

**Meeting of the Ad-Hoc Citizen Traffic Advisory Group
October 27, 2015**

**Lake Forest City Hall
25550 Commercentre Drive
Council Chambers
Lake Forest, California 92630**

AGENDA ON THE INTERNET: The Agenda is available through the Internet at www.lakeforestca.gov. You can access the document on the Friday before the meeting on Tuesday.

AGENDA DOCUMENT REVIEW: The full Agenda including all back up information is available at City Hall, 25550 Commercentre Dr., Lake Forest, California, on the Friday prior to the Tuesday meeting.

AGENDA DESCRIPTION: The Agenda descriptions are intended to give notice to members of the public of a general summary of items of business to be transacted or discussed.

CALL TO ORDER:

7:00 p.m.

ROLL CALL: Members: Mark Armando, Group Member

Scott Drapkin, Group Member

Grady Glover, Group Member

John Irish, Group Member

Tim Redwine, Group Member

Donald Stoll, Group Member

Derek Weiske, Group Member

Staff Liaison: David Rogers, Traffic Engineering
Manager

Selection of Chair and Vice-Chair

PUBLIC SESSION

Public Comments

At this time, members of the public may address the Ad-Hoc Citizen Traffic Advisory Group regarding any items within the subject matter jurisdiction of the Group. No action may be taken on items not listed on the agenda unless authorized by law. Comments shall be limited to three minutes per person and an overall time limit of thirty minutes for the Public Comments portion of the agenda.

Any person wishing to address the Ad-Hoc Citizen Traffic Advisory Group on any matter, whether or not it appears on this agenda, is requested to complete a "Request to Speak" form available at the door. The completed form is to be submitted to City staff prior to an individual being heard by the Ad-Hoc Citizen Traffic Advisory Group.

AGENDA ITEMS:

Old Business

1. STATUS REPORT ON CTAG TRAFFIC CONCERNS LIST, submitted by Public Works staff.

RECOMMENDED ACTION: Receive a presentation from the Public Works Department and discuss the status of the items on the list of traffic concerns developed at the 8/25/15 CTAG meeting.

New Business

1. DISCUSSION REGARDING MEETING DATES for November and December meetings, submitted by Public Works staff.

RECOMMENDED ACTION: Receive a presentation from the Public Works staff and discuss potential meeting dates for November and December.

2. APPROVAL OF MINUTES OF THE REGULAR MEETING OF THE CITIZEN TRAFFIC ADVISORY GROUP HELD ON September 22, 2015, submitted by Public Works staff.

RECOMMENDED ACTION: Approve as submitted.

3. PRESENTATION AND DISCUSSION REGARDING THE SADDLEBACK RANCH ROAD TRAFFIC CALMING PROJECT, submitted by Public Works staff.

RECOMMENDED ACTIONS: Receive a presentation from Public Works regarding the Saddleback Ranch Road Traffic Calming Project and discuss this topic.

4. PRESENTATION AND DISCUSSION REGARDING THE GENERAL PLAN AND CIRCULATION ELEMENT, submitted by Public Works staff.

RECOMMENDED ACTION: Receive a presentation from Development Services regarding the City's General Plan and Circulation Element and discuss this topic and make findings and recommendations, as appropriate.

ADJOURNMENT:



In compliance with the Americans With Disabilities Act, if you need special assistance to participate in this Meeting, including auxiliary aids or services, you should contact the City Clerk's Office at (949) 461-3400. Notification 48 hours prior to the Meeting will enable the City to make reasonable arrangements to assure accessibility to this meeting. The Ad-Hoc Citizen Traffic Advisory Group and agenda back-up materials can be obtained from the Office of the City Clerk on the Friday prior to the Ad-Hoc Citizen Traffic Advisory Group meeting. Copies of all Agendas, Staff Reports and Supporting Materials can also be found on the City's website – www.lakeforestca.gov/services/agendas. Agenda and agenda packets, if requested, will be made available in an appropriate alternative format to persons with a disability as required by the Americans With Disabilities Act. Copies of the agenda are provided at no cost and agenda back-up materials are available at the per page copy cost. If you wish to be added to the mailing list to receive a copy of the agenda, request must be provided to staff in writing.

The City of Lake Forest mailing address is 25550 Commercentre Drive, Lake Forest, California 92630.
Phone: (949) 461-3400. FAX (949) 461-3511.

CERTIFICATION: I, Stephanie D. Smith, City Clerk, of the City of Lake Forest, California, hereby certify that the foregoing agenda was posted for public review on October 22, 2015, at 6:00 p.m.
Stephanie D. Smith, MMC, City Clerk



Ad-Hoc Citizen Traffic Advisory Group Agenda Report

Meeting Date: October 27, 2015

Department: Public Works

SUBJECT:

STATUS REPORT ON CTAG TRAFFIC CONCERNS LIST

RECOMMENDED ACTION(S):

Receive a presentation from the Public Works Department on the status of the items on the list of traffic concerns developed at the 8/25/15 CTAG meeting.

DISCUSSION:

At the August 25, 2015 CTAG meeting, the members provided staff with a list of traffic and transportation topics and issues to cover and address as part of future meetings. Two additional items were added by the Group at the September meeting. In addition, a citizen provided a list of topics at the September meeting which the Group asked to be reviewed and items added, as appropriate. Staff included all the items on the list and provided comments on each. This will be a standing item under Old Business on all future CTAG agendas.

The topics and issues range from concerns about traffic signal operations at individual intersections to broad topics such as the status of the gap closure for Portola Parkway between Lake Forest and Irvine. As you can see on the attached list, some of the items have been referred to the City's contractors and consultants for review. These items should be addressed within a relatively short time frame. For other topics and issues, staff is gathering information and will either forward the appropriate material to the members for their review and information or schedule a brief discussion under this standing item or another discussion item for a future meeting.

If the Group wants more detailed reports and presentations on specific items, the Group (as a whole or at least a majority of members) would need to provide direction to staff on which items they would like additional information on and when they would like to have the information presented for review and discussion.

ATTACHMENTS:

CTAG Traffic Concerns List

Initiated By: David Rogers, P.E., T.E., Traffic Engineering Manager
Reviewed By: Carlo Tomaino, Assistant to the City Manager
Approved By: Thomas E. Wheeler, Director of Public Works/City Engineer



CTAG TRAFFIC CONCERNS 1st Meeting Review

NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
1	EB LAKE FOREST DR. INTO MIMI'S – SIGNAL TIMING EXCESSIVE DELAY	STOLL	COMPLETE	ADJUSTMENTS MADE ON SEPT 15
2	EB LAKE FOREST DR. TO 241 TOLL ROAD TRAFFIC SIGNAL ISSUE (LOOP DOES NOT DETECT MOTORCYCLE)		COMPLETE	FORWARDED TO CALTRANS FOR ADJUSTMENT
3	SB ALISO PARK, LEFT TURN TO GO EB ON EL TORO RD. TRAFFIC SIGNAL ISSUE (LOOP DOES NOT DETECT MOTORCYCLE)		COMPLETE	ADJUSTED MADE ON SEPT 15
4	EL TORO RD. WB AT TOLEDO WAY (NEEDS TO STAY GREEN LONGER)	REDWINE	COMPLETE	SIGNAL TIMING WAS ADJUSTED ON 9/8/15
5	EB EL TORO RD. ON SERRANO (SCHOOL TIME – DEMAND EXCEEDS THE LENGTH)		COMPLETE	SIGNAL TIMING WAS ADJUSTED ON 9/8/15
6	EL TORO HIGH SCHOOL TRAFFIC –CONCERN ABOUT GENERAL SCHOOL TRAFFIC	STOLL		WILL BE INCLUDED WITH TRAFFIC ENGINEERING DISCUSSION
7	PERMISSIVE LEFT TURN VS PROTECTED	WIESKE		WILL BE INCLUDED WITH TRAFFIC ENGINEERING DISCUSSION
8	EB BAKE PKWY. AT TRABUCO RD.	STOLL		WILL BE INCLUDED WITH CAPITAL PROJECT DISCUSSION IN OCTOBER
9	SB TOLEDO WAY AT SERRANO RD. (PROTECTIVE VS. PERMISSIVE)	WIESKE		WILL BE DISCUSSED WITH #7
10	SHASTA LAKE RD. AT SERRANO RD. (STATUS)	WIESKE	IMPROVEMENTS COMPLETED IN DECEMBER 2014	CURVE WARNING SIGNS WERE INSTALLED ON SERRANO ROAD, AND ADDITIONAL



CTAG TRAFFIC CONCERNS 1st Meeting Review

NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
				REFLECTIVE RAISED PAVEMENT MARKERS WERE INSTALLED TO ENHANCE THE CENTERLINE OF SERRANO ROAD
11	NB TOLEDO WAY NEEDS DUAL LEFT ONTO WB BAKE PKWY.			WILL BE INCLUDED WITH CAPITAL PROJECT DISCUSSION IN OCTOBER
12	STERLING SIGHT DISTANCE	IRISH		STAFF NEEDS TO REVIEW CONDITIONS
13	SADDLEBACK RANCH RD. – BIKE SAFETY/PORKCHOPS/PARKING NEAR CONCOURSE PARK	GLOVER		STAFF NEEDS TO PROVIDE INFORMATION ON THIS PROJECT TO GROUP – THIS PROJECT IS CURRENTLY UNDER CONSTRUCTION
14	SKYRIDGE DEVELOPMENT	GLOVER		THIS IS AN APPROVED DEVELOPMENT PROJECT IN MISSION VIEJO – STAFF TO PROVIDE INFORMATION TO GROUP
15	BIKE SAFETY/TRAIL ALONG RAILROAD/MULTI MODAL STREETS	WIESKE/DRAPKIN		TO BE INCLUDED WITH GENERAL PLAN DISCUSSION



CTAG TRAFFIC CONCERNS 1st Meeting Review

NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
16	ROUND ABOUTS	WIESKE		WILL BE INCLUDED WITH TRAFFIC ENGINEERING DISCUSSION
17	PORTOLA GAP CLOSURE	GLOVER		STAFF TO PROVIDE THE PORTOLA PARKWAY GAP CLOSURE TRAFFIC SENSITIVITY ANALYSIS THAT WAS PRESENTED TO THE CITY COUNCIL IN NOVEMBER 2014.
18	RIDGE ROUTE OVERCROSSING (STATUS)	WIESKE & REDWINE		STAFF WILL PROVIDE LATEST INFORMATION
19	ACCIDENT/SAFETY DATA INFORMATION	WIESKE/DRAPKIN		WILL BE INCLUDED WITH TRAFFIC ENGINEERING DISCUSSION
20	STRATEGIC PLAN BACKLOG PROJECTS			WILL BE INCLUDED WITH CAPITAL PROJECT DISCUSSION IN OCTOBER
21	GENERAL PLAN CIRCULATION ELEMENTS	DRAPKIN & WIESKE		COMMUNITY SERVICES WILL PROVIDE A PRESENTATION AT A MEETING TBD
22	MONITORING DEVELOPMENT IN ADJACENT CITIES	DRAPKIN		TO BE INCLUDED WITH MODELING DISCUSSION
23	ALL TRAFFIC SIGNALS ESPECIALLY ON ARTERIALS – TOO LONG RED OR GREEN LIGHTS DURING NON-PEAK TRAFFIC PERIODS	GROUP VIA JIM RICHERT	COMPLETE	CYCLE LENGTHS ARE USUALLY REDUCED BUT



CTAG TRAFFIC CONCERNS 1st Meeting Review

NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
				GREEN LIGHTS WILL EXTEND WITH MINIMAL TRAFFIC
24	NORTHBOUND BAKE AT TRABUCO – RIGHT LANE ON BAKE HAS BOTH RIGHT TURN AND STRAIGHT AHEAD ABILITY – LARGE TRAFFIC BACKUP	GROUP VIA JIM RICHERT	COMPLETE	FUTURE CAPITAL PROJECT TO ADD DEDICATED RIGHT TURN LANE
25	SERRANO AND LAKE FOREST – WESTBOUND ON SERRANO CROSSING LAKE FOREST – LEFT TURN LIGHT ONTO LF IS ALWAYS GREEN EVEN WITH NO LEFT TURN TRAFFIC	GROUP VIA JIM RICHERT	COMPLETE	THIS IS CURRENTLY A SPLIT PHASE INTERSECTION WHERE LEFT AND THRU IN THE SAME DIRECTION COME UP TOGETHER
26	WESTBOUND TOLEDO AT BAKE – RIGHT LANE BACKUP ON TOLEDO DUE TO NO RIGHT TURN LANE	GROUP VIA JIM RICHERT	COMPLETE	DEDICATED RIGHT NOT JUSTIFIED BASED ON TRAFFIC MODEL
27	SOUTHBOUND LAKE FOREST AT TRABUCO – RIGHT LANE BACKUP ON LAKE FOREST DUE TO NO RIGHT TURN LANE ONTO TRABUCO	GROUP VIA JIM RICHERT	COMPLETE	DEDICATED RIGHT NOT JUSTIFIED BASED ON TRAFFIC MODEL
28	HOME DEPOT ENTRANCE ON RANCHO PARKWAY IN FOOTHILL RANCH – LEFT TURN LIGHT ON RANCHO PARKWAY INTO HOME DEPOT IS NOT NEEDED DUE TO VERY LOW TRAFFIC VOLUME ON RANCHO PARKWAY	GROUP VIA JIM RICHERT	COMPLETE	PROTECTED LEFT IS JUSTIFIED
29	BAKE PARKWAY BETWEEN TRABUCO AND 241 – TRAFFIC CONGESTION ON BAKE – WILL BE EVEN WORSE WITH 4000 NEW HOMES	GROUP VIA JIM RICHERT	COMPLETE	SIGNAL COORDINATION PROJECT UNDERWAY. TRAFFIC MODEL DOES NOT CALL FOR ADDITIONAL



CTAG TRAFFIC CONCERNS 1st Meeting Review

NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
				MITIGATIONS/WIDENING
30	MUIRLANDS AND RIDGE ROUTE – AT RUSH HOUR, EASTBOUND TRAFFIC ON MUIRLANDS BACKS UP TO DYLAN	GROUP VIA JIM RICHERT	IN PROGRESS	SENT TO CONSULTANT FOR REVIEW
31	MUIRLANDS AND DYLAN – RED LIGHT FOR MUIRLANDS TRAFFIC AT DYLAN EVEN THOUGH NO CROSS TRAFFIC ON DYLAN	GROUP VIA JIM RICHERT	IN PROGRESS	SENT TO CONSULTANT AND CONTRACTOR FOR REVIEW
32	EL TORO AND ARBOR – GREEN LIGHT FOR ARBOR TRAFFIC IS VERY LONG – EL TORO ROAD TRAFFIC DELAYED NEEDLESSLY	GROUP VIA JIM RICHERT	COMPLETE	PEDESTRIANS ARE COMMON AT THIS LOCATION. PEDESTRIANS REQUIRE EXTENDED TIMES TO CROSS THIS WIDE SECTION OF EL TORO. OVERALL GREEN IS AT MINIMAL NECESSARY
33	EL TORO AT BRIDGER – TRAFFIC BACKS UP ON EL TORO AS THERE IS NO DEDICATED RIGHT TURN LANE ONTO BRIDGER	GROUP VIA JIM RICHERT	COMPLETE	DEDICATED RIGHT NOT JUSTIFIED BASED ON TRAFFIC MODEL
34	CHINOOK AND SERRANO LIGHT COORDINATION – A REAL TRAFFIC MESS – CHINOOK AND SERRANO LIGHTS ALWAYS RED FOR LAKE FOREST TRAFFIC	GROUP VIA JIM RICHERT	IN PROGRESS	NEW COORDINATION TIMING BEING IMPLEMENTED FOR THESE SIGNALS
35	SUNFLOWER AND ALTON – SUNFLOWER GETS GREEN LIGHT EVEN WHEN THERE IS NO TRAFFIC EXITING SUNFLOWER ONTO ALTON	GROUP VIA JIM RICHERT	IN PROGRESS	SENT TO CONSULTANT AND CONTRACTOR FOR REVIEW



CTAG TRAFFIC CONCERNS 1st Meeting Review

NO.	TRAFFIC CONCERNS	CTAG MEMBER	STATUS	COMMENTS
36	TRABUCO BETWEEN BAKE AND EL TORO – GREEN LIGHT DURATION ALONG TRABUCO IS WAY TOO LONG DURING PEAK VOLUME TIMES DUE TO NEW SYNCHRONIZATION PROGRAM	GROUP VIA JIM RICHERT	COMPLETE	LONGER GREEN TIMES FOR THRU MOVEMENT IS TYPICAL FOR COORDINATION
37	LAKE FOREST AT JERONIMO – LEFT TURN LIGHT FROM SOUTHBOUND LAKE FOREST ONTO EASTBOUND JERONIMO IS TOO SHORT	GROUP VIA JIM RICHERT	COMPLETE	BACKUP OCCURS ONLY DURING SCHOOL AM AND PM PEAKS. MAXIMUM TIME ALREADY ALLOTTED
38	REVIEW SERRANO CREEK UNDERCROSSING ON TRABUCO FOR BIKERS AND HIKERS	WEISKE		
39	WIDEN BAKE PARKWAY	WEISKE		SEE #29

Leah Basile, President of Portola Hills II Association
Amanda Newton, resident of Lake Forest
Lorie Still, resident of Lake Forest
Walter Michallik, resident of Lake Forest
Elaine Koehler, resident of Lake Forest
Marcos Sidhum, resident of Lake Forest
Steve Kuver, resident of Lake Forest
Elizabeth Wallace, Former President of Portola Hills II Association
Linda Gagnon, resident of Lake Forest
Chris Laflash, resident of Lake Forest
Gregg Pumphrey, resident of Lake Forest
Sue Rees, resident of Lake Forest
Scott Minami, resident of Lake Forest
Linda Thompson, resident of Lake Forest
Larry Smail, resident of Lake Forest
Nashaat Endraws, resident of Trabuco Canyon
Maria Gonzalez, resident of Lake Forest
Katie & Jim McCarthy, residents of Lake Forest

Discussion ensued on the process for residents' to have their concerns reviewed. Responding to the residents of Portola Hills, staff informed the public that the City Council had approved the project and was therefore the only body that could require changes or take other action on the project. Staff stated that the comments would be forwarded to the City Council and suggested that requests to modify the Saddleback Ranch Road Traffic Calming Project be directed to City Council.

Agreement was reached among the Group Members to add an item on the Saddleback Ranch Road Traffic Calming Project to the next meeting's agenda on October 27, 2015.

AGENDA ITEMS:

1. DISCUSSION REGARDING MEETING TIMES/DATES AND COMMUNICATION PROCESSES AND PROCEDURES

Dave Rogers, Traffic Engineering Manager, presented alternate meeting times and dates for the Group to consider.

Consensus was formed among the Group Members to continue with the Citizen Traffic Advisory Group monthly meeting start and end times. The Group will consider the proposed alternate November and December meeting dates and decide on dates at the next meeting on October 27, 2015.

Tom Wheeler, Director of Public Works and City Engineer, presented the preferred communication processes and procedures to maintain uniformity and transparency between the staff, Group and City Council.

Following the influx of public comments, it was suggested to discuss the potential of selecting a Chairman and Vice Chairman for the Group to provide some structure to the meetings, where necessary. The Group agreed to proceed with discussing the possibility of a Chairman at the next meeting.

ACTION: Members of the Ad-Hoc Citizen Traffic Advisory Group received the presentation and discussed the meeting times and dates and communication processes and procedures.

2. APPROVAL OF MINUTES OF THE REGULAR MEETING OF THE CITIZEN TRAFFIC ADVISORY GROUP HELD ON AUGUST 25, 2015

ACTION: Members of the Ad-Hoc Citizen Traffic Advisory Group approved as submitted.

3. STATUS REPORT ON CTAG TRAFFIC CONCERNS LIST

Dave Rogers, Traffic Engineering Manager, provided a status report on the Group Members Traffic Concerns List.

Number four on the Traffic Concerns List was discussed and will be further reviewed by staff. Number nine was suggested by the Group to be a separate item to allow for an extensive discussion. The Group majority recommended adding two additional items to the list: Serrano Creek Trail Undercrossing on Trabuco Road for mountain bikers and hikers and widening Bake Parkway.

ACTION: Members of the Ad-Hoc Citizen Traffic Advisory group received a presentation from the Public Works Department and discussed the status of the items on the list of traffic concerns developed at the 8/25/15 CTAG meeting.

4. PRESENTATION AND DISCUSSION REGARDING TRAFFIC SIGNAL OPERATIONS, COORDINATION AND COMMUNICATION

Dave Rogers, Traffic Engineering Manager, presented information pertaining to the City's traffic signal operations, coordination and communication. He provided the Group Members with the City's goals.

Consensus was formed among the Group Members to add an additional goal and recommend that the City Council encourage, if not direct, staff to pursue supplemental funding opportunities, such as grants.

Consensus was formed among the Group Members to add another goal and recommend that the City Council direct staff to review the potential use of camera equipment for the sole purpose of monitoring and improving traffic flow.

ACTION: Members of the Ad-Hoc Citizen Traffic Advisory Group received a presentation from Public Works regarding the City's traffic signal operations, coordination and communication, discussed this topic and recommended that the City pursue the goals of; minimizing issues with individual traffic signals; having all the traffic signal equipment in the cabinets meet or exceed all current standards and be compatible with future technology; connect all signals to the master system; continue to update coordination timing; and evaluate the City's needs and review a possible upgrade to Adaptive Signal Control; pursue supplemental funding opportunities; and review the potential use of camera equipment for the sole purpose of monitoring and improving traffic flow. The last two goals were added by the Citizen Traffic Advisory Group.

ADJOURNMENT:

The Ad-Hoc Citizen Traffic Advisory Group Adjourned the September 22 Ad-Hoc Citizen Traffic Advisory Group Meeting at 10:39 p.m.

Respectfully submitted:

APPROVED:

AMBER HASTON
PUBLIC WORKS MANAGEMENT AIDE

DAVE ROGERS
TRAFFIC ENGINEERING MANAGER



Ad-Hoc Citizen Traffic Advisory Group Agenda Report

Meeting Date: October 27, 2015

Department: Public Works

SUBJECT:

PRESENTATION AND DISCUSSION REGARDING THE SADDLEBACK RANCH ROAD TRAFFIC CALMING PROJECT

RECOMMENDED ACTION(S):

RECEIVE A PRESENTATION FROM PUBLIC WORKS ON THE SADDLEBACK RANCH ROAD TRAFFIC CALMING PROJECT AND DISCUSS THIS TOPIC.

DISCUSSION:

Background

At the September CTAG meeting, residents from the Portola Hills neighborhood spoke under public communications expressing their concerns about the Saddleback Ranch Road Traffic Calming Project (SRRTCP). The concerns covered various issues, but focused on a few major topics; that the travel lanes are too close to the sidewalks in certain areas; that the lanes in some areas are not wide enough for vehicles to safely pass bicycles and; that the medians are too wide contributing to the narrow lanes (a summary of the concerns received to date is attached).

Staff thanked the residents for their comments and indicated that the concerns would be forwarded to the City Council. Staff also informed the residents that the City Council would be the appropriate body to discuss concerns about a project that is currently under construction, because the City Council approved the project and authorized the construction. Although the CTAG's mission, as defined by the City Council, did not include a review of current projects, the CTAG wanted additional information on this issue and therefore asked Staff to add an item on SRRTCP to the October agenda.

Since the September meeting, the City Council has held two meetings and residents from Portola Hills spoke under public communications at both meetings. The City Council acknowledged their concerns, but did not add an item for discussion on their agenda and did not refer this matter to the CTAG. At the

second meeting on October 20, the City Manager informed the Council and audience that city staff has been meeting and working with the project design consultant to review possible changes and modifications to the project. He also stated that staff will be meeting with representatives from the 6 HOAs in Portola Hills on Monday, October 26 to get input on the possible changes and modifications. Staff will be reporting the results of that meeting as part of the presentation on this issue.

Many of the residents that spoke at the meetings and who have contacted the City by other means have stated that they were not aware of the SRRTCP. The City conducted what it believed was a thorough outreach effort, but the comments suggest that there may be opportunities to improve communication and participation, especially for projects like SRRTCP that have a more direct impact on residents. Since reviewing ways to improve public participation and communication is one area that the Council directed the CTAG to review, Staff will use SRRTCP as a case study for this topic, when it is brought back to the CTAG as a stand-alone discussion item.

Saddleback Ranch Road Traffic Calming Project

Saddleback Ranch Road (SRR) is designated as a local collector street for the Portola Hills neighborhood and runs between Ridgeline Drive at the north to Glen Ranch Road at the south. This street is primarily used by the residents to get from their homes to the arterial street system and vice versa. The street is about 1.1 miles long and ranges in width from about 40 feet at the north end to more than 60 feet at the south end closer to Glen Ranch Road. There are a total of seven intersections on SRR, five of which are uncontrolled and require drivers to wait for gaps in traffic before entering SRR. In addition, there is an elementary school at about the mid-point on the street.

In 2012, the City held community meetings in Portola Hills with the primary goal of discussing proposed development along Glen Ranch and its potential impacts to the neighborhood. The direction of the discussion changed during the meetings to one focused more on overall traffic safety concerns on SRR. Specifically, the residents were concerned about speeding on SRR and sight distance for drivers attempting to turn onto SRR from the side streets. From these meetings came a consensus from the neighborhood to introduce traffic calming measures to address the concerns.

The City hired a professional traffic engineering consulting company with extensive experience in traffic calming to design the project with the goals of:

- Reducing the speed of vehicles, particularly those that were traveling at an unreasonable speed for the conditions;
- Improving sight distance at intersections;
- Improving the traffic circulation in front of the school; and
- Changing the character and feel of SRR (from a driver's perspective) to reflect its intent/design as a neighborhood collector street.

Traffic calming has been used for decades throughout the country and usually employs a variety of features to try and achieve the goals that are established for any given situation. The features on SRR generally work together to improve sight distance, narrow travel lanes and cause slight changes in the direction of travel, which have been shown to reduce speeds and cause drivers to generally be more attentive and cautious. For SRR the City is using several features.

Bulb Out Curbs

Bulb out curbs at intersections are used to narrow the through lanes on SRR at the intersections and more importantly allow drivers on the side streets to pull further forward into a protected area to improve sight distance. Most of the side streets on SRR have limited sight distance and the combination of lower approach speeds for SRR traffic and the ability to increase sight distance will improve overall traffic safety and reduce the likelihood of collisions at these intersections.

Medians

Medians are used to narrow travel lanes over longer distances between intersections. Narrowed lanes over longer lengths tend to cause drivers to stay at a moderated speed over a longer distance. Planted medians (especially those with trees) provide a larger visual presence within the driver's field of view and can further help to moderate speeds.

Diverters (Pork Chops)

Diverters are usually used in conjunction with bulb outs at intersections to provide a physical guidance to drivers making right turns. For SRR they have been used at Malabar and in front of the school. The one at Malabar was installed to prevent drivers in the right turn only lane from passing through the

intersection to pass drivers in the through lane, which was identified as one of the major safety concerns on SRR. The one in front of the school was installed in conjunction with various striping changes to help organize and guide drivers.

Striping

Striping can be used to organize traffic in areas where wide sections of pavement can lead to higher speeds and driver confusion and conflicts. An example of this is on SRR in front of the school where there was only centerline striping and drivers had to make left and right turns into and out of the school while through traffic was forced to try and find a way through the area. The striping in front of the school provides dedicated lanes for various movements and organizes traffic, which reduces the likelihood of traffic incidents in this area.

Striping can also be used in conjunction with other traffic calming features to guide drivers and reduce speed. However, striping by itself generally has minimal traffic calming benefits.

Sample Construction Plan

The project is still under construction so the final condition cannot be evaluated by driving SRR at this time. The original SRRTCP striping plan is attached to the report for review by the CTAG members. This plan provides the best example of what the completed project will look like to the drivers on SRR. The proposed changes and modifications that are being discussed with the HOA representatives are not included on this plan, but will be discussed at the meeting.

Presentation

In order to better understand the project origins and the thought process behind the traffic calming, the original traffic engineering consultant for the project, Joe Foust from Stantec Engineering, will give a presentation at the meeting. Time will be allowed at the end of the presentation for questions from the CTAG members.

RECOMMENDATIONS:

1. Receive a presentation from Public Works regarding the Saddleback Ranch Road Traffic Calming Project and discuss this topic.

ATTACHMENTS:

1. Saddleback Ranch Road Map
2. Public Comments Summary
3. Project Striping Plans

Initiated By: David Rogers, P.E., T.E., Traffic Engineering Manager
Reviewed By: Thomas E. Wheeler, Director of Public Works/City Engineer
Approved By: Thomas E. Wheeler, Director of Public Works/City Engineer



Whiting Access

Whiting Access

Santiago Canyon Rd

Crystal Canyon Rd

Vista portola

Ridgeline Rd

Saddleback Ranch Rd

Woodland Way

Canyon Crest Dr

Canyon Terrace Dr

Canyon Rim Dr

Cedar Ridge Rd

Camelback Rd

Big Springs Rd

Brookhill Rd

Chimney Rock Circle

Shady Ridge Ln

Sycamore Glen Dr

Oakview Ln

Richland Way

Ridgeline Rd

Sleeping Oak Dr

Jasper Hill Rd

Quiet Hill Ln

Fawn Ridge Rd

Yosemite Dr

Red Bluff Dr

Klondike Dr

Saddleback Ranch Rd

Sierra Peak Ln

Shawbow Oak Dr

Modjeska Peak Ln

Canyon Vista Dr

Boulder Dr

Pueblo Dr

Harvest View Ln

Millwood Rd

Lucca Ct

Cortona Way

Genova Way

Natalia Rd

Dorado Dr

Highridge Way

Torres Way

Dorebo Dr

Highridge Way

in Ranch Rd

Saddleback Ranch Rd

El Toro Rd

S18



**Saddleback Ranch Road
Public Comments/E-mail Summary**

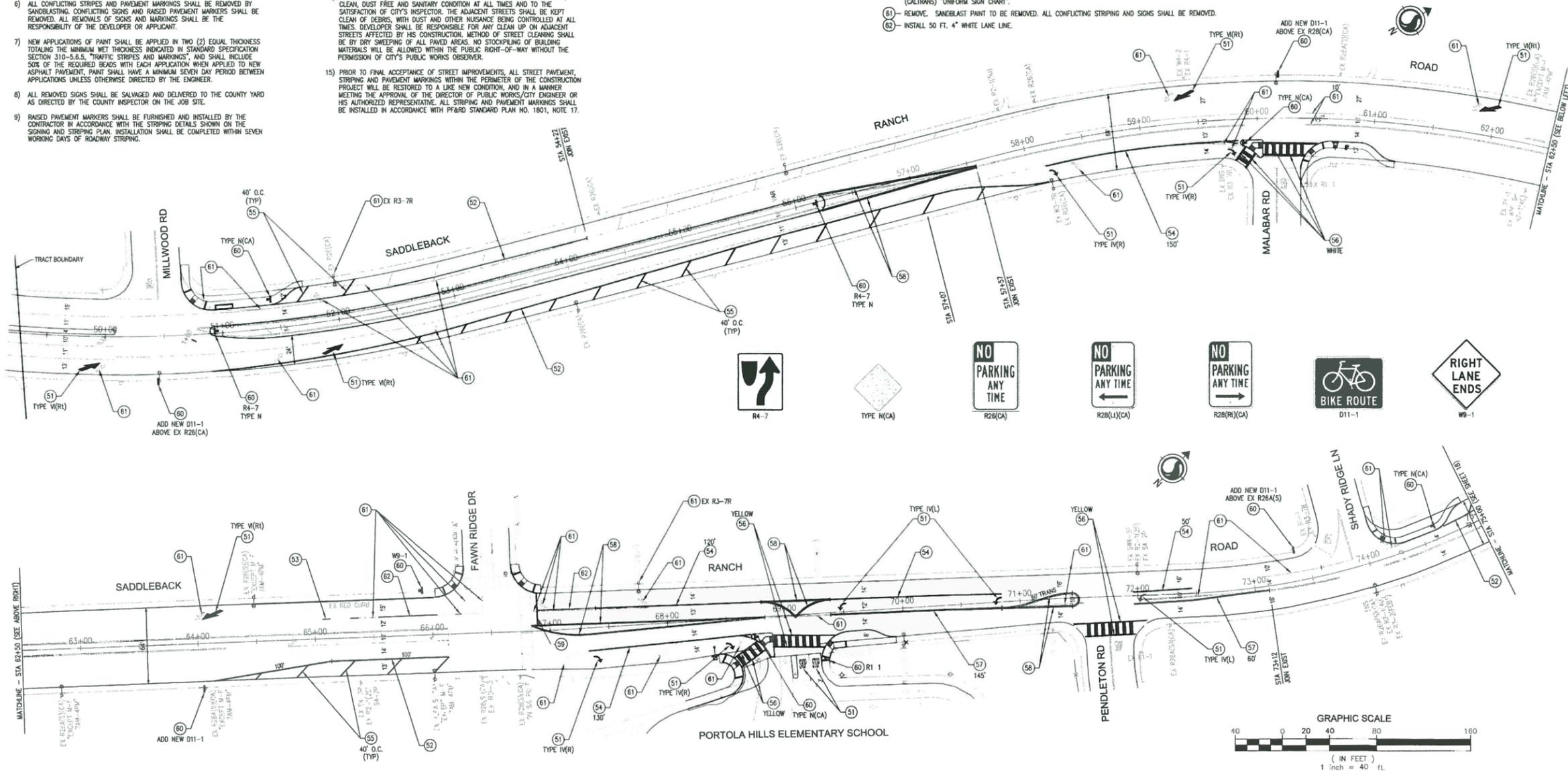
Positive	Negative	Neutral	Issue						
			Bulb Outs	Drainage	Sidewalk Width/ Spacing	Medians/ Lane Width	Room for Bicycles	Speed	Evacuation Issues
9	67	15	11	12	28	39	43	13	9
10%	74%	16%							

SIGNING & STRIPING GENERAL NOTES

- CONTRACTOR SHALL INSTALL SIGNING AND STRIPING IN ACCORDANCE WITH THE APPROVED PLAN.
- TRAFFIC STRIPES, PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE MANUFACTURED AND INSTALLED PER CALTRANS PUBLICATION CA-MUTCD LATEST REVISION, CALTRANS STANDARD PLANS AND CALTRANS STANDARD SPECIFICATIONS, LATEST EDITIONS ADOPTED BY THE ORANGE COUNTY BOARD OF SUPERVISORS.
- ALL SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE NOTED ON PLANS. SIGNS SHALL BE INSTALLED ON SQUARE PERFORATED STEEL TUBE POSTS WITH BREAKAWAY BASES PER SP 1417, UNLESS OTHERWISE NOTED ON THE PLAN.
- ALL STRIPES, SIGNS AND PAVEMENT MARKINGS SHALL BE REFLECTORIZED.
- STENCILS FOR PAVEMENT MARKINGS SHALL MATCH ORANGE COUNTY STANDARD STENCILS EXACTLY. ALL STRIPING AND MARKING DETAILS SHALL MATCH CALTRANS STANDARD PLAN DETAILS.
- ALL CONFLICTING STRIPES AND PAVEMENT MARKINGS SHALL BE REMOVED BY SANDBLASTING. CONFLICTING SIGNS AND RAISED PAVEMENT MARKERS SHALL BE REMOVED. ALL REMOVALS OF SIGNS AND MARKINGS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR APPLICANT.
- NEW APPLICATIONS OF PAINT SHALL BE APPLIED IN TWO (2) EQUAL THICKNESS TOTALING THE MINIMUM WET THICKNESS INDICATED IN STANDARD SPECIFICATION SECTION 310-5.6.5, "TRAFFIC STRIPES AND MARKINGS", AND SHALL INCLUDE SOX OF THE REQUIRED BEADS WITH EACH APPLICATION WHEN APPLIED TO NEW ASPHALT PAVEMENT. PAINT SHALL HAVE A MINIMUM SEVEN DAY PERIOD BETWEEN APPLICATIONS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- ALL REMOVED SIGNS SHALL BE SALVAGED AND DELIVERED TO THE COUNTY YARD AS DIRECTED BY THE COUNTY INSPECTOR ON THE JOB SITE.
- RAISED PAVEMENT MARKERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE STRIPING DETAILS SHOWN ON THE SIGNING AND STRIPING PLAN. INSTALLATION SHALL BE COMPLETED WITHIN SEVEN WORKING DAYS OF ROADWAY STRIPING.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE MUNICIPAL CODE ADOPTED BY THE CITY OF LAKE FOREST AND ANY SPECIAL REQUIREMENTS OF THE PERMIT.
- THE DEVELOPER/CONTRACTOR SHALL KEEP A COPY OF THE CURRENT ORANGE COUNTY PUBLIC FACILITY & RESOURCES DEPARTMENT (PF&RD) STANDARD PLANS ON THE CONSTRUCTION SITE AT ALL TIMES.
- THE DEVELOPER/CONTRACTOR SHALL NOTIFY THE CITY OF LAKE FOREST'S PUBLIC WORKS OBSERVER AT (949) 461-3484 AT LEAST TWO WORKING DAYS (MINIMUM OF 48 HOURS) PRIOR TO STARTING CONSTRUCTION WORK WHICH REQUIRES PUBLIC WORKS INSPECTION.
- A CITY OF LAKE FOREST ENCHANCEMENT PERMIT SHALL BE REQUIRED TO PERFORM WORK WITHIN THE PUBLIC RIGHT-OF-WAY. CITY APPROVED PLANS DO NOT RELIEVE THE CONTRACTOR AND/OR DEVELOPER FROM RESPONSIBILITY TO OBTAIN AN ENCHANCEMENT PERMIT. A COPY OF THE PERMIT SHALL BE KEPT ON THE CONSTRUCTION SITE AT ALL TIMES.
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- PRIOR TO FINAL ACCEPTANCE OF STREET IMPROVEMENTS, ALL STREET PAVEMENT, STRIPING AND PAVEMENT MARKINGS WITHIN THE PERIMETER OF THE CONSTRUCTION PROJECT WILL BE RESTORED TO A LIKE NEW CONDITION, AND IN A MANNER MEETING THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH PF&RD STANDARD PLAN NO. 1801, NOTE 17.

SIGNING AND STRIPING CONSTRUCTION NOTES

- INSTALL WHITE PAVEMENT LEGENDS AS SHOWN.
- INSTALL 4" SOLID WHITE RIGHT EDGE LINE. (DETAIL 27B)
- INSTALL 4" SKIP WHITE LANE LINE. (DETAIL 9)
- INSTALL 8" SOLID WHITE CHANNELIZING LINE. (DETAIL 3B)
- INSTALL 12" WHITE DIAGONALS.
- INSTALL CROSSWALK (WHITE OR YELLOW AS INDICATED).
- INSTALL DOUBLE YELLOW. (DETAIL 22)
- INSTALL PAINTED MEDIAN. (DETAIL 29)
- INSTALL 12" SOLID WHITE STOPBAR.
- INSTALL SIGN PER DESIGNATION. SEE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, (CALTRANS) "UNIFORM SIGN CHART".
- REMOVE. SANDBLAST PAINT TO BE REMOVED. ALL CONFLICTING STRIPING AND SIGNS SHALL BE REMOVED.
- INSTALL 50 FT. 4" WHITE LANE LINE.



PLANS PREPARED BY:
Stantec
 38 TECHNOLOGY DRIVE, SUITE 100
 IRVINE, CA 92618
 949.923.6000 stantec.com
 UNDER THE SUPERVISION OF:
 FENG XU RCE 80744 DATE 2/16/2015

PROJ MGR:	RG	DATE:	03/11/15
DESIGNER:	RS	DATE:	03/11/15
DRAFTER:	RS	DATE:	03/11/15
CHECKED BY:	JX	DATE:	03/11/15

APPROVED FOR CONSTRUCTION IN PUBLIC RIGHT-OF-WAY ONLY
 _____ DATE
 THOMAS WHEELER, P.E.
 PUBLIC WORKS DIRECTOR / CITY ENGINEER

**SADDLEBACK RANCH ROAD
 SIGNING AND STRIPING PLAN**
 CITY OF LAKE FOREST
 PUBLIC WORKS DEPARTMENT
 SHEET 17 OF 30

DRAWING: v:\2013\active\2073000-2007\st.dwg PLOTTED: 3/16/2015 1:50 PM BY: Cornejo, Ada

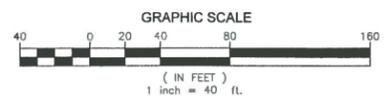
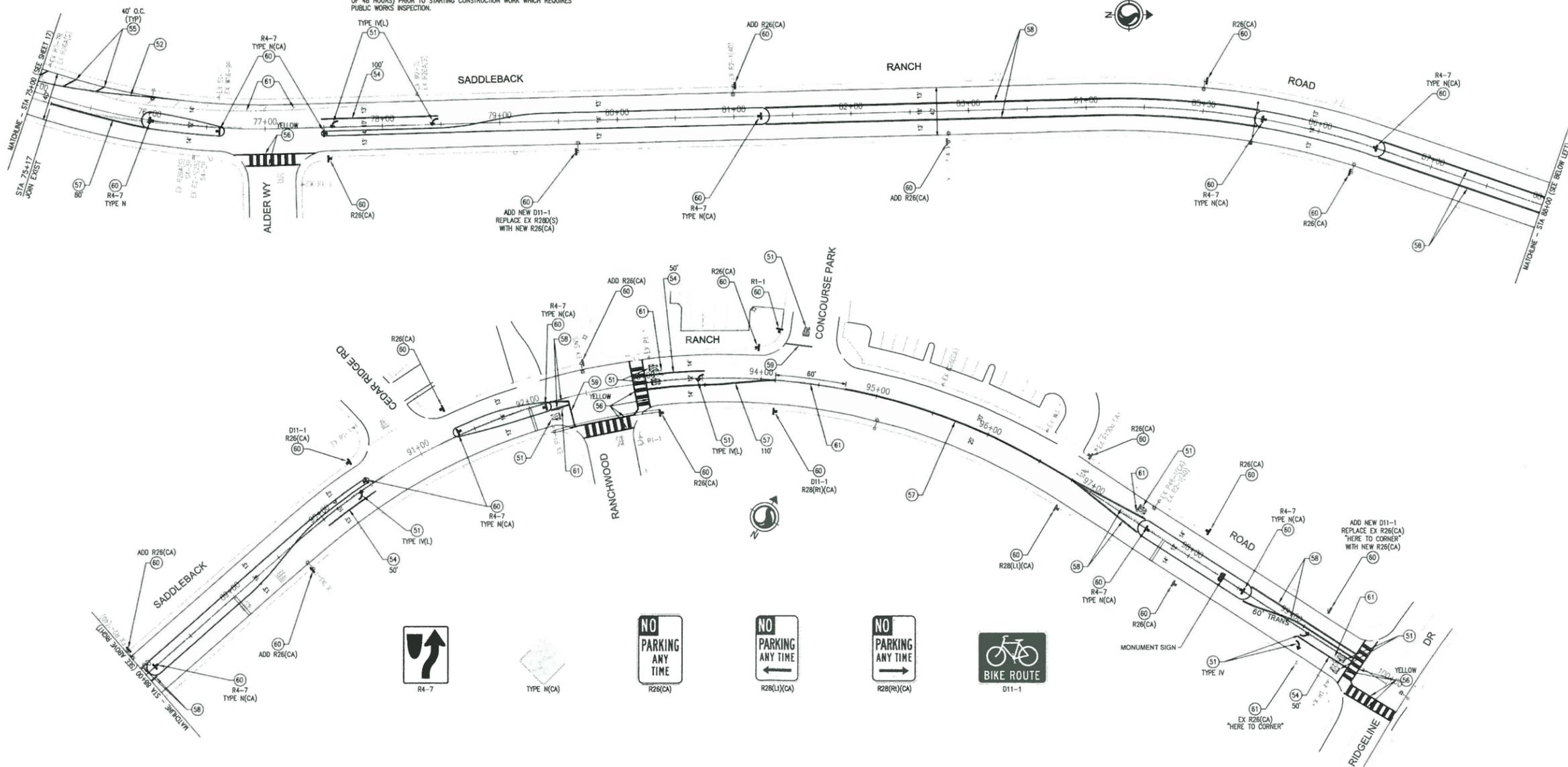
SIGNING & STRIPING GENERAL NOTES

- CONTRACTOR SHALL INSTALL SIGNING AND STRIPING IN ACCORDANCE WITH THE APPROVED PLAN.
- TRAFFIC STRIPES, PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE MANUFACTURED AND INSTALLED PER CALTRANS PUBLICATION CA-MUTCD LATEST REVISION, CALTRANS STANDARD PLANS AND CALTRANS STANDARD SPECIFICATIONS, LATEST EDITIONS ADOPTED BY THE ORANGE COUNTY BOARD OF SUPERVISORS.
- ALL SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE NOTED ON PLANS. SIGNS SHALL BE INSTALLED ON SQUARE PERFORATED STEEL TUBE POSTS WITH BREAKAWAY BASES PER SP 1417, UNLESS OTHERWISE NOTED ON THE PLAN.
- ALL STRIPES, SIGNS AND PAVEMENT MARKINGS SHALL BE REFLECTORIZED.
- STENCILS FOR PAVEMENT MARKINGS SHALL MATCH ORANGE COUNTY STANDARD STENCILS EXACTLY. ALL STRIPING AND MARKING DETAILS SHALL MATCH CALTRANS STANDARD PLAN DETAILS.
- ALL CONFLICTING STRIPES AND PAVEMENT MARKINGS SHALL BE REMOVED BY SANDBLASTING. CONFLICTING SIGNS AND RAISED PAVEMENT MARKERS SHALL BE REMOVED. ALL REMOVALS OF SIGNS AND MARKINGS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR APPLICANT.
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DATE	BY	DESCRIPTION	APPV
REVISIONS			

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 PUBLIC WORKS DIRECTOR / CITY ENGINEER

**SADDLEBACK RANCH ROAD
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 CITY OF LAKE FOREST
 PUBLIC WORKS DEPARTMENT
 SHEET 18 OF 30

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Ad-Hoc Citizen Traffic Advisory Group Agenda Report

Meeting Date: October 27, 2015

Department: Public Works

SUBJECT:

PRESENTATION AND DISCUSSION REGARDING THE CITY'S GENERAL PLAN AND CIRCULATION ELEMENT

RECOMMENDED ACTION(S):

RECEIVE A PRESENTATION FROM DEVELOPMENT SERVICES REGARDING THE CITY'S GENERAL PLAN AND CIRCULATION ELEMENT AND DISCUSS THIS TOPIC AND MAKE FINDINGS AND RECOMMENDATIONS, AS APPROPRIATE.

DISCUSSION:

General Information

The City's General Plan is the guiding document for all aspects of development in the City (see attached). The Circulation Element is the portion of the General Plan that covers the transportation and traffic elements (see attached). At the September CTAG meeting, the members asked for a presentation on the Circulation Element, since it establishes the baseline and goals for everything traffic and transportation related and therefore creates a foundation for recommendations that may be developed by the CTAG. The thinking is that the CTAG should look to formulate recommendations that are appropriate for the current and future transportation system in the City, but are also in conformance with the goals and objectives of the Circulation Element.

The Planning Division's primary responsibilities include implementation of the City's General Plan and Zoning Ordinance, and management of development in the City. This includes processing of land use and development applications for review by the City Council or Planning Commission. Good land use policy is critical to the City's future and ensures that Lake Forest maintains a high quality of life for residents and a viable local economy for businesses.

The Circulation Element guides continued development of the circulation system to support planned growth. The anticipated development pattern, as identified in the Land Use Element, will increase the demand for local and regional roadways. This element establishes acceptable roadway service levels and identifies improvements required to maintain the service levels. The use of other transportation modes such as transit, walking, bicycling, and riding is promoted to reduce the demand for transportation system improvements and improve air quality.

In 2010 the State adopted new General Plan guidelines to implement the California Complete Streets Act (see attached excerpts).

The guidelines are designed to help agencies plan for the development of a well-balanced, connected, safe, and convenient multimodal transportation network. This network should consist of complete streets which are designed and constructed to serve all users of streets, roads, and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or taking transit. To assist with implementation of the State guidelines, the Orange County Council of Governments (OCCOG) recently began the Complete Streets Initiative to help create guidelines specifically for Orange County (see attached).

Presentation

In order to give the CTAG members a better understanding of the General Plan and Circulation Element, the Director of Development Services, Gayle Ackerman, will be giving a presentation on the overall General Plan that will include a discussion of complete streets. This is a very timely discussion as the City is about to begin the process of updating the City's General Plan, including the Circulation Element.

RECOMMENDATION:

Receive a presentation from Development Services regarding the City's General Plan and Circulation Element and discuss this topic and make findings and recommendations, as appropriate.

ATTACHMENTS:

1. Introduction to the General Plan
2. Circulation Element
3. State Guidelines on Complete Streets Information
4. OCCOG Complete Streets Initiative Information
5. General Plan Map

Initiated By: David Rogers, P.E., T.E., Traffic Engineering Manager
Reviewed By: Thomas E. Wheeler, Director of Public Works/City Engineer
Approved By: Thomas E. Wheeler, Director of Public Works/City Engineer

Introduction

Lake Forest



General Plan

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INTRODUCTION TO THE GENERAL PLAN

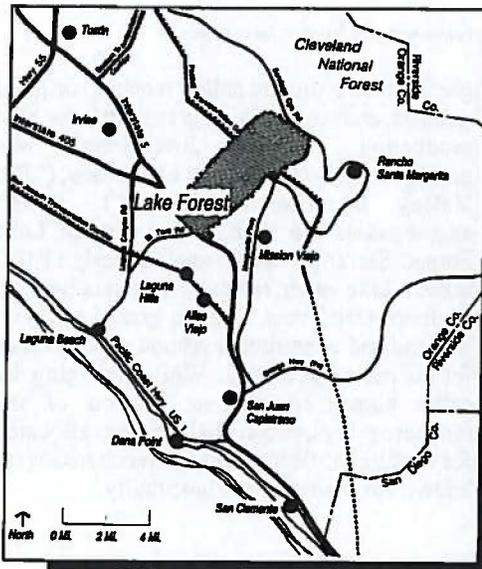
NEED FOR THE GENERAL PLAN

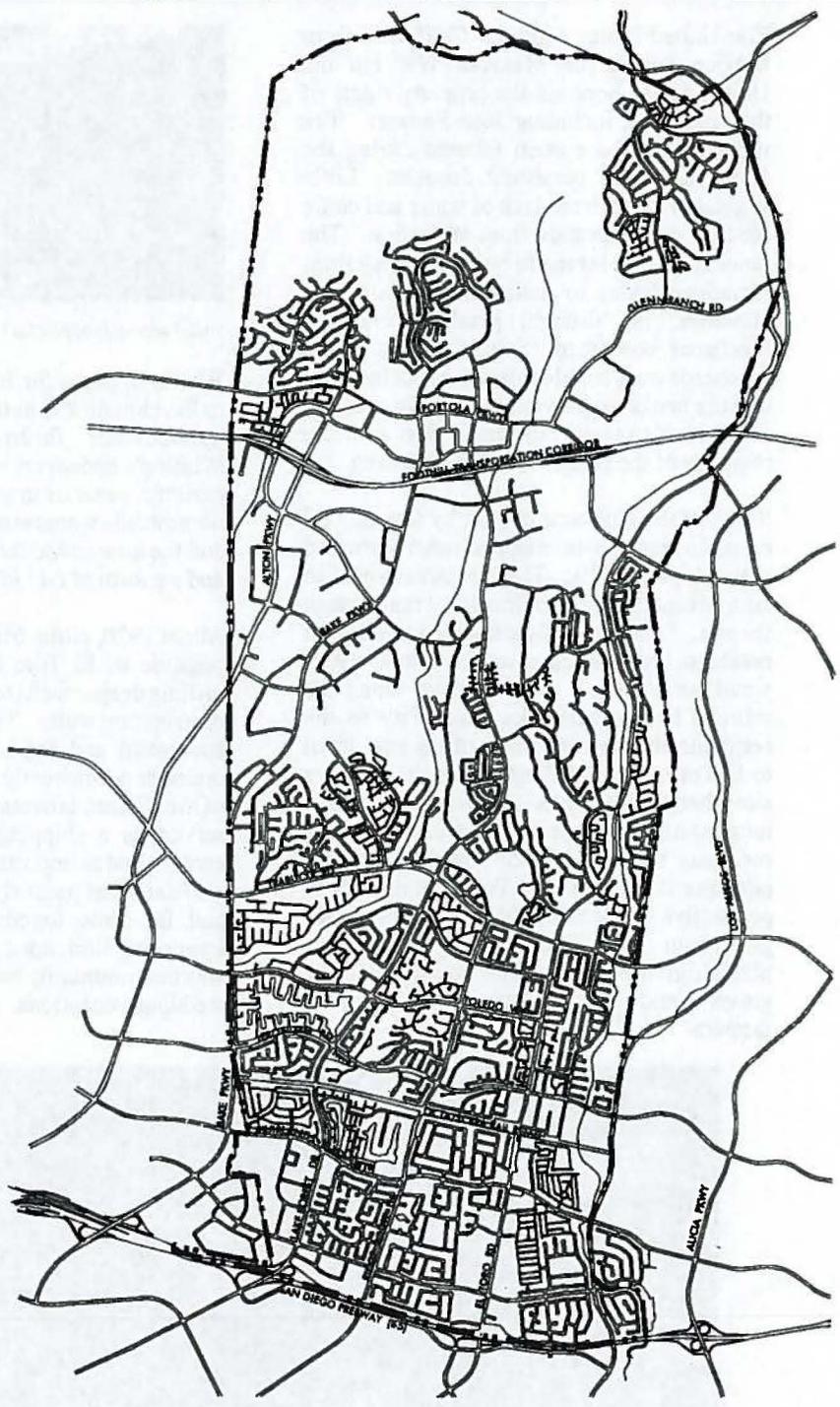
Located at the site of the historic town of El Toro, the City of Lake Forest is a diverse community of homes, businesses and parks. Over the last twenty years, the Lake Forest area has been developed as a series of Planned Communities among natural and created features such as rolling hills, lakes, creeks and eucalyptus groves. The name of the City refers to the lakes created as part of housing developments built in the early 1970s and the shady, fragrant eucalyptus forests that were cultivated circa 1900 and still exist.

Several of the largest Planned Communities primarily consist of single-family and multi-family development. Families within the community are benefitted by a strong business center that meets part of the service

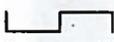
and employment needs of the area. To establish local political control and strengthen community identity and pride, residents organized to incorporate as a city. With respect for the natural and created amenities that make the community distinctive, the residents named the new city "Lake Forest" and incorporation was finalized in 1991. The geographic relationship of Lake Forest to the south Orange County region is illustrated below.

One of the responsibilities of an incorporated city is planning its future growth and development. According to state law, a new city must prepare and adopt its first General Plan as a tool to manage growth and development. The City of Lake Forest General Plan serves as a policy guide for determining the appropriate physical development and character of Lake Forest. The General Plan is founded upon the community's vision for Lake Forest and expresses the community's long-term goals. Implementation of the Lake Forest General Plan will ensure that future development projects are consistent with the community's goals and that adequate urban services are available to meet the needs of new development. The General Plan provides a continuum between the City's unique cultural heritage and the Lake Forest of tomorrow.





 City Boundary


NORTH

0' 3000'



General Plan

**Lake Forest
Planning Area**

meetings, school graduations, and other social events. The town did not begin to grow substantially until the 1970s. The local groundwater supplies were too limited to support urban development and imported water infrastructure was not extended into the area until the 1960s.

Several Planned Communities were developed during the 1970s and 1980s. Lakes were constructed in some of the communities to provide unique recreational opportunities and develop a distinctive community image. Citrus groves were replaced with single-family homes, commerce centers and parks, and a modern suburban landscape evolved. Residents of El Toro organized in 1989 to turn the area into a city. Lake Forest was the name

avored by the local residents and in 1991 the City of Lake Forest became the thirty-first city to incorporate in Orange County.

The dreams of the "Aliso City" founders for a dynamic city finally materialized some 100 years later. While the face of the landscape has evolved from the natural terrain of the Acagchemem to the modern day city, the spirit of human ingenuity and productivity persists. Present day residents enjoy the mild weather and mountain vistas that attracted the Spanish rancheros and American farmers, and the emphasis on family and community life endures as the City of Lake Forest enters the 21st Century based on its "vision for the future."



Vision for the Future of Lake Forest

To guide future growth and development in the City, the "Vision for the Future" of Lake Forest is the foundation of the General Plan and the sustaining basis for its goals, policies, and programs:

"In the future, Lake Forest is envisioned as a community supported by active citizen participation and involvement. Major public activity areas will create a distinctive, individual identity for the City that relies upon the established image of lakes, creeks, forests and open space. Fiscal stability, and necessary public services and facilities will be sustained through the expansion of economic activities and retention of existing businesses.

Expansion of the transportation system and services will improve access throughout Lake Forest. Improved recreational facilities and open space will offer a sense of place and connection with the community's natural setting. The neighborhoods of Lake Forest will provide a diversity of housing and a sense of safety and well being. Working co-operatively with other public agencies to address issues and opportunities of mutual interest, Lake Forest will provide an attractive, safe, and healthy environment in which to live, work, and recreate."

**RELATIONSHIP OF LAKE FOREST GENERAL PLAN ELEMENTS
TO STATE-MANDATED ELEMENTS**

Lake Forest General Plan Element	State-Mandated General Plan Elements						Optional
	Land Use	Housing	Circulation	Noise	Public Safety	Conservation/ Open Space	
Land Use	*						
Housing		*					
Circulation			*				
Recreation and Resources ⁽¹⁾						*	*
Safety and Noise				*	*		
Public Facilities/ Growth Management ⁽²⁾							*

(1) The Recreation component of this Element is optional.

(2) While Growth Management is not a state-mandated Element, it is mandated by Measure M for all jurisdictions in Orange County.

The MEA provides an environmental database that defines the environmental and community conditions of the Lake Forest Planning Area. Information from the MEA is used to formulate General Plan goals, policies and plans to effectively address the development opportunities and constraints. The MEA will also be useful for reviewing proposed development projects in Lake Forest. Several technical reports were prepared by professional consultants and incorporated into the MEA. Additional information was obtained from published documents and City staff.

The General Plan Master EIR analyzes the potential environmental impacts associated with development of the Lake Forest Planning Area according to the General Plan land use policy, and implementation of the General Plan.

Organization and How to Use the Plan

The General Plan is comprised of this Introduction and six elements. Each element is complete in itself but is an integral part of the General Plan. The General Plan is accompanied by an Implementation Plan and

Glossary. The elements and the Implementation Plan will help the City achieve the vision for the future. Each of the six General Plan elements is organized according to the following format: 1) Introduction; 2) Issues, Goals and Policies; and 3) Plan.

The Introduction of each element describes the focus and the purpose of the element. The Introduction also identifies other plans and programs outside of the General Plan that may be used to achieve specific General Plan goals. The relationship of the element to other General Plan elements is also specified in the Introduction.

The Issues, Goals and Policies section of each element contains a description of identified planning issues, goals and policies related to the element topic. The issues, goals and policies are based on input received from community workshops; members of the City Council, Planning Commission, and Parks and Recreation Commission; telephone survey conducted City-wide; and City staff.

The issues represent the opportunities, constraints or concerns that are addressed by

- A 30-minute *cable television program* focusing on the Lake Forest General Plan program was shown on a local cable channel. Information presented in the program described what a General Plan is, how a General Plan is prepared, and why a General Plan is important to Lake Forest;
- A total of *six community workshops/open houses* were held during the public participation program. The first set of three workshops/open houses were informational sessions to answer questions about the planning process and to allow citizens and the business community to voice concerns and identify issues. The third workshop focused on business community concerns with an invitation extended to all business in Lake Forest. The second set of community workshops/ open houses were to present draft General Plan goals and policies, to solicit comments about the draft goals and policies from the public and to receive public input regarding land use alternatives. A final community workshop/open house was held to review the Draft General Plan before the beginning of public hearings.
- *Two additional community workshops* focusing on park and recreation issues were held during the public participation program. Questionnaires were distributed at the workshops to provide an opportunity for participants to express their desires and concerns. In addition, questionnaires were sent to individual homeowner associations in the City. The workshops and questionnaires provided the means to determine the adequacy of existing recreational facilities in Lake Forest as well as desires for future recreational opportunities;
- The public had opportunities to address decision makers directly regarding issues, concerns and desires at *eight City Council, Planning Commission, and Park and Recreation Commission workshops* both

prior to preparation and during review of the Draft General Plan; and

- The Draft General Plan, Draft Environmental Impact Report, and supporting documents were circulated for public review and comment before and during *General Plan public hearings* held before the Planning Commission and City Council.

STEPPING STONE TO THE FUTURE

The community is facing technological, environmental and political changes with abundant opportunities for continued prosperity. The incorporation of Lake Forest has given the City the ability to control land use at the local level. Much of the City is developed. The substantial undeveloped area located to the east of the Foothill Ranch community, known as The Whiting Ranch Wilderness Park, has been designated for open space.¹ The newly completed Foothill Transportation Corridor provides new freeway access to the central portion of Planning Area. Existing land use and transportation patterns will consequently change and new opportunities for residential and economic development will flourish. Because the area is primarily developed and land use patterns are determined, planning efforts must focus on stimulating new economic development, revitalizing older areas, and enhancing the amenities and environmental features that make Lake Forest unique.

The General Plan provides the stepping stone between the community of today and desired community of the future. Strategies are established to take advantage of technological, environmental and political opportunities, and to achieve community goals. The policies and plans in the elements and the Implementation

¹General Plan Amendment 01-01A, dated July 17, 2001.

INTRODUCTION

Lake Forest is well served by a diverse circulation system. While the San Diego Freeway has served the area for many years, the Foothill Transportation Corridor is now in operation and provides additional highway access. A railroad extends through the City and John Wayne/Orange County Airport is located approximately ten miles to the west. Established transit service provides alternative transportation opportunities and many of the Planned Communities were developed with pedestrian, bicycle and equestrian trails.

The Circulation Element guides continued development of the circulation system to support planned growth. The anticipated development pattern, as identified in the Land Use Element, will increase the demand for local and regional roadways. This element establishes acceptable roadway service levels and identifies improvements required to maintain the service levels. The use of other transportation modes such as transit, walking, bicycling, and riding is promoted to reduce the demand for transportation system improvements and improve air quality.

PURPOSE OF THE CIRCULATION ELEMENT

The purpose of the Circulation Element is to provide a safe, efficient, and adequate circulation system for the City. State planning laws requires:

...a circulation element consisting of the general location for proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element plan.

To meet these objectives, the Circulation Element addresses the circulation improvements needed to provide adequate

capacity for future land uses. The Element establishes a hierarchy of transportation routes with specific development standards described for each roadway category.

The state General Plan Guidelines (Section 65302) recommend that the circulation policies and plans should:

1. Coordinate the transportation and circulation system with planned land uses
2. Promote the efficient transport of goods and the safe and effective movement of all segments of the population
3. Make efficient use of existing transportation facilities
4. Protect environmental quality and promote the wise and equitable use of economic and natural resources

The guidelines indicate that the Circulation Element should address all facets of circulation including streets and highways, transportation corridors, public transit, railroads, bicycle and pedestrian facilities and commercial, general, and military airports. The Lake Forest Circulation Element fulfills state requirements with a strategy to provide effective circulation facilities supporting desired community development. State law also requires the Circulation Element to address public utilities. The Lake Forest General Plan contains a Public Facilities/Growth Management Element that discusses the provision of utilities.

SCOPE AND CONTENT OF THE ELEMENT

This element contains goals and policies to improve overall circulation in Lake Forest. For vehicle transportation, a hierarchical roadway network is established with designated roadway types and design standards. The roadway type is linked to anticipated traffic levels and acceptable levels of service are

established to determine when capacity improvements are necessary. Because local circulation is linked with the regional system, the element particularly focuses on participation in regional programs to alleviate traffic congestion and construct capacity improvements. Alternative transportation modes are also emphasized in the element to reduce dependency on the automobile and thereby improve environmental quality.

The Circulation Element is comprised of three sections: (1) Introduction; (2) Issues, Goals, and Policies; and (3) the Circulation Plan. In the Issues, Goals, and Policies section, major issues pertaining to the transportation system are identified, and related goals and policies are established. The goals are overall statements of the City desires and are comprised of broad statements of purpose and direction. The policies serve as guides for planning circulation improvements to accommodate anticipated population growth, maintaining acceptable service levels while development occurs, promoting alternative transportation modes, and coordinating with local and regional jurisdictions to phase regional transportation facilities. The Circulation Plan explains how the goals and policies will be achieved and implemented. The Arterial Highway Plan and service levels are located in the Plan. Specific implementation programs are contained in the General Plan Implementation Program.

RELATED PLANS AND PROGRAMS

Several transportation plans prepared by the County focus on the regional transportation system. Strategies to handle anticipated traffic levels from future regional development are discussed. Other plans have also been prepared to locate future routes for mass transit including light rail and conventional buses. Plans and programs related to the Circulation Element include the following:

County of Orange Master Plan of Arterial Highways (MPAH)

The MPAH forms part of the Orange County General Plan and designates the arterial system in the circulation element of the General Plan. Defined according to specific arterial functional classifications, the MPAH serves to define the intended future road system for the County. Cities within the County are expected to achieve consistency with the MPAH in individual General Plan circulation elements. The Lake Forest Circulation Plan is consistent with the MPAH.

Foothill and Eastern Transportation Corridor

The Foothill Transportation Corridor (FTC) and the Eastern Transportation Corridor (ETC) are two of three major transportation corridors within Orange County. The Corridors are operated as toll facilities until the construction costs are paid. The FTC serves Lake Forest and crosses the central portion of the City. The 30-mile FTC is located inland of, and parallel to the Santa Ana (I-5) Freeway. The FTC begins at the east leg of the Eastern Transportation Corridor approximately three miles northwest of Lake Forest, continues south past Lake Forest Drive, and El Toro Road/Portola Parkway, to Oso Parkway, and is planned to connect to Interstate 5 south of San Clemente when completed. The east leg of the ETC extends from the San Diego Freeway at the current termination of the Laguna Freeway to an intersection with the west leg of the ETC in the City of Orange.

South Coast Air Quality Management District Air Quality Plan

South Coast Air Quality Management District (AQMD) is a regulatory body responsible for improving air quality in the South Coast Air Basin. AQMD identifies Transportation Demand Management (TDM) strategies and programs aimed at increasing the average

number of persons per vehicle arriving during the morning peak period. The Circulation Element identifies TDM strategies and other AQMD circulation programs to be implemented in Lake Forest.

County of Orange Congestion Management Plan

With the passage of the gas tax increase (Proposition 111) in June 1990, it became a requirement that urbanized areas such as Orange County adopt a Congestion Management Program (CMP). The goals of the CMP are to reduce traffic congestion and to provide a mechanism for coordinating land use development and transportation improvement decisions. For the most part, the Orange County CMP is a composite of local agencies' submittals in which each local jurisdiction develops the required data in accordance with the guidelines established by the Orange County Transportation Authority (OCTA). The OCTA compiles the data and submits the results to the Southern California Association of Governments (SCAG) for a finding of regional consistency. Two Lake Forest arterials, El Toro Road and Trabuco Road west of El Toro Road, are components of the Congestion Management Plan system.

County of Orange Growth Management Plan (Measure M)

In November 1990 voters approved Measure M, the Revised Traffic Improvement and Growth Management Ordinance, which authorized the imposition of a one-half percent sales tax to fund needed transportation improvements. To be eligible to receive funds, local jurisdictions must satisfy a variety of requirements as set out in the Orange County Local Transportation Authority (LTA) Ordinance No. 2. Included in these requirements the need to adopt a traffic circulation plan consistent with the MPAH, adopt and adequately fund a local transportation fee program, satisfy

maintenance requirements, adopt a Growth Management Element, and adopt a seven year capital improvement program that includes all transportation projects funded partially or fully by Measure M funds. The Lake Forest Public Facilities/Growth Management Element fulfills the Measure M requirements for the Growth Management Element while the Circulation Element provides roadway service and improvement standards.

The original Measure M was a 20 year program set to expire in 2011. In November 2006, Measure M renewal was approved by voters. The renewed Measure M is a 30 year program that will provide funding for transportation until 2041.

County of Orange Master Plan of Scenic Highways

The County General Plan includes a Scenic Highway Master Plan which designates certain highways as scenic routes. With this designation, specific guidelines are given for enhancing the scenic amenities of these facilities. Arterials subject to the plan in the City include Santiago Canyon Road and El Toro Road between Santa Margarita Parkway and Live Oak Canyon Road.

County of Orange Master Plan of Countywide Bikeways

Also part of the Countywide General Plan, the Master Plan of Countywide Bikeways designates various classes of bike routes throughout the County. One of the primary considerations is to provide continuity throughout the County and to provide a consistency between Countywide and local jurisdiction bikeway plans. The Circulation Element contains a bikeway plan that utilizes the County classification system and links to County routes.

Metrolink

Metrolink is a commuter rail service operated by the Southern California Regional Rail Authority (SCRRA), a joint powers authority comprised of five county agencies. SCRRA currently operates round trips on the Orange County line, which utilizes the right-of-way that is owned by OCTA and traverses the City of Lake Forest. Multiple stops during the morning and evening commuting period are provided at stations located in Irvine, Laguna Niguel and San Juan Capistrano, the three stations nearest Lake Forest.

This corridor is also referred to as the LOSSAN (Los Angeles to San Diego) Corridor. Other operators along this corridor include Amtrak, providing intercity passenger service from San Diego to Los Angeles and Santa Barbara; and the Atchison, Topeka and Santa Fe Railway Co. (Santa Fe), who, as the previous owner of the right-of-way, maintains a permanent use easement for the operation of freight service along this corridor.

The LOSSAN Corridor has been federally designated as a high speed rail corridor, and the California High Speed Rail Commission will consider the implementation of high speed rail services along this corridor.

Foothill Circulation Phasing Plan (FCPP)

The purpose of the Foothill Circulation Phasing Plan adopted by the County of Orange in 1987, is to ensure that new development in the Foothill Area is balanced with improvements to the regional road network. The FCPP provides a quantitative link between the phasing of future development and road improvements. The FCPP consists of a financing plan for a phased construction program, which is tied to an approved schedule of development. Lake Forest is located in the Foothill Area and is subject to the FCPP. The

City collects FCPP fees at the time building permits are issued.

Lake Forest Transportation Mitigation Program (LFTM)

A citywide traffic model was developed as part of the Opportunities Study which allows for detailed review of citywide traffic impacts. Based on a citywide traffic model, the Lake Forest Traffic Mitigation Fee Program (LFTM) provides the Development Mitigation Program, Comprehensive Phasing Program, and Performance Monitoring Program described in the Public Facilities and Growth Management Element.

RELATIONSHIP TO OTHER GENERAL PLAN ELEMENTS

According to state planning law, the Circulation Element must be independent but consistent with the other General Plan Elements. All elements of the General Plan are interrelated to a degree, and certain goals and policies of each element may also address issues that are the primary subjects of other elements. The integration of overlapping issues throughout the General Plan elements provides a strong basis for implementation of plans and programs, and achievement of community goals. The Circulation Element relates most closely to the Land Use, Recreation and Resources, and Public Facilities/Growth Management Elements.

The Land Use and Circulation Elements are inextricably linked: The planned development identified in the Land Use Element is the basis for determining future road improvements. The circulation policies and plans ensure that existing transportation facilities will be improved and new facilities will be constructed to adequately serve traffic generated by planned development. An efficient circulation system is a critical factor

for diversifying and expanding local economic activities. In addition, the Circulation Element promotes alternative transportation modes to minimize the regional impacts of planned local development.

The Circulation Element provides for a trail system that accommodates bicycles, pedestrians and equestrian riders. Trails for these uses will connect with recreational areas and support the City recreational goals identified in the Recreation and Resources Element. In addition to promoting bicycle and pedestrian transportation, the Circulation Element promotes the use of public transit. Alternative transportation modes will help achieve the air quality goals identified in the Recreation and Resource Element. The policies and plans in the Circulation Element also support the local and regional transportation goals established in the Public Facilities/ Growth Management Element.

ISSUES, GOALS, AND POLICIES

Six major issues are addressed by the goals, policies, and implementation actions of the Circulation Element. These major issues include (1) supporting the development of regional transportation facilities; (2) providing a suitable system of City roadways; (3) increasing the use of public transit and non vehicular modes of travel; (4) ensuring the existence of convenient and suitable parking for vehicles; (5) improving the efficiency of the transportation system and controlling demands on the system; and (6) identifying and utilizing sources of funding for transportation system improvements. Each issue and the related goals, policies and implementing actions are identified and discussed in the following section.

INTERCITY AND REGIONAL TRANSPORTATION

Transportation in Lake Forest is directly related to an overall transportation network for the region. Planning for the needs of the community necessarily includes recognition of the related transportation needs and planning efforts of the surrounding county, region, and state. With that recognition is the need for the City to actively monitor transportation planning and development in the surrounding area.

GOAL 1.0: Support for the development of an efficient network of regional transportation facilities.

Policy 1.1: Support the completion of the Orange County Master Plan of Arterial Highways.

Policy 1.2: Work closely with adjacent jurisdictions and transportation agencies to ensure that development projects outside Lake Forest do not adversely impact the City or

other providers of public facilities and services in Lake Forest.

Policy 1.3: Monitor rail travel programs including the Urban Rail System and the Commuter Rail (Metrolink) System.

LOCAL TRANSPORTATION ROUTES

Safe and convenient access to activities in the community is provided by a well designed local roadway system. That system serves the community's primary need for mobility and includes a planned hierarchy of roadways to meet that need.

GOAL 2.0: A system of roadways in the community that meets local needs.

Policy 2.1: Provide and maintain a City circulation system that is in balance with planned land uses in Lake Forest and surrounding areas in the region.

Policy 2.2: Coordinate improvements to the City circulation system with other major transportation improvement programs, such as the Foothill Circulation Phasing Plan and improvement to the San Diego Freeway (I-5).

Policy 2.3: Improve the Lake Forest circulation system roadways in concert with land development to ensure adequate levels of service.

TRANSIT, BICYCLE, PEDESTRIAN, AND EQUESTRIAN FACILITIES

Public transportation offers an option to the traditional use of an automobile for traveling within and outside of the community. Non vehicular methods or modes of travel, such as bicycling or walking, can reduce demands on the roadway system where appropriate facilities exist to foster those modes. Together, public transportation and non vehicular modes

of travel provide important alternatives to travel by automobile.

GOAL 3.0 Increased use of public transportation.

Policy 3.1: Promote the provision of public transit facilities within areas of major development.

Policy 3.2: Encourage the provision of additional regional public transportation services and support facilities, such as park and ride lots near the San Diego Freeway (I-5) and the Foothill Transportation Corridor.

Policy 3.3: Encourage the provision of special transit services in Lake Forest.

Policy 3.4: Promote access and public transit service between Lake Forest and regional-serving transportation centers.

GOAL 4.0: Promotion of non vehicular modes of travel.

Policy 4.1: Promote the provision of non vehicular circulation within Lake Forest.

Policy 4.2: Provide and maintain a non vehicular component of the Lake Forest overall circulation system that supports bicycles, equestrians, and pedestrians and is coordinated with those of other service districts in Lake Forest and with adjacent jurisdictions.

Policy 4.3: Improve pedestrian access from neighborhoods to commercial areas.

PARKING

Convenient and well designed parking facilities are an important component of the City roadway system because they provide suitable vehicle storage areas at work, shopping, and recreation destinations. Proper parking area design can also allow for short distance travel of vehicles from one property

to another without impacting the public street system.

GOAL 5.0 Convenient and suitable parking facilities for motorized and non motorized vehicles.

Policy 5.1: Require sufficient off street parking for all land uses and maximize the use of parking facilities in Lake Forest.

Policy 5.2: Eliminate the use of on street parking on identified arterial streets where maximum traffic flow is desired.

Policy 5.3: Promote the provision of access between the parking areas of adjacent properties along arterial roadways to improve overall traffic flow.

TRANSPORTATION SYSTEM AND DEMAND MANAGEMENT

Transportation System Management (TSM) and Transportation Demand Management (TDM) methods are included in an overall strategy to improve transportation. These methods can improve system effectiveness and provide relief from increasing demands for more improvements to transportation facilities.

GOAL 6.0: Maximized transportation system efficiency.

Policy 6.1: Improve operational measures of the traffic system designed to maximize the efficiency of the system while minimizing delay and congestion.

Policy 6.2: Improve intersection capacity at key intersections to improve traffic flow.

Policy 6.3: Support the implementation of employer Transportation Demand Management (TDM) provisions of the Air Quality Management Plan (AQMP) and the Congestion Management Program (CMP), and participate in regional efforts to implement TDM requirements.

TRANSPORTATION FINANCING

Adequate funding must be available to finance needed improvements to the transportation system. Overall system improvements will rely upon several different sources of funding to meet the expected demands for expansion and enhancement of transportation facilities.

GOAL 7.0: Utilization of various financing methods to improve the overall transportation system.

Policy 7.1: Utilize available financing methods and sources of funding to make necessary improvements to the overall transportation system in Lake Forest.

Policy 7.2: Ensure that new development in Lake Forest associated with the Foothill

Circulation Phasing Plan meets the commitments for improvements described by the Plan.

Policy 7.3: Maintain the transportation standards required to qualify for revenue from the Congestion Management Plan and the Revised Traffic Improvement and Growth Management Ordinance (Measure M).

RELATED GOALS AND POLICIES

The goals and policies described in the Circulation element are related to and support subjects included within other General Plan elements. In turn, many goals and policies from the other elements directly or indirectly support the goals and policies of the Circulation Element. These supporting goals and policies are identified in Table C-1.

Table C-1
Circulation Related Goals and Policies by Element

<i>Circulation Issue Area</i>	<i>Related Goals and Policies by Element</i>					
	<i>Land Use</i>	<i>Housing</i>	<i>Circulation</i>	<i>Recreation and Resources</i>	<i>Safety and Noise</i>	<i>Public Facilities/ Growth Management</i>
Intercity and Regional Transportation	3.3, 5.7	1.6		7.1, 7.2, 7.3, 7.6	2.5	7.1, 9.1, 9.2
Local Transportation Routes	3.1, 3.3, 4.2	1.5		1.7, 7.4, 7.6, 7.7	2.2, 2.5, 5.1, 5.2, 6.1	7.1
Transit, Bicycle, Pedestrian, and Equestrian Facilities		1.5, 1.6		1.1, 1.3, 1.7, 7.3, 7.6		7.1
Parking	3.1			7.3		
Transportation System and Demand Management	3.1, 4.2			7.1, 7.2, 7.3, 7.5		7.1
Transportation Financing	5.4					7.1

CIRCULATION PLAN

The City of Lake Forest is supported by a diverse circulation system with vehicle, transit, pedestrian, bicycle and equestrian linkages. The local system connects with the larger regional system and operation of the two systems is interdependent. This section of the element establishes the Circulation Plan. The Plan summarizes the approach to ensure safe and convenient operation of the circulation system and identifies improvements required to accommodate traffic from planned development.

Vehicle transportation is presently the primary mode and an Arterial Highway Plan (Figure C-1) is established with hierarchical roadway designations, physical design standards for the roadway designations, and service standards. The Arterial Highway Plan includes regional arterials and anticipated regional traffic levels. The use of alternative transportation modes is promoted to reduce dependency on automobile transportation.

The Plan is based on the goals and policies identified in the previous section. The Circulation Element Implementation Program, which is part of the General Plan Implementation Program, is an extension of the Circulation Plan and contains specific programs to coordinate planned development with vehicular and non-vehicular circulation improvements.

INTERCITY AND REGIONAL TRANSPORTATION

Lake Forest and the southern California region have experienced rapid urban growth in the last two decades. The success of existing and future development is in part dependent on the availability of an effective regional transportation system. The system must link localities with outside commerce centers and

regional transportation hubs. In addition, the regional circulation system must meet the needs of local residents. Lake Forest is well connected with the regional system. The San Diego Freeway (Interstate 5) extends along the western portion of the City and provides connection with other regional freeways in Orange County, San Diego County, Los Angeles County, and beyond. The Orange County Transportation Authority (OCTA) railroad traverses the central part of the City and John Wayne/Orange County Airport is located approximately ten miles to the west.

The Foothill Transportation Corridor (FTC) provides additional highway access. The FTC travels through the central portion of the City and provides regional access for residents and businesses. As a result, some traffic using the San Diego Freeway has been redirected toward the FTC. In addition, direct access to the FTC has generated new commercial and light industrial development in the central portion of the City.

Many roadways in Lake Forest serve regional transportation purposes and are part of the Orange County Master Plan of Arterial Highways (MPAH). Because development in the City could affect operation of MPAH roadways, improvements will be required. The Foothill Circulation Phasing Plan is another plan that identifies transportation facilities for anticipated regional development.

Ensuring adequate circulation for residents and business will require coordination with regional and state transportation planning efforts. Roadways within the City will be improved in accordance with the MPAH and Foothill Circulation Phasing Plan. The Lake Forest Traffic Mitigation Program (LFTM) will provide a funding source for transportation improvements to support

planned development. Completion of the FTC will be monitored to ensure adequate capacity and consistency with planned circulation improvements in the City. In addition, Measure M requirements will be implemented in the City to further control regional traffic. Application of Measure M requirements is specifically addressed in the Public Facilities/Growth Management Element.

LOCAL TRANSPORTATION ROUTES

The circulation goals and policies emphasize the need for a circulation system capable of serving both existing and future traffic. Essentially, this represents a requirement that land use and circulation must be in "balance." The Lake Forest Arterial Highway Plan delineates the roadway component of the Circulation Element. The plan is designed to accommodate anticipated traffic levels based on buildout of the City's Land Use Element.

Roadway Classifications

Four roadway classifications are included in the Arterial Highway Plan, these being consistent with the Orange County Master Plan of Arterial Highways (MPAH). Figure C-1 Illustrates the roadway classifications on the Arterial Highway Plan.

Principal Arterials - Principal Arterials are eight-lane roadways with raised landscaped medians. Unsignalized minor street and driveway access may be allowed under certain circumstances, but signalized access is preferred, and left-turn restrictions are typically placed at unsignalized access locations. Curbside parking is prohibited. In some locations, full buildout to eight lanes may not occur, but augmented lanes at intersections (e.g. separate right-turn lanes) can result in comparable capacity.

Major Arterials - Major Arterials are six lane roadways with raised landscaped medians.

Left-turn restrictions will generally be placed at minor unsignalized driveways, and as a primary traffic carrier, local access is confined to signalized intersections to the extent possible. Curbside parking is generally prohibited.

Primary Arterials - These are four-lane roadways with painted or raised medians. They are similar in function to Major Arterials, but have lower traffic carrying capacity needs. Parking is generally prohibited.

Secondary Arterials - Secondary Arterials are four-lane roadways without medians (undivided). Direct access from adjacent residential properties is possible and left-turning vehicles may block the center lane when making a turn. Commercial access is typically via signalized or unsignalized intersections with center turn lanes. While on-street parking can occur, it should be prohibited near intersections or where localized circumstances warrant parking restrictions.

REPRESENTATIVE ROADWAY CAPACITIES

As will be seen from the later discussion on Principal Intersections, carrying capacity of the roadway system is determined by peak hour intersection performance. With respect to daily traffic on the different types of roadways, the following is a general guide to the average daily traffic (ADT) carrying capacity of the four roadway classifications:

CLASSIFICATION	ADT
Principal (8-lanes divided)	70,000
Major (6-lanes divided)	56,000
Primary (4-lane divided)	36,000
Secondary (4-lane undivided)	25,000

The actual carrying capacity will depend on a number of factors such as access control and

intersection treatment, and these representative ADT values are intended only as general guidelines and not for use in evaluating level of service.

COMMERCIAL DESIGNATION

The commercial qualifier for certain roadways recognizes that the daily traffic patterns for commercial uses are different than for other land uses. Most commercial activity occurs after the morning peak hour and is somewhat continuous throughout the remainder of the day. The traffic impacts of commercial use are heavier during the non-peak hours compared to most other land uses. Hence the commercial designation is applied to roadways with significant amounts of commercial use, and such roadways will typically have a higher representative ADT than those listed above.

ROADWAY DIMENSIONS

The roadway classifications are defined according to schematic cross-sections and intersection treatments. Together, these provide the City with General Plan related

mechanisms to require adequate right-of-way dedications when opportunities arise.

Cross-Sections

Figure C-2 shows schematic cross-sections of each classification of roadway. These sections represent the desirable standards, but variations in right-of-way width and specific roadway improvements will occur in certain cases due to physical constraints and/or right-of-way limitations. In some situations, additional right-of-way may be required for bikeways and trails. Also, the roadway classifications may deviate from the standards where local character dictates special treatment.

Intersection Dimensions

The cross-sections presented earlier identify midblock roadway dimensions. Right-of-way needs at intersections are typically greater than those at midblock. Table C-2 provides guidelines for determining the number of required lanes at intersection approaches for each roadway classification.

Roadway Classification	Number of Entering Lanes (Each Direction)			COMMENTS
	Through	Left Turn	Right Turn	
Principal Arterial	3	2 ⁽¹⁾	1	Two right-turn lanes or a free right-turn may be required at specific locations
Major Arterial	3	2 ⁽¹⁾	1	A free right-turn may be required at specific locations
Primary Arterial	2	1 or 2 ⁽²⁾	1	
Secondary Arterial	2	1	0 ⁽³⁾	
Notes:				
⁽¹⁾ Only one left-turn lane is required if left-turn is into a two-lane roadway.				
⁽²⁾ The need for one or two left-turn lanes will depend on existing and future turn volumes.				
⁽³⁾ A separate right-turn lane may be required under special circumstances or where the roadway terminates.				

Right turn lanes will typically require some additional right-of-way on one side (the entering side on the intersection). The additional right-of-way should be a minimum of six feet with 10 feet being preferable, and extend for at least 250 feet back from the intersection curb face.

PRINCIPAL INTERSECTIONS

The performance of the citywide arterial system is largely dependent on intersection capacity. This is recognized in the performance criteria discussed below, and reflects the reality of driver-perceived levels of service on the roadway system. Accordingly, the Circulation Element uses the concept of Principal Intersections to emphasize the importance of intersection performance.

Principal intersections are identified as locations that are critical to the function of the overall roadway network. Their locations are such that performance failure at one or more

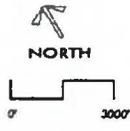
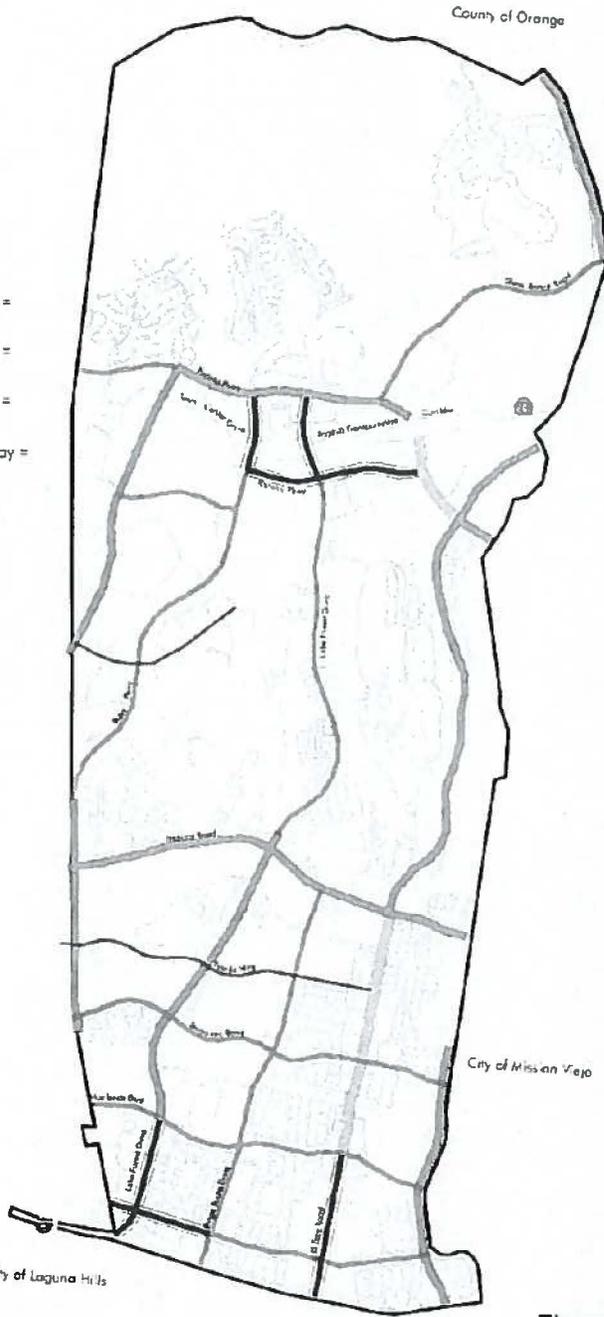
gives the appearance that the roadway system in the vicinity is failing. Such locations are regularly monitored and priority is given to them in implementing roadway improvements.

Within the set of Principal Intersections, selected locations are labeled "Critical Intersections". These are locations that are either deficient today or are estimated to be deficient in the future even with reasonable improvements. The intent is that they be subject to regular monitoring to identify any changes in conditions that could occur over time and/or potential improvements that might be identified to remedy the situation.

Both the Principal Intersections and the subset of Critical Intersections are defined in the accompanying administrative document entitled "Annual Transportation Report" (see later discussion), rather than specified in the Circulation Element. In this manner, intersections can be added or deleted from the list over time as circumstances warrant.

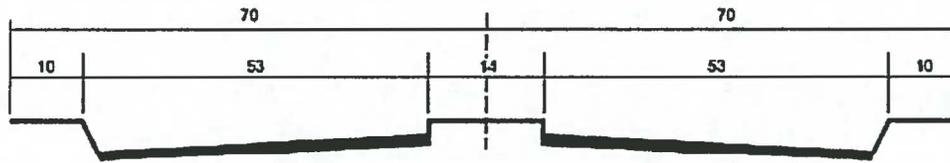
Legend

-  City Boundary
-  8 Lane Divided Roadway = Principal Arterial
-  6 Lane Divided Roadway = Major Arterial
-  4 Lane Divided Roadway = Primary Arterial
-  4 Lane Undivided Roadway = Secondary Arterial
-  Commercial Street

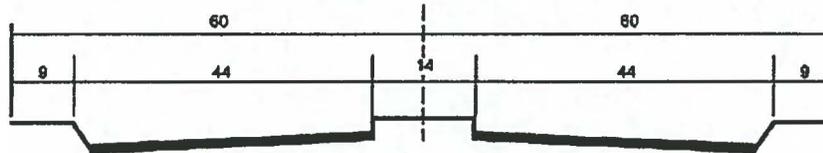


Source: Austin-Foust Associates

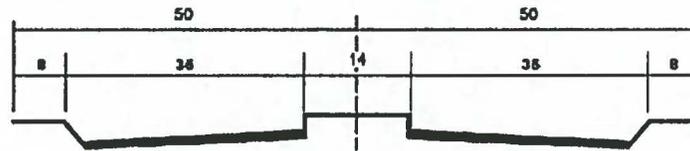
Figure C-1
Arterial Highway Plan



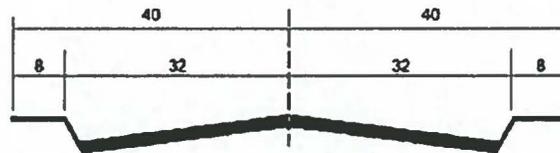
Eight-Lane Divided Roadway 140' R/W
Principal Arterial



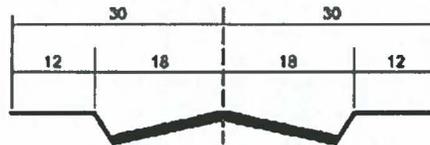
Six-Lane Divided Roadway 120' R/W
Major Arterial



Four-Lane Divided Roadway 100' R/W
Primary Arterial



Four-Lane Undivided Roadway 80' R/W
Secondary Arterial



Two-Lane Undivided Roadway 60' R/W



General Plan

Source: Austin-Foust Associates

Figure C-2
Typical Cross-Sections

PERFORMANCE CRITERIA

Evaluating the ability of the circulation system to serve the traffic demand requires establishing suitable performance criteria. Performance criteria have a policy component that establishes a desired level of service (LOS) and a technical component that specifies how traffic forecast data can be used to measure the achievement of these criteria.

The performance criteria used for evaluating volumes and capacities on the City street system are based on peak hour intersection data, since as noted above intersection performance dictates the level of service experienced by drivers. The performance criteria are summarized in Table C-3, and include the thresholds used in evaluating project impacts.

These performance standards establish a basis from which to evaluate the need to improve roadway facilities (specifically intersection locations) in response to increased traffic, and also define project impact and mitigation criteria. Selected locations labeled "Critical Intersections" have difficulty meeting the performance standard even with improvements, and are subject to special monitoring as noted above. As conditions change or suitable improvements are identified for a given Critical Intersection, it would be deleted from the list.

Certain levels of analysis require that the I-5 and SR-241 freeway mainline segments serving the City and freeway ramps accessing the I-5 and SR-241 be examined. Such analysis would satisfy the Caltrans traffic impact study guidelines.

LAKE FOREST TRANSPORTATION MITIGATION PROGRAM

The Lake Forest Transportation Mitigation (LFTM) Program establishes long-range transportation improvements designed to maintain adequate levels of service on the City's arterial road system. It also provides cost estimates and fees for funding the improvements.

The LFTM Program is described in the Annual Transportation Report along with the following pertinent information pertaining to the arterial street system:

- Current list of Principal Intersections
- Existing ADT volumes and peak hour intersection volumes
- Current status of Critical Intersections
- Current list of LFTM Program improvements
- Costs and fees for LFTM Program improvements

The document is updated yearly and provides the basic administrative and technical resource for items referred to here in the Circulation Element.

Table C-3
CITY OF LAKE FOREST PERFORMANCE CRITERIA

Calculation Methodology

Level of service (LOS) to be based on peak hour intersection capacity utilization (ICU) values calculated using the following values:

Saturation Flow Rate: 1,700 vehicles/hour/lane

Clearance Interval: .05

Right-Turn-On-Red Utilization Factor*: .75

* "De-facto" right-turn lane is assumed in the ICU calculation if 19 feet from edge to outside of through-lane exists and parking is prohibited during peak periods.

Performance Standard

LOS "D" (peak hour ICU less than or equal to .90) for all intersections except Critical Intersections where LOS "E" (peak hour ICU less than or equal to 1.00) is acceptable with the requirement that regular monitoring take place.

Mitigation Requirement for Project Impacts

For ICU greater than the acceptable level of service, mitigation of the project contribution is required to bring intersection back to acceptable level of service or to no-project conditions if project contribution to the ICU is greater than .01.

Truck Routes

Lake Forest experiences moderate amounts of truck traffic generated by commercial and light industrial uses. Truck traffic may increase in future years to support new businesses. Noise impacts and congestion can be caused by truck traffic in urban areas. To avoid such impacts, truck routes will be designated in the City through the process for the Foothill Growth Management Area.

To minimize noise impacts in residential areas, truck routes will be located along arterial roadways. In adopting a set of designated routes for truck traffic traveling through the City, steps will be taken to minimize the amount of truck traffic on arterials in

residential areas that are sensitive to congestion and noise impacts.

Transit, Bicycle, Pedestrian, and Equestrian Facilities

One of the key components of the Circulation Plan is to promote the use of alternative transportation modes such as transit, bicycling, walking, and riding. Increasing the use of alternative transportation modes will produce a number of community benefits including reduced traffic, less need for costly roadway improvement projects and improved air quality. Facilities for bicycling, walking, and riding provide recreational opportunities as well.

Public bus service is provided by OCTA. An established network of bus routes provides access to employment centers, shopping and recreational areas within the City. As the eastern portion of the City developed and public transit services demand increased for the Foothill Ranch and Portola Hills communities, OCTA has established new bus routes to serve the areas north of Trabuco Road. Figure C-3 indicates the bus routes currently serving Lake Forest. A summary of approximate origin and destination is shown on Table C-4. OCTA continually modifies the bus routes in order to meet the needs of the riders.

Station Link is a fleet of special OCTA buses scheduled to meet Orange County Metrolink train commuters at their stations. Station Link buses are commuters' connections to major work, shopping, and transit connection to regional transportation centers, such as the Irvine Transportation Center.

Table C-4	
OCTA Bus Service Through Lake Forest	
Line	Origin/Destination
Route 86	Costa Mesa - Mission Viejo via Alton Pkwy./Jeronimo Rd.
Route 89	Laguna Beach to Mission Viejo via Laguna Canyon Rd.-El Toro Rd.
Route 177	Laguna Hills to Foothill Ranch via Los Alisos-Muirlands-Lake Forest Drive
Route 206	Santa Ana to Lake Forest Express via 5 freeway
Route 188	Laguna Hills to Irvine Spectrum via Rockfield-Ridge Route-Trabuco-Alton
Route 480	Irvine Transportation Center to Lake Forest via Alton Pkwy/Bake Pkwy/Lake Forest Dr.

SOURCE: GPA 2008-02

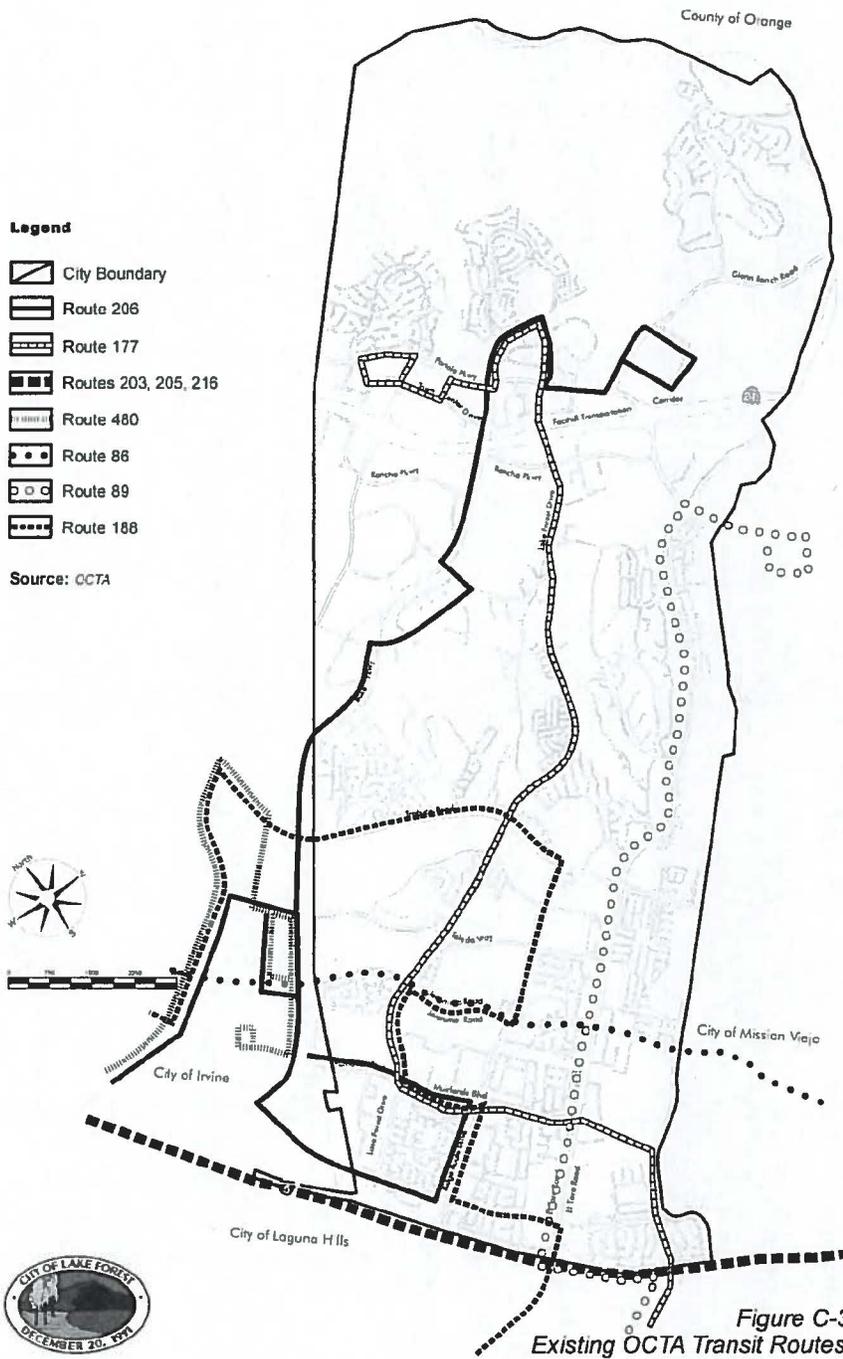
The City will advocate that the planned Urban Rail and Metrolink systems serve the transit needs of Lake Forest through continued

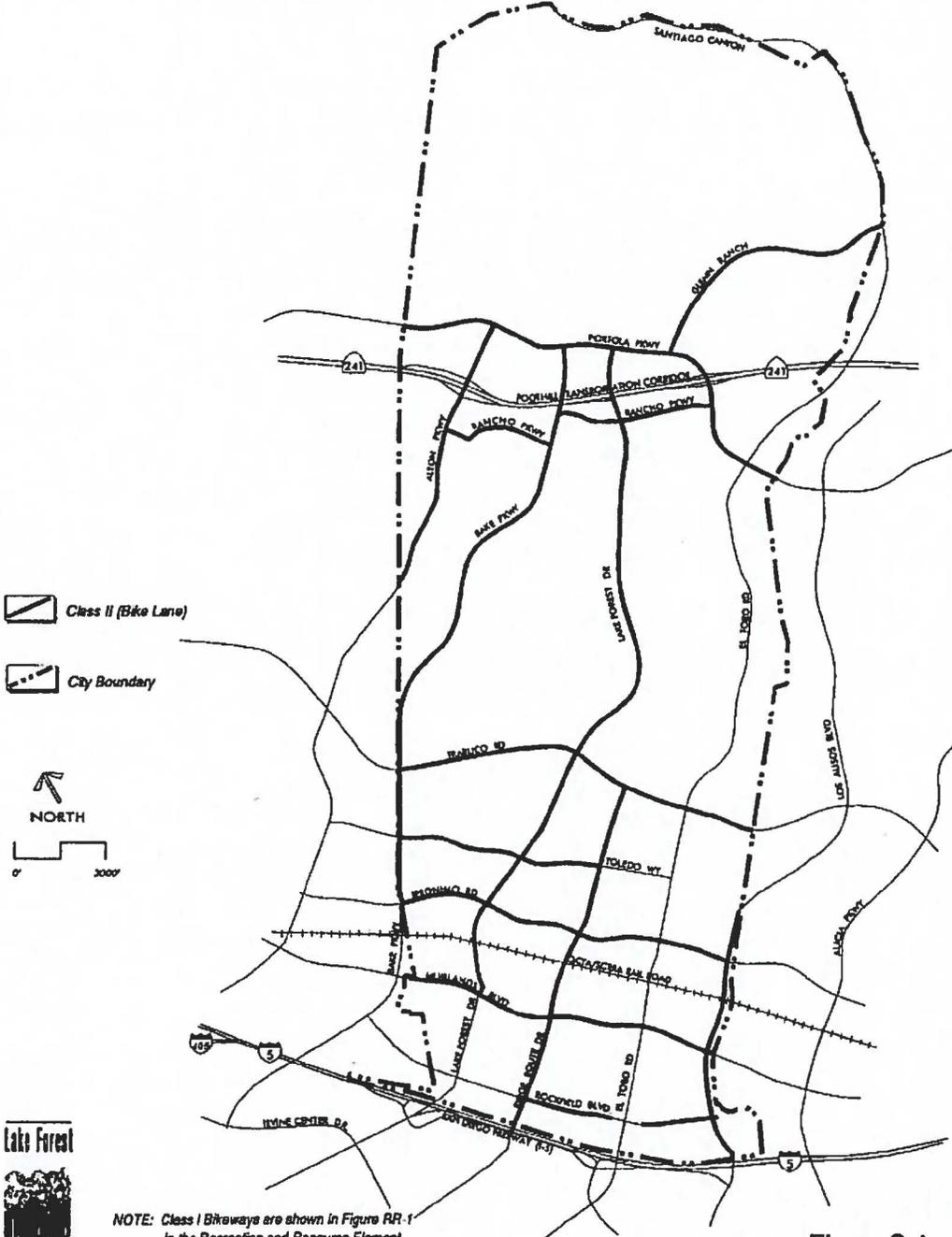
coordination with OCTA and regional planning forums.

The planned bikeway system within the City is illustrated in Figure C-4. Table C-5 provides descriptions of the three bikeway classifications presently implemented in Orange County. As Figure C-4 indicates, the bikeway system is comprised of a network of Class II bike lanes along arterial roadways. Class I off-road bike trails are described in the Recreation and Resources Element.

The City will continue to enhance the bikeway system as roadway improvements occur. Bikeway system projects will focus primarily on the closing of gaps in the existing system (e.g., the railroad under-crossing at Ridge Route Drive and along Rockfield Boulevard), making City bikeways continuous with the regional bikeway system (e.g., bikeway connections on the planned extension of Alton Parkway south of the Foothill Transportation Corridor, and eliminating on-street parking in marked bicycle lanes where accepted standards indicate that such parking is not advised.

Enhanced local bicycle, pedestrian and riding linkage is planned. The goal is to link residential areas, schools, parks and commercial centers so that residents can travel within the community without driving. New east-west trail access is desired and will be sought with new development. New development projects will be required to include bicycle, pedestrian and riding trails and homeowners associations will be encouraged to construct linkage to adjacent areas where appropriate.





 Class II (Bike Lane)

 City Boundary



NOTE: Class I Bikeways are shown in Figure RR-1 in the Recreation and Resource Element.

SOURCE: Austin-Faust Associates

Figure C-4
Planned Bikeways

**Table C-5
Bikeway Classification Descriptions**

Class I Bike Path or Bike Trail

Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians; crossflows with motorized vehicles minimized.

Sizing: Minimum width for Class I (two-way) is eight feet. Desirable width is 10-12 feet. Minimum shoulder width of two feet each side. Minimum width for Class I (one-way) is five feet. Minimum shoulder width of two feet each side.

Class II Bike Lane

Provides a restricted right-of-way on a roadway's shoulder designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited; vehicle parking and crossflows by pedestrians and motorists permitted. Vehicle parking in a Class II bike lane is not desirable and should be discouraged. Additional lane width (12 feet minimum and 13 feet desirable) shall be required if on-street parking is permitted.

Sizing: Typical width of eight feet. A reduction in width to allow for restriping of an existing roadway or for added turning lanes may be permitted. In such cases, a five-foot width, or gutter width plus three feet, whichever is greater, is the minimum width.

Class III Bikeway

Provides for shared use of roadway facilities. These bikeways share the street with motor vehicles or share the sidewalk with pedestrians. In both of these conditions, bicycle use is a secondary function of the pavement.

SOURCES: Caltrans "Planning and Design Criteria for Bikeways in California"
County of Orange adopted standard Plans for Bikeways

PARKING

Adequate parking is an essential part of urban circulation systems. Vehicle storage areas are required at residential communities, public facilities, parks, commercial areas and employment centers. Without adequate parking, drivers are forced to park cars on-street and traffic flow can be consequently impeded.

In new development projects, sufficient off-street parking will be required and the parking ordinance will be periodically reviewed and amended to reflect current circulation needs. Shared parking access between parking areas of adjacent properties will be required along arterial roadways.

A provision for shared parking allowances is included in the parking ordinance. When monitoring the performance of arterial roadways, the City will consider eliminating on-street parking to increase traffic flow,

particularly when such parking occurs within marked bicycle lanes, where accepted standards indicate that such parking is not advised.

TRANSPORTATION SYSTEM AND DEMAND MANAGEMENT

The efficiency of the circulation system will be maximized with transportation system management (TSM) and transportation demand management (TDM) strategies. TSM involves physical improvements to the circulation infrastructure to expand capacity and increase traffic flow while TDM involves reducing the demand for vehicular transportation. In addition to enhancing the operation of the circulation system, TSM and TDM strategies provide relief from increasing demands for more improvements to transportation facilities.

Traffic signal coordination and intersection capacity improvements will be implemented as needed to maintain traffic flow.

Traffic fees for traffic impacts of new development will be collected according to established local and regional fee programs. The City will support the implementation of the employer TDM provisions of the South Coast Air Quality Management District Air Quality Management Plan and participate in regional efforts to implement TDM requirements. Programs to increase transit ridership and use of non-vehicular transportation such as walking and bicycling will be actively pursued.

TRANSPORTATION FINANCING

Implementing circulation improvements to accommodate planned growth will require financing. Funding for transportation improvements is available from several local, state, and federal sources. The City will identify available funding sources and establish a Development Mitigation Program (LFTM), and maintain the Comprehensive Phasing Program, Performance Monitoring Program, and Capital Improvement Program to guide construction and funding of transportation system improvements. More information about these programs is provided in the Public Facilities/Growth Management Element.

The standards and programs required to qualify for revenue from the Congestion Management Plan and Measure M will be applied in the City. Circulation improvements to accommodate new development projects will be constructed and/or funded by project proponents. Fees will be collected for traffic impacts of new development in accordance with established fee programs.



Update to the General Plan Guidelines: Complete Streets and the Circulation Element

December 15, 2010

STATE OF CALIFORNIA
Arnold Schwarzenegger,
Governor

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SECTION I: PURPOSE AND BACKGROUND

PURPOSE

This update to the circulation element section of the *2003 General Plan Guidelines* meets the requirements of Assembly Bill 1358, The California Complete Streets Act. The Act requires the Governor's Office of Planning and Research (OPR) to amend the *General Plan Guidelines* to assist city and counties in integrating multimodal transportation network policies into the circulation elements of their general plans. Starting January 2011, all cities and counties, upon the next update of their circulation element, must plan for the development of multimodal transportation networks.¹

To support cities and counties in meeting the requirements and objectives of AB 1358, this update provides guidance on general plan circulation element goals, policies, data collection techniques, and implementation measures related to multimodal transportation networks. The goal of this update is to provide information on how a city or county can plan for the development of a well-balanced, connected, safe, and convenient multimodal transportation network. This network should consist of complete streets which are designed and constructed to serve all users of streets, roads, and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or taking transit.

AB 1358 places the planning, designing, and building of complete streets into the larger planning framework of the general plan by requiring jurisdictions to amend their circulation elements to plan for multimodal transportation networks. These networks should allow for all users to effectively travel by motor vehicle, foot, bicycle, and transit to reach key destinations within their community and the larger region. OPR recommends that local jurisdictions view all transportation projects, new or retrofit, as opportunities to improve safety, access, and mobility for all travelers and recognize pedestrian, bicycle, and transit modes as integral elements of their transportation system. The standard practice should be to construct complete streets while prioritizing project selection and project funding so that jurisdictions accelerate development of a balanced, multimodal transportation network.

Understanding the existing resources, location, and design of a local jurisdiction is imperative to successfully implement a multimodal transportation network. The planning, design, construction, and operation of a multimodal transportation network will be different for each community. Complete streets will look different in rural, suburban, or urban communities. Cities and counties should focus on crafting a network of travel options that are reflective of a community's individual context. A list of selected references with more information on multimodal transportation networks is provided at the end of this document.

¹ Assembly Bill 1358, Chapter 657, Statutes 2008.

Orange County Council of Governments (OCCOG) Complete Streets Initiative



The Orange County Complete Streets Initiative (OC CSI) aims to:

- Help create a transportation network that serves all users, and
- Ensure that all Orange County jurisdictions can comply with the California Complete Streets Act (AB 1358) which requires a Complete Streets component in the Circulation Element in General Plan updates

The purpose of the study is to:

- Promote increased mobility choice
- Engage user safety for all modes
- Create street design policies and guidance in one document
- Tailor design guidance to Orange County's different street types
- Help prioritize space within rights of way to accommodate a mix of transportation types which suit street character, use, and capacity
- Provide Complete Street policies that jurisdictions can use in the Circulation Element of General Plans

What are Complete Streets?

Complete Streets are transportation facilities that:

- Are planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit vehicles, truckers, and motorists
- Are appropriate to the function and context of the facility
- Recognize the variety of non-automotive users, and are inclusive of all ages and abilities
- Look different, according to context, community preferences, types of road users, and their needs



We need your input to help us understand:

- The issues and opportunities around Complete Streets in Orange County
- How a Complete Streets approach could benefit your community
- What design elements you would like to see in your streets

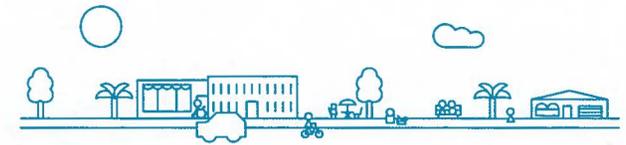


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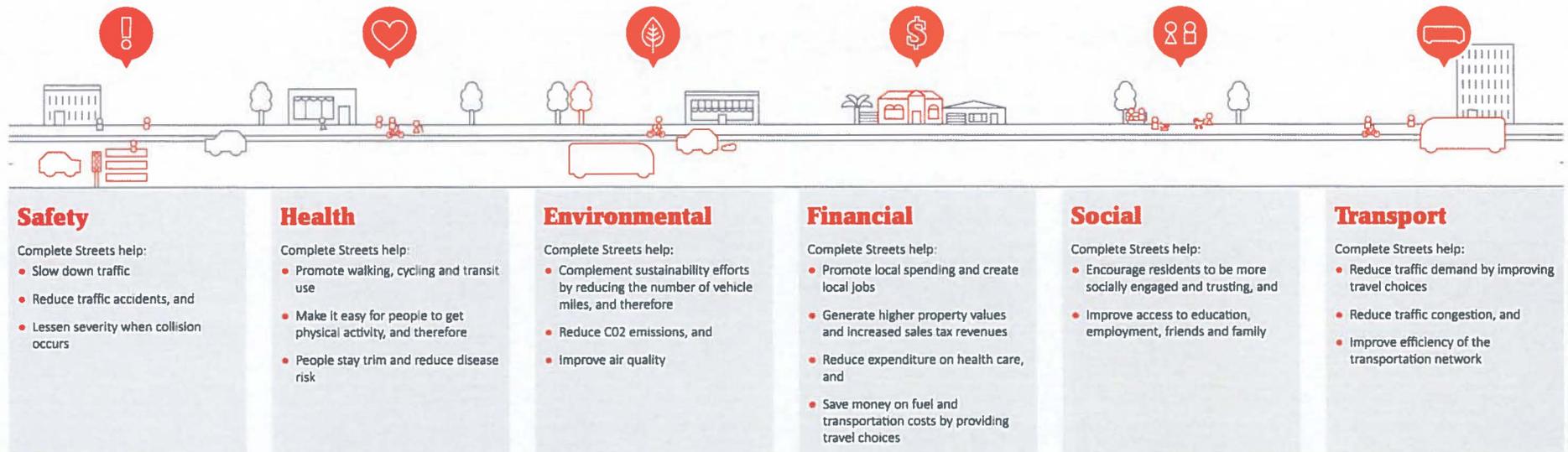
public workshops



Benefits of Complete Streets



Research shows that Complete Streets can bring many benefits. Some are highlighted below.



Street typologies



The Complete Street approach can be applied to all types of streets. Here is a selection of street types found in Orange County.

Commercial Corridor



Boulevard



Downtown Street



Business Park Street



Neighborhood Main Street



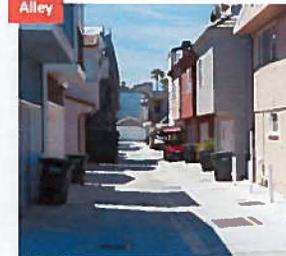
Neighborhood Residential Street



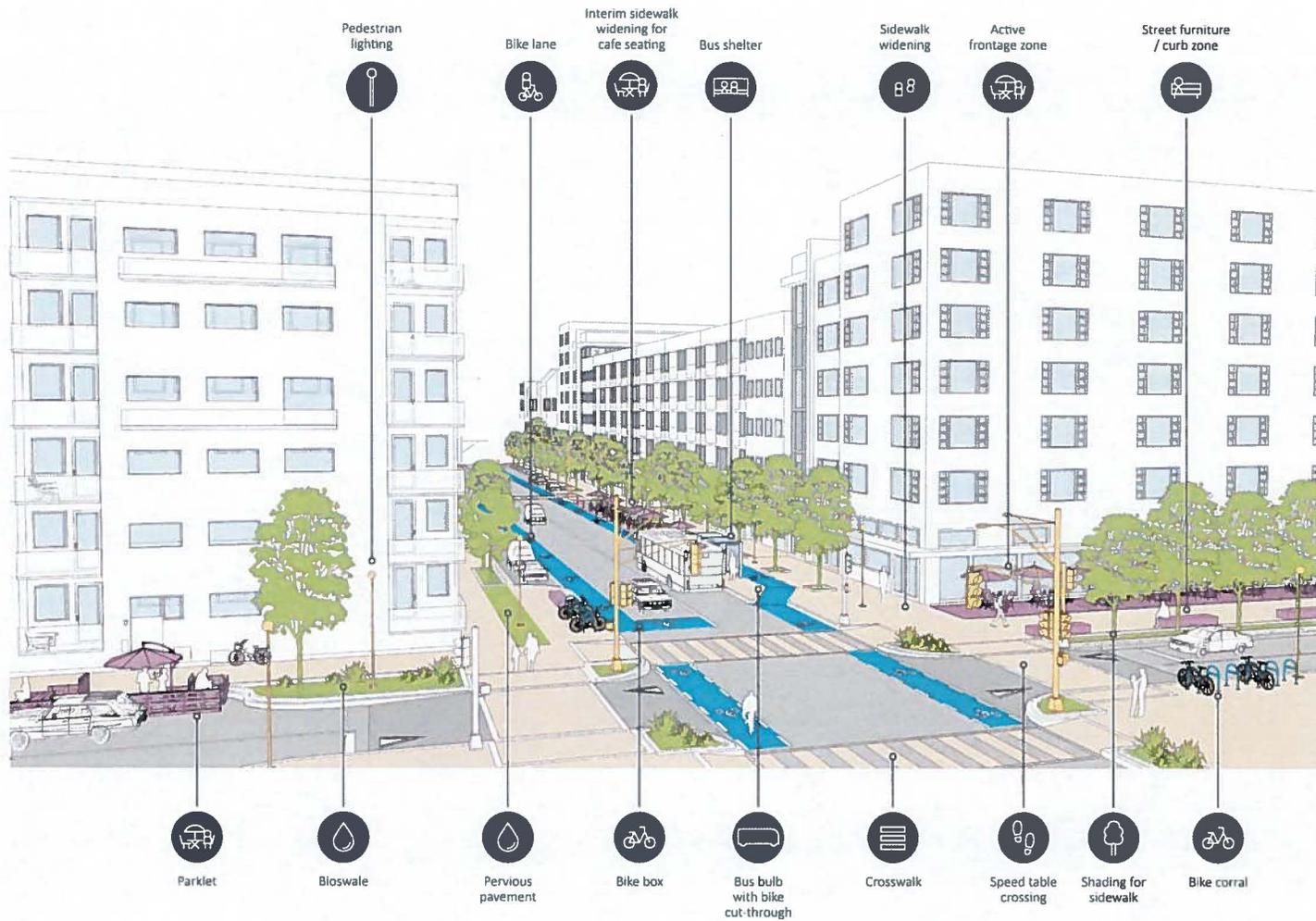
Shared Street



Alley



Downtown Complete Street



Residential Complete Street

Multi-occupancy housing



Curb extension and curb cut



Bioswale

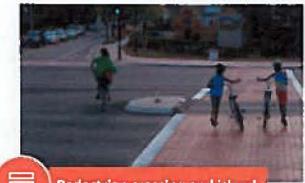
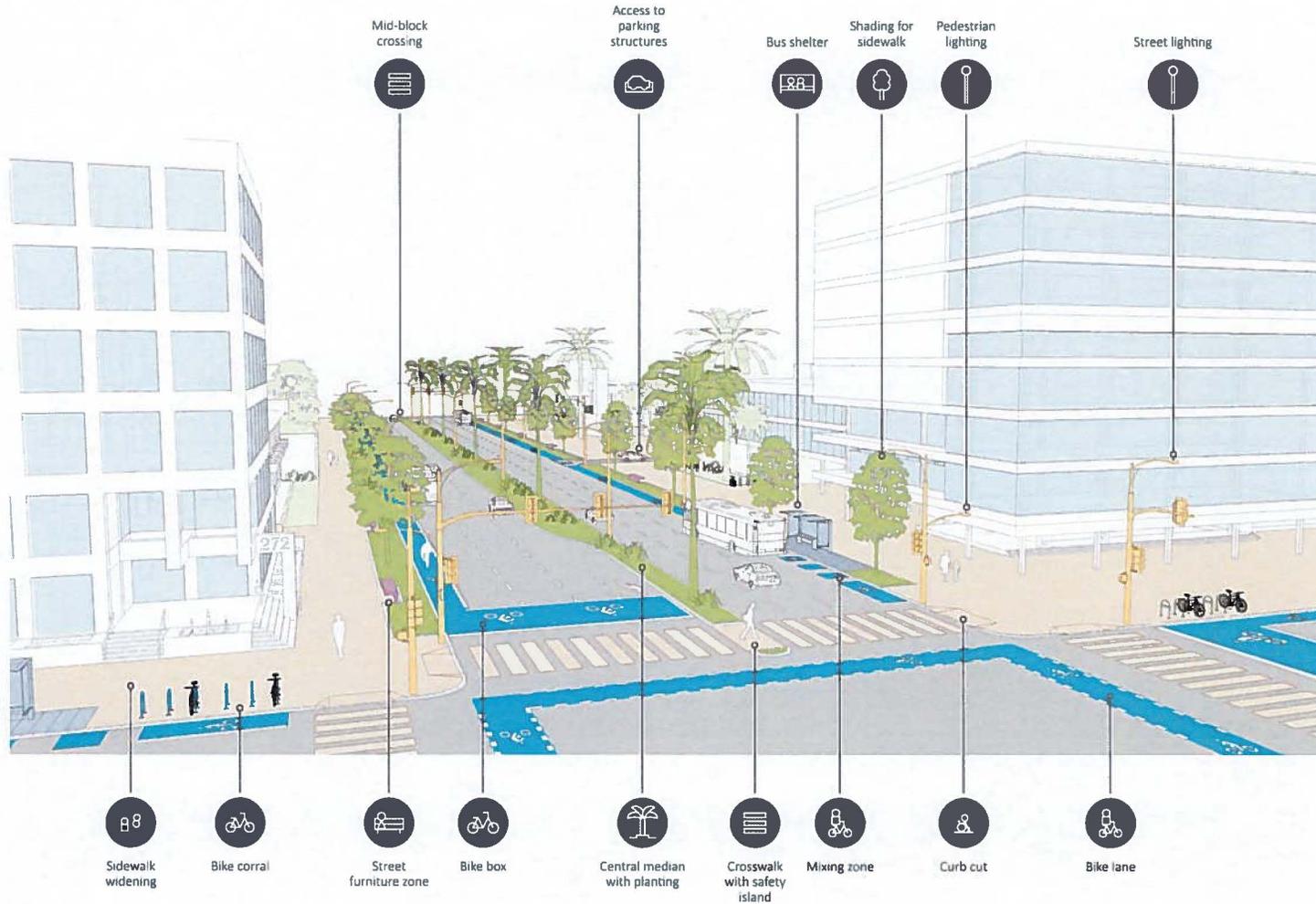
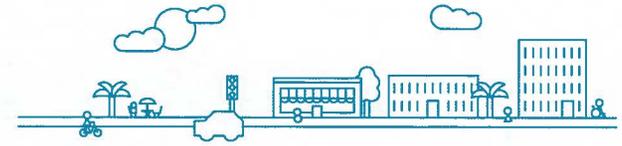


Safe routes to school



Sharrows

Commercial Corridor Complete Street



Pedestrian crossing and island



Bike box



Bike lane



Central median



What makes a Complete Street in your community?



Write your thoughts on a post-it-note and stick on the board

You might want to think about speed reduction, improved walkability, design for biking, access to transit, provisions for street activities, etc.



Which street designs would you like to see in Orange County?



Place a sticky dot under like or dislike to indicate your Complete Street preferences

Bus bulb with shelter



Bike infrastructure



Wider sidewalks



Central median for planting/shade



Curb extension at crossings



Road diet



Parking bays



Other

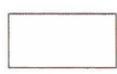
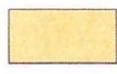
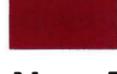


City of Lake Forest General Plan

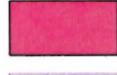
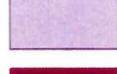
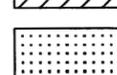
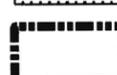
COUNTY OF ORANGE

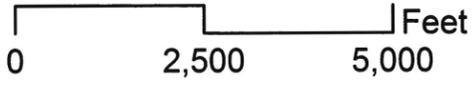
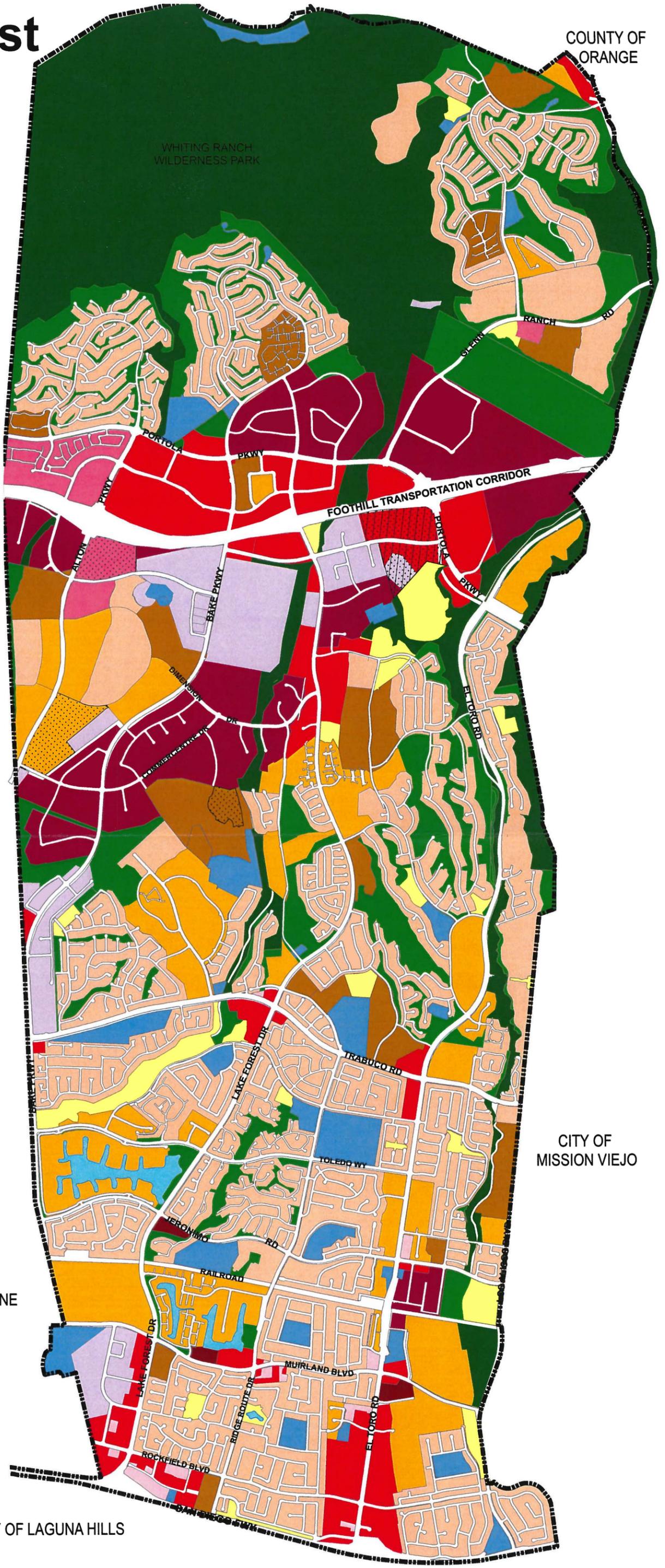
Land Use Designations

Residential Designations

-  Very Low Density Residential (0 to 2 DUs/Net AC)
-  Low Density Residential (2 to 7 DUs/Net AC)
-  Low-Medium Density Residential (7 to 15 DUs/Net AC)
-  Medium Density Residential (15 to 25 DUs/Net AC)
-  High Density Residential (25 to 43 DUs/Net AC)

Non-Residential Designations

-  Commercial
-  Professional Office
-  Mixed-Use
-  Business Park
-  Light Industrial
-  Public Facility
-  Community Park/Open Space
-  Regional Park/Open Space
-  Open Space
-  Lake
-  Transportation Corridor
-  Mineral Resources Overlay
-  Public Facilities Overlay
-  City Boundary



CITY OF IRVINE

CITY OF MISSION VIEJO

CITY OF LAGUNA HILLS

Figure LU-1
Land Use Map

Updated 4/4/14 JM