



Administrative Report

Date: August 26, 2019

To: Public Works Commission

From: Department of Public Works

**Subject: RINDGE LANE AND MATHEWS AVENUE
ALL-WAY STOP CONTROLS**

RECOMMENDATION:

1. Install all-way stop controls, including appropriate signage and pavement markings as designed by Staff, at the intersection of Rindge Lane and Mathews Avenue

ALTERNATIVES AVAILABLE:

1. Install 10' red curb on the southeast corner of the intersection of Rindge Lane and Mathews Avenue.
2. Other actions as determined by the Public Works Commission.

SUMMARY:

In response to a petition submitted by residents, Staff has performed an analysis of all-way stop controls at the intersection of Rindge Lane and Mathews Avenue. The subject intersection was evaluated with respect to enhancing pedestrian and motorist safety. Vehicle volumes are elevated through this intersection during the AM peak period (7-9 a.m.) and PM peak period (4-6 p.m.). Field observations revealed some conflicts between vehicles and pedestrians during this period which could be reduced by enhancing the right-of-way traffic controls at the intersection. Installing all-way stop controls at the subject intersection could increase pedestrian and vehicle safety, reduce the occurrence of undesirable motorist and pedestrian behaviors, and improve intersection operations during peak volume periods.

A vicinity map of the study area is included in Attachment 1. The recommended traffic controls are illustrated in Attachment 2.

BACKGROUND:

Staff received a petition on October 15, 2018 requesting all-way stop controls at the intersection of Rindge Lane and Mathews Avenue. A copy of the petition and resident correspondence is included as Attachment 3. Staff waited to study the subject intersection until after construction of the new commercial center was complete in order to accurately assess intersection operations. Prior to construction, local residents relayed their concerns to Staff regarding the current intersection design and the various conflicts it causes for pedestrians and vehicles. Staff proceeded to collect data, perform field observations,

obtain measurements, and gather vehicle speeds, turning movements, and pedestrian counts.

Rindge Lane is classified as a major collector roadway on the current California Road System Functional Classification System map (CRS map 13V42). Due to its classification, the California Vehicle Code requires that an Engineering and Traffic Survey (E&T Survey) be conducted to establish a legal speed limit that can be enforced by radar or other electronic means. The current E&T Survey supports the posted speed limit of 25 mph along the roadway segment. Rindge Lane runs north-south and stopping is prohibited on both sides of the street. It is approximately 28 feet wide with one travel lane in each direction and is separated by a dashed yellow centerline. There are all-way stop controls approximately 300 feet to the north of the subject intersection at Nelson Avenue and a signalized intersection approximately 300 feet to the south at Artesia Boulevard.

Mathews Avenue is classified as a local street on the current CRS map 13V42 and has a 25 mph residential prima facie speed limit. It runs west-east and is one-way in the eastbound direction. It is stop controlled at the subject intersection and has no crosswalks. It is approximately 28 feet wide with one eastbound-only travel lane and parallel parking allowed on both the north and sides of the street. There are eastbound one-way stop controls approximately 600 feet to the west of the subject intersection at Blossom Lane and all-way stop controls approximately 800 feet to the east at Vail Avenue.

Fronting development in the vicinity of the intersection is predominantly single and multi-family residential. Several commercial sites including recently-opened CVS Pharmacy and Grocery Outlet are located directly south of the subject intersection on Artesia Boulevard. A driveway that accesses these businesses is located approximately 35 feet south of the subject intersection. There are sidewalk, curb and gutter improvements on all legs.

August 26, 2019

Rindge Lane and Mathews Avenue
All-Way Stop Controls



On Mathews Avenue looking East



On Rindge Lane looking South



On Rindge Lane looking North



On Mathews Avenue looking West

ANALYSIS:

Vehicle turning movements along with pedestrian counts were obtained at this intersection during the AM peak period (7-9 a.m.) and PM peak period (4-6 p.m.) on August 14, 2019. Vehicle speed data was also obtained at the intersection on August 12, 2019. The data revealed the following:

- AM Peak Hour vehicle volume on Rindge Lane was 548 vehicles per hour
- PM Peak Hour vehicle volume on Rindge Lane was 507 vehicles per hour
- AM Peak Hour vehicle volume on Mathews Avenue was 68 vehicles per hour
- PM Peak Hour vehicle volume on Mathews Avenue was 82 vehicles per hour
- 15 pedestrians crossed Rindge Lane during the AM peak hour period
- 9 pedestrians crossed Rindge Lane during the PM peak hour period
- The 85th percentile speed of traffic on Rindge Lane at Mathews Avenue was 28 mph, average speed was 25 mph, and the highest recorded speed was 36 mph

A review of the available SWITRS accident data at this intersection during the previous three-year period, ending 7/22/2019, revealed the following accidents:

- January 22, 2016 – Broadside Accident (Vehicle-Vehicle)
- May 12, 2017 – Broadside Accident (Vehicle-Bicyclist)
- May 22, 2019 – Hit Pedestrian (Vehicle-Pedestrian)

All reported accidents may be correctable by all-way stop controls.

For the legal speed limit of 25 mph on Rindge Lane, the minimum stopping sight distance per Table 201.1 of the California Highway Design Manual is 150 feet. Field measurements revealed that visibility for the east approach of Mathews Avenue looking both north and south onto Rindge Lane exceeds the minimum stopping sight distance. However, minor tree trimming improvements on the northeast corner of the intersection and the addition of approximately 10' red curb on the southeast corner of the intersection could enhance sight visibility.

DISCUSSION:

The California Manual on Uniform Traffic Control Devices (CA MUTCD) provides guidance for the installation of all-way stop controls. It suggests that all-way stop controls may be considered when:

- **Warrant A** - Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.

- **Warrant B** – When there are five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
- **Warrant C** - Where the vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour. When the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants may be reduced to 70 percent of the above values.
- **Warrant D** - Where no single criterion is satisfied, but where Criteria B and C are all satisfied to 80 percent of the minimum values.

The CA MUTCD also provides other criteria that may be considered, including:

- The need to control left-turn conflicts;
- The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and,
- An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where all-way stop control would improve traffic operational characteristics of the intersection.

Based on the above information, the collision and volume warrants (Warrants B-D) are not satisfied and do not support all-way stop control installation. With respect to the volume criteria, there are not sufficient volumes on Mathews Avenue to meet the minimum threshold. Warrant A, related to the need for a traffic signal, is also not satisfied. With regards to the additional criteria allowed for consideration in the CA MUTCD in conjunction with field observations, the following appears applicable to justify all-way stop controls at this intersection:

Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop.

Field observations revealed that a significant number of southbound vehicles on Rindge Lane form a long queue at the signalized intersection at Artesia Boulevard specifically during the PM peak period. Queued vehicles were observed from Artesia Boulevard to Nelson

Avenue blocking the subject intersection and a driveway that accesses the CVS Pharmacy and Grocery Outlet site. During this condition, eastbound vehicles on Mathews Avenue seemed to experience diminished sight visibility with respect to northbound vehicles on Rindge Lane. Traffic counts also revealed a moderate number of pedestrians crossing Rindge Lane during peak periods, creating the potential for significant pedestrian and motorist conflicts.

Based on the above information, it is recommended that all-way stop controls be installed at the intersection of Rindge Lane and Mathews Avenue to increase pedestrian safety, as well as improve traffic flow during the more heavily congested AM and PM peak periods. In conjunction with this action, it is also recommended that appropriate signage and pavement markings be installed. The recommended modifications are illustrated in Attachment 2.

RECOMMENDATION:

1. Install all-way stop controls, including appropriate signage and pavement markings as designed by Staff, at the intersection of Rindge Lane and Mathews Avenue.

ALTERNATIVES AVAILABLE:

1. Install 10' red curb on the southeast corner of the intersection of Rindge Lane and Mathews Avenue.
2. Other actions as determined by the Public Works Commission.

COORDINATION:

Residents within one block of the intersection were sent notices of the Public Works Commission meeting to encourage providing input. A copy of the resident notification letter is included in Attachment 3.

Prepared by:

Nik Boas, Associate Civil Engineer

Submitted by:

Ted Semaan, Public Works Director

Attachment 1 – Vicinity Map

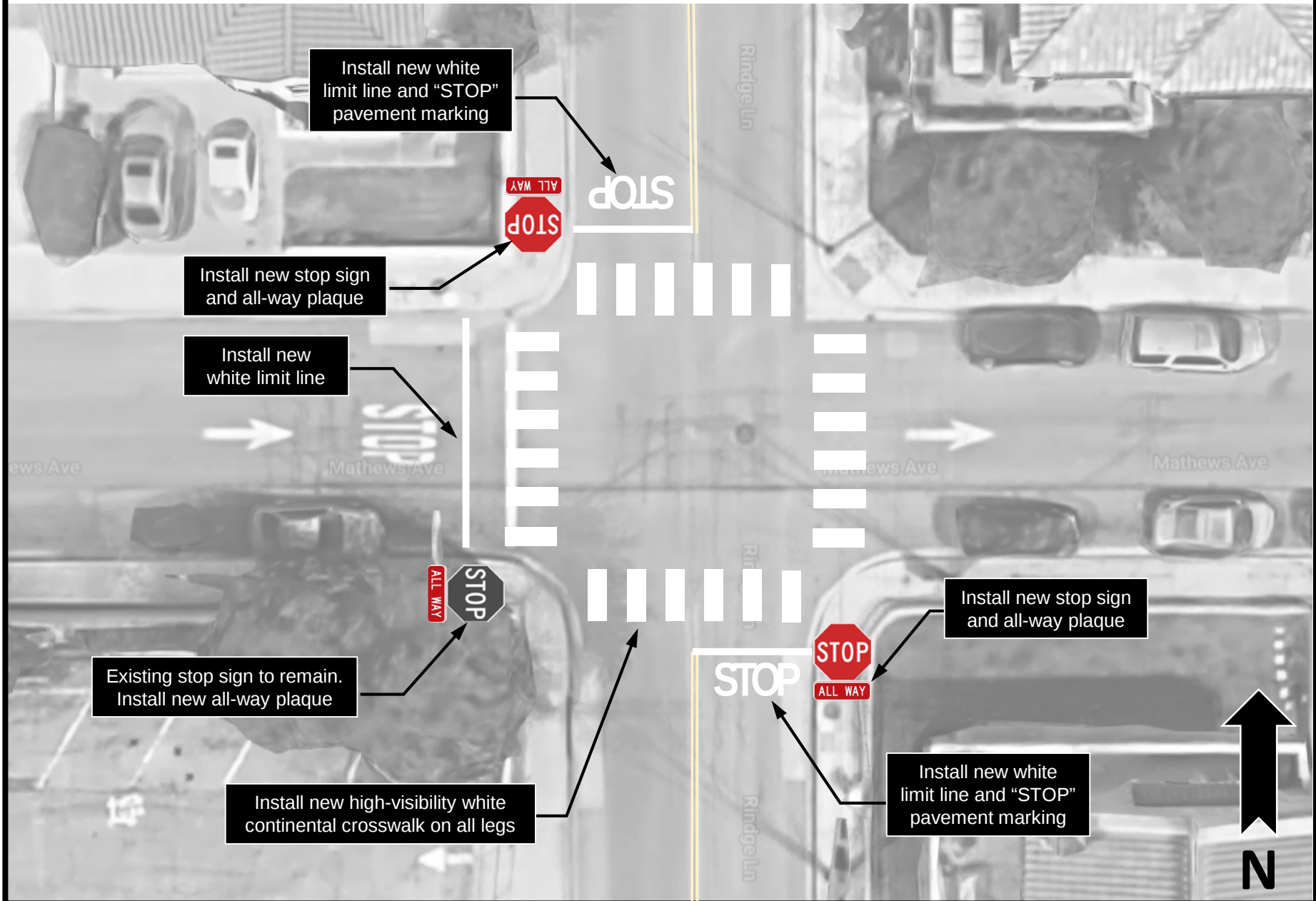
Attachment 2 – Recommended Intersection Modifications

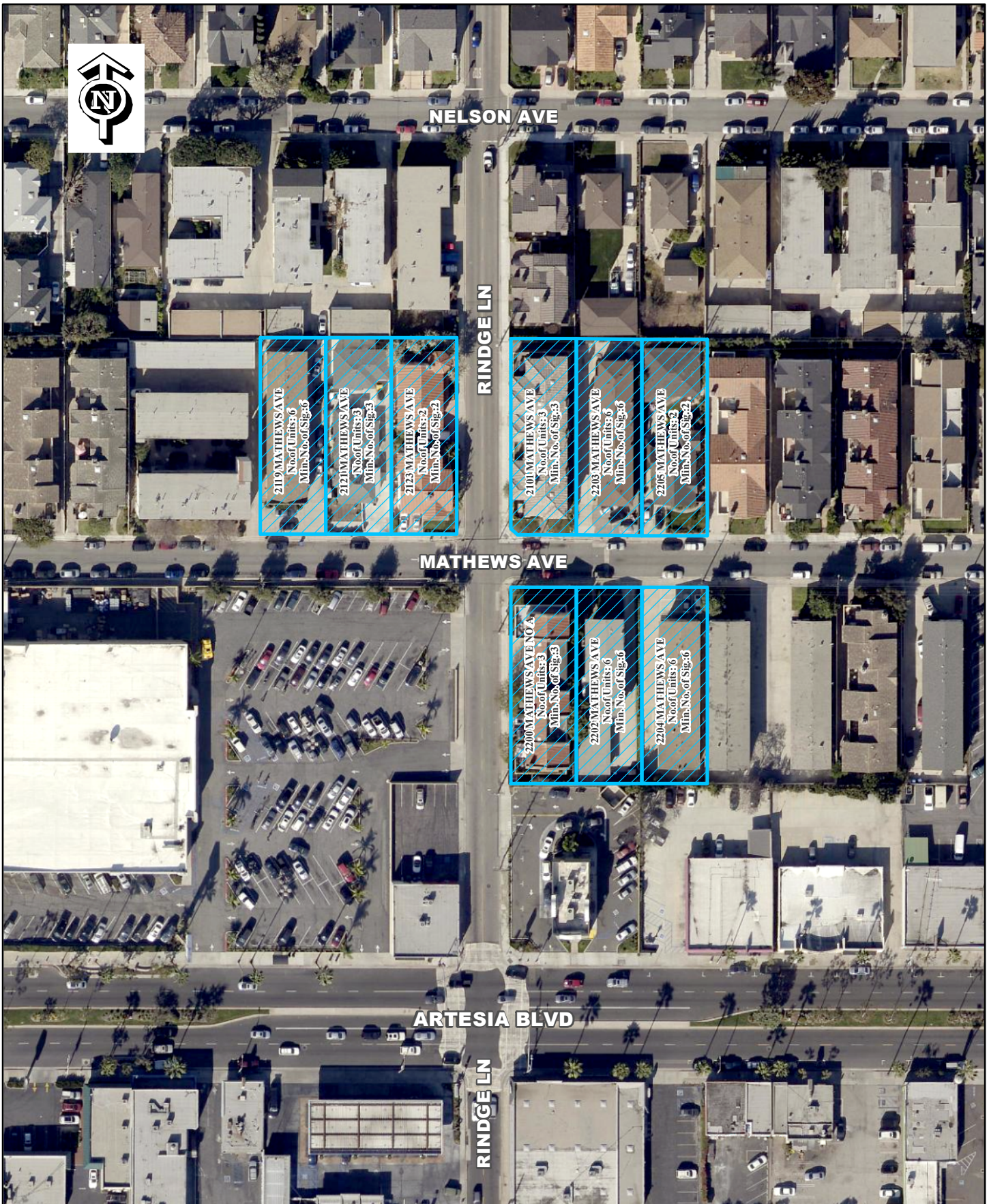
Attachment 3 – Resident Petition, Correspondence & Meeting Notification Letter

Attachment 1
Vicinity Map



Attachment 2 All-Way Stop Control



**ADDRESS : NUMBER UNITS : MINIMUM NUMBER SIGNATURES**

NOTE: For multi-unit properties, the HOA president, property manager, or property owner may sign as representative for the entire property.



PETITION FOR STOP SIGN STUDY

INSTRUCTIONS: This petition is required to initiate a study to determine the need for STOP signs at an intersection and does not guarantee that STOP signs will be warranted nor commit the City of Redondo Beach to the installation of STOP signs at the study intersection. This petition is to be submitted to the City Engineer within six months from the date of the first signature after being signed by those occupants shown on the City-supplied map of required signatures. For multi-unit properties, the homeowners/condo association president or property owner may sign as representative for the entire property. Signatures must be dated; undated signatures will not be tallied.

We, the undersigned, desire, agree with, and request the installation of STOP signs at the intersection of:
Rindge Ln and Mathews Ave
Street Name Street Name

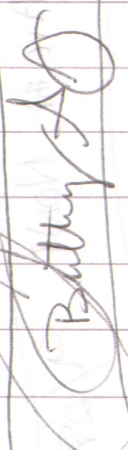
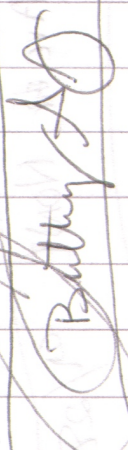
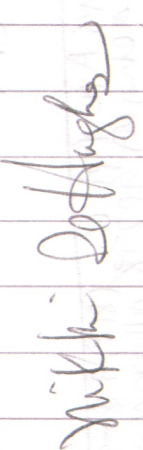
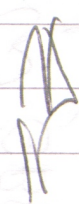
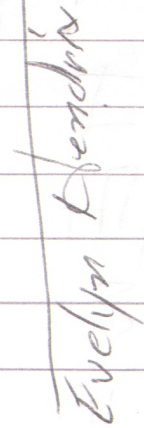
for the following reason(s):

there are a lot of accidents at the corner

By signing this petition, I acknowledge that I have read the attached "Requests for STOP Signs at Intersections of Residential Streets."

NAME (PRINTED)	SIGNATURE	ADDRESS	PHONE	EMAIL	DATE
James Martin	[Signature]	2104 Rize Loe.	714 330388	macewinn.jones@gmail.com	9/28/18
Cassandra Brown	[Signature]	2003 Mathews Ave. B	818 2591603	blessb45t@icloud.com	9/28/18
Taraneh Quinsaat	[Signature]	2200 Mathews Ave 1	703 799 8015	shywildcat1000@yahoo.com	9/28/18
Seneca Jamboucin	[Signature]	2200 Mathews Ave 3	424 3537010	lawar@gmail.com	9/28/18
Rosemaria Guffey	[Signature]	2202 Mathews Ave A	310 421-1231		9/28/18
Nenya Cole	[Signature]	2202 Mathews Ave Apt 5	700 985-5101	MColeOP@gmail.com	9/28/18
William [unclear]	[Signature]	2202 Mathews Ave Apt 5	714 206 8198	MeeLynTalk@yahoo.com	9-28-18
Sevadas John	[Signature]	2202 Mathews Ave	424-392-5769	AKK	9/28/18
M K GEORGE	[Signature]	2204 Mathews Ave Apt D	310 3761419	Not available	9/28/18
ROBERT GRABARSKY	[Signature]	2123 MATHEWS AVE	(408) 799-2010	ROBGRABARSKY@AOL.COM	9/28/18
Gerardo fernandes	[Signature]	2121 MATHEWS AVE. B	424 3904044		9-28-18

Petition Spokesperson: Jessica Revere Phone No.: 310.489.8280 Page 1 of 4

Name	Signature	Address	Phone	Email	Date
Michael		2204 Mathews			10/1/18
Ashvren		Ave Apt. E			10/1/18
Jenethem		2202 Mathews Ave E			10/1/18
Brittney		2121 Mathews Ave			10/1/18
Nikki		2121 Mathews Ave #A			10/1/19
Monica Calbarca		2204 Mathews Ave Apt B			10/1/18
JerGeorge		2205 Mathews Ave			10/1/18
Tinsue Tekeste		2119 Mathews ave Apt E			10/12/18
Evelyn Dendora		2202 Mathews E			10-12-18

Name	Signature	Address	Phone	Email	Date
Kari Alsbrook	Kari Alsbrook	2119 Mathews Ave #17 Redondo Beach CA 90278	310 978 5532	KARIALSOBROOK@Yahoo.com	9-28-19
Sharon Brickel	Sharon Brickel	2119 Mathews Ave #B 4 Catdog@roadrunner.com Redondo Beach, CA			9/28/2018
Jana Hosley	Jana Hosley	2119 Mathews Ave #C	None		9/28/18
ESine		2105 Rndy Ln			9/28/18
Allison Constante	Allison Constante	2203 Mathews Ave Apt. E Redondo Beach, CA 90278	(818) 798-4336 allisonconstante2@gmail.com		10/01/18
Glennys Dimore	Glennys Dimore	2203 Mathews Ave Apt F Redondo Beach, CA 90278	310-743-5097		
Jrma Gonzalez	Jrma Gonzalez	2803 Mathews Ave Apt C Redondo Beach CA 90278			10-1-18
Dionisio LEE		2102 Rndy Ln Redondo Beach		GBSCopp@comcast.com	10/1/18
JAVIER		2104 1/2 MATTHEWS			
				AVENUE 10-18	

Name	Signature	Address	Phone/Email	Date
Reisha Green	Reisha Green	2204 Matthews Ave #A	310- 908-1608	10-14-18



Public Works Department
Engineering Services Division

415 Diamond Street
Redondo Beach, California 90277
www.redondo.org

tel: 310 318-0661
fax: 310 374-4828

August 12, 2019

Resident

Redondo Beach, CA

**SUBJECT: ALL-WAY STOP REQUEST AT
RINDGE LANE AND MATHEWS AVENUE**

The City of Redondo Beach has reviewed conditions at the intersection of Rindge Lane and Mathews Avenue to determine whether all-way stop controls should be installed as requested by a resident petition.

Staff will present their recommendations at a regular meeting of the Public Works Commission on **Monday, August 26, 2019**. The meeting will be held in the **City Council Chambers**, located at **415 Diamond Street**, at **7:00 p.m.** Parking is available in the parking structure under the library or on adjacent streets. The Public Works Commission will review Staff's engineering report, receive public input, evaluate the installation of all-way stop controls and forward a recommendation to City Council for their approval. Your input would be greatly appreciated.

If you have any questions or comments, please contact me via telephone at (310) 318-0661, extension 4525, or via email at Nikolas.Boas@redondo.org.

Sincerely,

Nik Boas, P.E.
Associate Civil Engineer

cc: John Gran, District 4 Council Member
Laura Emdee, District 5 Council Member
Joe Hoefgen, City Manager
Ted Semaan, Director of Public Works
Andrew Winje, City Engineer
Gene Kim, City Traffic Engineer

Nikolas Boas

From: Susan Brilliant [REDACTED]
Sent: Friday, August 16, 2019 10:05 AM
To: Nikolas Boas
Subject: All-Way Stop Request at Rindge Lane & Mathews Avenue



ATTN: Email is from an external source; **Stop, Look, and Think** before opening attachments or links.

Dear Mr. Boas:

Thank you for the letter and opportunity to provide input. I am a resident living on Mathews Ave. near Rindge Lane and would support any controls that would promote safety and more mindful attention paid to pedestrians, cyclists and other automobile drivers. I trust Councilwoman Emdee will study the data and let us know the benefits and drawbacks of alternatives.

Thanks again,
Sue Brilliant

VIII. NEW BUSINESS

1. **RINDGE LANE AND MATHEWS AVENUE ALL-WAY STOP CONTROLS** – Install all-way stop controls, including appropriate signage and pavement markings as designed by Staff, at the intersection of Rindge Lane and Mathews Avenue.

Associate Civil Engineer Boas, presented the following:

- Background:
 - A petition from residents was received October 2018, to review traffic and pedestrian safety. The reason for the delay in getting to the Commission is because Staff waited until construction for the new CVS pharmacy and grocery outlet were complete, and traffic normalized.
 - Staff performed field evaluations during morning, afternoon, and evening peak periods over a three- day period. Peak hour vehicle counts were taken on August 14, 2019, and vehicle speeds were taken on August 12, 2019.
- Analysis:
 - Vehicle count results:
 - AM peak hour vehicle total was 616 – 548 vehicles on Rindge Lane, 68 on Mathews Avenue
 - AM peak hour pedestrian total was 15
 - Review of SWITRS data during past three years ending July 22, 2019 revealed three reported accidents. Two were broad side accidents, which could be correctable by an all-way stop. The third was a vehicle who hit a pedestrian in the intersection, and was a hit and run – possibly correctable by all-way stop controls.
 - Visibility meets the minimum stopping sight distance of 150' for the 25-mph speed limit
- Caltrans Warrants for installation of all-way stop controls:
 - Warrant A – As an interim measure for a traffic signal
 - Warrant B – 5 or more correctable accidents in 12 months
 - Warrant C – During highest hours of an average day:
 - Average of 300 vehicles on the major (uncontrolled) street
 - Average of 200 vehicles, pedestrians and bicycles on the minor (controlled) street
 - Required volumes reduced to 70% if 85th % speed > 40 mph
 - Warrant D – Warrants B and C satisfied 80%
- Additional CAMUTCD provides for additional criteria to be considered:
 - Need to control left-turn conflicts
 - Need to control vehicles/pedestrian conflicts near locations that generate high pedestrian volume
 - Locations where a road user, after stopping, cannot see conflicting traffic unless the conflicting cross traffic is also required to stop
 - Two residential collector streets of similar design would operate more efficiently with all-way stop controls
- Caltrans Warrants A-D are not satisfied according to the data obtained by Staff.
- Other criteria justify consideration of all-way stop control installation:
 - Locations where a road user, after stopping cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop

- Southbound vehicles on Rindge Lane form a queue at the signalized intersection of Artesia Boulevard which restricts sight visibility in the PM peak period for vehicles on Mathews Avenue

Staff recommends installation of all-way stop controls, including appropriate signage and pavement markings as designed by Staff, at the intersection of Rindge Lane and Mathews Avenue.

Commissioner Glass said he believes an all-way stop is a great idea, however, he recommends marking the street in front of the parking lot entrance with a “keep clear” sign. He said if you are traveling southbound on Rindge Lane, and cross Mathews Ave, there is only 1-2 car lengths available before being at the driveway entrance where people are trying to exit the lot. On the opposite side, there is room for approximately four cars before getting to the light, which blocks the entrance to the parking lot and also creates a safety hazard because they cannot see northbound traffic on Rindge Lane.

Chair Funabashi said the only challenge of keeping cars from blocking the driveway is that there are two driveways for the grocery outlet, as well as one for the bookstore.

In response to Commission Garcia, Associate Civil Engineer Boas said when doing their observations, pedestrians, bicycles and vehicles are all grouped together. Out of the 15 pedestrians at peak hour, 3 or 4 of them were bicycles.

Commissioner Glass noted that there is a lot of traffic on Rindge Lane because there is a Post Office in that area, as well.

Deanna Lapin, lives at the corner of Blossom and Mathews and noted that it is a safety issue at the intersection and is all for stop signs.

Jessica Petri, lives on Rindge Lane, and hears screeches almost every day. She said it is getting busier, and it is a gamble to make a left turn onto Rindge Lane. She assisted with the petition and only a select few said no, everyone else said yes.

Motion by Commissioner Hannon, seconded by Commissioner Fox to allow Deanna Lapin to speak again. She petitioned for stop signs at Mathews and Blossom intersection; instead they got bulb-outs. She noted that most of her neighbors are not happy about that because they still cannot see.

In response to Commissioner Simpson regarding the potential for a roundabout, or traffic circle at this location, Associate Civil Engineer Boas said the roadways are both 28 feet and with the one-way controls on Mathews it would be difficult to get that to work.

Commissioner Hannon noted that the advantage of roundabouts is that it keeps the traffic flowing. He said sometimes people are unpredictable and don't stop at stop signs. He thinks more visibility would help make it safer, however, he is not sure if a three-way stop will make it any safer.

In response to Chair Funabashi regarding the 10 feet of red curb on the southeast corner and the benefit of sight visibility, Associate Civil Engineer Boas said that would benefit vehicles heading eastbound on Mathews, looking at vehicles heading northbound on Rindge. There was a fire detector check that was recently installed with the construction, and Staff noticed a vehicle could potentially park really close to the curb return and limit views.

Chair Funabashi clarified that it is the southwest corner rather than the southeast corner, as indicated in the report.

Associate Civil Engineer Boas clarified that the 10 feet of red curb was an alternative presented, rather than the recommendation presented.

Barry Brukel lives at the intersection just a couple feet down and produced some photos for the Commission to review.

Motion by Commissioner Fox, seconded by Commissioner Simpson, to receive and file the photos provided by Mr. Brukel.

Mr. Brukel said driving east on Mathews, on the north corner, there is a corner lot with bushes and a small wall. Cars line up going down Rindge, backed up, which creates a barrier. He suggested stop signs on this corner.

Motion by Commissioner Simpson, seconded by Commissioner Fox, to accept the recommendation of Staff to install all-way stop at the intersection along with a “keep clear” designation at the driveway. Motion carried unanimously, with Commissioner Brown absent.

City Traffic Engineer Kim clarified that the recommendation will be forwarded to City Council.

In response to Commissioner Simpson regarding when the item will go to City Council, City Traffic Engineer Kim said they typically try to move them forward as soon as they can, however, it is based on workload and availability. He noted that the same residents who received notification letters for today’s meeting will receive City Council meeting notifications.

2. FLAGLER LANE BETWEEN ANITA STREET AND BERYL STREET TRAFFIC SAFETY EVALUATION –

Receive the engineering report, receive public input and provide direction to Staff regarding proceeding with the recommended roadway modifications to Flagler Lane.

City Traffic Engineer Kim, presented the following:

- Background:
 - Initiated by Councilman Horvath and residents within the vicinity to review pedestrian safety
 - Flagler Lane roadway segment adjacent to Dominguez Park, Redondo Beach Dog Park, the Redondo Beach Historical Museum, and Little League Field
 - Staff evaluated the pedestrian crossing enhancements, as pedestrians from the west side cross Flagler to access City provided amenities
 - Field evaluations/observations conducted by Staff during morning and mid-day peak periods
 - Pedestrian counts taken on August 7, 2019

The portion of Flagler Lane evaluated is classified as a minor arterial, with one travel lane in each direction, northbound and southbound, separated by a two-way left turn lane. There is angle parking on the east side, and parallel parking on the west side. There are two off-street parking lots on the east side, one opposite Agate street, the other opposite Amethyst Street. There are all-way stop controls at Flagler Lane, Anita/190th Street, with overhead flashing stop beacons, and an all-way stop at Flagler Lane/Beryl.