

## SEMINARY TOMORROW – A COMMUNITY ENGAGEMENT PROCESS

Following North Coast's purchase of the former Baptist Seminary property, an initial plan focused on helping a local secondary school secure a more viable campus. The Strawberry community opposed elements of the initial plan. The primary concern was traffic; other concerns included maintaining the community character, preserving open space, responding to demographic changes in the region and ensuring durability.

Marin County officials identified a growing need for diversity in housing types, stating that, "the insistence on continued single-family development is a thing of the past", and reinforced a desire to reimagine the site without "the constraints of trying to force it into the continuation of the [historic] Seminary use" or a decades-old master plan. This ultimately led to the secondary school's withdrawal from the project and the expiration of the 1984 Master Plan, reverting the Seminary site to its base residential zoning with a conditional use permit overlay allowing a college/university campus for approximately 1,000 students.

North Coast, untethered from the constraints of the 1984 Master Plan, began to examine other possibilities for the site. The Marin County Planning Commission encouraged this re-examination through a fresh lens without the restrictions of the 1984 Master Plan. Commissioner John Eller stated, "I believe that this will frame the approval process for this development more appropriately, i.e. that the developer, community, and the process should recognize the eventual changes to this property are rooted in the [1953] Use Permit for both an academic institution and a residential component."

In response to the preceding series of events, Marin County Supervisor Kathrin Sears charged both North Coast and the Strawberry community to "get real...to come out of their corners, stop trying to throw up roadblocks or maximize their perceived entitlements, be open to learning what a clarified, defined proposal means in terms of real, on the ground impacts, and be open to changing their minds."

North Coast and a group of Strawberry community representatives (the "Community Caucus") formed a working group and entered into professionally facilitated discussions, collectively calling themselves "Seminary Tomorrow."

The Community Caucus consisted of the following Strawberry residents who had been active with the Strawberry Community Association, Strawberry Design Review Board, Strawberry Recreation District Board, De Silva Island HOA, Seminary Cove HOA, and Seminary Neighborhood Association:

- Josh Andresen
- Julie Brown
- Fran Corcoran
- Bill Foss
- Bob Hendry
- David Leimsieder
- Josh Sale
- Barry Shafran



In addition, Seminary Tomorrow was professionally facilitated by Marie Rainwater of Rainwater & Associates.

It should be noted that the Seminary Tomorrow process did not include community members who advocate for more affordable and workforce housing or other Strawberry residents who have expressed a wide range of concerns, preferences and ideas that differ from the priorities of the Community Caucus.

The stated goal of Seminary Tomorrow was to collaborate on alterations to the redevelopment plan and reach consensus or qualified consensus on a new, reimagined plan. The original scope included 10 meetings taking place over several months. Since the formation of Seminary Tomorrow, a significant effort was made by all parties that included:

- Over 18 months of dialogue;
- Over 50 meetings;
- Hundreds of hours of communications;
- Thousands of pages of materials prepared; and
- Extensive analysis and response.

The Community Caucus analyzed a wide range of details, from overall land use and associated impacts to focused elements such as sidewalk design and architectural detail. The new plan was conceived and analyzed by the Seminary Tomorrow group in segmented detail including:

- Housing that addresses current regional shortages and unaffordability;
- Density issues;
- Housing for a local work force;
- A housing alternative for a growing older adult population in Marin;
- Traffic impacts of the selected land uses;
- The maintenance of open space;
- Preservation of the few remaining ridgelines;
- Preservation of long-established amenities such as the playing field and day care; and
- Extensive discussion regarding various academic uses.

The nature of the site allowed for the development of these elements to be completely inclusionary and synergistic, creating a new kind of live/work/learn community that could become as a whole, greater than the sum of its parts.

Significant improvements were made in North Coast's proposed redevelopment plan through the Seminary Tomorrow process. Due to the Community Caucus's initial focus on potential traffic, the group enlisted an independent third-party traffic engineer, Parisi Transportation Consultants, to conduct a preliminary analysis of the existing site and potential land use scenarios and provide a baseline understanding of traffic impacts.

The Community Caucus also focused on multiple aspects of the residential plan including community character and density. Each residential neighborhood was refined by Seminary Tomorrow and developed through an iterative process with multiple rounds of feedback and subsequent adjustments, producing a plan that conforms more closely to the Caucus's desire for high-quality, low-impact residential development.

Through the Seminary Tomorrow process, North Coast agreed to submit an alternative plan that reduced the base zoning RMP-2.47 unit count from 249 to 234 total units. Separately, North Coast agreed to remove six single-family units initially contemplated on the slope between Chapel and Seminary Drives in order to create an open space area (which is not a feature many residents living adjacent to the open space support).

It is North Coast's understanding that the balanced mix of proposed housing types addresses the Caucus's initial goal of responding to regional housing needs while also maintaining local impacts at an acceptable level.

Beyond the specifics of the housing, Seminary Tomorrow looked to ensure the network of private streets within the site were oriented toward pedestrian use rather than cars. The Community Caucus proposed the idea to reduce the stretch of Chapel Drive adjacent to Chapel Hill to emergency vehicle access only, thereby transforming the remaining two segments of Chapel Drive into residential cul-de-sacs and connecting the proposed Chapel Hill Park with the open space that extends to the Bay.

To further minimize traffic impact, Seminary Tomorrow agreed that the primary users of the fitness center should be limited to residents of the Residential Care Facility and on-site housing, academic users and the local community that are within walking distance. The goal of these amenities is to eliminate the need for residents, on-site users and the local community to drive to access similar services off-site.

Lastly, North Coast proposed reducing the maximum student population of the academic campus from the approximately 1,000 students allowed under the existing 1953 Conditional Use Permit to 700 students as a potential traffic mitigation measure. The Community Caucus rejected that proposal, which ultimately led to the conclusion of the Seminary Tomorrow process.

### **A Summary of Seminary Tomorrow Process Outcome**

In October 2019, the Community Caucus and North Coast concluded the Seminary Tomorrow process. North Coast's summary of the discussions that took place among the parties is attached. North Coast agreed to include the results of the Seminary Tomorrow process in its application and to request that the County study these as part of an alternative project in the environmental review. Because no consensus was achieved following the conclusion of the Seminary Tomorrow process, it should be noted that the summary only outlines the ideas discussed and North Coast's understanding of the Caucus's positions. It does not form the basis of any proposed or alternate plan.

On Saturday, December 7, 2019, North Coast held an open house in its library and presented to the neighbors the facilitated concept. As part of the presentation, Parisi summarized its preliminary traffic analysis that was completed at the request of Seminary Tomorrow.

## **SEMINARY TOMORROW OUTCOME SUMMARY**

1. **A Residential Care Facility.** *A Residential Care Facility (RCF) is proposed on the site that will include:*

- *50 memory and assisted living residences;*
- *100 independent living residences;*
- *Meeting and other activity rooms;*
- *Dining facilities; and*
- *Administrative offices.*

*The existing bridge over Herring Drive will provide RCF residents access to the academic campus and additional dining facilities.*

*Shift changes of staff will be scheduled to avoid peak hours. Staff will also have preference to lease on-site housing units.*

*The average size of the independent residences is approximately 1,200 square feet. The average size of the assisted and memory care residences is approximately 500 square feet. Back-of-house and common areas, which are largely below grade, are approximately 100,000 square feet, which makes for a total of approximately 235,000 square feet. This number will change as the design is further refined.*

2. **The Academic Institution.** *North Coast is exploring a long-term partnership with internationally recognized universities to establish a Center for Advanced Studies that would comply with the existing 1953 conditional use permit. The academic focus will include:*

- *Intense study and research in areas related to California's dominance in innovation and research;*
- *Competitive, high quality academic fellowships linked to the region;*
- *International undergraduate and graduate-level study focused on interdisciplinary research;*
- *Extended education and studies offered to Marin residents;*
- *Specific areas of study dedicated to mission-based research focused on solving severe challenges of the 21<sup>st</sup> century (environmental degradation/poverty, etc.); and*
- *Collaboration with regional biomedical, medical, pharmacology, high technology companies, and California universities.*

*North Coast will continue discussions with interested community members as it explores this type of academic use with potential tenants.*

*Some of the goals that were discussed in detail during the Seminary Tomorrow process and where there was general agreement are to:*

- *Substantially reduce student population to potentially mitigate impacts.*
- *Dedicate a portion of the on-site housing to the academic use in two ways:*

- *Require a percentage of the market-rate housing set aside for use by the academic institution*
- *A Certificate of Preference program will be used to give priority to lease applicants who are students, faculty, and staff (and other on-site staff)*
- *Contain the campus to the 120,600 square feet of buildings that currently exist on site*
- *Require quiet hours between 9:00 PM and 6:00 AM daily except for special events programming.*
- *Schedule classes and related activities to avoid peak AM and PM traffic periods.*
- *Require that janitorial and property management services, including gardening and maintenance of the grounds, commence at 6:00 AM.*
- *Develop a Good Neighbor Policy in collaboration with community representatives that will include the following:*
  - *A commitment to continued communication and collaboration with the community*
  - *A dedicated point of contact to work with the community*
  - *A defined process to address community concerns*
  - *Strategies to reduce and/or manage potential impacts associated with special events or ongoing academic operations*
- *Require access to any permanent cultural/art exhibits be by appointment only. Hours of operation will be consistent with the academic campus.*

*Areas not currently supported by the Community Caucus:*

*The Community Caucus supports an academic use if the maximum student population is capped at 350 and with a minimum of 50% of the market-rate housing tied to the campus.*

*The nature and number of special events is not yet defined. The Community Caucus wants more definition regarding the number of special events allowed per year and has suggested that these events be limited to 12 per year. It also would like visitors attending any permanent art exhibit be limited to 25 at any one time.*

*North Coast is not requesting any modification to the 1953 Conditional Use Permit in its application.*

3. **Housing.** *The alternate plan includes 233 housing units (in addition to the Residential Care Facility) to be built on the Seminary site. The total includes 20% affordable housing units.*

*The average unit size of the 233 housing units excluding the Residential Care Facility is approximately 1,775 square feet. The total residential square footage is approximately 413,575 square feet.*

*Area not currently supported by the Community Caucus:*

*The Community Caucus wants a minimum of 50% of the market-rate housing tied to the academic use.*

4. **Open Space.** Open spaces, preserved viewsheds, and new trails and pedestrian pathways will remain open to the public. North Coast will implement a long-term landscaping plan that will preserve the forested nature of the site. Specific areas include the following:

- Seminary Drive Landscape Buffer
- Seminary Field
- Campus Approach
- Forested Knoll
- Seminary Point Trail
- Seminary Cove Trail
- Chapel Hill Park and Wildlife Corridor
- Shuck Knoll Trail
- Campus Slopes
- Storer Pathway
- Woodland Buffer

5. **Playing Field.** A re-envisioned playing field will be elevated and moved away from Seminary Drive, leaving a natural landscaped berm as the only visible element from Seminary Drive. There will be no access to the field from Seminary Drive and vehicle access will be internal. The field will be redesigned to include picnic areas, and the existing redwood grove will be preserved. Field usage will be maintained at historic use levels and the field will remain as a low-profile, community-based amenity. Lights and loudspeakers will not be permitted.

*Area not currently supported by the Community Caucus:*

*The Community Caucus wants to limit future use of the sports field to on-site residents, the local Strawberry community, and past users at previous levels or less.*

6. **Fitness Center.** An on-site fitness center located at the top of the playing field is proposed. The use of the center will be limited to on-site residents and the local Strawberry community.

7. **Daycare.** A daycare will continue to operate on-site and will be located adjacent to the fitness center. Its use will be limited to no more than the current enrollment of approximately 60 students with preference given to on-site residents and residents of the local Strawberry community.

8. **Additional Parcels.** The Community Caucus requested that North Coast propose a total of 30 parcels as part of its application.

*Area of concern for the Community Caucus:*

*The Community Caucus is concerned that parcel taxes collected will not be used for Strawberry resources including the fire department, schools, and the sanitation district.*

9. **Traffic Management.** North Coast anticipates that a County condition of approval will include a Traffic Demand Management plan. North Coast agrees that this is appropriate and will commit to the following services as part of that plan:

- *An on-site Transportation Demand Management Coordinator who will be responsible for enforcing the plan and will be accountable to designated community representatives*
- *Bicycle parking*
- *Shuttle services to be provided for on-site residents and workers*
- *Staggered on-site employee shift changes*
- *Campus and worker housing preference program*
- *A program that includes:*
  - *A Guaranteed Ride Home provision*
  - *Subsidized transit passes*
  - *On-site car and bike sharing*
  - *Employer education*
  - *Ride matching*
- *Special events valet parking as needed*
- *Construction traffic mitigation plan that includes community review and input*

*Areas not currently supported by the Community Caucus:*

*A preliminary independent traffic analysis was conducted within the past year as part of the Seminary Tomorrow process. A copy of the report is attached as **Appendix A**. The Community Caucus wants to use the results of this preliminary study to define a number of daily and peak hour trips as a condition for the new development. Specifically, the Community Caucus wants daily trip levels to not exceed 3,000 and peak hour trips to not exceed 400. The Community Caucus's preferred strategy for achieving this traffic objective is to cap the student population to 350 and tie a minimum of 93 housing units to the academic use.*

*North Coast is committed to preparing and enforcing a Traffic Demand Management plan, which will include the services outlined above, after considering the results of a full environmental review and a traffic analysis based on 'Vehicle Miles Traveled'. The Community Caucus, however, would like a more detailed plan to be submitted as part of the application for environmental review.*

10. **Durability.** *In order to ensure that the foregoing plans are reasonably durable, following substantive completion of construction a deed restriction for the entire site will be executed, which will be in effect for 25 years.*
11. **Off Site Intersection.** *The community and North Coast representatives will meet with the local Marin County Supervisor, the Public Works and Planning staff to encourage the County to address the 7-Eleven intersection congestion.*

## APPENDIX A

### PARISI TRANSPORTATION CONSULTANTS PRELIMINARY TRAFFIC ANALYSIS

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# The Seminary Site

Vehicle Trip Generation and Intersection Impacts

March 11, 2019



## Traffic Committee Meetings

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- 11/9/2018 Meeting
  - Reviewed scope of work
- 12/6/2018 Meeting
  - Presented scenario land uses
  - Draft trip generation, intersection volumes, and level of service
- 1/11/2019
  - Presented revised scenario and data that incorporated feedback from previous meeting
- 1/29/2019
  - Presented revised scenarios



# Tonight's Agenda

- ▶ Land Use Scenarios
- ▶ Vehicle Trip Generation
  - Vehicle Trip Generation Rates
  - Estimated Weekday, AM peak, and PM peak trips
- ▶ Key Intersections
  - Intersection volumes and level of service update
  - Level of Service by turning movement for key intersections
  - Potential Mitigation
- ▶ Key Roadway Segments

## Near-Term Regional Improvements

### EA #15161

EPIS Project ID: 0414000446

#### Restatement

This project proposes to install Ramp Meters and Traffic Operations System (TOS) at various locations in the northbound direction along Route 101 from PM 0.0 to PM 9.0 in Marin County.

#### Scope

Project scope includes installation and repair of ramp metering at 11 locations, of which three include ramp widening. TOS element includes installation of a Changeable Message Sign (CMS), salvage/removal of Wireless Magnetometer Vehicle Detection Sensors (WMVDS) and installation of inductance loops. Improvements also include widening of State Route 131 (Tiburon Blvd) from North Kruff Road to US 101 northbound on-ramp.

#### Environmental

Env. Document Type — CECE

Permit — None

#### Right-of-Way

TCE — 0

No. of Full Take — 0

No. of Partial Take — 0

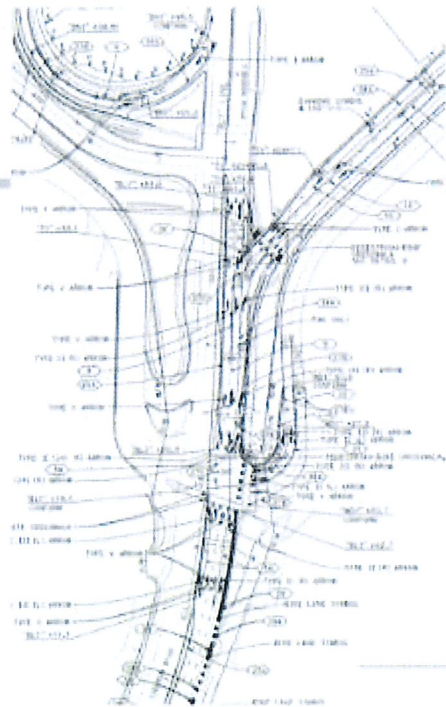
#### NORTH REGION: Marin 101 — PM 0.0/9.0



#### PROJECT NOTES:

- This project is Phase 1 of the Marin 101 Corridor Ramp Metering Project (EA #15160).
- Widening of State Route (SR) 131 (Tiburon Blvd) was added to the project to improve traffic flow on SR 131 and US 101 on-ramp.
- Caltrans will work with local partners and TAM to develop a ramp metering implementation plan.
- Ramp metering lights are anticipated to be activated in the Fall of 2020.

Design Manager: Peter Bruckner (PH) 916-288-0934  
 Civil Office of Traffic Systems: Latha S. Lee (PH) 916-288-4026



## Scope

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- Estimate vehicle trips generated by different land use scenarios for the Seminary site
- Estimate the potential traffic impacts of the trips generated by different land use scenarios
- Identify possible improvements and their effects on traffic delay

## Land Uses

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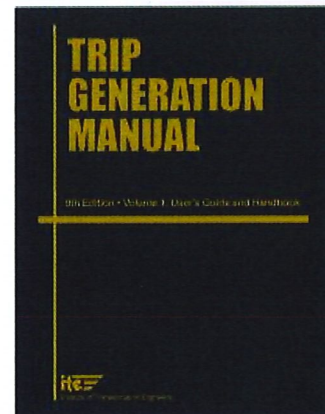
- Current/ Near Term
- "Zoning 1"
- "Zoning 2"
- 2015 Published Plan/ 2015 Plan with ITE Rates
- Potential Plan

# Land Uses

Current/Near-Term	"Zoning 1"	"Zoning 2"	2015 Published Plan/ 2015 Plan with ITE Rates	Potential Plan
<b>Residential</b>				
211 Dwelling Units	258 Dwelling Units	299 Dwelling Units	304 Dwelling Units	258 Dwelling Units
<b>Academics</b>				
300/ 1,000 Graduate Students	1,000 Graduate Students	1,000 Graduate Students	1,000 High School Students	700 Graduate Students
<b>Amenities</b>				
<ul style="list-style-type: none"> <li>• 65 Student Day Care</li> <li>• 3.47 Acre Field</li> <li>• North Coast Office 1,000 SF</li> </ul>	<ul style="list-style-type: none"> <li>• 65 Student Day Care</li> <li>• 3.47 Acre Field</li> </ul>	All amenities assume they are for the exclusive use of the Seminary and don't generate any new external trips	<ul style="list-style-type: none"> <li>• 65 Student Day Care</li> <li>• 17 Thousand SF Athletic Facility/ Community Use</li> <li>• 1,200 Seat Auditorium</li> <li>• 900 Seat Sport Facility</li> <li>• 100 Attendee Playing Field</li> </ul>	<ul style="list-style-type: none"> <li>• 65 Student Day Care</li> <li>• 3.47 Acre Field</li> <li>• 17 Thousand SF Athletic Facility/ Community Use</li> <li>• North Coast Office 1,000 SF</li> </ul>
<b>Senior Care Facility</b>				
				150 Dwelling Units

## Vehicle Trip Generation

The Institute of Transportation Engineers' Trip Generation Manual provides trip generation rates for numerous land use and building types. Ongoing work is added to the report periodically. Over 4,000 studies were aggregated in the current edition.



# Trip Generation Rates

Land Use	Weekday Daily Trip		Weekday AM Peak Hour		Weekday PM Peak Hour		Source
	Rate		Rate		Rate		
Single Family Dwelling Unit	9.52	per unit	0.75	per unit	1.00	per unit	Average rate for ITE Category 210 (Single Family).
Multi-Family Dwelling Unit	6.65	per unit	0.68	per unit	0.90	per unit	Average rate for ITE Category 220 (Apartment).
University/ College	1.71	per student	0.17	per student	0.17	per student	Average rate for ITE Category 550 (University/College).
Private High School	2.48	per student	0.81	per student	0.81	per student	Average rate for ITE Category 536 (Private School K-12).
Day Care	4.48	per student	0.80	per student	0.81	per student	Average rate for ITE Category 565 (Day Care).
Athletic Field	22.75	per acre	4.50	per acre	3.50	per acre	Average rate for ITE Category 411 (City Park).
Gym/ Health Center / (YMCA style facility)	32.93	per 1,000 SF	1.41	per 1,000 SF	3.53	per 1,000 SF	Average rate for ITE Category 492 (Health/Fitness Club)
Office	11.65	per 1,000 SF	1.80	per 1,000 SF	1.74	per 1,000 SF	Average rate for ITE Category 710 (General Office Building)
Senior Center	3.11	per dwelling unit	0.17	per dwelling unit	0.24	per dwelling unit	Combined average rate for ITE Categories 252, 254 and 253 (Senior Adult Housing Detached, Assisted Living and Congregate Care Facility)

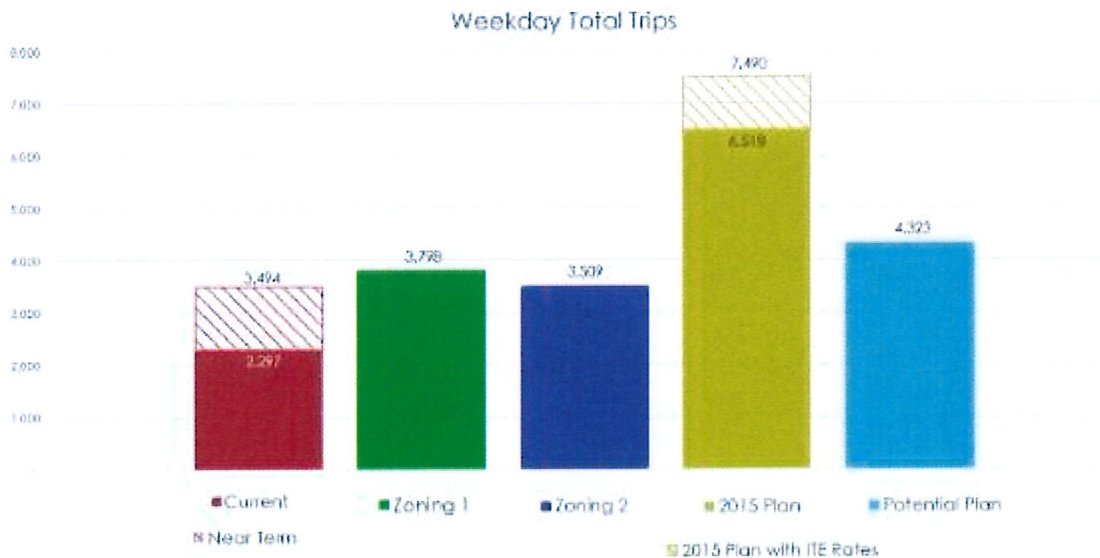
# Trip Generation Rates In/Out Split

Land Use	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Rate	In	Out	Rate	In	Out
Single Family Dwelling Unit	0.75 per unit	25%	75%	1.00 per unit	63%	37%
Multi-Family Dwelling Unit	0.68 per unit	20%	80%	0.90 per unit	65%	35%
University/ College	0.17 per student	78%	22%	0.17 per student	32%	68%
Day Care	0.80 per student	53%	47%	0.81 per student	47%	53%
Athletic Field	4.50 per acre	55%	45%	3.50 per acre	55%	45%
Gym/ Health Center / (YMCA style facility)	1.41 per 1,000 SF	50%	50%	3.53 per 1,000 SF	54%	46%
Office	1.80 per 1,000 SF	89%	11%	1.74 per 1,000 SF	15%	85%
Senior Center	0.17 per dwelling unit	42%	58%	0.24 per dwelling unit	53%	47%

# Trip Generation Assumptions

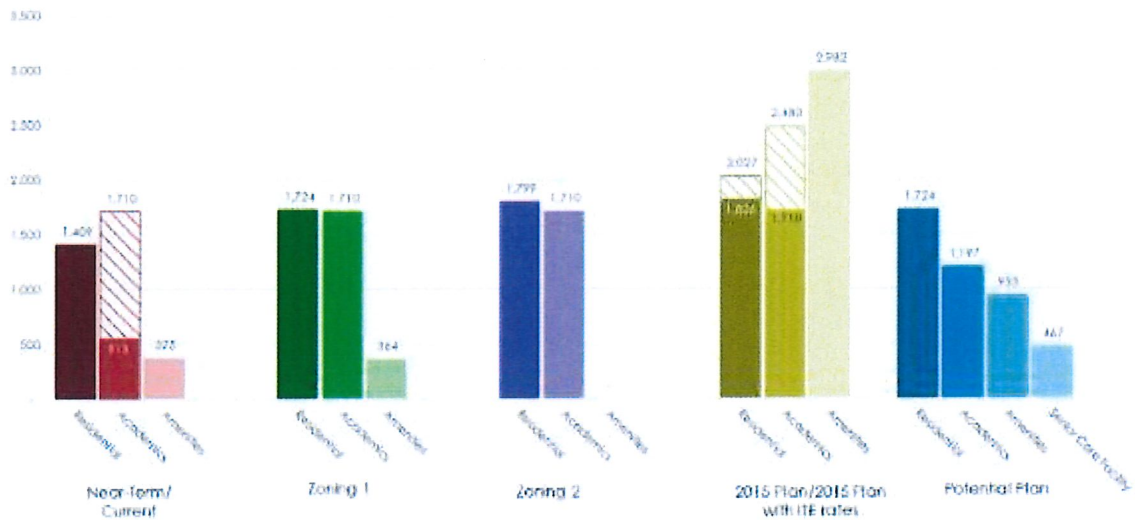
- Minimal internal vehicle trip reductions have been assumed between complimentary land uses
- Implementation of a transportation demand management program has not been assumed
- Internal trip capture plus effective TDM measures could substantially reduce vehicle trip generation

## Estimated Weekday Vehicle Trips



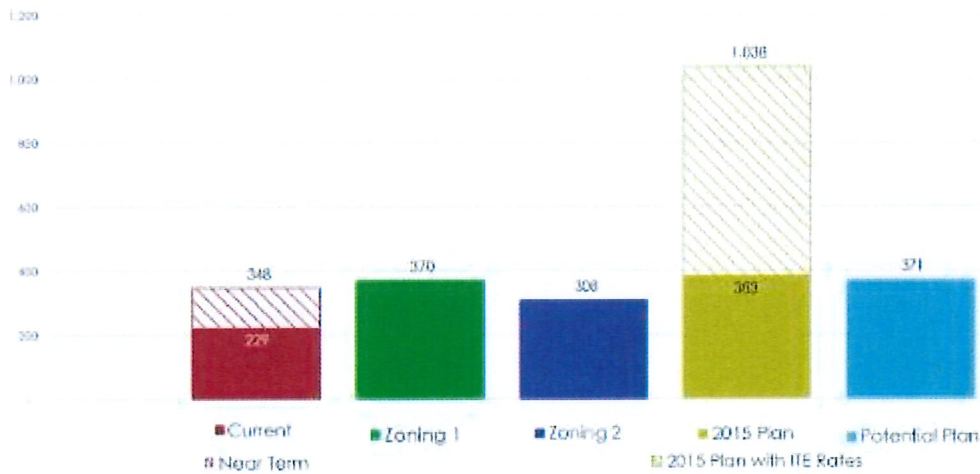
# Estimated Weekday Vehicle Trips

Weekday Total Trips

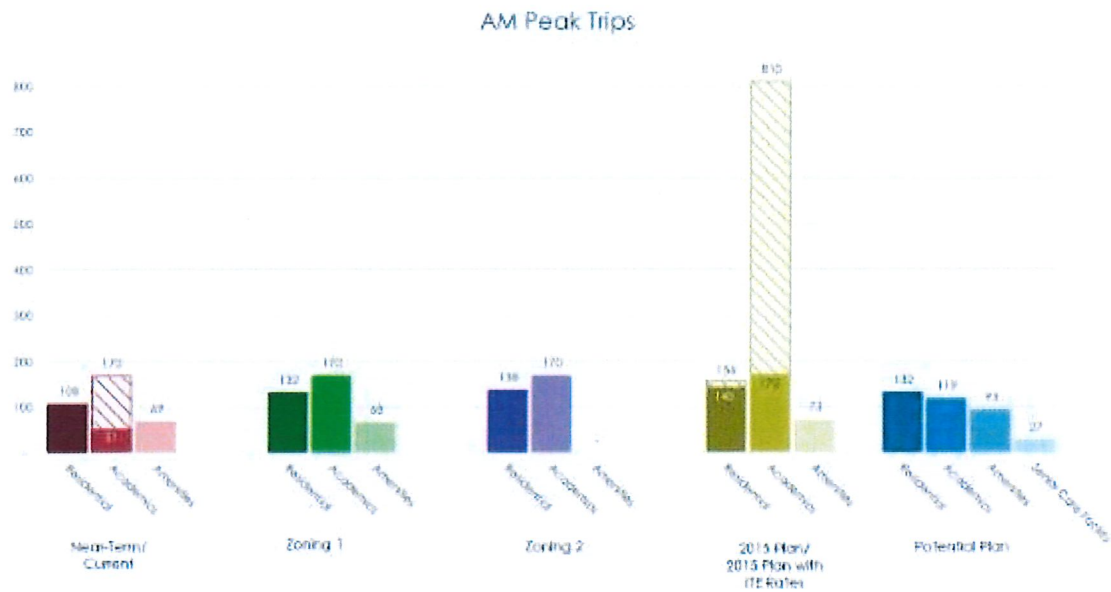


# Estimated AM Peak Hour Vehicle Trips

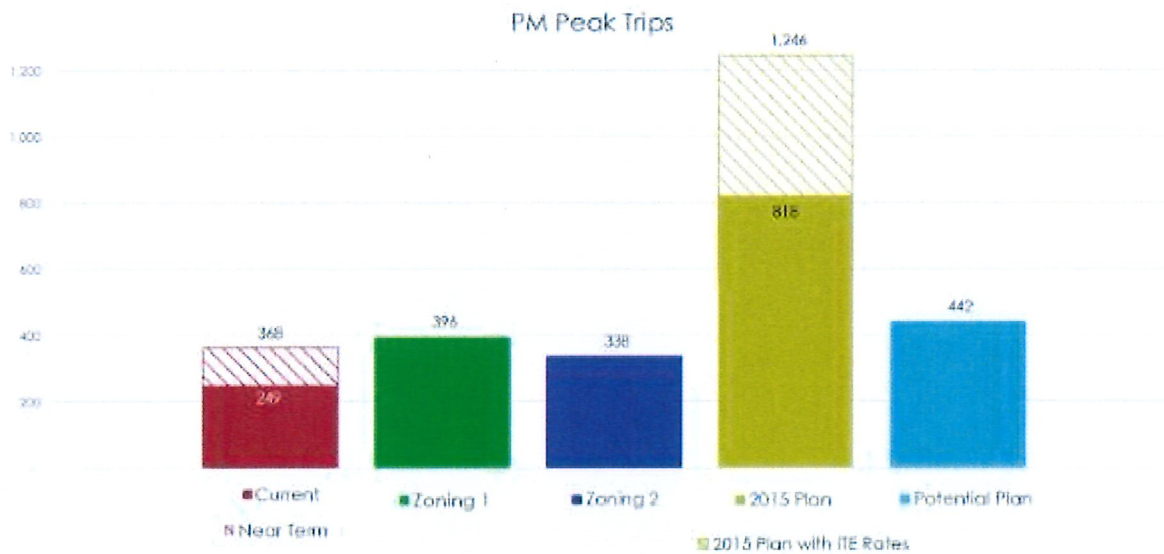
AM Peak Trips



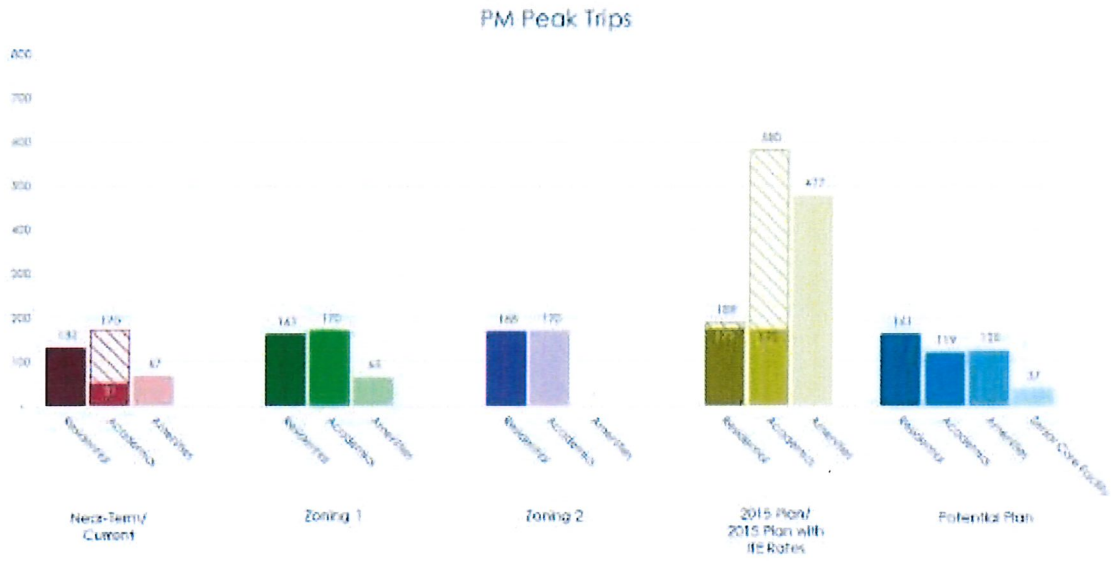
# Estimated AM Peak Hour Vehicle Trips



# Estimated PM Peak Hour Vehicle Trips



# Estimated PM Peak Hour Vehicle Trips



## Key Intersections



## Level of Service

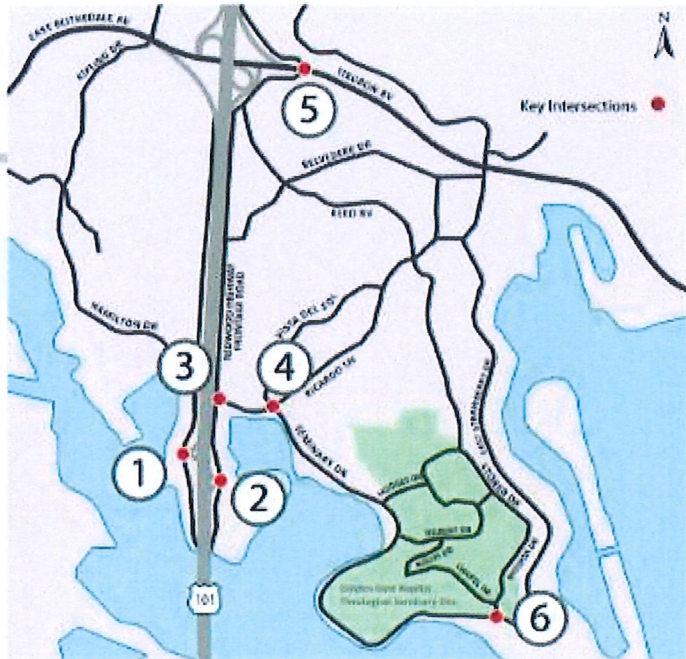
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- A standard measurement of vehicle delay which reflect the relative ease of traffic flow
- LOS is expressed as a letter grade A-F
- LOS D is acceptable according to the County's General Plan

## Level of Service

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Level of Service	Signalized Intersection Average Delay in seconds	Unsignalized Intersection Average Delay in seconds	Description
A	0 -10 sec	0 – 10 sec	Free Flow
B	>10 - 20 sec.	> 10 -15 sec.	Stable Flow (slight delays)
C	>20 - 35 sec.	> 15 – 25 sec.	Stable Flow (acceptable delays)
D	>35 – 55 sec.	> 25 – 35 sec.	Acceptable conditions; occasionally approaching congested conditions
E	>55 - 80 sec.	>35 – 50 sec.	Unstable flow
F	> 80	> 50 sec.	Highly congested (congestion and queues fail to clear)



## Key Intersections Studied

#1 - Redwood Hwy Frontage Road/ US 101 SB Ramps

#2 - Redwood Hwy Frontage Rd/ US 101 NB Ramps

#3 - Redwood Hwy Frontage Rd/ Seminary Dr

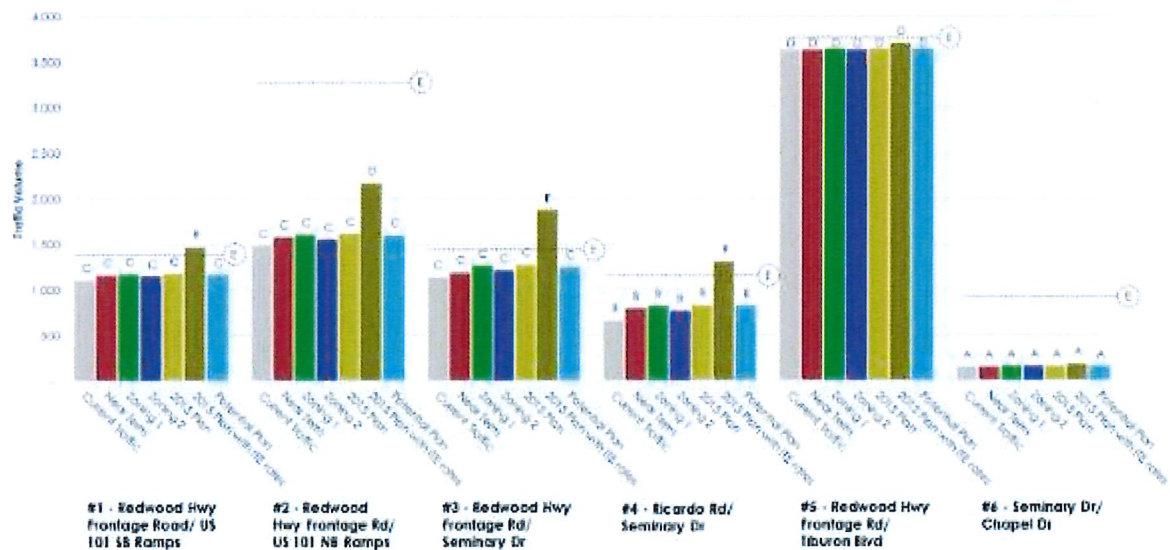
#4 - Ricardo Rd/ Seminary Dr

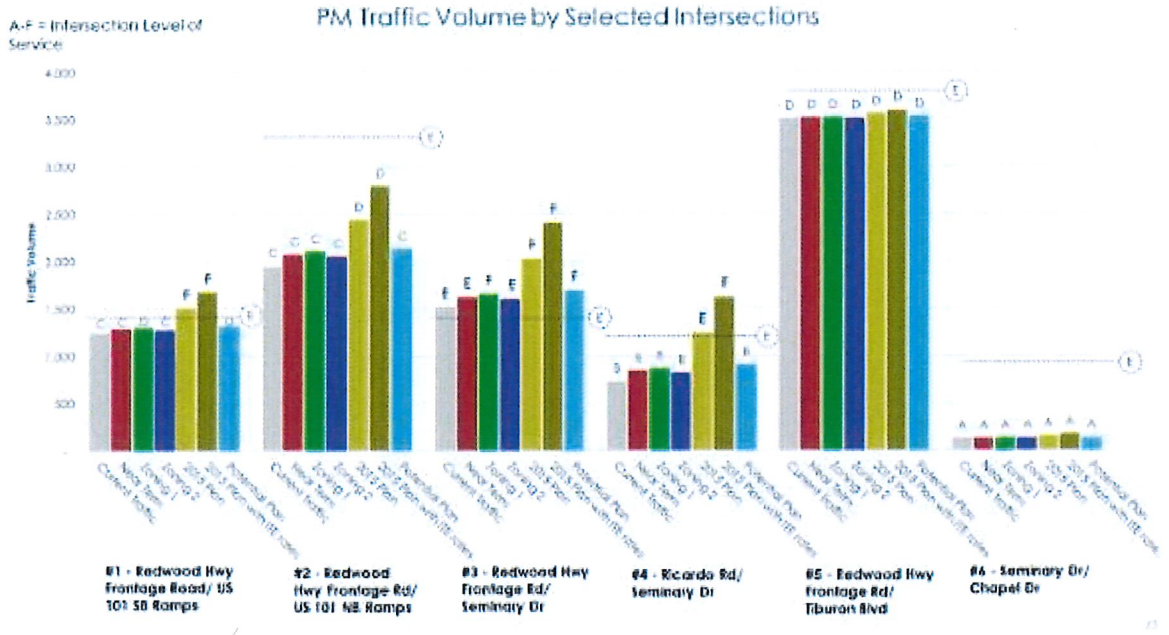
#5 - Redwood Hwy Frontage Rd/ Tiburon Blvd

#6 - Seminary Dr/ Chapel Dr

A-F = Intersection Level of Service

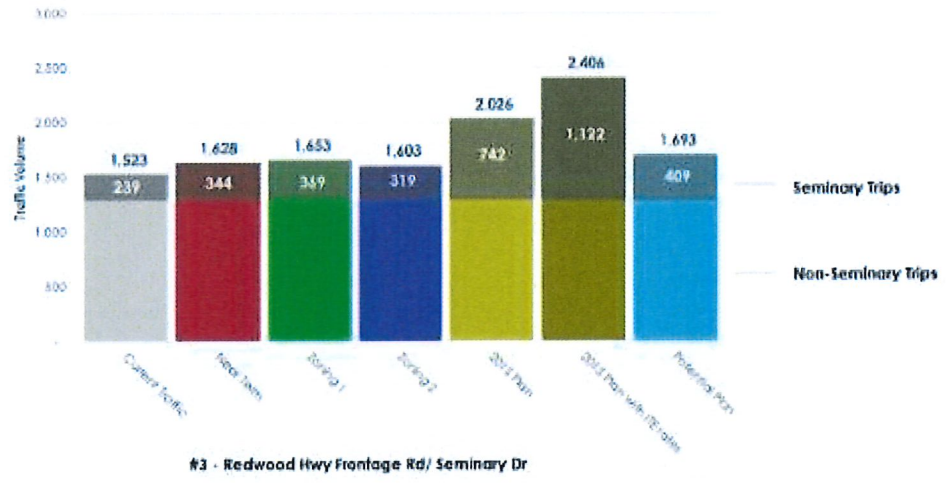
AM Traffic Volume by Selected Intersections





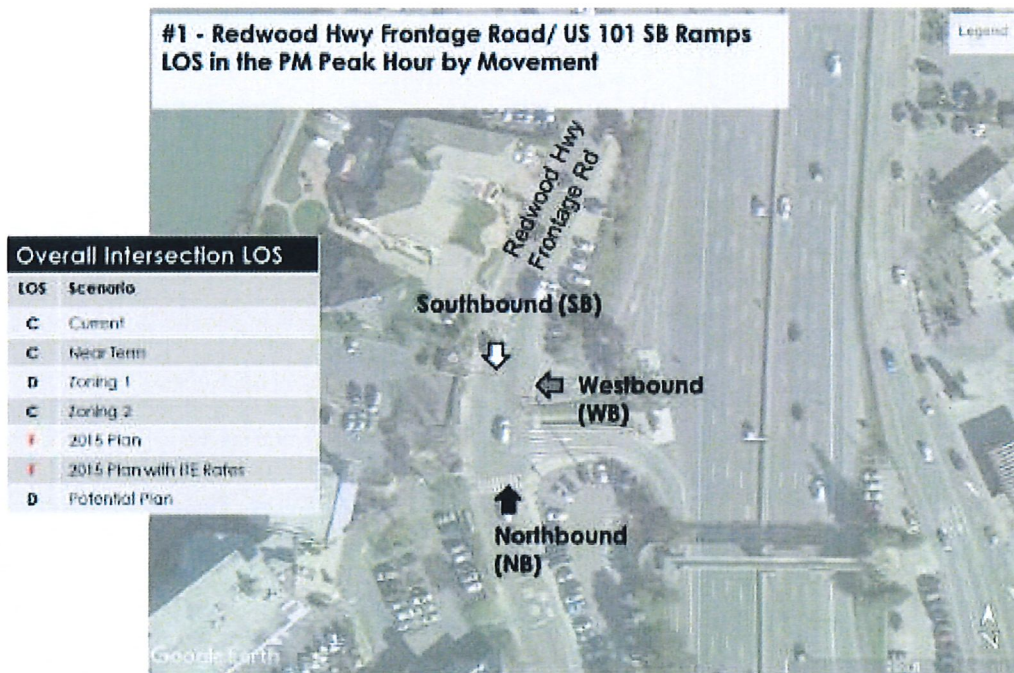
### PM Peak Period Trips

#### Seminary Trips vs. All Trips



# Trip Generation Assumptions

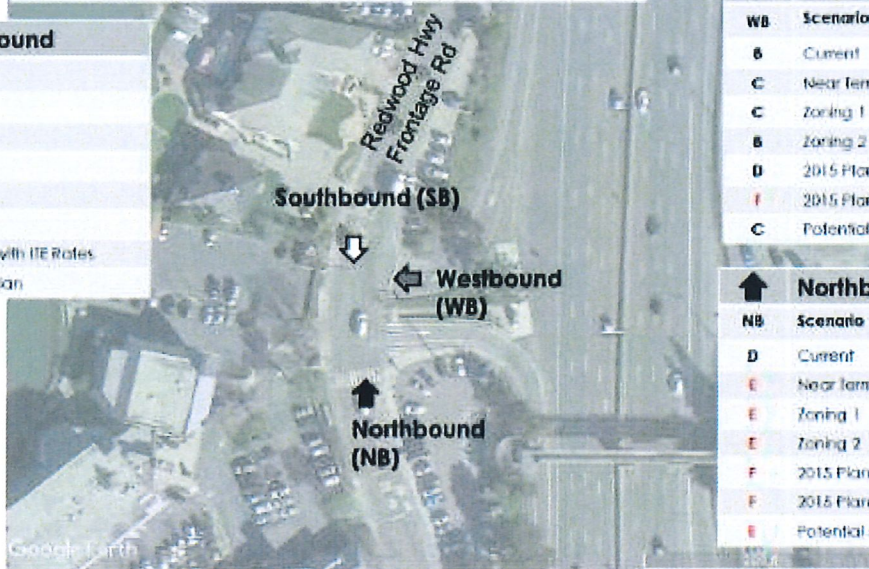
- Minimal internal vehicle trip reductions have been assumed between complimentary land uses
- Implementation of a transportation demand management program has not been assumed
- Internal trip capture plus effective TDM measures could substantially reduce vehicle trip generation
- Assumes no mitigation



**#1 - Redwood Hwy Frontage Road/ US 101 SB Ramps  
LOS in the PM Peak Hour by Movement**

**Southbound**

SB	Scenario
B	Current
B	Near Term
B	Zoning 1
B	Zoning 2
C	2015 Plan
C	2015 Plan with ITE Rates
B	Potential Plan



**Westbound**

WB	Scenario
B	Current
C	Near Term
C	Zoning 1
B	Zoning 2
D	2015 Plan
F	2015 Plan with ITE Rates
C	Potential Plan

**Northbound**

NB	Scenario
D	Current
E	Near Term
E	Zoning 1
E	Zoning 2
F	2015 Plan
F	2015 Plan with ITE Rates
E	Potential Plan

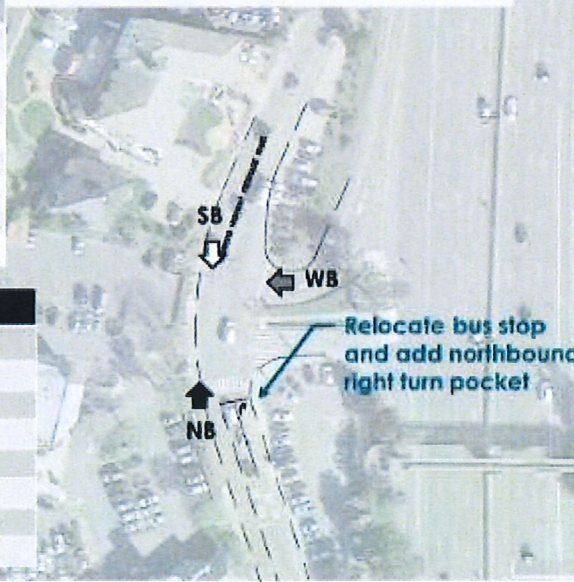
**#1 - Redwood Hwy Frontage Road/ US 101 SB Ramps  
LOS in the PM Peak Hour by Movement**

**Southbound**

SB	Scenario
(B)	Current
(B)	Near Term
(B) B	Zoning 1
(B) B	Zoning 2
(C) C	2015 Plan
(C)	2015 Plan with ITE Rates
(B) B	Potential Plan

**Overall Intersection LOS**

	Scenario
(C)	Current
(C)	Near Term
(D) B	Zoning 1
(C) B	Zoning 2
(F) C	2015 Plan
(F)	2015 Plan with ITE Rates
(D) B	Potential Plan



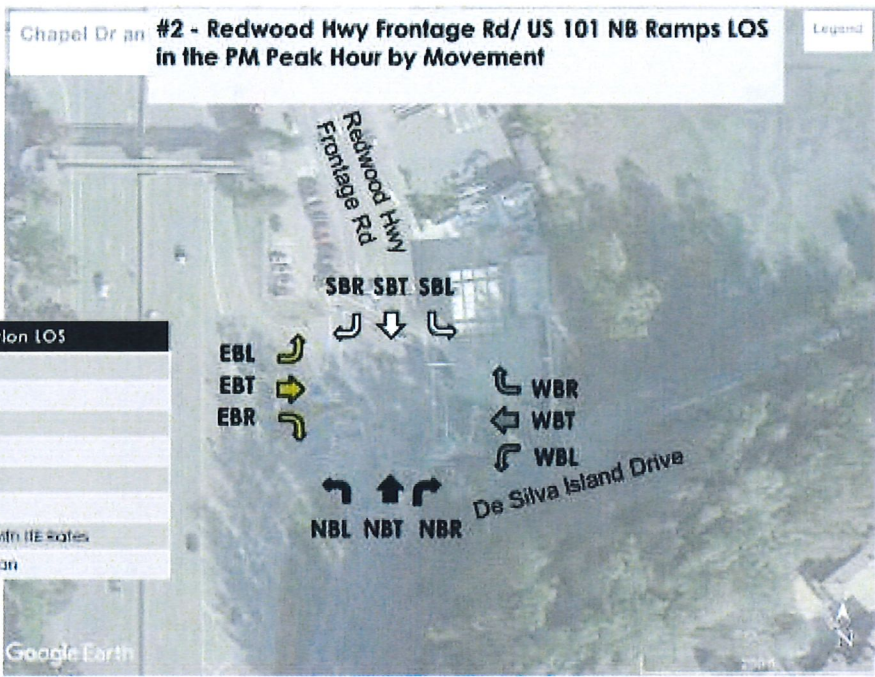
**Westbound**

WB	Scenario
(B)	Current
(C)	Near Term
(C) C	Zoning 1
(B) B	Zoning 2
(D) D	2015 Plan
(F)	2015 Plan with ITE Rates
(C) C	Potential Plan

**Northbound**

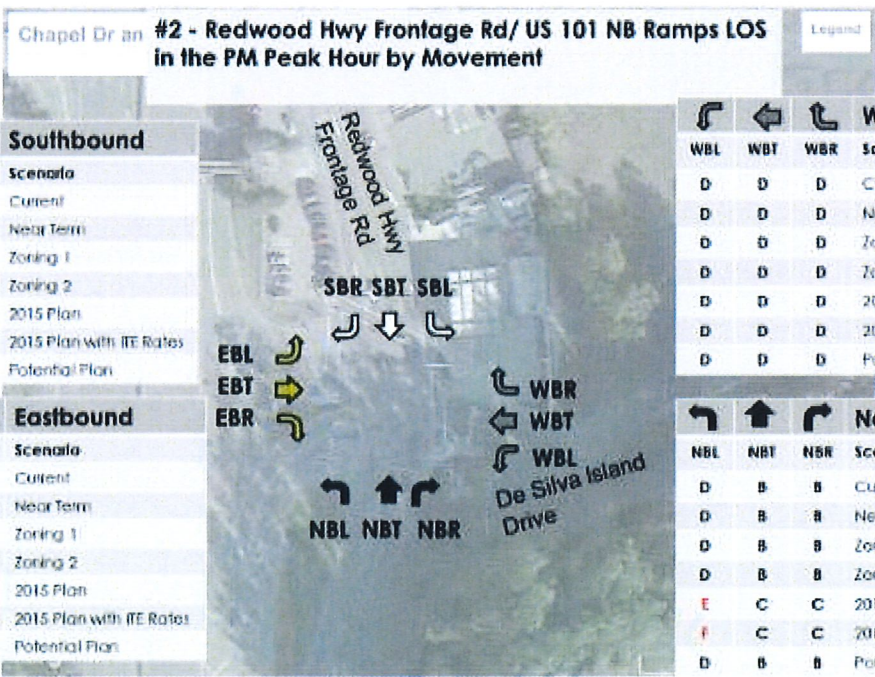
NB	Scenario
(D)	Current
(E)	Near Term
(E) B	Zoning 1
(E) B	Zoning 2
(F) C	2015 Plan
(F)	2015 Plan with ITE Rates
(E) B	Potential Plan

**Legend:**  
(X) = LOS without mitigation  
X = LOS with mitigation



**Overall Intersection LOS**

LOS	Scenario
C	Current
C	Near Term
D	Zoning 1
C	Zoning 2
D	2015 Plan
D	2015 Plan with ITE Rates
C	Potential Plan



Southbound			Scenario
SBR	SBT	SBL	Current
B	C	D	Near Term
B	C	D	Zoning 1
B	C	D	Zoning 2
C	C	D	2015 Plan
C	C	D	2015 Plan with ITE Rates
B	C	D	Potential Plan

Eastbound			Scenario
EBR	EBT	EBL	Current
C	D	D	Near Term
C	D	D	Zoning 1
C	D	D	Zoning 2
C	E	E	2015 Plan
C	E	E	2015 Plan with ITE Rates
C	D	D	Potential Plan

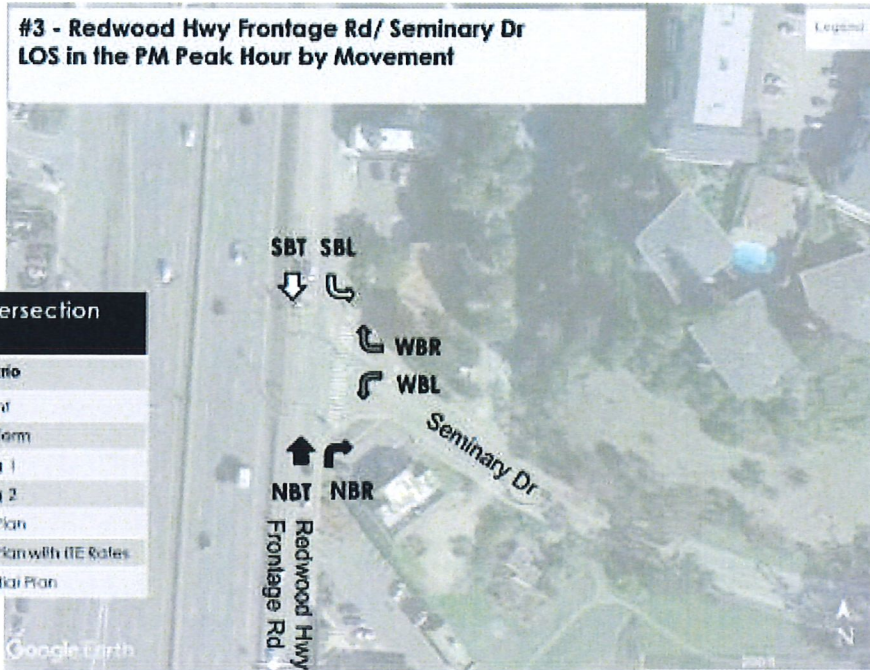
Westbound			Scenario
WBL	WBT	WBR	Current
D	D	D	Near Term
D	D	D	Zoning 1
D	D	D	Zoning 2
D	D	D	2015 Plan
D	D	D	2015 Plan with ITE Rates
D	D	D	Potential Plan

Northbound			Scenario
NBL	NBT	NBR	Current
D	B	B	Near Term
D	B	B	Zoning 1
D	B	B	Zoning 2
D	B	B	2015 Plan
E	C	C	2015 Plan with ITE Rates
D	B	B	Potential Plan

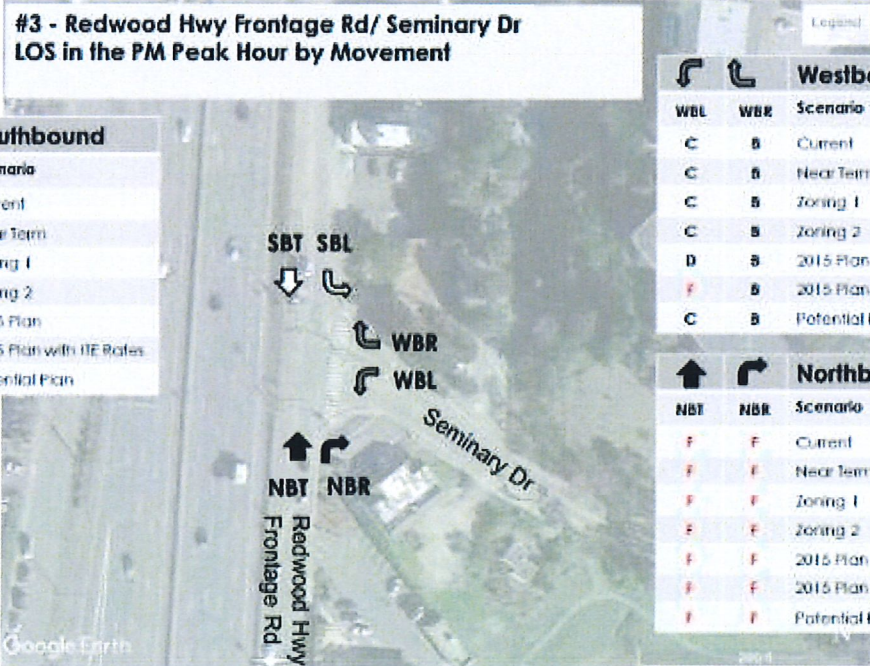
**#3 - Redwood Hwy Frontage Rd/ Seminary Dr  
LOS in the PM Peak Hour by Movement**

Overall Intersection LOS	
LOS	Scenario
E	Current
E	Near term
F	Zoning 1
E	Zoning 2
F	2015 Plan
F	2015 Plan with ITE Rates
F	Potential Plan



**#3 - Redwood Hwy Frontage Rd/ Seminary Dr  
LOS in the PM Peak Hour by Movement**

Southbound		
SBT	SBL	Scenario
A	D	Current
A	D	Near Term
A	D	Zoning 1
A	D	Zoning 2
A	E	2015 Plan
A	F	2015 Plan with ITE Rates
A	F	Potential Plan



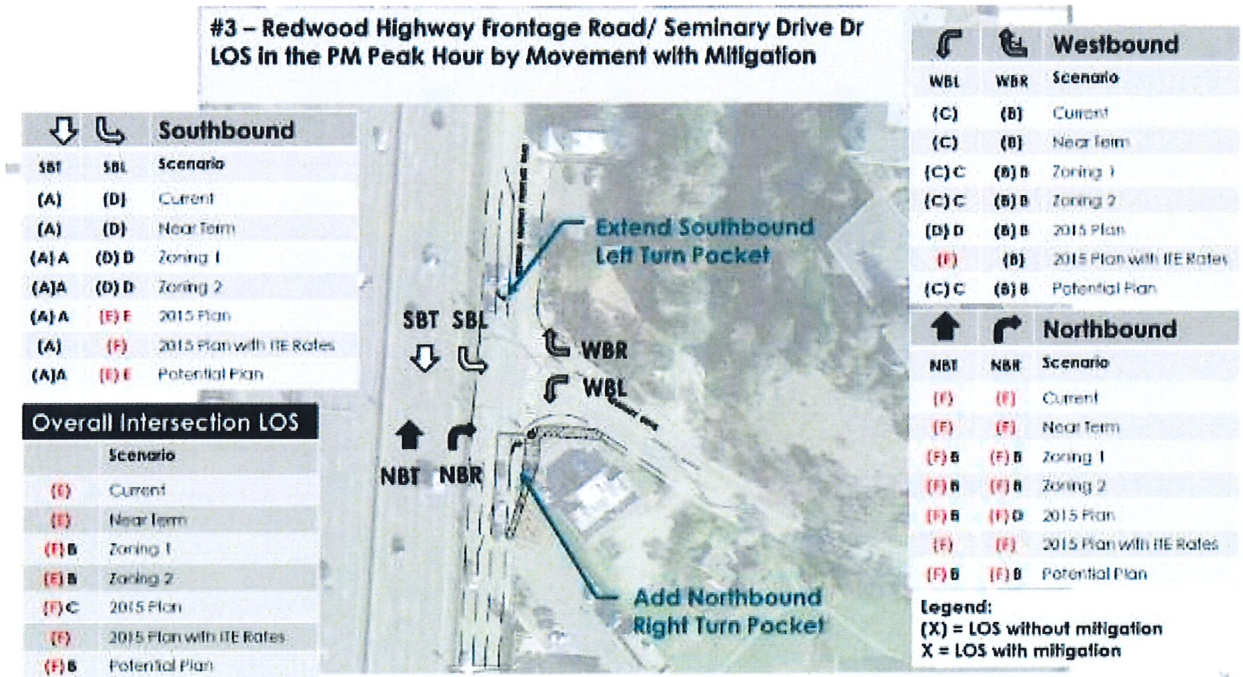
Westbound		
WBL	WBR	Scenario
C	B	Current
C	B	Near Term
C	B	Zoning 1
C	B	Zoning 2
D	B	2015 Plan
F	B	2015 Plan with ITE Rates
C	B	Potential Plan

Northbound		
NBT	NBR	Scenario
F	F	Current
F	F	Near Term
F	F	Zoning 1
F	F	Zoning 2
F	F	2015 Plan
F	F	2015 Plan with ITE Rates
F	F	Potential Plan

# 1982 Strawberry Community Plan

## e. Seminary Drive and Redwood Frontage Road.

Traffic will be added to this intersection by all four of the major development proposals in Strawberry. The existing service level for this intersection is very high and will drop somewhat when all projects are built out. However, by adding a southbound left turn lane and a northbound right turn lane on Redwood Frontage Road, the future traffic can be handled at a very good level of service (Service Level B). The added lanes should be part of the program to extend the three lane operation of the frontage road south from its current terminus to near the Seminary Drive freeway ramps. With the additional pavement, the intersection should be able to operate efficiently without additional traffic control measures such as new stop signs or a traffic signal.



S



### #4 - Ricardo Rd/ Seminary Dr LOS in the PM Peak Hour by Movement

Legend

Overall Intersection LOS	
Scenario	Overall Intersection LOS
B	Current
B	Near Term
B	Zoning 1
B	Zoning 2
F	2015 Plan
F	2015 Plan with ITE Rates
B	Potential Plan



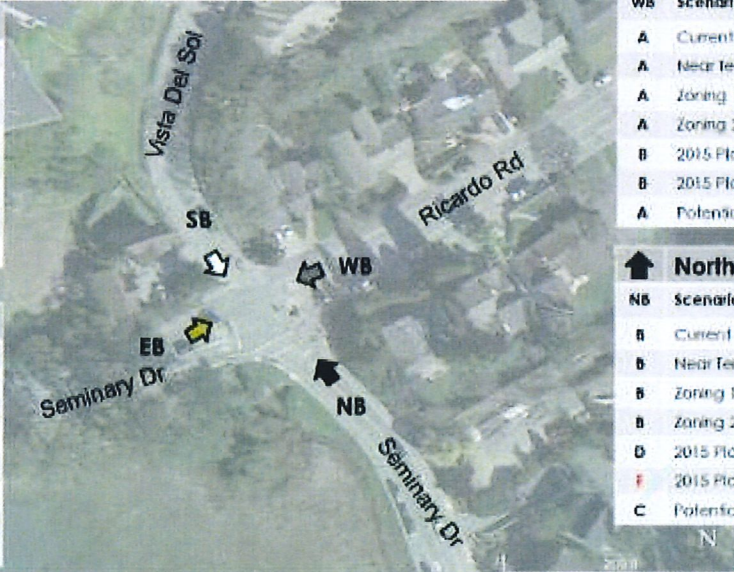
### #4 - Ricardo Rd/ Seminary Dr LOS in the PM Peak Hour by Movement

Legend

Southbound	
SB Scenario	Overall Intersection LOS
A	Current
A	Near Term
A	Zoning 1
A	Zoning 2
A	2015 Plan
B	2015 Plan with ITE Rates
A	Potential Plan

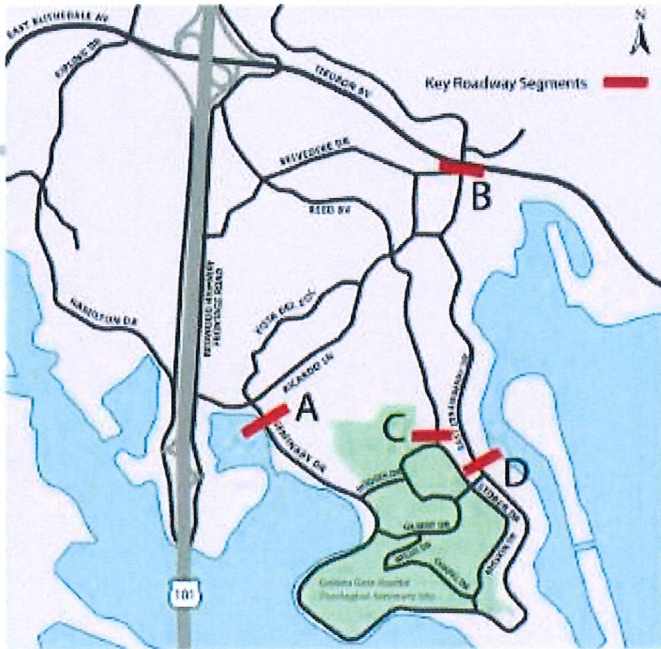
Eastbound	
EB Scenario	Overall Intersection LOS
B	Current
B	Near Term
B	Zoning 1
B	Zoning 2
F	2015 Plan
F	2015 Plan with ITE Rates
B	Potential Plan



Westbound	
WB Scenario	Overall Intersection LOS
A	Current
A	Near Term
A	Zoning 1
A	Zoning 2
B	2015 Plan
B	2015 Plan with ITE Rates
A	Potential Plan

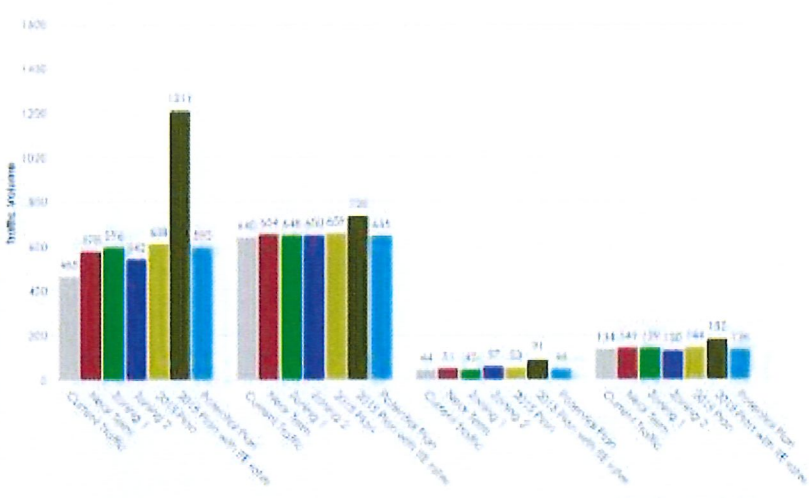
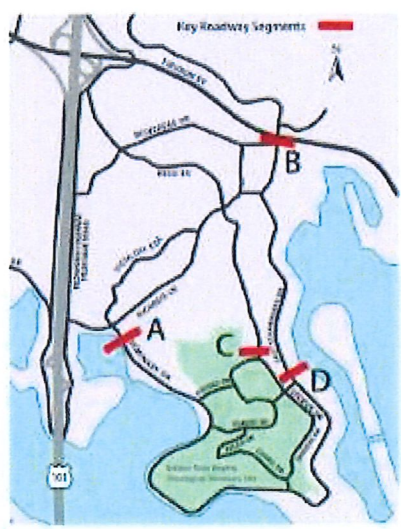
Northbound	
NB Scenario	Overall Intersection LOS
B	Current
B	Near Term
B	Zoning 1
B	Zoning 2
D	2015 Plan
F	2015 Plan with ITE Rates
C	Potential Plan



# Key Roadway Segments Studied

- A - South of Seminary Dr and Ricardo Ln
- B - South of East Strawberry Dr and Tiburon Blvd
- C - North of Reed Blvd and Storer Dr
- D - North of Herring Dr and East Strawberry Dr

AM Traffic Volume by Road Segment

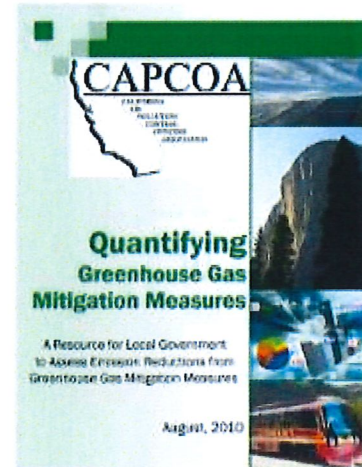


- A - South of Seminary Dr and Ricardo Ln
- B - South of East Strawberry Dr and Tiburon Blvd
- C - North of Reed Blvd and Storer Dr
- D - North of Herring Dr and East Strawberry Dr



# Quantifying TDM

The California Air Pollution Control Officers Association provides guidance on quantifying TDM impacts. Their report, *Quantifying Greenhouse Gas Mitigation Measures*, synthesizes hundreds of studies on TDM measures.



## TDM Reduction Rates

Factor	Description	Land Uses Trip Reduction Applies to	Potential for Trip Reduction
<b>Campus/worker housing</b>	Constructed on-campus housing to shift away from being primarily a commuter school.	Academic, Residential	21% <sup>1</sup>
<b>On-site residential services</b>	Provide on-site residential services, such as groceries, banking, fitness center, etc.	Residential, Amenities	5% <sup>2</sup>
<b>Carpool and vanpool incentives</b>	Give priority parking to carpool vehicles, provide website services and message board to coordinate rides, give financial incentive	Academic	1 - 5%
<b>Shuttle service</b>	Implement a free shuttle service	Academic, Residential, Senior Center	0.3 - 13.4%
<b>Unbundle parking</b>	Parking is priced separately from rent prices	Residential	2.6 - 13%
<b>Parking fees/ parking cash out</b>	Changing for parking or providing employee parking "cash-out"	Academic, Amenities	0.1 - 19.7%
<b>Free/ reduced price transit</b>	Provides free rides on Marin/ Golden Gate Transit for all campus affiliates, residents and CCRC affiliates.	Academic, Residential, Amenities, Senior Center	1 - 20%
<b>Staggered working hours</b>	Encourage workers to start/end work hours outside peak traffic times	Academic	*
<b>Reduced workday week</b>	Encourage telecommuting and alternative work schedules to reduce commute trips	Academic	1 - 5.5%

<sup>1</sup>Source: Not CAPCOA data. ITE has a off-campus student housing trip rate category [ITE Land Use 225]

<sup>2</sup>Source: Not CAPCOA data. ITE mixed use trip generation rate that decrease for internal trip capture.

\*Source: Recommend not calculating this TDM measure reduction as land use types aren't applicable to existing data but implementing in TDM Plan

# TDM Reduction Rates

Factor	Description	Land Uses Trip Reduction Applies to	Potential for Trip Reduction
<b>Employee TDM coordinator</b>	Implement marketing strategies, new employee orientation, event promotion, publication and annual monitoring and modifying the program	Academic, Residential, Amenities, Senior Center	1 - 4%
<b>On-site car sharing</b>	Work with Zipcar or others to provide vehicles on site	Academic, Residential, Senior Center	0.4 - 0.7%
<b>On-site bike sharing</b>	Incorporate bikeshare services on site	Residential, Amenities	0.5 - 2.5%
<b>Bike Parking, on site services</b>	Provide secure bike parking for residents, students, employees, shower facilities and lockers	Residential, Academic	1 - 5%
<b>Traffic calming</b>	Improve walking and biking conditions in the neighborhood, improve signage, and reduce on-site traffic speeds		No trip impact, but site benefits
<b>Off-peak freight delivery</b>	Schedule campus deliveries during off peak hours	Freight delivery's already tends to avoid the peak, will assume no peak period trip reduction but recommend implementing this strategy	
<b>Special events valet parking</b>	Limit events to a set number of times per year		No peak period reduction
<b>Guarantee ride home Program</b>	TAM already offers this service. Add this to marketing material on-site Transportation Demand Coordinator will distribute		

# TDM Reduction Rates

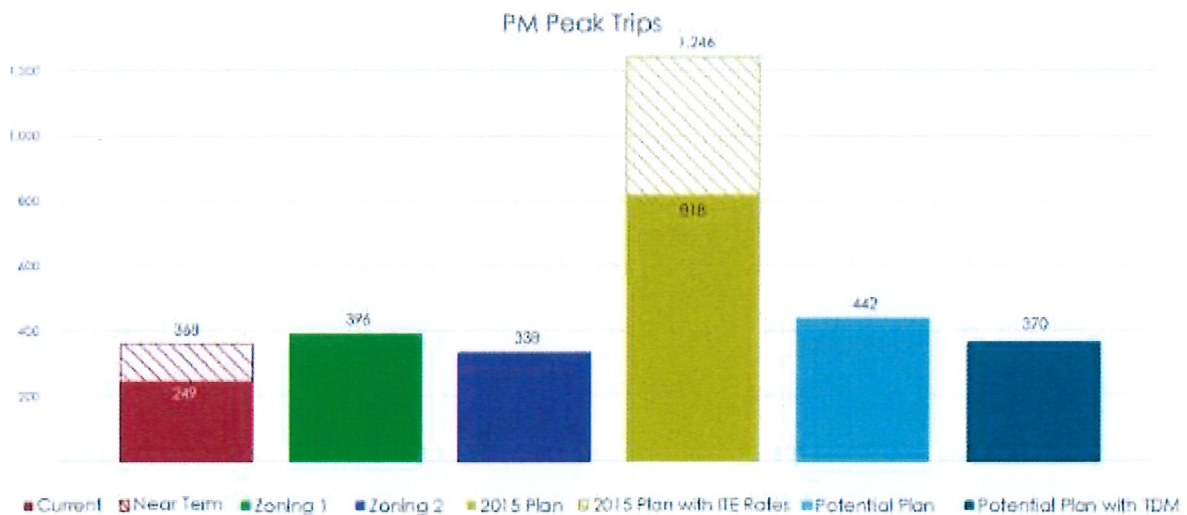
Trip Reduction Potential	Measures	Ranges	Academic	Residential	Amenities	Senior Center	Reduction in Trips
<b>High</b>	Student/worker housing (applied to 50 units)			21%			
	Shuttle Service	0.3 - 13.4%	5%	5%	5%	5%	
	On-site residential services		5%	5%	5%		72
	Parking fees/ parking cash out	0.1 - 19.7%	2%				
	Free/ reduced price transit	1 - 20%	5%	5%		5%	
	Employee TDM coordinator	1 - 4%	2%		2%	2%	
<b>Medium</b>	Carpool and vanpool incentives	1 - 5%	1.5%				
	Unbundle Parking	2.6 - 13%		0.5%			6
	Reduced workday week	1 - 5.5%	1.5%				
<b>Low</b>	On-site car sharing	0.4 - 0.7%	0.5%	0.5%	0.5%	0.5%	
	On-site bike sharing	0.5 - 2.5%	0.5%	0.5%	0.5%		
	Bike parking and on site services	1 - 5%	0.5%				5
<b>Not Analyzed</b>	Staggered working hours, Off-peak freight delivery	These measures are difficult to quantify, especially given land use types, should be implemented regardless of estimated trip reduction					

# Trip Reduction Due to TDM

- Conservative trip reduction factors were used
- Even with conservative numbers, implementation of measures with high potential could reduce PM trips by at least 16%
- With implementation of additional measure or more aggressive measures (increased shuttle buses) could reduce PM peak trips by 20%

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## Estimated PM Peak Hour Vehicle Trips



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## Future Analysis

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- Environmental documentation will evaluate baseline, cumulative and project scenarios for broader study area
- Will assume planned transportation improvements

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