Ave and Rose St: to add crosswalks on all four legs of the intersection
- Citrus Ave and Bear Valley Pkwy: to add crosswalks on all four legs of the intersection
- Lincoln Ave and Fig St: to add crosswalks on all four legs of the intersection
- Citrus Ave and Patterson Rd: to add a crosswalk on the West leg of the intersection

Next figures show the location of the selected intersections and the crosswalks that are recommended for installation. Stop bars will be replaced as needed. School zone crosswalks will be yellow per CA-MUTCD2012.

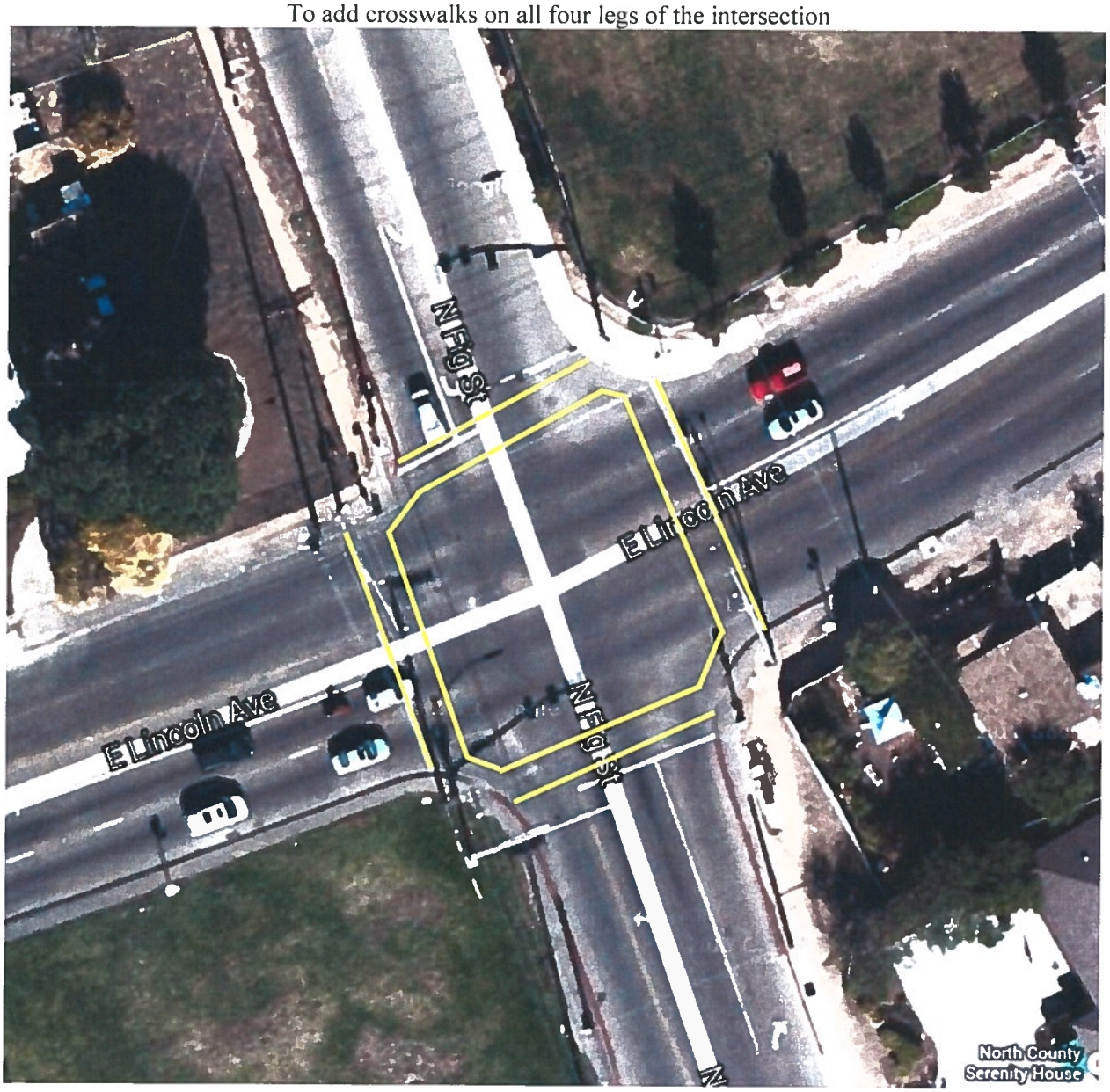
✓ Washington Ave and Rose St
To add crosswalks on all four legs of the intersection

✓ Citrus Ave and Bear Valley Pkwy
To add crosswalks on all four legs of the intersection



✓ Lincoln Ave and Fig St

To add crosswalks on all four legs of the intersection



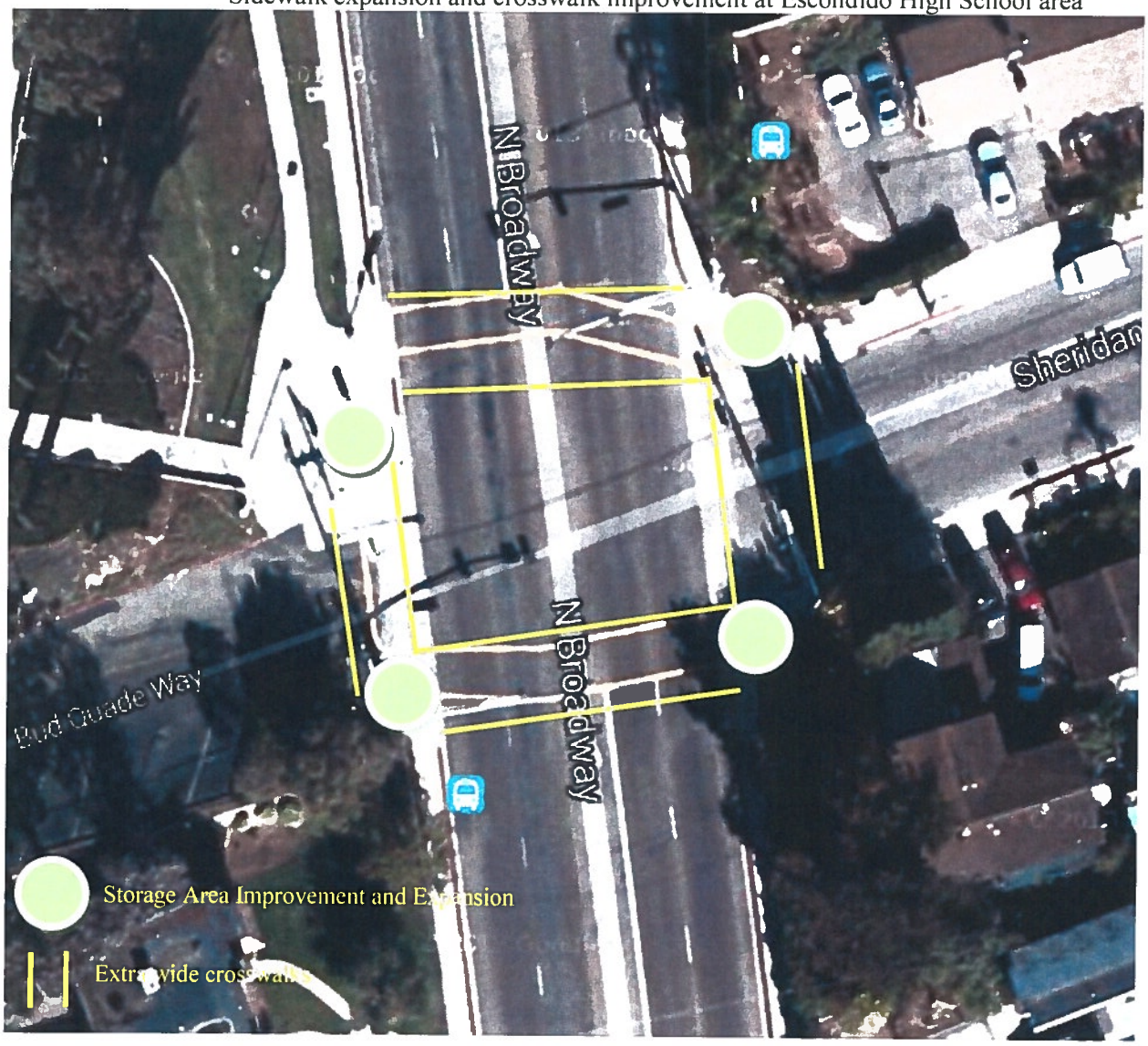
✓ Citrus Ave and Patterson Rd

To add a crosswalk on the West leg of the intersection

Project 2: Escondido High School crosswalks improvement at the intersection of N Broadway and Sheridan Ave

Escondido High School, with student population of 2,520 is located at 1535 N. Broadway, across from Sheridan Avenue. During school traffic peak periods of morning and afternoon, the crosswalk at the intersection of N. Broadway and Sheridan Avenue is impacted by heavy student pedestrian traffic.
City staff has evaluated various alternatives to assist with pedestrian and bicycle traffic concerns. The effective measure approved by the Commission is to expand the storage area of the sidewalks at the corners of the intersection. By implementing curb expansions, pedestrians and bicyclists would have more storage area to gather and wait for their green light to cross the intersection. This solution would provide a high capacity waiting area for pedestrians together with additional time allowed for the pedestrians to cross N. Broadway.
The recommendation to expand and improve the storage area was included in Traffic Management Projects List (TMPL) and ranked 3rd on the list. TCSC has approved the priority list and has directed City staff to further evaluate the feasibility and estimate the cost of the project.

Sidewalk expansion and crosswalk improvement at Escondido High School area



Cost Estimate:
Based on the proposed traffic safety measures, table below shows a preliminary cost estimate for the projects.

Item	Quantity	Unit of Measure	Average Unit Price	Item Total
Transverse crosswalks	17	EA	$400	$6800
Crosswalk storage area improvement and curb expansion	4	EA	$3750	$15000
Total				**$21800**

Recommendation:

Necessary Council Action: Approve the implementation of the added crosswalks at four locations and expanded sidewalk on N Broadway at Sheridan Ave.

Respectfully submitted,

Prepared by:

Abraham Bandegan, TE, PTP
Associate Engineer/Traffic Division

Reviewed by:

Julie B. Procopio, PE
Assistant Director of Public Works

Approved by:

Edward N. Domingue, PE
Director of Public Works/City Engineer

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TRANSPORTATION and
COMMUNITY SAFETY COMMISSION

Commission Report of: July 10th, 2014 **Item No.: F2**

Location: Chestnut St

Initiated by: Staff

Request: Review and Approve Traffic Calming on Chestnut St

Background:

In 2011, City staff detected speeding on Chestnut St. After preliminary evaluations, two edge lines and a double-yellow centerline were added to Chestnut St from 5th Ave to Juniper Street by City's street maintenance project in FY 2011-2012. Analysis of the speed survey conducted later revealed that the edge lines were effective. However, vehicles were continuing to travel at above the design speed for the roadway.

In April 2014, City staff included a potential "Chestnut St Traffic Calming" project in City's Traffic Management Project List (TMPL) for prioritization. Based on the criteria adopted by the Transportation and Community Safety Commission, the project ranked 2nd on the list. The Commission then directed staff to evaluate feasible solutions and prepare a traffic calming plan for Chestnut St using the "Traffic Calming Toolbox of City of Escondido" recently adopted by the Commission.

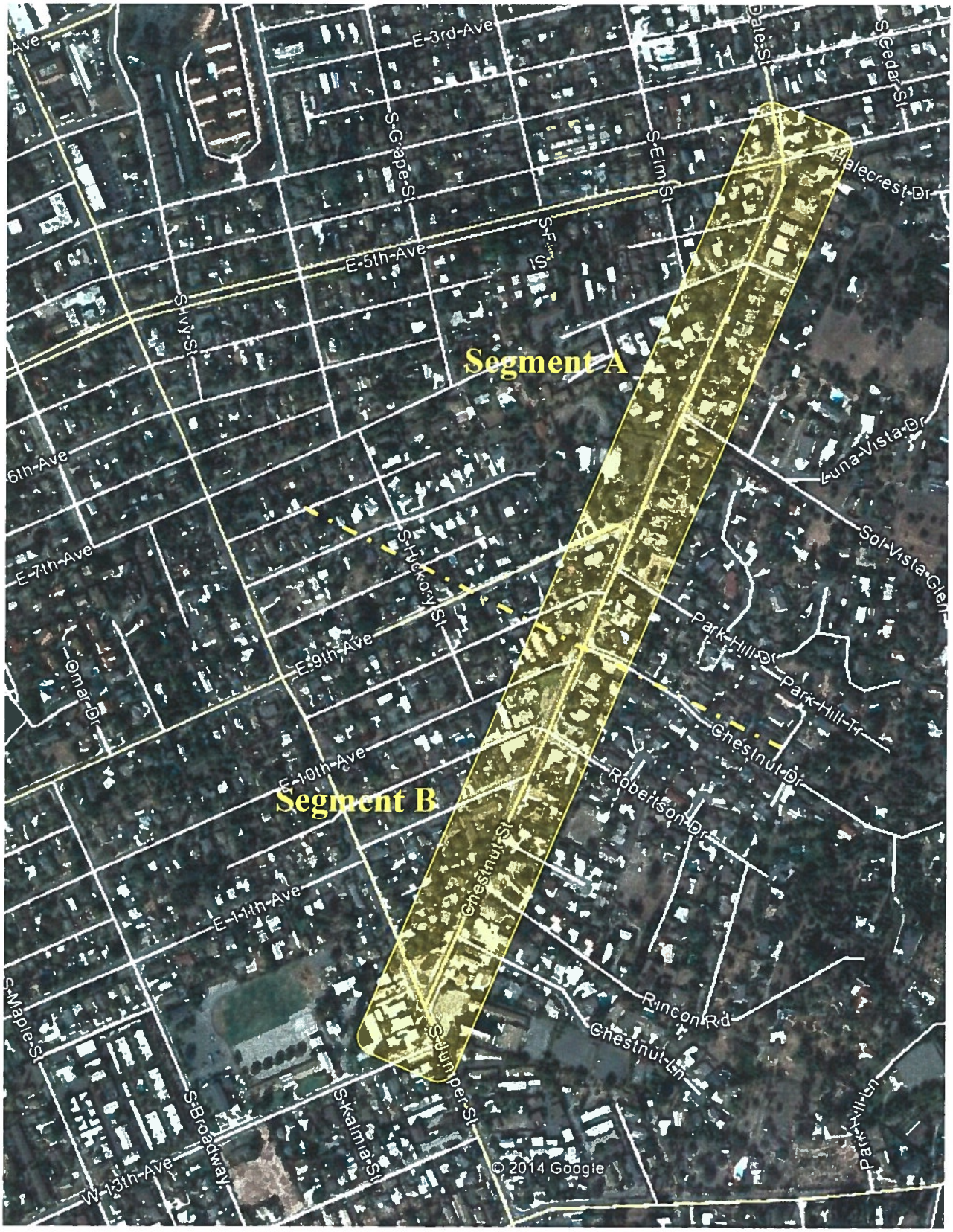
Discussion and Purpose:

Chestnut St is classified as Collector in City of Escondido General Plan and City staff have received complaints and has detected speeding on this street. The next figure shows the location of Chestnut St. Per Commission direction, City staff has evaluated implementing extra measures of traffic calming in the area and has prepared a traffic calming plan for Chestnut St.

After evaluating the segments' speed profile before and after the installation of the edge lines and centerline and based on the geometry of the road, City staff has considered the following items:

1. Narrowing down the travel lanes on Chestnut St
2. Adding Class II and Class III bike-lanes on Chestnut St
3. Adding a parking lane on Chestnut St
4. Evaluation of installing an All Way Stop Controlled intersection at the intersection of Chestnut St and 9th Ave
5. Installation of signs necessary for the new striping plan

Chestnut St Aerial view



1. Narrowing down the travel lanes on Chestnut St to 10' wide lanes

The existing lane width on Chestnut St is variable between 12' and 13' between 5th Ave and Chestnut Dr (Segment A). Between Juniper St and Chestnut Dr (Segment B), the N/B lane is very wide (close to 30'). City staff has considered narrowing down the lanes widths to 10' to calm down the traffic flow on the segment and also create a safe buffer between the travel lanes and the unpaved area (residents' frontage). By narrowing down the lane widths to 10' there would be close to 3' of separation between the vehicles and the edge of the roadway (unpaved shoulder) which is sometimes used by the bicyclists and pedestrians.

In order to add extra visibility to the new proposed edge lines and a more effective separation between the travel lanes and edges of pavement, City staff has considered adding a second edge line adjacent to the existing one and cross hatching the 2'-3' area in between. The existing and proposed striping plan on Chestnut St north of the intersection of Chestnut Dr is shown below.

Existing striping cross section on Chestnut St between 5th Ave and Chestnut Dr (Segment A)

Proposed striping cross section on Chestnut St between 5th Ave and Chestnut Dr (Segment A)

2. Adding Class II and Class III bike-lanes on Chestnut St

Based on the City of Escondido Bicycle Master Plan, Chestnut St is classified to accommodate Class II (striped) bike lanes between 5th Ave and Juniper St. However, Class II bike lanes can only be accommodated between Chestnut Dr and Juniper St (Segment B). Considering the limited width of the roadway between 5th Ave and Chestnut Dr (Segment A), City staff recommends adding Class III (sharrows) bike lanes in this area as an interim measure. When the street is widened to City standards, the class III bike lanes will be replaced with the class II bike lanes as recommended by the Master Plan.

3. Adding a parking lane on Chestnut St

The existing width of the N/B lane of Chestnut St on the segment between Juniper St and Chestnut Dr is close to 30' and the S/B lane width is 12'. In order to accommodate for the Class II bike lanes and bike buffers and also adding a parking lane to the N/B approach, centerline of the segment needs to be shifted 5' toward west. This would provide enough width on each side to accommodate for 10' travel lanes, bike lanes and a parking lane as shown below.

Existing striping cross section on Chestnut St between Chestnut Dr and Juniper St (Segment B)

Proposed striping cross section on Chestnut St between Chestnut Dr and Juniper St (Segment B)

4. Evaluation of installing an All Way Stop Controlled intersection at the intersection of Chestnut St and 9th Ave

Chestnut St is classified as Collector St and 9th Ave is classified as Local Collector in City of Escondido General Plan and both are two-lane undivided roads at the intersection area. The posted speed is 40 MPH on Chestnut St and 30 MPH on 9th Ave. Currently, only 9th Ave is stop-controlled. The figure below shows the aerial view of the intersection.

Aerial view of the intersection of Chestnut St and 9th Ave

For the purpose of warrant analysis, intersection volumes, crash history and speed studies were reviewed per City of Escondido All-Way Stop Control (AWSC) Application policy and also per CA-MUTCD2012 section 2B.07. Traffic and Speed surveys were conducted and the results were used for warrant analysis. Crash records were collected for the intersection and were reviewed to determine whether they were related to the intersection control and if they were susceptible to correction by adding Stop-Signs to N/B and S/B Chestnut St. Considering the limited sight distance at the intersection for most of the approaches, that criteria was also considered in the engineering study.

a. City of Escondido All-Way Stop Control Application policy

Warrant analysis based on the City policy is shown below.

Warrant	Maximum Points	Intersection Points	Description
Through St	5	0	9th Ave is not a through Street
Accidents	20	2	1 accident susceptible to correction
Unusual Condition	5	5	Restricted sight distance, grade, unimproved roadway
Volume (Major Street)	5	0	4hr volumes below 1400
Volume (Minor Street)	10	0	4hr volumes below 600
Volume Split	5	3	Difference between major and minor 4hr volumes

Based on City policy, an intersection needs at least 28 points for AWSC justification. With a total of 10 point, an All-Way Stop Control is not warranted for the study intersection.

b. CA-MUTCD2012 section 2B.07 All-Way Stop Application Analysis

Criterion B:

Staff evaluated the accident history on City's accident records database and could not identify 5 or more crashes susceptible to correction by a multi-way stop at the intersection.

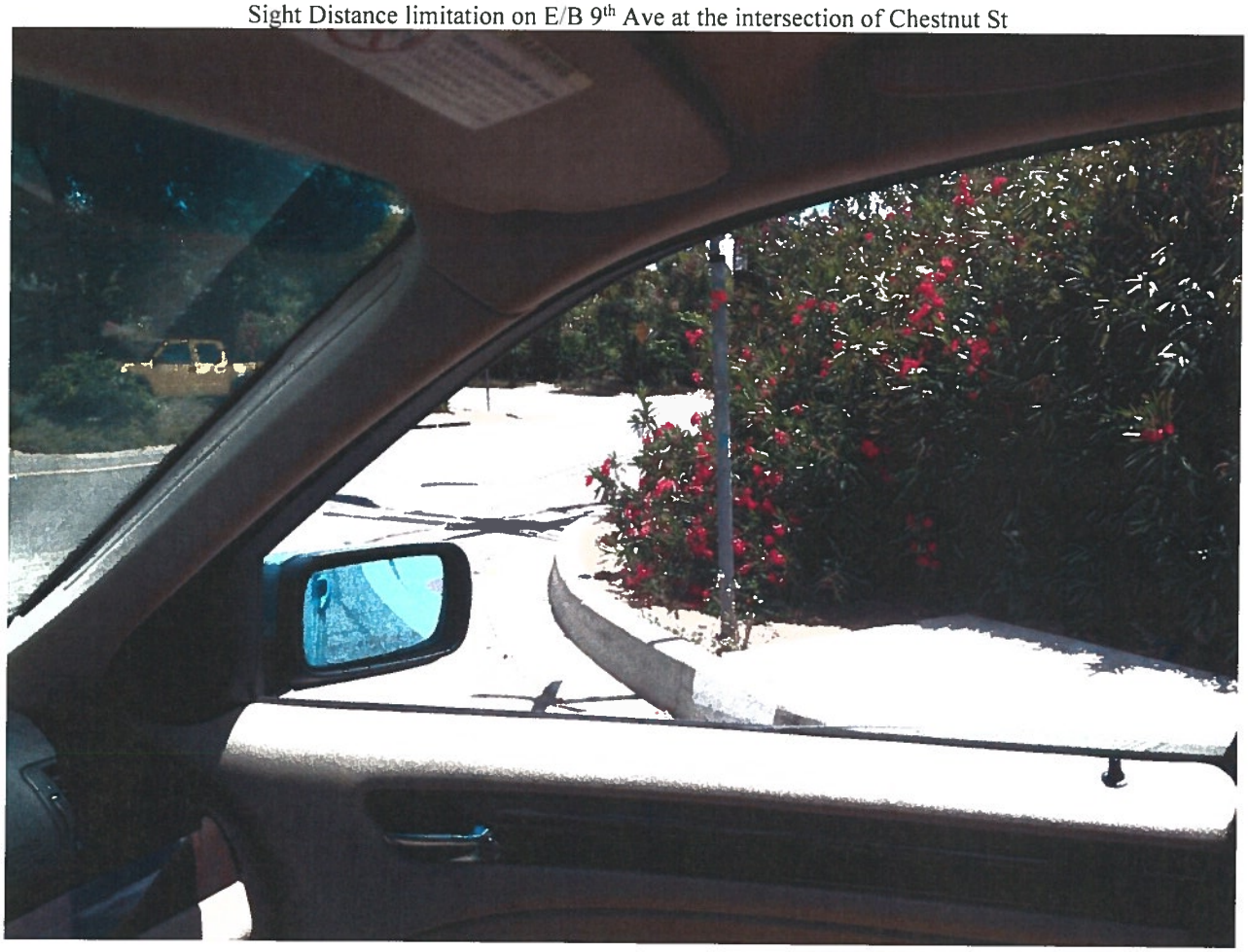
Criterion C:

Based on the volumes on the major street, volume criterion is met for All-Way Stop Control. However, the minor street volume, although close, is less than warrant thresholds. It should be considered that the traffic count was conducted in summer when schools were off and still the minor street volumes were close to the thresholds. However, based on the conducted counts, criterion C is not met.

Other factors to be considered:
The criteria also states that stop signs may be considered where left-turn conflicts need to be controlled and where a road user, after stopping, cannot see conflicting traffic and is unable to negotiate the intersection unless the conflicting cross traffic is required to stop. As shown in the images below, currently vehicles on E/B 9th Ave making a right turn or left turn maneuver onto N/B or S/B Chestnut St have limited sight distance.

These factors and Criteria C being very close to the thresholds are the most important reasons why a multi-way stop-control is recommended at the intersection of Chestnut St and 9th Ave. Also, it should be noted that using Multi-Way Stop Controlled intersections in conjunction with other traffic calming measures to make them more effective is recommended in the City "Traffic Calming Toolbox" that was adopted by the Commission. An AWSC at the study intersection can improve the effectiveness of the other traffic calming measures that are recommended for implementation.

Sight Distance limitation on E/B 9th Ave at the intersection of Chestnut St



Sight Distance limitation on E/B 9th Ave, at the intersection of Chestnut St

5. Installation of signs necessary for the new striping plan

Based on the proposed traffic calming measures and the related striping plan, a number of signs are needed to be installed. Necessary signs are designed per CA-MUTCD2012 for installation of class II and class III bike lanes and the AWSC intersection at Chestnut St and 9th Ave. The next figure shows the proposed signage on Chestnut St.

6. Outreach and Effectiveness

A community meeting was held on 06/26/2014. Residents that attended the meeting expressed support for the project.

Traffic Engineering will continue monitoring the speed profile on Chestnut St and conduct a new speed survey after implementation of the proposed traffic calming plan to measure the effectiveness of the traffic calming project.

Proposed signing on Chestnut St

Cost Estimate:
Based on the proposed traffic calming plan, table below shows a preliminary cost estimate for the project.

Item	Quantity	Unit of Measure	Average Unit Price	Item Total
Fabricate and install signs	13	EA	$300	$3900
Grinding existing striping	2900	LF	$2	$5800
Standard striping	13000	LF	$0.5	$6500
Thermoplastic legends	16	EA	$100	$1600
Speed radar feedback sign	1	EA	$4000	$4000
Total				**$21800**

Recommendation:

Approve staff recommendation to recommend to City Council the installation of stop-signs on Chestnut St at the intersection of 9th Ave and traffic calming measures on Chestnut St.

Necessary Council Action: Approval of the Stop-Sign

Respectfully submitted,

Prepared by:

Abraham Bandegan, TE, PTP
Associate Engineer/Traffic Division

Reviewed by:

Julie B. Procopio, PE
Assistant Director of Public Works

Approved by:

Edward N. Domingue, PE
Director of Public Works/City Engineer

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TRANSPORTATION and
COMMUNITY SAFETY COMMISSION

Commission Report of: July 10th, 2014 **Item No.: F3**

Location: Eucalyptus Ave

Initiated by: Staff

Request: Review and Approve Traffic Calming on Eucalyptus Ave

Background:

In 2013, City staff received complaints related to speeding and cut-through traffic on Eucalyptus Ave. After preliminary evaluation, two speed radar feedback signs were installed on Eucalyptus Ave on both N/B and S/B approaches in February 2014. Analysis of the speed radar feedback signs after 60 days showed that they were effective to a satisfactory level. City staff also included a potential "Eucalyptus Ave Traffic Calming" project in City's Traffic Management Project List (TMPL) for prioritization. Although the project did not rank high on the list based on the criteria adopted by the Transportation and Community Safety Commission, the Commission directed staff to reevaluate feasible solutions to resolve the issue.

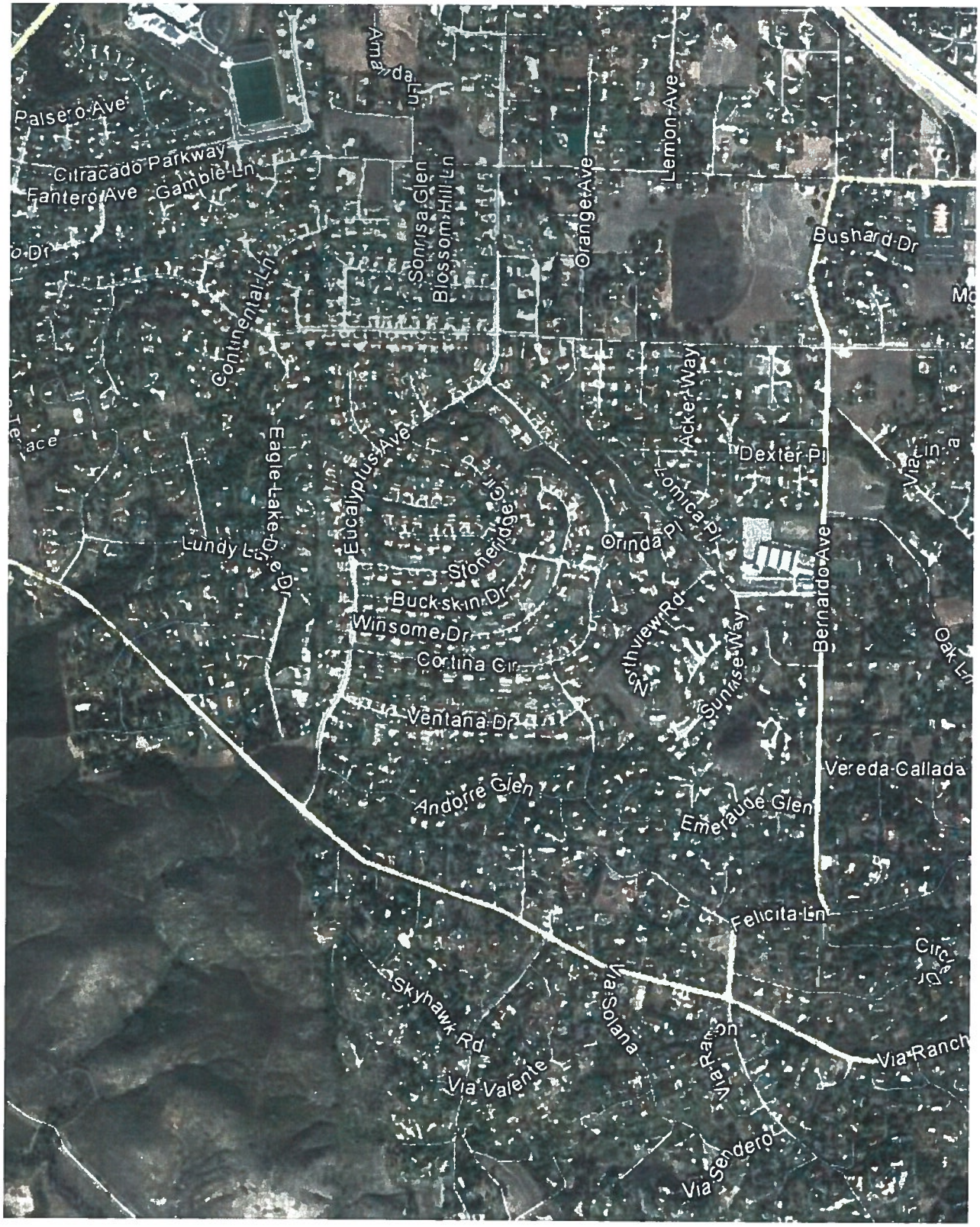
Discussion and Purpose:

Eucalyptus Ave is classified as Local Collector in City of Escondido General Plan and City staff have received complaints of speeding and high volume of cut-through traffic on this street. The next figure shows the location of Eucalyptus Ave. Considering the residential nature of the neighborhood, Escondido Police Department has helped by enforcing the speed limit. City staff has also installed two speed radar feedback signs on Eucalyptus Ave in February 2014. Per Commission direction, City staff has evaluated implementing extra measures of traffic calming in the area.

After reviewing the speed records from the speed radar feedback signs, receiving residents' suggestions and reevaluating the segments' speed profile before and after the installation of the two feedback signs, City staff has considered the following items:

1. Evaluation of cut-through traffic on Eucalyptus Ave and capacity analysis
2. Evaluation of installing an All Way Stop Controlled intersection at the intersection of Eucalyptus Ave and Hamilton Ln
3. Evaluation of installing an All Way Stop Controlled intersection at the intersection of Eucalyptus Ave and Shalimar Pl
4. Relocation of the N/B speed radar feedback sign
5. Continuous Speed enforcement by Escondido PD

Eucalyptus Ave Aerial view



1. Evaluation of cut-through traffic on Eucalyptus Ave and capacity analysis

Based on the available data from SANDAG's series 11 and series 12 models, the Average Daily Traffic (ADT) on Eucalyptus Ave was 2600 veh/day during both 2008 and 2010. Based on City of Escondido standards for Local Collector streets, the road is operating on LOS A. The street is experiencing traffic well below its operating capacity.

Close to 300 single family detached houses use Eucalyptus Ave as their only access road. Assuming a trip rate of 10/dwelling-unit per SANDAG "BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION", the vehicular trip generation of the residents on Eucalyptus Ave would be near 3000 veh/day which is equal to the estimated current ADT of the segment. Considering the classification of Eucalyptus Ave as a Local Collector, City staff does not consider the cut-through traffic to be significant.

Options to deter cut-through traffic were evaluated. It was determined that measures such as turn restrictions during peak hours would divert traffic to other roads that are not designed to receive this additional traffic. As a result, measures to deter cut-through traffic are not recommended.

2. Stop Sign installation analysis at the intersection of Eucalyptus Ave and Hamilton Ln

Eucalyptus Ave and Hamilton Ln are both classified as two-lane undivided Local Collector (66'/42') and at the intersection area, both are mostly built to this width. The posted speed is 25 MPH on Hamilton Ln and 35 MPH on Eucalyptus Ave. Currently, both N/B and S/B Eucalyptus Ave are stop-controlled. The figure below shows the aerial view of the intersection.

Aerial view of the intersection of Hamilton Ln and Eucalyptus Ave

For the purpose of warrant analysis, intersection volumes, crash history and speed studies were reviewed per City of Escondido All-Way Stop Control (AWSC) Application policy and also per CA-MUTCD2012 section 2B.07. Traffic and Speed surveys were conducted and the results were used for warrant analysis. Crash records were collected for the intersection and were reviewed to determine whether they were related to the intersection control and if they were susceptible to correction by adding Stop-Signs to E/B and W/B Hamilton Ln. Sight distance at the intersection was also considered in the engineering study.

a. City of Escondido All-Way Stop Control Application policy

Warrant analysis based on the City policy is shown below.

Warrant	Maximum Points	Intersection Points	Description
Through St	5	5	Eucalyptus Ave is a through Street
Accidents	20	2	1 accident susceptible to correction
Unusual Condition	5	5	Restricted sight distance, grade, unimproved roadway
Volume (Major Street)	5	0	4hr volumes below 1400
Volume (Minor Street)	10	0	4hr volumes below 600
Volume Split	5	5	Difference between major and minor 4hr volumes

Based on City policy, an intersection needs at least 28 points for AWSC justification. With a total of 17 points, an All-Way Stop Control is not warranted for the study intersection.

b. CA-MUTCD2012 section 2B.07 All-Way Stop Application Analysis

Criterion B:

Staff evaluated the accident history on City's accident records database and could not identify 5 or more crashes susceptible to correction by a multi-way stop at the intersection.

Criterion C:

Based on the volumes on the major street, volume criterion is met for All-Way Stop Control. However, the minor street volume, although close, is less than warrant thresholds. It should be considered that the traffic count was conducted in summer when schools were off and still the minor street volumes were close to the thresholds. However, based on the conducted counts, criterion C is not met.

Other factors to be considered:
The criteria also states that stop signs may be considered where left-turn conflicts need to be controlled and where a road user, after stopping, cannot see conflicting traffic and is unable to negotiate the intersection unless the conflicting cross traffic is required to stop. As shown in the images below, currently vehicles on N/B Eucalyptus Ave are not able to make a safe and easy right turn or left turn maneuver onto E/B or W/B Hamilton Ln because of the limited sight distance. Vehicles coming up the hill on W/B Hamilton Ln toward the study intersection also have a limited sight distance.

These factors and Criteria C being very close to the thresholds are the most important reasons why a multi-way stop-control is recommended at the intersection of Eucalyptus Ave and Hamilton Ln. Also, it should be noted that using Multi-Way Stop Controlled intersections in conjunction with other traffic calming measures to make them more effective is recommended in the City "Traffic Calming Toolbox" that was adopted by the Commission. An AWSC at the study intersection can improve the effectiveness of the other traffic calming measures that are recommended for implementation.

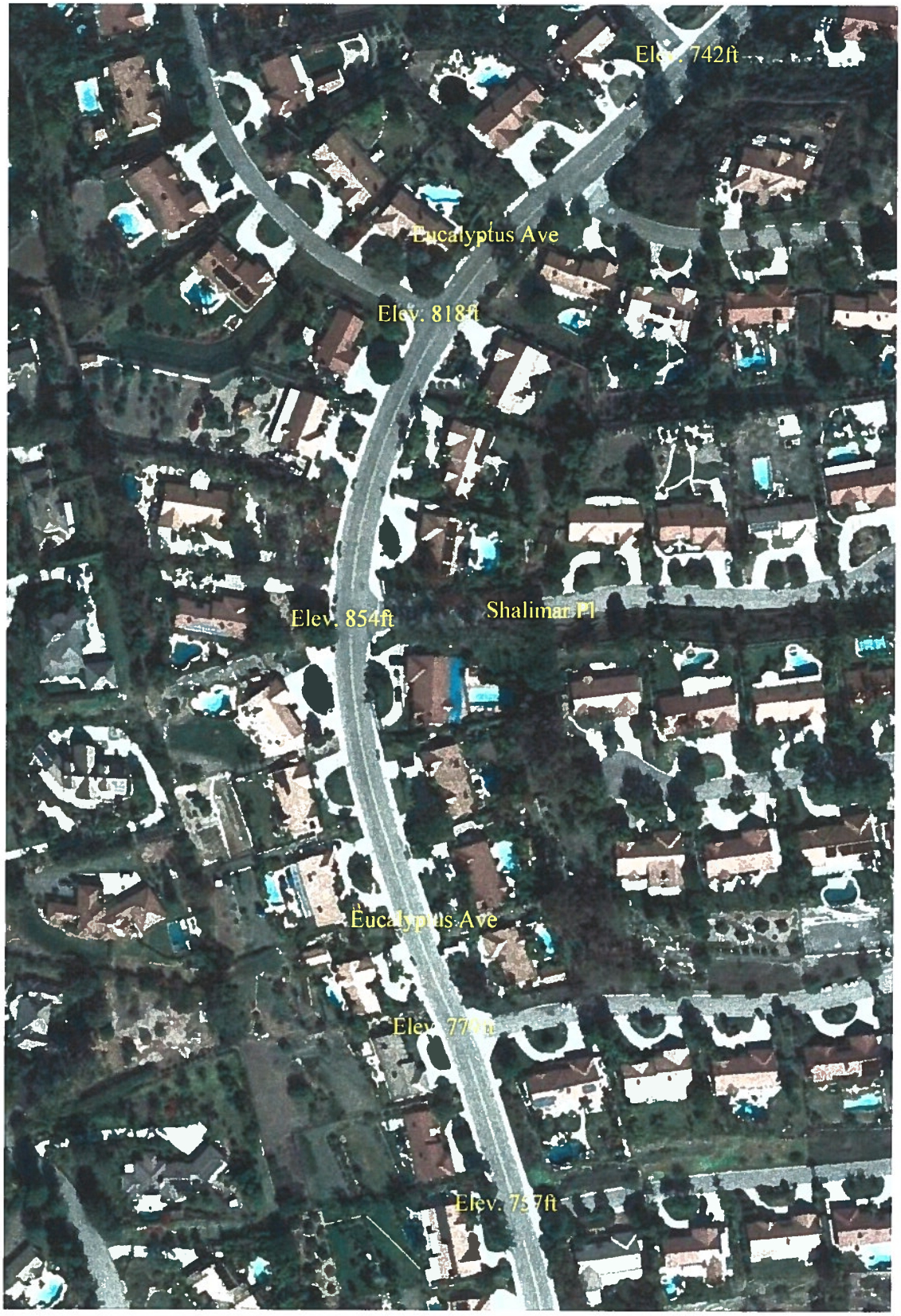
Sight Distance limitation on W/B Hamilton Ln, east of the intersection of Eucalyptus Ave

Sight Distance limitation on N/B Eucalyptus Ave at the intersection of Hamilton Ln

3. Stop Sign installation analysis at the intersection of Eucalyptus Ave and Shalimar Pl

Shalimar Pl is an unclassified road and is stop controlled at the intersection area which is located on top of a crest vertical curve with relatively steep grades (over 10%) on Eucalyptus Ave. The Prima Facie speed is 25 MPH on Shalimar Pl and the posted speed is 35 MPH on Eucalyptus Ave. The next figure shows the aerial view of the intersection.

Aerial view of the intersection of Shalimar Pl and Eucalyptus Ave



Considering that Shalimar Pl is a residential cul-de-sac and due to its very low volume, City staff did not analyze the traffic volume and crash warrant to for the application of All Way Stop Control (AWSC) intersection.

Since the intersection is located on a compound vertical and horizontal curve, the sight distance criteria is once again met. The criteria states that stop signs may be considered where left-turn conflicts need to be controlled and where a road user, after stopping, cannot see conflicting traffic and is unable to negotiate the intersection unless the conflicting cross traffic is required to stop. As shown in the images below, currently vehicles on Shalimar Pl are not able to make a safe and easy right turn or left turn maneuver onto N/B or S/B Eucalyptus Ave because of the very limited sight distance. Vehicles coming up the hill on N/B and S/B Eucalyptus Ave toward the study intersection also have a very limited sight distance.

Sight distance factor is the most important reason why a multi-way stop-control should be considered at the intersection of Shalimar Pl and Eucalyptus Ave. Stop signs on Eucalyptus Ave at Shalimar Pl are recommended. Two W3-1 (Stop Ahead) warning signs are also recommended on N/B and S/B in advance of the proposed stop signs.

Sight Distance limitation on Shalimar Pl at the intersection of Eucalyptus Ave

Sight Distance limitation on Shalimar Pl at the intersection of Eucalyptus Ave

4. Relocation of the N/B speed radar feedback sign

Site visits were conducted to evaluate the relocation of the existing N/B speed radar feedback sign. Since an AWSC is recommended at the intersection of Shalimar Pl and Eucalyptus Ave, the existing N/B Speed Radar Feedback Sign can be relocated. City staff recommends relocation of the existing N/B sign to a new location north of the hill, at the intersection of Cortina Cir (N/B at 2223 Eucalyptus Ave).

City staff will continue using the radar data to measure the effectiveness of the implemented solutions and monitor the speed profile on Eucalyptus Ave.

5. Continuous Speed enforcement by Escondido PD

Since the April 2014 Transportation Commission meeting, Escondido PD has conducted 6 random speed enforcements on Eucalyptus Ave which have led to 2 speeding citations and 1 impound for unlicensed driver. Traffic Engineering and Escondido Police Department will continue random speed enforcement in the area and monitoring to determine the effectiveness of the new traffic calming measures.

Cost Estimate:
Based on the proposed traffic calming measures, table below shows a preliminary cost estimate for the project.

Item	Quantity	Unit of Measure	Average Unit Price	Item Total
Fabricate and install signs	6	EA	$300	$1800
Thermoplastic legends	8	EA	$100	$800
Speed radar feedback sign relocation	1	EA	$800	$800
Total				**$3400**

Recommendation:

Approve staff recommendation to relocate the N/B Eucalyptus speed radar feedback sign. Approve Staff recommendation to recommend to City Council the installation of stop-signs on Hamilton Ln at the intersection of Eucalyptus Ave and on Eucalyptus Ave at the intersection of Shalimar Pl.

Necessary Council Action: Approval of the Stop-Signs

Respectfully submitted,

Prepared by:

Abraham Bandegan, TE, PTP
Associate Engineer/Traffic Division

Reviewed by:

Julie B. Procopio, PE
Assistant Director of Public Works

Approved by:

Edward N. Domingue, PE
Director of Public Works/City Engineer

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TRANSPORTATION and COMMUNITY SAFETY COMMISSION

Commission Report of: July 10th, 2014 **Item No.: F4**

Location: 511 E. Grand Avenue

Initiated By: City Staff

Request: Angela Hill, Greg Birch, Fari Sayre & Staff

Subject: Crosswalks on East Grand Avenue near Palomar Hospital enhancements & possible All-Way Stop at Grape Street and Grand Avenue.

Background:

At the last transportation Commission during public comment, Ms. Angela Hill expressed her concern with not being able to safely cross the street in the area of 511 East Grand Avenue, noting her concern with the high speeds of vehicles and limited visibility. She also stated that a vehicle hit her when she was crossing the street in this area.

Commissioner Dayani requested staff investigate options to improve safety at this location by including a senior speed zone.

Discussion & Purpose:

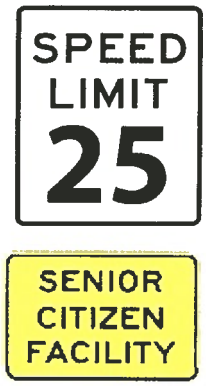
In 2013 the cross walk on East Grand Avenue between the Senior Community and Palomar Hospital was upgraded considerably with the installation of the crosswalk at the vertical curve and with California Manual on Uniform Traffic Control Devices (CA-MUTCD) signage and striping at the crosswalk, advance warning signage for pedestrian crossing approaches, ADA ramps and a street light. Other options like the passive pedestrian activated Rectangular Rapid Flashing Beacon (RRFB) were discussed at the August 2013 Transportation Commission meeting. The Commission decided against installing RRFB because it is not an approved application in the California MUTCD, and does not eliminate the Multiple Threat Crash that exists when there are multiple approach lanes to the crosswalk. In addition a pedestrian's false sense of security in crosswalks was cited based on, studies by the City of San Diego in the 1970's and City of Los Angeles in 2006.

1. **Senior Citizen Community:**

- Villa Escondido, 511 E Grand Ave Escondido, CA 92025, is advertised as a 112-Unit 55+ senior apartment home. The CA-MUTCD does not provide a classification for a Senior Citizen Community.

The CVC allows per CVC 22352 Prima Facie Speed Limit applicable when passing a senior center or other facility used by senior citizens, contiguous to a street to be posted with standard senior citizen warning signage.

22358.4 – Decrease of Local Limits near Schools or Senior Centers.



SW50 (CA)

Table 2B-101(CA) Standard Application of Speed Limits per California Vehicle Code

25 mph	State or local authority	▪ Any highway other than a State highway in any business or residential district ▪ A street contiguous to senior citizen facility other than a State highway ▪ Adjacent to a children's playground in a public park, but only during particular hours or days when children are expected to use facilities	22352.a.2 & 22357.1

09g *The SENIOR CITIZEN FACILITY (SW50(CA)) sign (see Figure 2C-11(CA)) should not be used alone.*

Option:

09h The SW50(CA) sign may be used in combination, above the Speed Limit (R2-1 (25,20 or 15)) sign on any street or road, other than a State highway, with a speed limit greater than 25 mph that is adjacent to a senior citizen facility. Refer to CVC 22352 and 22358.4.

Eastbound View of Crosswalk on E. Grand Avenue

Westbound View of Crosswalk on E. Grand Avenue

Eastbound Approach to Crosswalk on E. Grand Avenue & S. Hickory St.

Eastbound Closer View of Crosswalk at E. Grand Avenue & S. Hickory St.

2. **All-Way Warrant Analysis at Grand Avenue & Grape Street:**

Description of Area: The intersection of Grape Street at Grand Avenue is surrounded by a mix of residential homes, Palomar Hospital, Villa Escondido a senior continuing care retirement community (see Area Map on last page).

Data: Grand Avenue extends in an east-west direction and is classified a Collector in the City's Circulation Element of the General Plan. Grape Street extends in a north-south direction and is an unclassified local street. Traffic on Grape Street presently stops for Grand Avenue. Both streets are improved with asphalt pavement, and concrete curb and gutter. Both Grand Avenue and Grape Street are two-lane roadways separated by painted centerline striping, with no-parking on Grand Avenue, and parking on both sides of Grape Street. Traffic on Grand Avenue averages 14,470 Vehicles Per Day (VPD) and the volume on Grape Street averages 79 VPD.

Background: Staff analyzed the intersection to determine if an ALL-WAY STOP was warranted at the intersection of Grape Street at Grand Avenue, so that there could be a safer crossing for the pedestrians in the area.

Discussion: There is increased traffic and pedestrian activity near this intersection at the mid-block fronting the Palomar Hospital Emergency Care from the Villa Escondido facility.

- **Evaluation All-Way Stop by City Policy:** The intersection of Grape Street at Grand Avenue was evaluated for potential implementation of ALL-WAY STOP traffic controls using adopted City Traffic Policy No. 6, "ALL-WAY STOP Control". This evaluation procedure is used to support consistent implementation of traffic controls throughout the city.

An accumulated total of 28 points out of the possible 50 points is required to consider implementation of ALL-WAY STOP traffic controls. The evaluation procedure considers the following criteria with their indicated accumulated point totals:

a. If street is a through street 0 pts.
b. Through roadway – both roadways extend through area and beyond max. 5 pts. 0 pts.
Correctable collisions – Two points assigned to correctible collisions within 1 year. There have been 9 recorded collisions in three previous 3 yrs., however all non-correctible – all driver error. 20 pts. possible, 0 pts.
Unusual conditions -- Senior Community, Hospital, steep hill, pedestrian activity max. 5 pts.

Volume criteria -- Four highest hrs. Major (5 pts.), Minor (0 pts.), volume split (0 pts.)
20 pts. possible, 5 pts.

The accumulated point total for this evaluation is 10 pts.

The "Evaluation by City Policy" is not met.

- **Evaluation All-Way Stop by CA- MUTCD (2012) Warrants & guidelines:**

Condition A. Signal Warrant – **Not Met**
Condition B. Five or more correctible crashes in 12 months – **Not Met**
Condition C1. Minimum Volumes Major – **Met**
Condition C2. Minimum Volumes Minor – **Not Met**
Condition C3. 85th Approach Speed Major exceeds 40 MPH – Posted 30 Mph - **Not Met**
Condition D. No Single criterion is satisfied B, C1 and C2. – **Not Met** (are all satisfied to 80% Min. Value)

- **The "Evaluation by CA-MUTCD Warrants" is not met, as a majority of Condition Warrants are not met.**

View looking west making left out of Grape St. @ Grand Ave. – Restrict Left out – Signage for "Right Turn Only" recommended.

The California Manual on Uniform Traffic Control Devices (CA- MUTCD) contains guidelines for considering installation of STOP traffic controls. Traffic Counts were taken and it was determined that minimum volume and accident criteria were not met.

As there is a problem with Left Turn conflicts out of Grape Street and as considering the "Evaluation using CA-MUTCD guidelines" the installation of an ALL-WAY STOP is not supported. It would be prudent to install a "Right Turn Only" at Grape Street, below the existing Stop sign.

Additionally, the Institute of Transportation Studies, University of California - Berkeley offered the City of Escondido a study opportunity for a "Pedestrian Safety Assessment" at key identified locations by City staff. The Traffic staff will work with the consultants to review safety improvements at these locations that could be appropriately implemented.

3. **Crosswalk visibility Improvements:**

The following measures are recommended to improve visibility of crosswalk at Grand & Hickory, and at 511 E. Grand Avenue crosswalks.

a. Install a spring base "Yield to Pedestrians within Crosswalk" in the striped median at Grand and Hickory, and a pavement legend for "Yield" at the cross walk approach if it can be accommodated.
b. Pavement Legends for "Yield" at the approaches preceding the Saw Tooth Yield Pavement Legends at the 511 E. Grand crosswalks.

Addition of Yield and Yield to Pedestrian on striped median.

Addition of Yield Legend Approaching Yield sawtooth line, double faced Pedestrian sign with Arrow.

Recommendations:

It is requested that the Transportation and Community Safety Commission approve additional signage considered to assist in alerting drivers of a Mid-Block Pedestrian Crossing.

1. Install Senior Citizen Signage SW 50 (CA) at all approaches with 25MPH signs.
2. Update crosswalk signage by double facing the signs (W11-2 Ped Walking & W16-7 P Arrow pointing down) at the crosswalk at the apex of the hill at Palomar Hospital driveway.
3. Consider "Right Only" R3-5 (R) out of Grape Street due to crest of hill sight distance.
4. Install a spring base "Yield to Pedestrians within Crosswalk" in the striped median at Grand and Hickory. Pavement Legends for "Yield" at the cross walk approach if it can be accommodated.
5. Pavement Legends for "Yield" at the approaches preceding the Saw Tooth Yield Pavement Legends at the 511 E. Grand crosswalks.

Fiscal Impact:
The estimated cost of installing the additional signs and pavement markings (Labor & Materials) as described in the recommendations is $3,300. Based on the proposed recommendations, table below shows a preliminary cost estimate for the project.

Item	Quantity	Unit of Measure	Average Unit Price	Item Total
Fabricate and install signs & posts	9	EA	$300	$2700
"Yield" Thermoplastic legends	3	EA	$200	$600
Total				**$3,300**

Necessary Council Action: None

Respectfully submitted,

Prepared by:

Ali Shahzad, PE (Traffic)
Associate Engineer/Traffic

Reviewed by:

Julie Procopio, PE (Civil)
Assistant Director of Public Works

Approved by:

Edward N. Domingue, PE (Civil)
Director of Public Works/City Engineer


E Grand Ave
S Grape St
E 2nd Ave
S Hickory St

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TRANSPORTATION and COMMUNITY SAFETY COMMISSION

Commission Report of: July 10th, 2014 **Item No.: F5**

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 2012 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 January 13, 2012.

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) dated January 13, 2012:

> "***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(f).*
>
> ***Standard:***
> *If the speed limit to be posted has had the 5 mph reduction applied, then an E&TS shall document in writing the conditions and justification for the lower speed limit and be approved by a registered Civil or Traffic Engineer. The reasons for the lower speed limit shall be in compliance with CVC Sections 627 and 22358.5.*
>
> *Support:*
> *The following examples are provided to explain the application of these speed limit criteria:*
> *A. Using Option 1 above and first step is to round down: If the 85th percentile speed in a speed survey for a location was 37 mph, then the speed limit would be established at 35 mph since it is the closest 5 mph increment to the 37 mph speed. As indicated by the option, this 35 mph established speed limit could be reduced by 5 mph to 30 mph if the conditions and justification for using this lower speed limit are documented in the E&TS and approved by a registered Civil or Traffic Engineer.*
> *B. Using Option 1 above and first step is to round up: If the 85th percentile speed in a speed survey for a location was 33 mph, then the speed limit would be established at 35 mph since it is the closest 5 mph increment to the 33 mph speed. As indicated by the option, this 35 mph speed limit could be reduced by 5 mph to 30 mph if the conditions and justification for using this lower speed limit are documented in the E&TS and approved by a registered Civil or Traffic Engineer.*
> *C. Using Option 2 above and first step is to round up: If the 85th percentile speed in a speed survey for a location was 33 mph, instead of rounding up to 35mph, the speed limit can be established at 30mph, but no further reductions can be applied (which is allowed in the two examples above).*
>
> ***Standard:***
> *Examples 1 and 2 for establishing posted speed limits shall apply to engineering and traffic surveys (E&TS) performed on or after July 1, 2009 in accordance with the Department's Traffic Operations Policy Directive Number 09-04 dated June 29, 2009.*

Option:
After January 1, 2012, Example 3 may be used to establish speed limits. Refer to CVC 21400(f).
Support:
Any existing E&TS that was performed before July 1, 2009 in accordance with previous traffic control device standards is not required to comply with the new criteria until it is due for reevaluation per the 5, 7 or 10 year criteria."

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) 2012 edition, a document published by the Federal Highway Administration and modified by CALTRANS for use in California. The CA-MUTCD guidelines state that 85 percent of drivers are traveling at a safe and reasonable speed, and that this "85th percentile" speed is the parameter of a speed survey that should be used to determine a legally enforceable posted speed limit.

Recommendation:

As part of the City of Escondido's speed survey program, staff has performed speed surveys at 16 segment locations. Data was collected for each segment, and Attachment A contains the draft speed surveys.

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 10km/h (5 mph) increment of the 85th-percentile speed of free-flowing traffic.*" In setting speed limits, the CA-MUTCD also states that, "*in matching existing conditions with the traffic safety needs of the community, engineering judgment may indicate the need for a further reduction of 10 km/h (5 mph).*"

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, "*when qualifying an appropriate speed limit, local authorities may also consider residential density, school zone, and pedestrian and bicyclist safety.*"

Therefore, based on these 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 1-2, 4-11, and 13-15, 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 each of these cases, then, the posted speed limit will not change. For speed survey 12, the recommended speed limit is changing (decrease by 5mph) based on the 85th-percentile speed of the new speed survey. Per the CA-MUTCD and CVC this speed is compliant for increment, as it is within 5 mph of adjacent speed zones for upward and downward speeds. Finally, speed survey 3 is a new speed zone; the recommended speed limit is 30 MPH, which is rounded down from the 85th-percentile of 36 MPH. Since there is no previously posted speed, this survey will have to be approved by City Council.

Table 1 - Overview of Speed Surveys

Segment No.	Street Name	Segment		Previous Speed Survey	Posted Speed Limit (MPH)	85th Percentile (MPH)	Recommended Speed Limit (MPH)	Speed Limit to be posted, per Traffic Engineer
		From	To					
1	Auto Park Way	Andreasen Road	Citracado Pkwy	05/02/06	40	44	45	40
2	Auto Park Way	Citracado Parkway	Mission Road	08/08/06	40	45	45	40
3	Hayden Drive	Bear Valley Parkway	Oak Hill Drive	None	None	36	35	30
4	Juniper Street	Second Avenue	Fifth Avenue	07/27/06	30	34	35	30
5	Juniper Street	Chestnut Street	Felicita Avenue	07/17/06	35	40	40	35
6	Juniper Street	Felicita Avenue	City Limits	07/27/06	35	41	40	35
7	Lincoln Avenue	Rose Street	Midway Drive	08/31/06	35	39	40	35
8	Lincoln Avenue	Midway Drive	El Norte Parkway	09/01/06	35	42	40	35
9	Midway Drive	El Norte Parkway	Washington Avenue	09/06/06	35	40	40	35
10	Midway Drive	Washington Avenue	Grand Avenue	09/01/06	35	39	40	35
11	Midway Drive	Grand Avenue	Bear Valley Parkway	08/01/06	35	39	40	35
12	Ninth Avenue	Hale Avenue	Auto Park Way	05/16/06	35	32	30	30
13	Ninth Avenue	Centre City Parkway	Escondido Boulevard	01/10/07	30	34	35	30
14	Ninth Avenue	Escondido Boulevard	Juniper Street	04/12/07	25	30	30	25
15	Ninth Avenue	Juniper Street	Chestnut Street	04/12/07	30	34	35	30

Necessary Council Action: Approval of changed speed limit and new speed zone.

Respectfully submitted,

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