

Preliminary Off-Campus Traffic Analysis

UNIVERSITY OF CALIFORNIA
SANTA CRUZ
LRDP #11, October 20, 2004

Cooper, Robertson & Partners
EDAW
Arup
Kimley-Horn & Associates

Overview

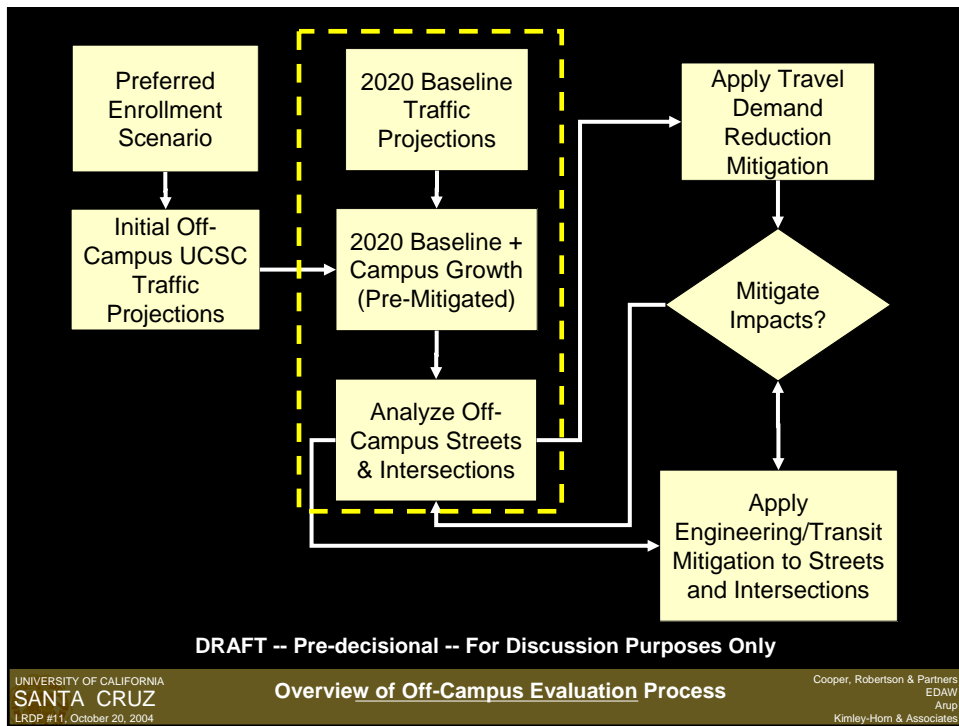
- First step towards LRDP EIR traffic analysis
- Addresses off-campus traffic impacts at key intersections
- Further details and other modes/issues analyzed in EIR
- Preliminary findings – assists in refining assumptions and analysis

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Overview of Traffic Study

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Methodology

- Existing conditions from Fall 2003/Spring 2004 traffic counts
- AMBAG model used to develop 2020 projections
- Model validated to within (+/-) 10% on key roads in Santa Cruz
- Growth in campus added onto 2020 baseline traffic projections
- Analysis includes Home Depot and Coast Hotel

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Traffic Study Methodology

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Campus Trip Generation

- Based on per capita rate from counts/current population
- Adjusted to reflect 50% on-campus undergrad housing
- Fall 2003, 40% undergrad on-campus housing

Estimated Campus Trip Generation

	Persons	AM Peak	PM Peak	Daily
		Hour	Hour	
Students:	21,000	1,579	2,172	26,846
Faculty/Staff:	5,158	413	567	7,015
Total Trips in 2020	26,158	1,992	2,739	33,861
Existing Trips		1,452	2,040	24,830
Growth (2003/04 to 2020)		540	699	9,031

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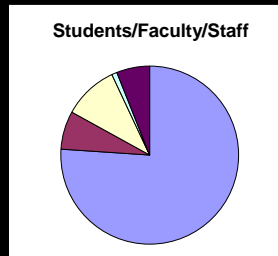
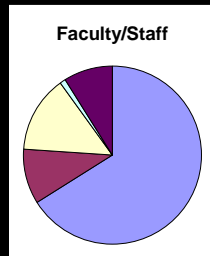
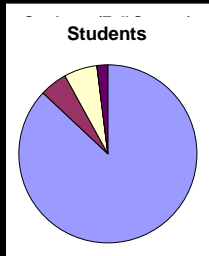
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Measuring Traffic Impacts

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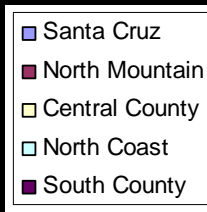
Countywide Trip Distribution

Fall 2003 Data

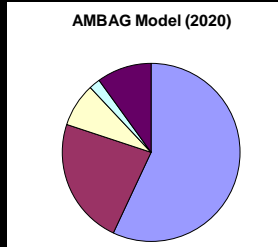


Fall data is of place of residence

AMBAG model charts reflect trip distribution



2020 AMBAG Model



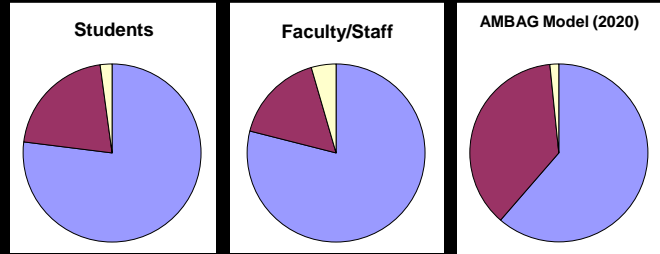
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Campus Trip Distribution

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Santa Cruz Trip Distribution



Fall 2003 Data

2020 AMBAG Model

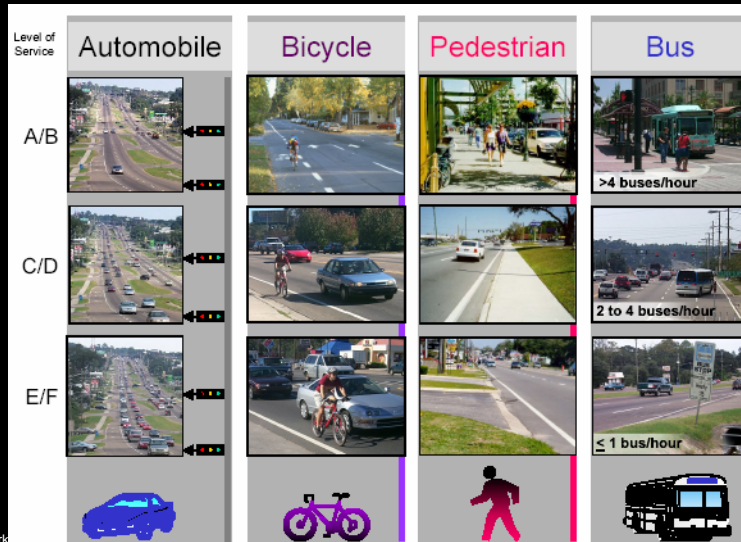
- West Santa Cruz
- East Santa Cruz
- North Santa Cruz

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Campus Trip Distribution

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Level of Service



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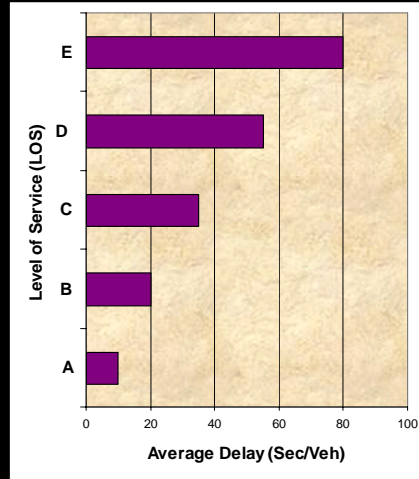
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Level of Service

- Intersection level of service (LOS):
 - Based on the delay experienced by drivers
 - Peak hours of the day
 - Letter grades A-F



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Significant Impacts

- City of Santa Cruz' significance criteria:
 - Needs to change LOS from acceptable to unacceptable
 - And...add more than 3% traffic
 - Or...require a traffic signal at a stop controlled intersection
 - And...add more than 3% traffic

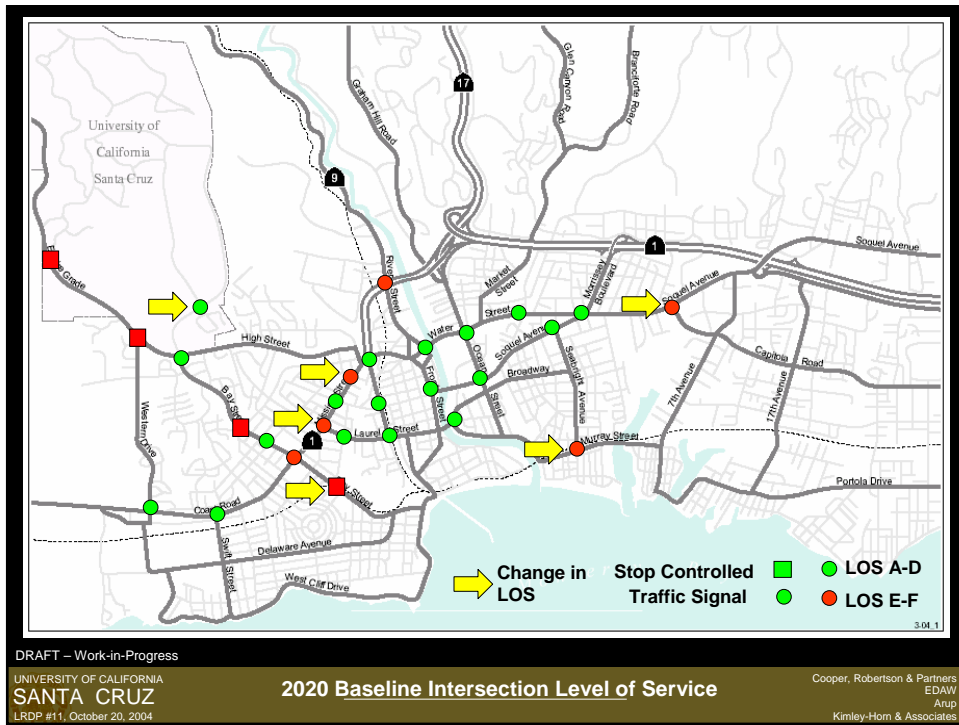
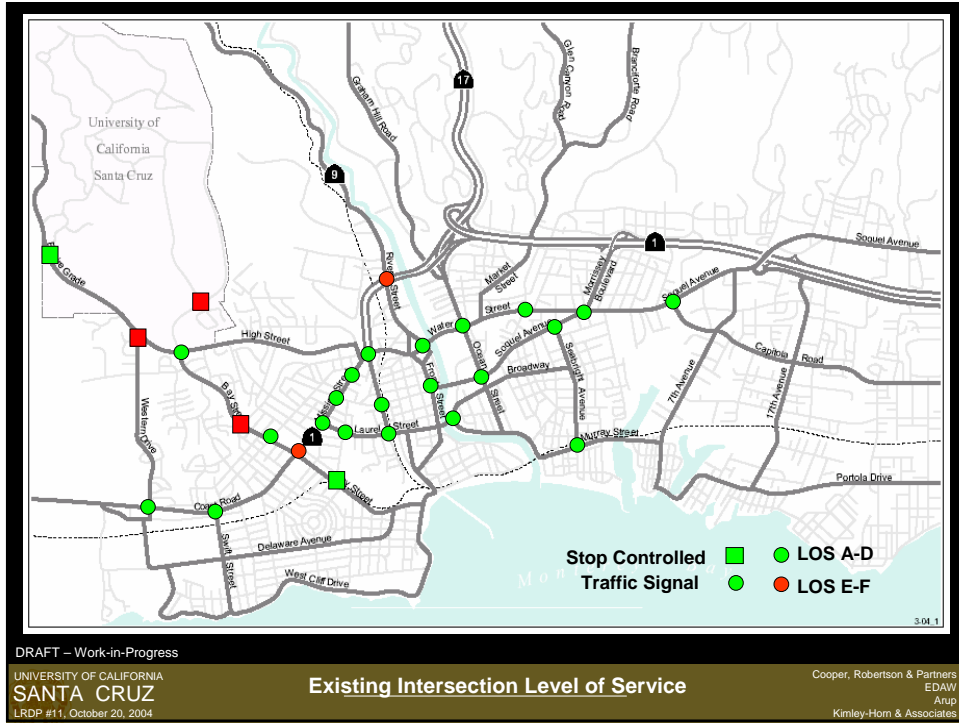
	Without Project	With Project	Project Contribution to Intersection	
			Less Than 3%	More Than 3%
Signalized Intersections				
A-D	A-D	NO	NO	
A-D	E-F	NO	YES	
E-F	E-F	NO	YES	
Unsignalized Intersections				
		Meets Warrants for Signal	NO	YES

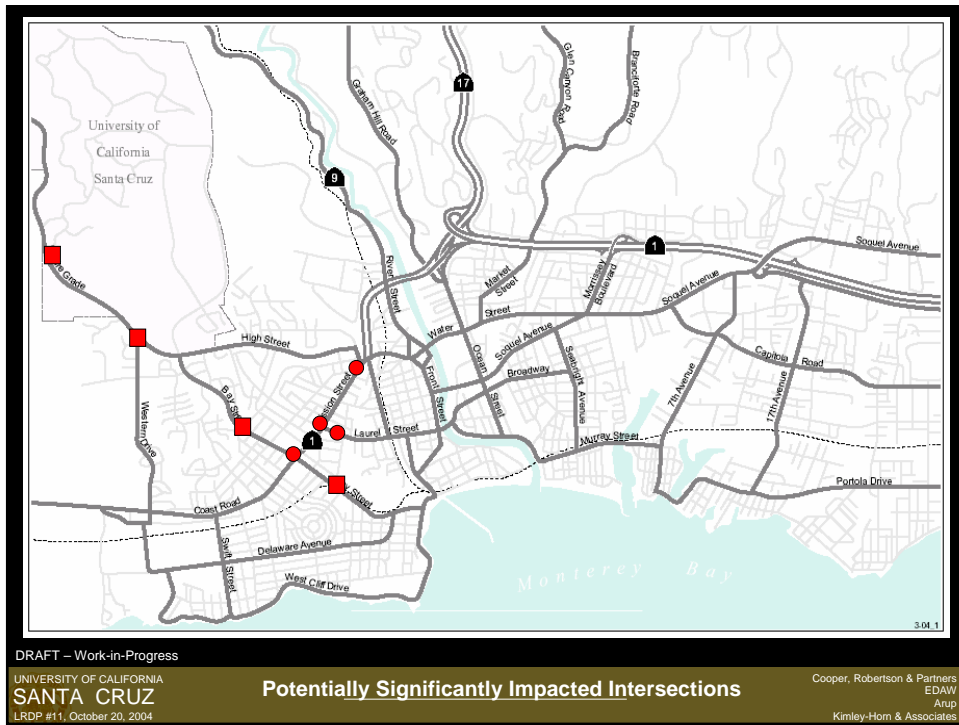
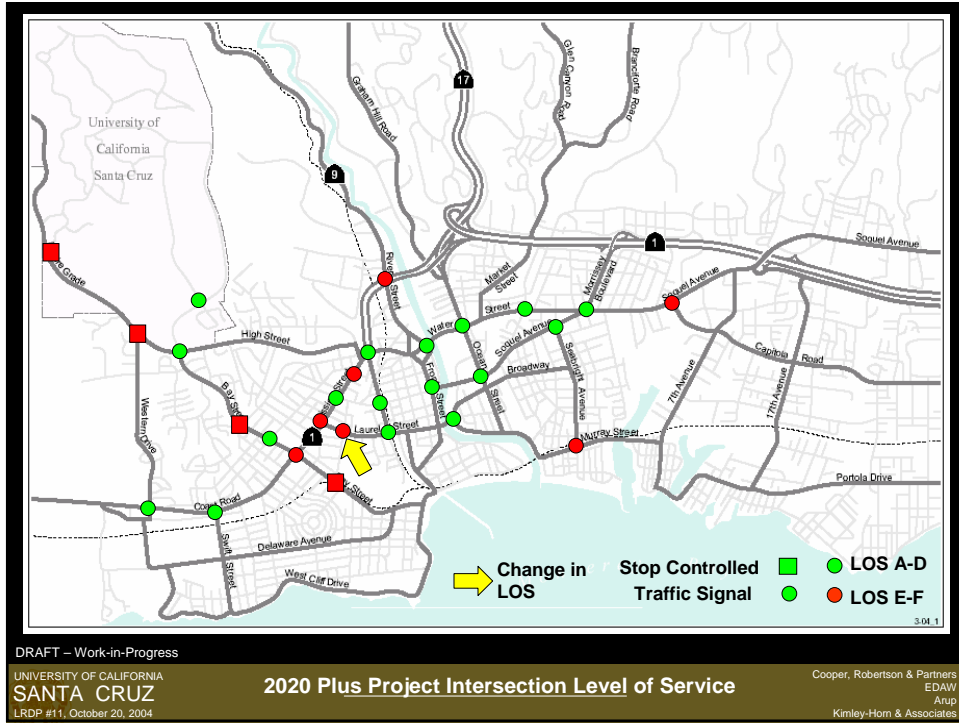
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Travel Demand Reduction Measures

- Improve current mode share through existing and enhanced TDM programs
- Increase retail/services on campus
- Provide South County remote park and ride
- Expand vanpool fleet
- Introduce car-sharing program
- Support implementation of Bus Rapid Transit in Santa Cruz

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Potential Improvement Measures

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Transit Improvement Measures

- Direct express Eastside to Campus bus service bypassing Downtown Transit Center
- Increase frequency and capacity of existing bus routes serving campus
- Transit pre-emption/queue jump lanes for transit on campus and selected off campus locations or major corridors
- Bus priority lanes on Bay Street
- Improve special event transit service

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Potential Improvement Measures

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Engineering Measures

- Install traffic signals where warranted
- Widen Bay Street in two-lane segments to allow exclusive bus lane
- Eliminate left turns along Bay Street between Escalona and Mission (access management)
- Implement access management measures on Mission Street

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Potential Improvement Measures

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Engineering Measures

- Implement traffic-adaptive signal systems and coordination on critical arterial streets
- Implement minor capacity and safety improvements at critical intersections

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