

## AGENDA

### Meeting of the San Marcos Traffic Commission

**Meeting Date:** December 4, 2019 | **Meeting Time:** 6:00 PM

**Location:** City Council Chambers, 1 Civic Center Drive, San Marcos CA 92069

**Americans with Disabilities Act:** If you need special assistance to participate in this meeting, please contact the City Clerk Department at (760) 744-1050, ext. 3105. Notification 48 hours in advance will enable the City to make reasonable arrangements to ensure accessibility to this meeting. Assisted listening devices are available for the hearing impaired. Please see the City Clerk if you wish to use this device.

**Agendas:** Agenda packets are available for public inspection 72 hours prior to scheduled meetings at the Information Desk counter located on the first floor of City Hall, 1 Civic Center Drive, San Marcos, during normal business hours or online at [www.san-marcos.net](http://www.san-marcos.net).

Agenda-related writings or documents provided to a majority of the Commission after distribution of the agenda packet will be available for public inspection at the time of distribution at the Information Desk counter located on the first floor of City Hall, 1 Civic Center Drive, San Marcos, CA, during normal business hours.

#### 1. CALL TO ORDER - 6:00 P.M.

#### 2. PLEDGE OF ALLEGIANCE

#### 3. ROLL CALL

Anyone wishing to speak to the Commission on any item must first complete a Request to Speak form and turn it in to the secretary

#### 4. ORAL COMMUNICATIONS

Persons wishing to speak on a matter not on the agenda may be heard at this time; however, no action will be taken until placed on a future agenda.

#### 5. APPROVAL OF MINUTES

September 4, 2019

#### 6. OLD BUSINESS

a. None

#### 7. NEW BUSINESS

a. Proposed ALL-WAY STOP control at the Intersection of Knob Hill Road and Matin Circle

**8. REPORTS AND INFORMATION ITEMS**

- a. Engineering Staff Updates
- b. San Diego County Sheriff's Department Traffic Collision Summary And Accident Investigation Log
- c. Traffic Commission Commentary
- d. Staff Commentary

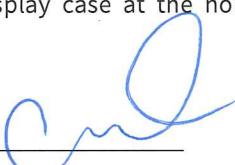
**ADJOURNMENT**

**AFFIDAVIT OF POSTING**

STATE OF CALIFORNIA )  
COUNTY OF SAN DIEGO ) ss.  
CITY OF SAN MARCOS )

I, Aurelia Velasquez, Secretary, San Marcos Traffic Commission, hereby certify that I caused the posting on November 27, 2019 of this agenda in the glass display case at the north entrance of City Hall.

DATED: November 27, 2019

  
\_\_\_\_\_  
Aurelia Velasquez  
Traffic Commission Secretary

# MINUTES

## Meeting of the San Marcos Traffic Commission

**WEDNESDAY, September 4, 2019 | 6:00 PM**

**City Council Chambers, 1 Civic Center Drive, San Marcos, CA 92069**

1. **CALL TO ORDER:** Chairman Rico called the Traffic Commission Meeting to order at 6:00 p.m.
2. **PLEDGE OF ALLEGIANCE:** Led by Commissioner Phil Makrogiannis
3. **ROLL CALL:**

PRESENT: COMMISSIONERS: RICO, CHRISTIAN, MAKROGIANNIS, HANSEN, COLLINS, BRIDGE, BUCKLEY

ABSENT: COMMISSIONERS: MASTERSON & HOAGLIN

**ALSO PRESENT:** Senior Traffic Engineer, Mike Rafael; Principal Traffic Engineer, Nicholas Abboud; Traffic Sergeant, Nicholas Maryn; and Traffic Commission Secretary, Aurelia Velasquez & Danielle Norris.

4. **ORAL COMMUNICATIONS**

None

5. **APPROVAL OF MINUTES – June 5, 2019**

Commissioner Hansen makes a motion to accept the minutes as recorded. Commissioner Bridge seconds the motion. Motion carries.

AYES: COMMISSIONERS: CHRISTIAN, MAKROGIANNIS, HANSEN, COLLINS, BRIDGE, BUCKLEY

NOES: COMMISSIONERS:

ABSTAINS: COMMISSIONERS:

**6. OLD BUSINESS**

A. None

**7. NEW BUSINESS**

A. Quail Hill Drive- Residential Speeding and Traffic Safety Concerns.

Residents living adjacent to Quail Hill Drive reported residential speeding along Quail Hill Drive between La Sombra Drive and Via Vera Cruz and have traffic safety concerns. Residents are also concerned about pedestrian safety on the street due to a recent bicycle and vehicle collision on Quail Hill Drive. Residents are interested if speed bumps may be considered on Quail Hill Drive to reduce vehicle speeding.

Engineering staff conducted an engineering study to determine if traffic calming measures may be warranted on Quail Hill Drive. Engineering staff collected both traffic speed and volume data for (7) consecutive days at the midblock of the street (between Cardinal Court and Partridge Court adjacent to the neighborhood park). The highest traffic volumes along the roadway segment occurred during the morning peak (7-8am) and afternoon peak (3-4pm) which is consistent with residential traffic patterns. Engineering staff determined a majority of the frequent offenders are area residents, and cut-through traffic is non-existent.

Engineering staff reviewed the community's request for ALL-WAY STOP controls along Quail Hill Drive to improve pedestrian safety and reduce vehicle speeds. Per the CAMUTCD, ALL-WAY STOP-controls at intersections are intended to assign the right-of-way at locations where traffic volumes are approximately equal from all approaches and used for speed control.

Staff has determined that traffic volumes are unequal, stopping sight distance sufficient and low pedestrian crossings observed during peak hours at all of the minor intersections on Quail Hill Drive. Based on the finding Engineering staff proposes the use of edgeline striping as an alternative and effective traffic calming measure to help reduce speeds on residential streets.

**CONCLUSION AND RECOMMENDATIONS:**

1. Installation of edgeline striping consisting of a 4-inch white line on Quail Hill Drive between La Sombra Drive and Via Vera Cruz.
2. Installation of new one-way STOP signs and limit lines at all minor street intersections.

3. Installation of new speed limit signs (25MPH) and advanced playground warning signs on Quail Hill Drive.
4. Installation of a new ALL WAY STOP signs, limit lines, pavement markings, and 50-feet of double yellow centerline at all approaches to the intersection of Quail Hill Drive and McMahr Drive.
5. Deployment of the City's speed radar trailers to help build and reinforce speed compliance on Quail Hill Drive.

Ian Piston resides at 1006 Goldfinch Way disagrees with the cut through. Likes the plan however, he cuts through Discovery himself. Mr. Pistoni sits on the HOA board for his community and they did not vote on the plan. They can review and vote on 9/18/19. If the plan has been done at other places we would like to try it. One kid being hit is enough for me personally.

Bill Kogerman resides at 1023 Partridge Court is concerned for emergency traffic and the safety of the community and kids. He is pleased to see it finally getting addressed and willing to give it a shot. Couple of things of importance to him regarding the plan is not just the speed. It's also field of vision on the street. It changes direction and elevation. Decrease in the reaction time for a driver's total stopping distance is going to increase. Take those things into consideration as the street is being used as a cross through.

Commissioner Buckley makes a motion to accept the proposed recommendations by engineering staff as presented. Commissioner Hansen seconds the motion. Motion carried by majority vote.

AYES: COMMISSIONERS: CHRISTIAN, COLLINS, BRIDGE, BUCKLEY, HANSEN, MAKROGIANNIS

NOES: COMMISSIONERS:

ABSTAINS: COMMISSIONERS:

Commission Hansen would like a follow up after completion.

## **8. REPORTS AND INFORMATION ITEMS**

### **A. Engineering Staff Updates**

- New signal in operation at North City Drive and North Twin Oaks Valley Road, providing access to the University District area.
- New signal in operation at Radiance Way and San Marcos Blvd, providing access to new skyline development.
- All all-way stop sign plaques have 2/3/4 way supplemental plaques mounted below. Per current CAMUTCD standards, an all-way supplemental plaque replaces the previous standards.
- Engineering staff evaluated major streets that currently have no left edgeline striping adjacent to raised center medians. Per CAMUTCD standards, edgeline striping should be used to delineate the left edge of the roadway. Staff recommends installation of left edgeline markings to improve visibility of raised center medians during nighttime periods and to improve traffic safety.
- West Linda Vista drive was reevaluated due to a recent roadway collision due to unsafe speed through the roadway curve. Staff installed chevron signs for curve warning and relocated 40 mph speed limit sign to after the curve warning signs.
- Update on intersection of Sycamore and Olive: installation of no left turn for semi trucks over 26 ft.

### **B. San Diego County Sheriff's Department Traffic Collision Summary And Accident Investigation Log**

- 8 DUI arrests, 2 DUI collisions, 35 collisions, only 8 people injured in the month of August

### **C. Traffic Commission Commentary:**

- Commissioner Phil comments on start of school collision at Double Peak School entrance/exit. Traffic Sergeant, Nicholas Maryn explained extra motor units are

recruited during this time of year for additional traffic enforcement for nearby schools.

- Commissioner Buckley makes an official request of the Engineering Department to investigate the limited visibility of Linda Vista Drive up to West Linda Vista Drive.
- Commissioner Debra makes a comment on speed on Melrose from San Elijo to Rancho Santa Fe.

**D. Staff Commentary:**

**9. ADJOURNMENT:** Chairman Collins adjourned the meeting at 6:57 pm.

---

Arturo Rico, Chairman  
Traffic Commission

ATTEST:

---

Aurelia Velasquez, Secretary  
Traffic Commission

## AGENDA REPORT

### Meeting of the San Marcos Traffic Commission

**MEETING DATE:** December 4, 2019  
**AGENDA ITEM NO:** 7A  
**SUBMITTED BY:** Michael Rafael, P.E. – Senior Civil Engineer *MR*  
**APPROVED BY:** Nic Abboud, P.E. – Principal Civil Engineer *na*  
**SUBJECT:** Proposed All-Way STOP Control at the Intersection of Knob Hill Road and Matin Circle

#### BACKGROUND:

A request was received from a representative of the St. Petka Serbian Orthodox Church located on 1854 Knob Hill Road regarding the safety of pedestrian crossings at the intersection of Knob Hill Road and Matin Circle. She mentioned that the church has allowed the use of their property for additional parking during school pickup and drop-off times at Knob Hill Elementary in response to a request from the school. She expressed concerns of vehicular speeding occurring near this uncontrolled intersection where parents and school pedestrians cross. She is requesting "Child Crossing" or similar signs at either side of the street to warn motorists of potential pedestrian crossings.

#### EXISTING CONDITIONS:

The study area for this report is at the intersection of Knob Hill Road and Matin Circle. Knob Hill Road between Bennett Avenue and Nordahl Road is classified as a local street and meets the residential district criteria for a speed limit of 25 MPH per the California Vehicle Code (CVC). The segment is approximately 0.5 miles long and is a 2-lane roadway with street width of 40 feet. There are (2) two ALL WAY STOP controls at the intersections of Augusta Drive and Knob Hill Road and Deavers Drive and Knob Hill Road. Knob Hill Elementary School is located along this segment on the south side of Knob Hill Road. There is an existing vertical curve at the uncontrolled intersection of Matin Circle and Knob Hill Road with an approaching uphill street grade of 8 percent. Matin Circle serves the Ambiance condominium community which consists of several multi-family units. The intersection is also shared with a driveway access to St. Petka Church across the street from Ambiance driveway. The intersection is configured for right-in/right-out/left-out turning movements for both driveways based on the existing roadway striping (see attached map). There are existing acceleration merging lanes for the left-out movements from both driveways at the intersection. Left-turn movements entering Matin Circle and the church driveway from Knob Hill Road are restricted based on lack of adequate sight distance for approaching traffic. However, engineering staff observed vehicles violating the left turn restrictions.

The school district has an informal agreement with the Church to allow school parents to park in the church parking lot during school pick-up/drop-off periods. The additional parking has reduced traffic congestion at the school where on-site parking is limited. Parents and school pedestrians regularly

cross from the church parking lot to the south side at this uncontrolled intersection and walk westerly to the school during dismissal times and cross again on their way back to their vehicles.

**DISCUSSION:**

Engineering staff does not recommend pedestrian warning signs at an uncontrolled intersection where pedestrians can legally cross per the CVC (California Vehicle Code). However, based on the existing roadway and traffic conditions, City staff conducted an engineering study to determine the feasibility of implementing an ALL WAY STOP control or a pedestrian crosswalk at the subject intersection. Currently, the intersection is uncontrolled on Knob Hill Road and STOP-controlled on Matin Circle.

ALL WAY STOP controls are typically implemented based on criteria established per the California Manual on Uniform Traffic Control Devices (CA MUTCD). Installation of unwarranted stop signs is discouraged for it has been shown to result in higher speeds between STOP-controlled intersections, rolling stops through intersections, and increased noise pollution resulting from acceleration and braking. Following are the criteria considered in an engineering study for an ALL WAY STOP control implementation: five (5) or more reported crashes in a 12-month period that are correctible by multi-way stop control; at least 300 vehicles per hour entering the intersection from the major street; at least 200 units per hour of combined vehicular, pedestrian, and bicycle traffic entering the intersection from the minor street; and an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour. Other criteria that may also be considered include: the need to control left turn conflicts, the need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes, the need to account for line of sight restrictions at locations where road users cannot see conflicting traffic, and the need to improve traffic operations at two residential neighborhood collector (through) streets.

Engineering staff's research revealed that an ALL WAY STOP control at the intersection had been requested by Ambiance residents and the church back in 2001. However, based on previous Caltrans standards at that time, the warrants for all-way stop control did not account for lack of sight distance for approaching traffic and was based on traffic volumes and reported vehicle collisions only. Therefore, it was decided to have the intersection reconfigured to have right-in/right-out/left-out turning movements, without significantly impacting access to the church or the residential development due to available alternative access points. Left turning movements into the Ambiance development and the church were restricted based on lack of adequate sight distance for approaching traffic.

Staff observations indicate low turning traffic volume counts during the AM and PM peak periods (weekday). Pedestrian crossing volumes were also relatively low during the offpeak periods. However, staff observed a high number of school pedestrian crossings during the PM dismissal times (2:00-3:00 pm). Approximatley 54 pedestrians crossed on the westerly side of the intersection from the church to the south side of Knob Hill Road (see attached pedestrian crossing data).

Staff researched the collision history at the intersection within the last 5 years and found that no collisions were reported at the intersection.

Sight distances were measured to determine if there were line of sight restrictions at the intersection. A stopping sight distance of approximately 150 feet was measured to the west on Matin Circle. The stopping sight distance was found to be unrestricted to the east. The existing vertical curve at the intersection contributes to the reduction in line of sight.

A 24-hour speed and volume tube count was conducted along Knob Hill Road, west of Matin Circle that indicated an 85<sup>th</sup> percentile speed of 35 MPH for traffic traveling eastbound. Per the Caltrans Highway Design Manual (HDM), a stopping sight distance of 250 feet for a 35 MPH speed (85th percentile) is required, and the available sight distance is appropriate for speeds of 25 MPH or less. Therefore, there is an insufficient line of sight distance at the intersection for motorists turning left onto westbound Knob Hill Road from Matin Circle based on the 35 MPH prevailing speed. All other turning movements from Matin Circle and on the church driveway have a sufficient line of sight distance.

Based on the findings of this study, it is concluded that the subject intersection meets the criteria for an ALL WAY STOP control per the CA MUTCD based on insufficient sight distance at the intersection caused by the existing vertical curve and the observed pedestrian crossings at the intersection. A new ALL WAY STOP control would also help improve traffic operations and pedestrian safety at the intersection. Marked crosswalks are not required at ALL WAY STOP control intersections in residential areas.

#### **CONCLUSION AND RECOMMENDATIONS:**

Engineering staff recommends the installation of an ALL WAY STOP control at the intersection of Knob Hill Road and Matin Circle based on satisfying criteria for a multi-way STOP per the CA MUTCD. The recommendation includes the installation of new STOP signs, new STOP pavement legends, limit lines, "ALL WAY" plaques, and "STOP AHEAD" signs.

St. Petka Serbian Orthodox church would be required to install a new "STOP" sign, limit line, and all-way stop plaque within their right-of-way.

#### **Traffic Data/Roadway Information:**

##### **2019 Traffic Volumes:**

Knob Hill Road (Bennett Avenue to Nordahl Road) – 4,585 VPD (vehicles per day)

##### **Speed Limit:**

25 MPH (Prima Facie) per CVC code.

##### **Accident History (last 5 years):**

No Collisions reported.



**City of San Marcos**  
1 Civic Center Drive  
San Marcos, CA 92069

Unusual conditions:

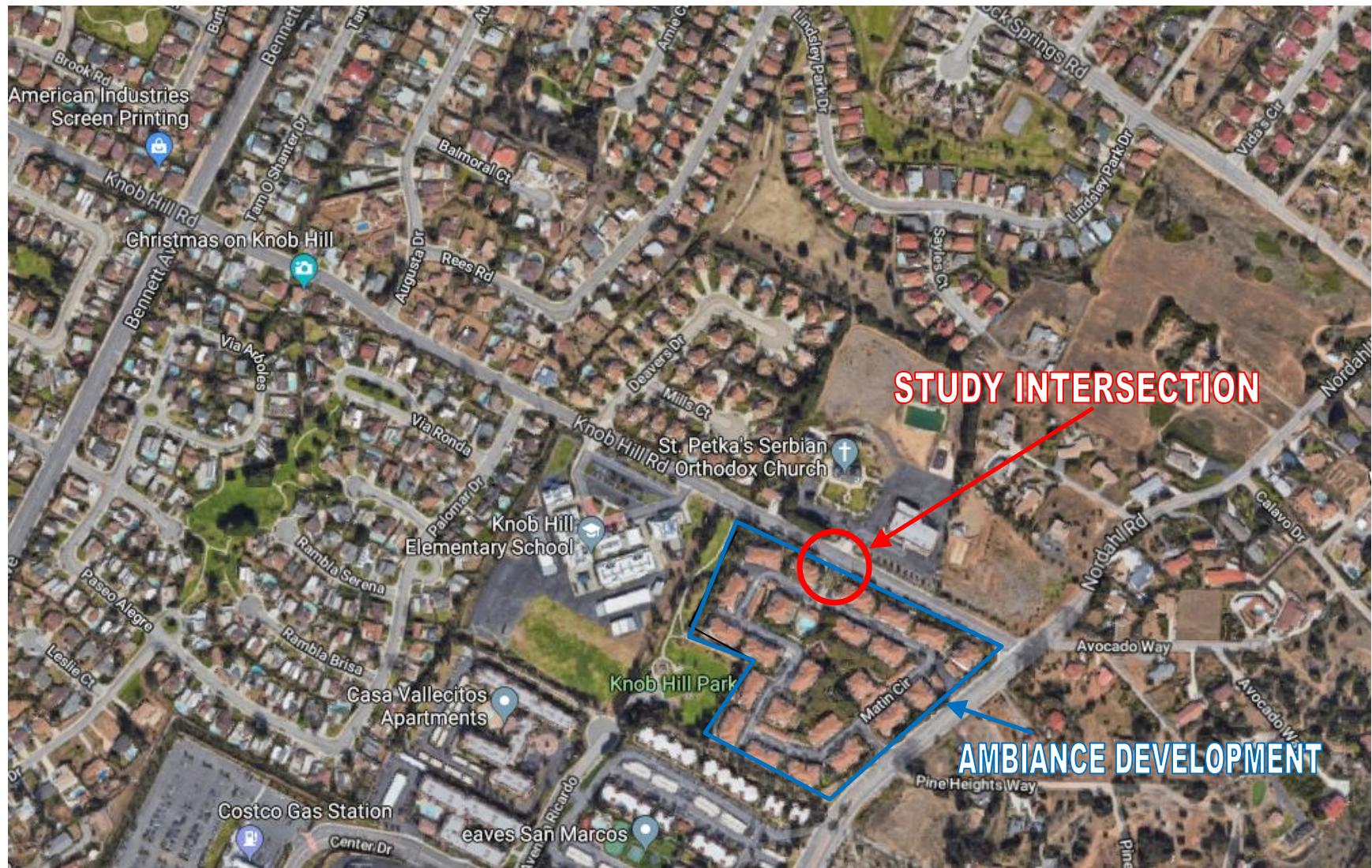
Hilly/rolling street terrain, residential street with cut-through traffic volumes.

**Attachment(s)**

Vicinity/Location Maps  
Sight Distance Exhibits  
Speed/Traffic Volume Data Collection  
Pedestrian Volume Data Collection  
Proposed ALL WAY STOP Exhibit  
Traffic Commission Reports  
Photos

## VICINITY MAP

### PROPOSED ALL WAY STOP CONTROL AT THE INTERSECTION OF KNOB HILL RD AND MATIN CIRCLE



DECEMBER 4, 2019  
CITY OF SAN MARCOS  
TC AGENDA #7A



\*NOT TO SCALE

LOCATION MAP  
EXISTING ROADWAY CONDITIONS – INTERSECTION OF KNOB HILL RD AND MATIN CIRCLE



DECEMBER 4, 2019  
CITY OF SAN MARCOS  
TC AGENDA #7A



\*NOT TO SCALE



85th Percentile Speed (MPH)	Posted Speed (MPH)	Required Sight Distance per Caltrans HDM (ft)
35	25	300

**KNOB HILL RD @ MATIN CIRCLE**  
**SIGHT DISTANCE EXHIBIT**  
**TC AGENDA #7A**

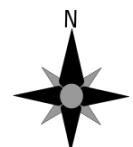


\*NOT TO SCALE



85th Percentile Speed (MPH)	Posted Speed (MPH)	Required Sight Distance per Caltrans HDM (ft)
35	25	300

**KNOB HILL RD @ MATIN CIRCLE  
SIGHT DISTANCE EXHIBIT  
TC AGENDA #7A**



\*NOT TO SCALE

Prepared by NDS/ATD  
Prepared by National Data & Surveying Services

Day: Tuesday  
Date: 10/1/2019

**City:** San Marcos  
**Project #:** CA19 4379 001

Knob Hill Rd E/O Matin Cir

DAILY TOTALS			NB 0	SB 0	EB 2,522	WB 2,063					Total 4,585
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	0	0	1	1	12:00	0	0	40	27	67
00:15	0	0	1	4	5	12:15	0	0	44	34	78
00:30	0	0	0	2	2	12:30	0	0	35	23	58
00:45	0	0	1	2	3	12:45	0	0	29	148	54
01:00	0	0	2	1	3	13:00	0	0	26	26	52
01:15	0	0	2	0	2	13:15	0	0	27	33	60
01:30	0	0	1	1	2	13:30	0	0	31	30	61
01:45	0	0	0	5	1	13:45	0	0	31	115	62
02:00	0	0	0	1	1	14:00	0	0	20	34	54
02:15	0	0	0	0		14:15	0	0	28	33	61
02:30	0	0	1	0	1	14:30	0	0	39	51	90
02:45	0	0	0	1	2	14:45	0	0	34	121	91
03:00	0	0	1	0	1	15:00	0	0	53	44	97
03:15	0	0	2	0	2	15:15	0	0	126	43	169
03:30	0	0	2	0	2	15:30	0	0	74	44	118
03:45	0	0	5	10	2	15:45	0	0	47	300	91
04:00	0	0	2	0	2	16:00	0	0	58	42	100
04:15	0	0	2	0	2	16:15	0	0	45	26	71
04:30	0	0	7	0	7	16:30	0	0	52	47	99
04:45	0	0	14	25	1	16:45	0	0	62	217	112
05:00	0	0	7	2	9	17:00	0	0	58	62	120
05:15	0	0	11	1	12	17:15	0	0	47	51	98
05:30	0	0	16	3	19	17:30	0	0	53	46	99
05:45	0	0	15	49	3	17:45	0	0	56	214	107
06:00	0	0	11	4	15	18:00	0	0	52	42	94
06:15	0	0	34	5	39	18:15	0	0	39	34	73
06:30	0	0	24	8	32	18:30	0	0	48	32	80
06:45	0	0	19	88	9	18:45	0	0	40	179	79
07:00	0	0	38	15	53	19:00	0	0	30	36	66
07:15	0	0	26	24	50	19:15	0	0	40	38	78
07:30	0	0	35	25	60	19:30	0	0	23	44	67
07:45	0	0	34	133	51	19:45	0	0	27	120	65
08:00	0	0	43	34	77	20:00	0	0	27	34	61
08:15	0	0	62	60	122	20:15	0	0	14	30	44
08:30	0	0	101	61	162	20:30	0	0	19	17	36
08:45	0	0	59	265	26	20:45	0	0	24	84	47
09:00	0	0	32	18	50	21:00	0	0	7	23	30
09:15	0	0	29	15	44	21:15	0	0	10	20	30
09:30	0	0	33	18	51	21:30	0	0	6	12	18
09:45	0	0	45	139	15	21:45	0	0	11	34	24
10:00	0	0	34	19	53	22:00	0	0	5	8	13
10:15	0	0	28	19	47	22:15	0	0	6	9	15
10:30	0	0	27	21	48	22:30	0	0	7	8	15
10:45	0	0	32	121	23	22:45	0	0	0	18	7
11:00	0	0	28	24	52	23:00	0	0	3	4	7
11:15	0	0	28	25	53	23:15	0	0	1	3	4
11:30	0	0	33	26	59	23:30	0	0	1	4	5
11:45	0	0	38	127	16	23:45	0	0	2	7	14
TOTALS			965	588	1553	TOTALS			1557	1475	3032
SPLIT %			62.1%	37.9%	33.9%	SPLIT %			51.4%	48.6%	66.1%
DAILY TOTALS			NB	SB	EB	WB					Total 4,585

DAILY TOTALS	NB		SB		EB		WB		Total 4,585
	0	0	0	2,522	2,063	15:15	16:30	15:15	
AM Peak Hour		08:00	07:45	07:45	PM Peak Hour		15:15	16:30	15:15
AM Pk Volume		265	206	446	PM Pk Volume		305	210	478
Pk Hr Factor		0.656	0.844	0.688	Pk Hr Factor		0.605	0.847	0.707
7 - 9 Volume	0	0	398	296	694	4 - 6 Volume	0	0	806
7 - 9 Peak Hour		08:00	07:45	07:45	4 - 6 Peak Hour		16:45	16:30	16:30
7 - 9 Pk Volume	0	0	265	206	446	4 - 6 Pk Volume	0	0	429
Pk Hr Factor	0.000	0.000	0.656	0.844	0.688	Pk Hr Factor	0.000	0.000	0.894

**SPEED**

Knob Hill Rd E/O Matin Cir

Day: Tuesday

Date: 10/1/2019

City: San Marcos

Project #: CA19\_4379\_001w

**West Bound**

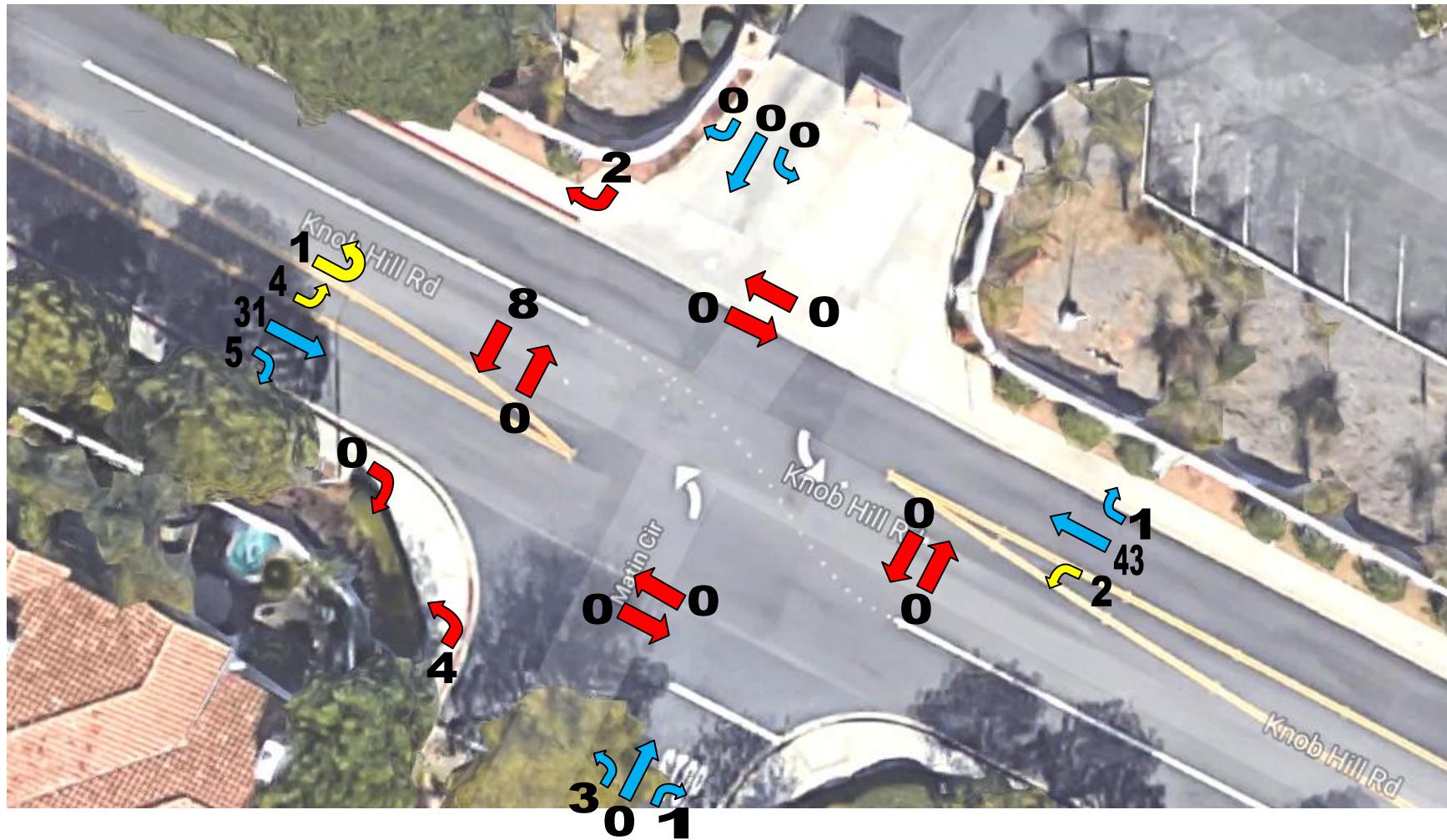
Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	2	6	2	0	0	0	0	0	0	0	0	10
01:00	0	1	0	2	0	0	0	0	0	0	0	0	0	3
02:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2
04:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:00	0	0	1	5	2	1	0	0	0	0	0	0	0	9
06:00	0	0	0	16	8	2	0	0	0	0	0	0	0	26
07:00	0	0	14	58	39	4	0	0	0	0	0	0	0	115
08:00	0	1	22	80	67	11	0	0	0	0	0	0	0	181
09:00	0	0	8	40	18	0	0	0	0	0	0	0	0	66
10:00	0	1	9	40	29	3	0	0	0	0	0	0	0	82
11:00	0	0	7	56	25	3	0	0	0	0	0	0	0	91
12:00 PM	0	0	7	68	30	3	1	0	0	0	0	0	0	109
13:00	0	0	6	71	41	2	0	0	0	0	0	0	0	120
14:00	0	1	9	104	60	1	0	0	0	0	0	0	0	175
15:00	0	0	10	104	57	4	0	0	0	0	0	0	0	175
16:00	0	0	16	90	56	3	0	0	0	0	0	0	0	165
17:00	0	2	17	102	85	3	1	0	0	0	0	0	0	210
18:00	0	0	10	81	53	3	0	0	0	0	0	0	0	147
19:00	0	0	10	78	63	4	1	0	0	0	0	0	0	156
20:00	0	0	4	61	38	1	0	0	0	0	0	0	0	104
21:00	0	0	5	42	19	1	1	0	0	0	0	0	0	68
22:00	0	0	5	16	10	1	0	0	0	0	0	0	0	32
23:00	0	0	1	8	5	0	0	0	0	0	0	0	0	14
<b>Totals</b>	<b>6</b>	<b>164</b>	<b>1132</b>	<b>707</b>	<b>50</b>	<b>4</b>								<b>2063</b>
<b>% of Totals</b>	0%	8%	55%	34%	2%	0%								100%

AM Volumes	0	3	64	307	190	24	0	0	0	0	0	0	0	588
% AM		0%	3%	15%	9%	1%								29%
AM Peak Hour		01:00	08:00	08:00	08:00	08:00								08:00
Volume		1	22	80	67	11								181
PM Volumes	0	3	100	825	517	26	4	0	0	0	0	0	0	1475
% PM		0%	5%	40%	25%	1%	0%							71%
PM Peak Hour		17:00	17:00	14:00	17:00	15:00	12:00							17:00
Volume		2	17	104	85	4	1							210
<b>Directional Peak Periods</b>		<b>AM 7-9</b>				<b>NOON 12-2</b>				<b>PM 4-6</b>				<b>Off Peak Volumes</b>
<b>All Speeds</b>		Volume		%		Volume		%		Volume		%		Volume
		296	↔	14%		229	↔	11%		375	↔	18%		1163
														56%

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Knob Hill Rd	West Bound	26	29	29	33	35	2063
Knob Hill Rd	East Bound	26	31	31	35	38	2522

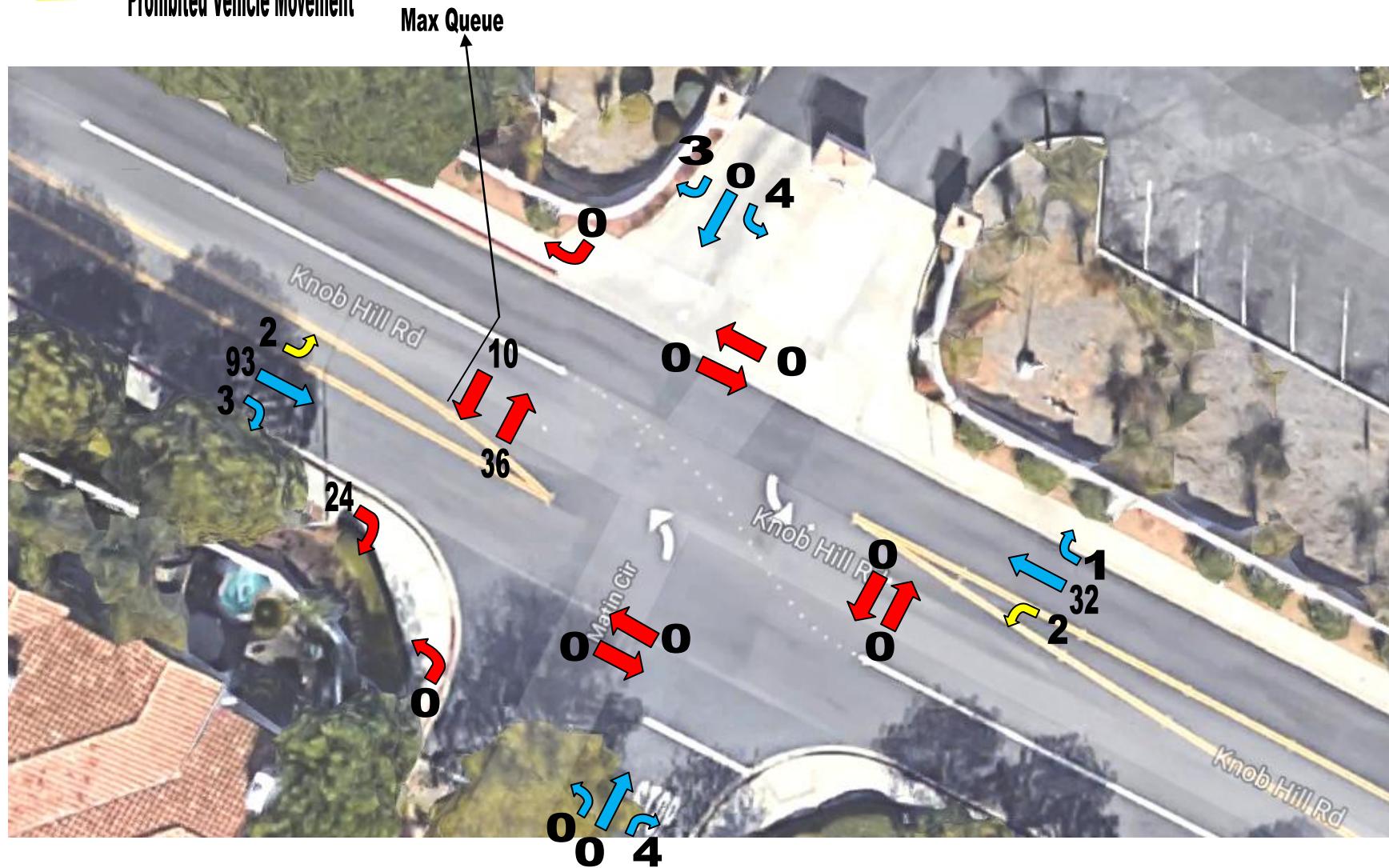
- Pedestrian Movement
- Vehicle Movement
- Prohibited Vehicle Movement

Date : 9/11/2019  
Time Interval: (2:00-2:15)



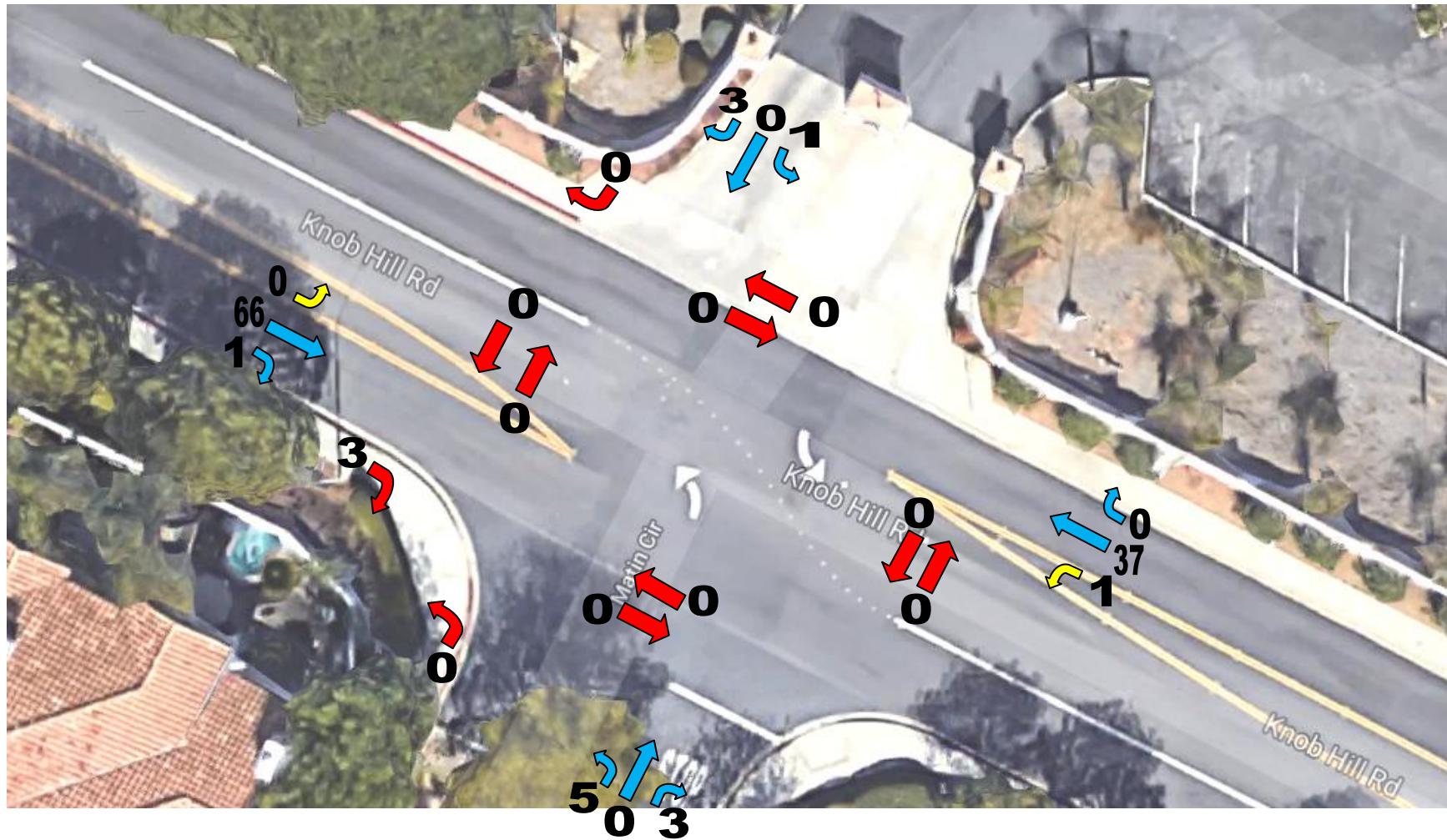
- Pedestrian Movement
- Vehicle Movement
- Prohibited Vehicle Movement

Date : 9/11/2019  
Time Interval: (2:15-2:30)



- Pedestrian Movement
- Vehicle Movement
- Prohibited Vehicle Movement

Date : 9/11/2019  
Time Interval: (2:30-2:45)

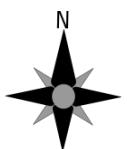




#### CONSTRUCTION NOTES:

- ① INSTALL RIGHT WHITE EDGELINE (DETAIL 27B) AND REMOVE EXISTING RED CURB (APPROX. 310').
- ② INSTALL DOUBLE YELLOW CENTER LINE (DETAIL 22).
- ③ INSTALL TWO WAY TURN LANE (DETAIL 31).
- ④ REMOVE EXISTING 'NO LEFT TURN' SIGN AND 'NO PARKING' SIGN AND REPLACE WITH NEW R1-1 (30"X30", HI-INTENSITY) 'STOP' SIGN AND R1-3P (18"X6", HI-INTENSITY) 'ALL WAY' SIGN ON EXISTING BREAKAWAY POST, STOP BAR AND STOP LEGENDS.
- ⑤ REMOVE EXISTING 'NO LEFT TURN' SIGN AND REPLACE WITH NEW R1-1 (30"X30", HI-INTENSITY) 'STOP' SIGN AND R1-3P (18"X6", HI-INTENSITY) 'ALL WAY' SIGN ON EXISTING BREAKAWAY POST, STOP BAR AND STOP LEGENDS.
- ⑥ INSTALL NEW R1-3P (18"X6", HI-INTENSITY) BELOW EXISTING R1-1 'STOP' SIGN.
- ⑦ INSTALL STANDARD LEFT TURN LANE (50 FT) AND LEFT TURN PAVEMENT ARROWS.
- ⑧ INSTALL NEW R1-1 (30"X30", HI-INTENSITY) 'STOP' SIGN AND R1-3P (18"X6", HI-INTENSITY) 'ALL WAY' SIGN ON NEW BREAKAWAY POST, STOP BAR AND STOP LEGENDS.
- ⑨ INSTALL NEW W3-1 (30"X30", HI-INTENSITY) 'STOP AHEAD' SIGN ON BREAKAWAY POST AND SUPPLEMENTAL 'STOP AHEAD' PAVEMENT LEGEND.

**PROPOSED TRAFFIC STRIPING  
IMPROVEMENTS**  
**KNOB HILL ROAD @ MATIN CIRCLE**  
**TC AGENDA #7A**



\*NOT TO SCALE

# R E P O R T

TO: Traffic Safety Commission  
Developmental Services Department  
FROM:

March 7, 2001

## STOP REQUEST AT KNOB HILL – MATIN CIRCLE AND SERBIAN MONASTERY

### BACKGROUND:

At the last regular Traffic Safety Commission Meeting, Niki Depew of the Ambiance HOA requested that we install an all way stop at their common driveway with the Serbian Monastery.

### DISCUSSION:

Currently there is a painted island with surface mounted channelizers restricting movement from Matin Circle and the Church driveway to right turns in and out. The intersection is currently operating like two "T" intersections restricted to right-turn only. The City currently has a capital project underway to replace the channelizers with a permanent raised median.

This analysis is done to determine the feasibility of establishing a 4-way stop controlled intersection permitting full turning movement from each approach.

The CALTRANS manual provides specific minimum warrants that should be met before an intersection is considered for stop control. The manual states that a "Multi-Way" intersection may be useful at some locations. Full intersection control should be used where the volumes of traffic on the intersecting streets are approximately equal. There are three specific conditions listed which would warrant full stop control. An intersection should meet at least one of these conditions to warrant an All-Way STOP sign, or have some unusual characteristic that may not be readily noticeable to motorists. The conditions listed in the CALTRANS manual are:

1. Interim measures for signal control.

Where a traffic signal control is warranted and urgently needed. A multi-way stop control can be installed as an interim measure to control traffic while arrangements are being made for the signal installation.

A traffic signal is not warranted at this location. However, the City would allow a signal to be placed here. Since the signal would only benefit the private drives on both sides, it would not be eligible for public funding.



THE CITY OF SAN MARCOS, CALIFORNIA

Traffic Safety Report  
Knob Hill-Matin All-Way STOP  
Page 2

2. High Accident Ratio.

Where an accident problem is indicated by five or more reported accidents within a twelve month period of a type susceptible to correction by a multi-way stop control. Such accidents include right-and left-turn collisions as well as right-angle accidents.

The earlier accident problem at this location was eliminated by installation of the channelizers.

3. Minimum traffic volumes.

- a) The total vehicular volume entering the intersection for all approaches should average 500 vehicles for any 8 hours of an average day, and
- b) The combined vehicular and pedestrian volume from the minor street or highway should average at least 200 units per hour, with an average delay to the minor street vehicular traffic of at least 30 seconds per vehicle during the maximum hour
- c) When the 85<sup>th</sup> percentile approach speed of the minor street traffic exceeds 40 miles per hour (MPH), the minimum vehicular volume warrant is 70 percent of the above total requirements.

None of these warrants are met in this location.

There are no plans to signalize this intersection. Visual observations of existing conditions shows that Knob Hill Road west of the intersection with Matin Circle and the Church driveway has a significant grade. The grade crests and restricts the visual line of sight. The available line of sight is not safe for crossing traffic.

The median (replacing the channelizers) has eliminated the safety issues. Installation of an unwarranted all-way STOP control at this location would result in a low rate of compliance by motorists on Knob Hill Road and cause an increase in rear-end accidents.

At the last approval granted the Church, they were required to pay an in-lieu fee for half the cost of installing a signal. So far, they have not elected to take advantage of that approval. If they proceed and the HOA is willing to fund the other half of the signal, the City would install the signal.

Traffic Safety Report  
Knob Hill-Matin All-Way STOP  
Page 3

**RECOMMENDATION:**

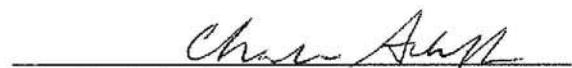
Staff does not recommend approval of an All-Way STOP control at this location.

Prepared/Submitted by:



Alan F. Schuler  
City Engineer

Reviewed by:



Charlie Schaffer, Director  
Developmental Services

LEITTS:REPORTS\KNOB HILL-MATIN ALL-WAY STOP

TRAFFIC SAFETY COMMISSION

ACTION

DATE & 10-03-01-#7A  
AGENDA ITEM #:

NO. 01-26

SUBJECT: KNOB HILL ROAD/MATIN CIRCLE MEDIAN

TRAFFIC SAFETY COMMISSION ACTION:

MOTION BY PEDERSON TO ACCEPT STAFF'S RECOMMENDATION TO INSTALL THE  
RAISED PAVEMENT MARKER MEDIAN AT KNOB HILL ROAD AND MATIN CIRCLE. SECOND  
BY BECKER. NONE OPPOSED. MOTION CARRIES.

CITY COUNCIL ACTION:

STAFF ACTION:

# R E P O R T

TO: Traffic Safety Commission

Developmental Services Department

FROM:

October 3, 2001

## KNOB HILL/MATIN CIRCLE RAISED MEDIAN

### DISCUSSION:

In March 2001, the Commission disapproved a request for an all way stop at the "knob" on Knob Hill at Matin Circle and the Serbian Church Monastery. As an alternate solution to the complaints received, staff has designed a "oversized raised pavement marker median" and striping plan that appears to satisfy all the motorists' needs, on both sides of Knob Hill, in a safe way.

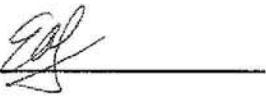
This plan differs from a raised median, in that it allows emergency vehicles to drive over the pavement markers when inadequate right -of- way can't accommodate the turning radius of fire trucks. The design allows left turns out of both the Ambiance apartments and the Serbian Church but does not allow left turns in. Residents of Ambiance would now be able to enter from Matin Circle or from Nordahl Road, giving them two (2) access points, one from the north and, south. They can also enter from the west and exit in either direction on Knob Hill.

Patrons and residents of the Serbian Church could enter from the east and exit in each direction on Knob Hill. Westbound traffic has adequate room to make a u-turn at Nordahl Road and make a right turn into the church.

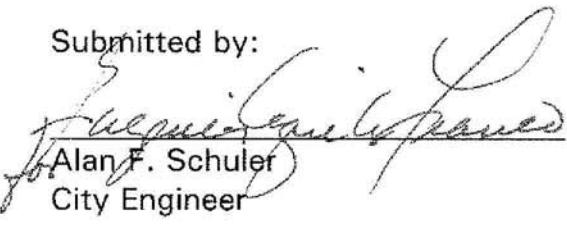
### RECOMMENDATION:

Staff recommends approval of the attached design for the raised pavement marker median plan.

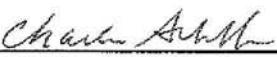
Prepared by:

  
Omar Dayani  
Senior Civil Engineer

Submitted by:

  
Alan F. Schuler  
City Engineer

Reviewed by:

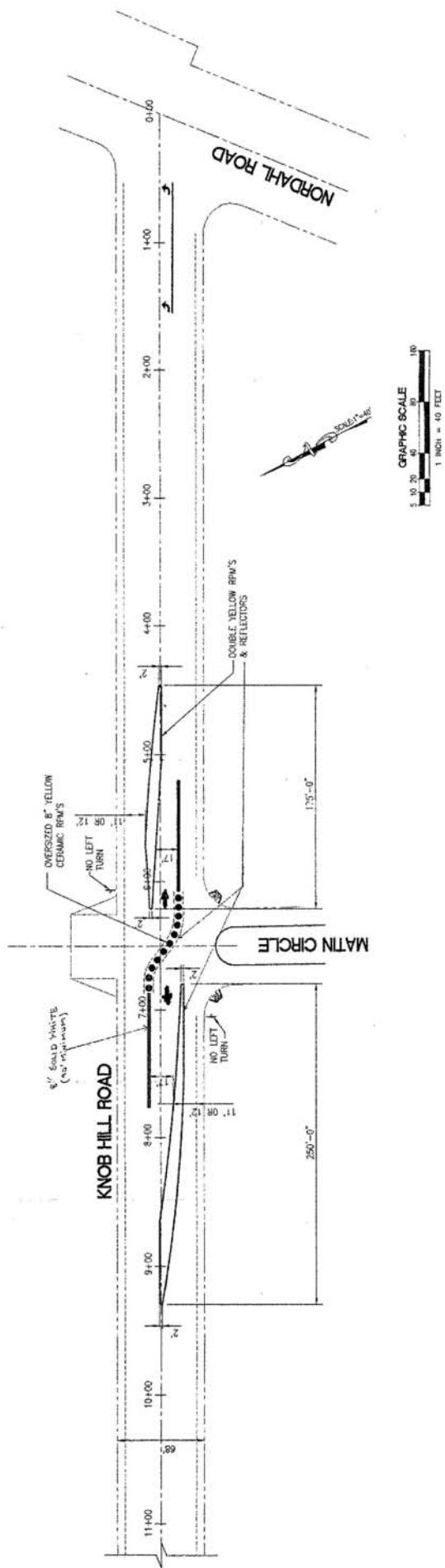
  
Charlie Schaffer,  
Director Developmental Services

Attachment: Improvement Plans  
LEIT\TSC\REPORTS\KNOBHILLMATINMEDIAN100301



THE CITY OF SAN MARCOS, CALIFORNIA

AGENDA ITEM  
# 7A





Looking eastbound on Knob Hill Rd from Church driveway



Looking westbound on Knob Hill Rd from Church driveway





Looking north from Matin Circle (St. Petka Church)



Looking westbound on Knob Hill Rd towards Matin Circle



Looking eastbound on Knob Hill Rd towards Matin Circle



Parents/school pedestrians crossing on westerly side of intersection during school dismissal times.