

SAFETY COMMISSION AGENDA STATEMENT

Item 2
Meeting Date 11/04/2020

ITEM TITLE: RESOLUTION OF THE SAFETY COMMISSION OF THE CITY OF CHULA VISTA RECOMMENDING THAT THE CHULA VISTA CITY COUNCIL INCREASE THE EXISTING SPEED LIMIT ON BIRCH ROAD BETWEEN LA MEDIA ROAD AND EASTLAKE PARKWAY FROM 45 MPH TO 50 MPH, AND THAT SCHEDULE X OF THE REGISTER MAINTAINED IN THE OFFICE OF THE CITY ENGINEER BE AMENDED TO REFLECT THIS SPEED LIMIT

SUBMITTED BY: Principal Traffic Engineer

Staff completed an Engineering and Traffic Survey (E&TS) on Birch Road between La Media Road and Eastlake Parkway (the “Segment”) in accordance with the California Vehicle Code (CVC) and California Manual on Uniform Traffic Control Devices (CAMUTCD), which indicate that the posting of speed limits that are not the maximum or standard prima facie speed limits defined by the CVC be determined by an E&TS for each street with a posted speed limit within the City. Based on the results of the E&TS, staff has determined that the speed limit on Birch Road between La Media Road and Eastlake Parkway be increased from 45 mph to 50 mph (see Attachment 1, Location Plat).

RECOMMENDATION: That the Safety Commission adopt the resolution.

DISCUSSION:

The CVC establishes minimum and maximum prima facie speed limits for all streets in the State. The minimum prima facie speed limit is 25 mph for specific roadway conditions and the maximum speed limit is 65 mph (55 mph for undivided roads) and an Engineering and Traffic Survey (E&TS) is required to change the prima facie speed limit from these preset limits for any City roadway that do not meet those conditions.

The CVC requires that local agencies review changes in local speed limits every five to ten years to determine if the existing street segment speed limits require updating due to the age of the E&TS or changes in roadway and traffic conditions. In October 2020, staff completed an E&TS for the segment of Birch Road between La Media Road and Eastlake Parkway in accordance with the California Vehicle Code.

As described in the California Vehicle Code, the survey shall include:

- (1) Prevailing speeds as determined by traffic engineering measurements;
- (2) Accident records;
- (3) Traffic/roadside conditions not readily apparent to the driver.

Currently, the existing posted speed limit on the Segment is 50 mph, and signs and pavement legends have indicated 50 mph since prior to October 2012. However, Ordinance 3189 approved in July 2011 establishes a speed limit of 45 mph on the Segment, and its underlying E&TS has

expired. It is proposed to update the E&TS and Ordinance 3189 based on the observed 85th percentile speed.

Physical Conditions

The following information describes the existing conditions along the subject Segment on Birch Road:

- Six-lane Prime Arterial.
- Length/Width – 1.29 miles long and 88’ to 124’ wide.
- Average Daily Traffic: 19,704 (2020)
- Number of Lanes: 6 lanes (3 per direction) from La Media Rd to Millenia Ave. 5 lanes (3 WB and 2 EB) from Millenia Ave to Orion Ave. 4 lanes (2 per direction) from Orion Ave to Eastlake PW
- Existing Speed Limit – Posted 50 mph.
- 85% Percentile Speed: 1) Eastlake PW to SR-125 – 49 mph. 2) SR-125 to Magdalena Ave – 52 mph. 3) Magdalena Ave to La Media Rd – 52 mph.
- Striping – Six lanes of traffic.
- Parking – Parking is not allowed along entire segment.
- Bike Lanes in both directions.
- Horizontal Alignment – Horizontal Curve with a radius of 1400’ over a length of 205.4’ yields a design speed of 51 mph.
- Vertical Alignment – Sag Vertical Curve with a 4.81% change over 580’ yields a design speed of 56 mph.
- Accident Rate History – The accident rate at this segment is 0.14 accidents per million vehicle miles, which is lower than the rate of 1.36 for similar roadways in the State of California (2016).

Traffic Calming

Given the short length and major roadway classification, no traffic calming measures are feasible.

Traffic Calming Measure	Applicable?	Feasible?	Implemented?
Police SAM Trailer	Y	N	N
Large Signs/Legends	Y	N	N
Narrowed Lanes	N	N	N
Striped Chicanes	N	N	N
Permanent Feedback Sign	N	N	N
Speed Cushions	N	N	N
Curb Extensions	N	N	N
Traffic Circles/Diverters	N	N	N

Speed Enforceability

If the proposed speed increase is not approved, the following are the only means of enforcing speed on the Segment:

- Basic Speed Law: police car matches speed of vehicle and determines that speed is unsafe for current conditions. Infeasible due to insufficient police availability and the segment is too short.
- Maximum Speed Law: use RADAR/LiDAR methods to enforce speed limit of 65 mph.

If the proposed speed limit is approved, police can use RADAR/LiDAR to enforce the approved posted speed limit.

CONCLUSION:

When speed limits are appropriately established the following objectives are achieved:

- Meaningful, unambiguous enforcement
- Voluntary public compliance
- Clear identification of the unreasonable violator
- Elimination of unjustifiable “tolerances” of higher speed travel

Based on the 85th percentile speed of the roadway, as well as a low collision rate outlined in the Engineering/Traffic Survey, staff has is recommending the speed limit increase.

Should the City Council establish the proposed 50 mph speed limit, Schedule X of the register maintained in the Office of the City Engineer be amended to reflect the speed limit increase:

- Birch Road, between La Media Road and Eastlake Parkway, proposed Speed Limit Increase to 50 mph.

FISCAL IMPACT:

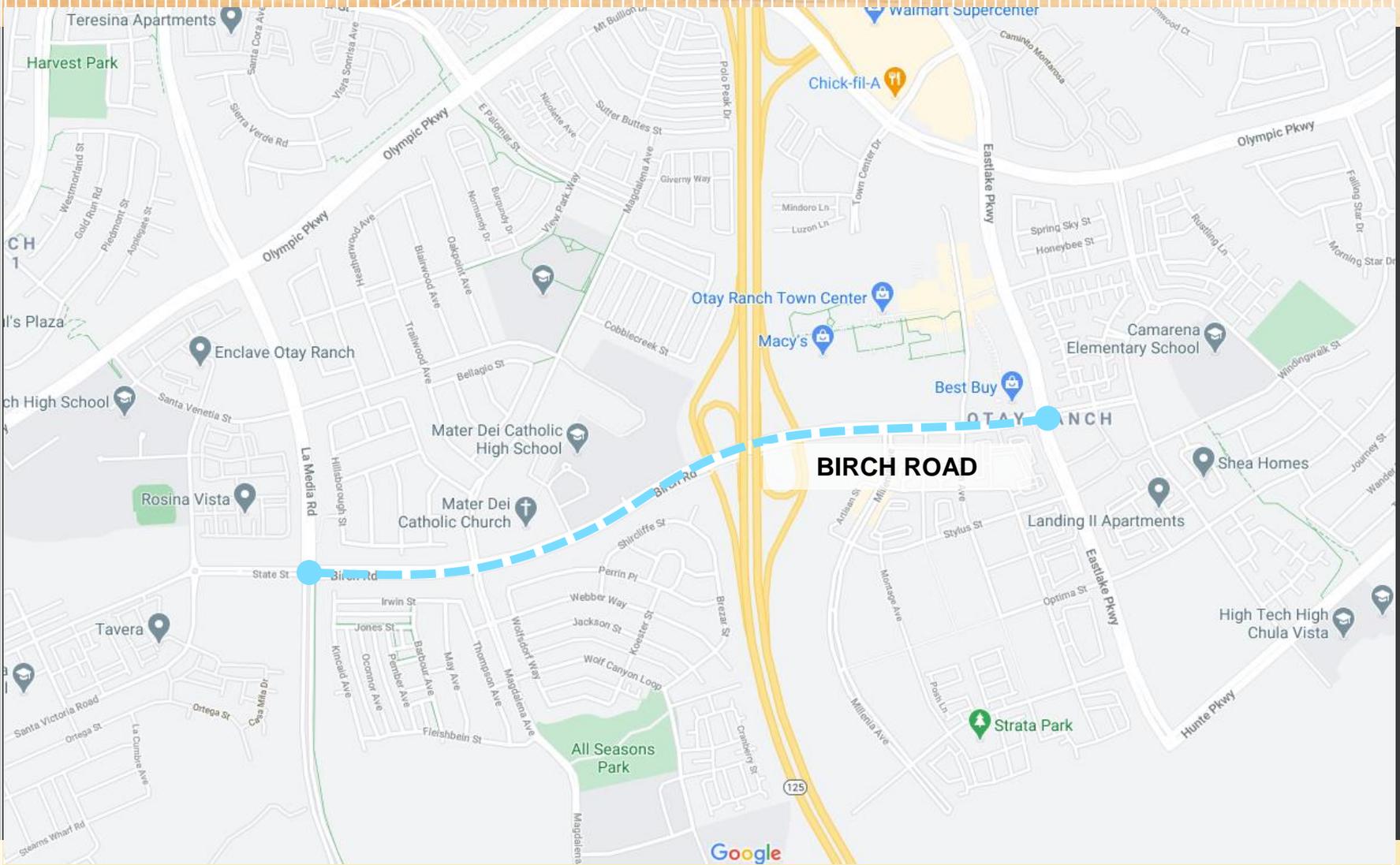
There is no fiscal impact with the increase of the speed limit because existing signs and marking already indicate the proposed speed limit.

Attachments:

1. Location Plat
2. Speed Survey



LOCATION MAP



CITY OF CHULA VISTA - VEHICLE SPEED SURVEY

SEGMENT UNDER STUDY: Birch Road (La Media Road - Magdalena Avenue)

DATE: 10/28/2020 SURVEY SITE: Mid-block POSTED SPEED: 50 mph

TIME START: 12:25 PM TIME END: 12:47 PM WEATHER: Clear

MPH	DIRECTION: <u>EB</u> = O <u>WB</u> = /																TOTAL	%	CUM %
	5				10				15				20						
65																	0	0%	100%
64																	0	0%	100%
63																	0	0%	100%
62																	0	0%	100%
61																	0	0%	100%
60																	0	0%	100%
59																	0	0%	100%
58	/	/															2	2%	100%
57																	0	0%	98%
56	O	/	/	/													4	4%	98%
55																	0	0%	95%
54	/																1	1%	95%
53	O	O	O	/	/	/	/										7	6%	94%
52	O	O	O	/	/	/	/										7	6%	87%
51	O	O	O	/	/												5	5%	81%
50	O	O	O	O	O	/	/	/	/	/							10	9%	77%
49	O	O	O	O	O	/	/	/	/	/	/	/					12	11%	68%
48	O	O	O	O	/	/	/	/									8	7%	57%
47	O	O	O	/													4	4%	50%
46	O	O	O	O	/	/	/	/	/	/							10	9%	46%
45	O	O	O	/	/	/											6	5%	37%
44	O	O	O	/	/	/											6	5%	32%
43	O	O	O	O	O	/	/										7	6%	26%
42	O	O	/	/													4	4%	20%
41	O	O	O	/													4	4%	16%
40	O	O	/														3	3%	13%
39	O	O	O	O	O	O	/	/									8	7%	10%
38	/	/															2	2%	3%
37	O																1	1%	1%
36																	0	0%	0%
35																	0	0%	0%
34																	0	0%	0%
33																	0	0%	0%
32																	0	0%	0%
31																	0	0%	0%
30																	0	0%	0%
29																	0	0%	0%
28																	0	0%	0%
27																	0	0%	0%
26																	0	0%	0%
RECORDER: Nancy Chen																TOTAL NUMBER OF VEHICLES: 111			

85TH PERCENTILE: 52 mph

CITY OF CHULA VISTA - VEHICLE SPEED SURVEY

SEGMENT UNDER STUDY: Birch Road (Magdalena Avenue - SR-125)

DATE: 10/28/2020 SURVEY SITE: Magdalena Avenue - Mater Dei Drive POSTED SPEED: 50 mph

TIME START: 12:55 PM TIME END: 1:14 PM WEATHER: Clear

MPH	DIRECTION: <u>EB</u> = O <u>WB</u> = /																TOTAL	%	CUM %
	5				10				15				20						
65																	0	0%	100%
64																	0	0%	100%
63																	0	0%	100%
62																	0	0%	100%
61																	0	0%	100%
60																	0	0%	100%
59																	0	0%	100%
58	O																1	1%	100%
57	/																1	1%	99%
56																	0	0%	98%
55	O	/															2	2%	98%
54	O	/	/														3	3%	96%
53	O	O	O	O	/	/	/	/	/								9	8%	94%
52	O	O	O	O	O	/	/	/	/	/	/	/					12	11%	85%
51	O	O	O	/	/	/	/	/									8	7%	74%
50	O	O	O	O	O	/	/	/	/								9	8%	67%
49	O	O	O	O	O	O	O	O	O	/	/	/	/	/	/		15	14%	58%
48	O	O	O	O	O	/	/	/									8	7%	44%
47	O	O	O	O	O	O	O	O	/	/	/	/					12	11%	37%
46	O	O	O	O	O	O	O	/	/	/	/	/					12	11%	26%
45	O	/	/														3	3%	15%
44	O	O	/														3	3%	12%
43	O	/	/														3	3%	9%
42	O	/	/	/													4	4%	6%
41	/																1	1%	3%
40	/																1	1%	2%
39	/																1	1%	1%
38																	0	0%	0%
37																	0	0%	0%
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32																	0	0%	0%
31																	0	0%	0%
30																	0	0%	0%
29																	0	0%	0%
28																	0	0%	0%
27																	0	0%	0%
26																	0	0%	0%
RECORDER: Nancy Chen												TOTAL NUMBER OF VEHICLES: 108							

85TH PERCENTILE: 52 mph

CITY OF CHULA VISTA - VEHICLE SPEED SURVEY

SEGMENT UNDER STUDY: Birch Road (SR-125 - Eastlake Parkway)

DATE: 10/28/2020 SURVEY SITE: Millenia Avenue - Orion Avenue POSTED SPEED: 50 mph

TIME START: 1:20 PM TIME END: 2:02 PM WEATHER: Clear

MPH	DIRECTION: <u>EB</u> = O <u>WB</u> = /																TOTAL	%	CUM %					
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80				85	90	95	100	
65																					0	0%	99%	
64																						0	0%	99%
63																						0	0%	99%
62																						0	0%	99%
61																						0	0%	99%
60																						0	0%	99%
59																						0	0%	99%
58																						0	0%	99%
57																						0	0%	99%
56																						0	0%	99%
55	/																					1	1%	99%
54	/																					1	1%	98%
53	/	/																				2	2%	97%
52	/	/	/																			3	3%	96%
51	/																					1	1%	93%
50	O	O	/	/																		4	4%	92%
49	O	O	O	/	/	/																6	5%	89%
48	O	/	/																			3	3%	83%
47	O	O	O	/	/	/	/															7	6%	81%
46	O	O	O	O	/	/	/															7	6%	75%
45	O	O	/	/	/	/	/	/	/	/	/											11	10%	68%
44	O	O	O	O	O	/	/	/	/													9	8%	59%
43	O	O	O	O	O	O	/	/	/	/												10	9%	51%
42	O	O	O	O	O	O	O	O	/	/	/	/										12	11%	42%
41	O	O	O	/	/	/	/	/														8	7%	32%
40	O	O	O	O	/																	5	4%	25%
39	O	O	O	O	O	O	O	O	/	/	/											11	10%	20%
38	O	O	O	O	/	/																6	5%	11%
37	O	/																				2	2%	5%
36	O	O	O	/																		4	4%	4%
35	O																					1	1%	1%
34																						0	0%	0%
33																						0	0%	0%
32																						0	0%	0%
31																						0	0%	0%
30																						0	0%	0%
29																						0	0%	0%
28																						0	0%	0%
27																						0	0%	0%
26																						0	0%	0%
RECORDER: Nancy Chen												TOTAL NUMBER OF VEHICLES: 114												

85TH PERCENTILE: 49 mph