



# Parking and Transportation Needs at the University of California, San Diego, 2006-07 to 2012-13

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## Abstract

UCSD's last in-depth parking and transportation needs evaluation was completed in November 2001. Since then, the campus has grown in overall number of students, employees, and visitors yet has maintained roughly a 20% vacancy rate in parking at peak occupancy. Now, as the campus population is projected to grow by 5,300 and the number of parking spaces to decrease by 1,660 spaces by 2012-13, UCSD, through this study, is updating its understanding of parking and transportation needs and options for providing adequate, affordable, and cost-effective access to the campus.

Since 1995-96, the campus population has increased by about 42%, or 11,700 people, but only 12%, or 1,100, more A, B, and S parking spaces are occupied now. This slow rate in increased parking occupancy may be attributed to improved shuttle and mass transit services and, perhaps, to a reduction in demand associated with increased parking permit and gasoline costs. In 2006-07, the parking vacancy rate was about 20%—well above the campus standard of 5%, which is consistent with that used at other University of California campuses.

If parking demand were to follow the past 10-year trend of relatively stable occupancy rates even with population growth, it is estimated that in 2012-13 there would be 4% vacancy, or about 550 spaces empty at peak, which means that additional parking or implementation of parking eligibility restrictions similar to those that are in place at six other UC campuses would be needed to achieve the campus target vacancy rate of 5%.

## Introduction

This study analyzes current use of transportation services, anticipated impact of capital improvement projects, and estimated growth in the campus population in order to forecast future need as well as identify options for how that need may be met. To ensure UCSD's continued commitment to providing environmentally sound, operationally efficient, and cost effective access to the campus, four concurrent efforts to examine current parking capacity, track alternative transportation use, forecast future needs, and make recommendations to enhance and expand services have recently been undertaken.

In May 2007, Sundstrom and Associates completed their report entitled, *UCSD Alternative Transportation Programs: An Analysis of Campus Programs*. Parking Design Group (PDG) and the Hoyt Company conducted a study that focused on projecting future campus parking capacity needs. This analysis, *Parking Demand Analysis: West Campus, Scripps Institution of Oceanography, Medical Center La Jolla*, was completed in October 2007. Student Affairs produced two reports, *2007 Commuter Student Survey – Evening Use of the Campus*, and *UCSD Downtown Programmatic and Population Inventory and Parking Requirements*.

## Method

The Office of Institutional Research (IR) designed in consultation with the offices of Transportation & Parking Services (TPS) and Physical Planning (PPO), the data requirements and analyses that would serve as the foundation of the study. These requirements included collecting the following data: 1.) past, current and future use of transportation services, 2.) campus population trends, 3.) parking inventory as a function of the anticipated impact of the capital program, 4.) the relationship between parking space vacancy and campus population, 5.) the types and prices of parking permits, 6.) parking conditions at other UC's, 7.) financial projections on the cost of new parking structures scenarios and 8.) the impact of those costs on future parking permit prices.

Throughout the process, members of IR, TPS and PPO met on a frequent basis to interpret the initial analyses as well as the reports by PDG, the Hoyt Company, and Student Affairs. Once the analyses were completed, recommendations were developed that best fit the results. IR then wrote a draft report to present the findings and recommendations to the Transportation and Parking Committee (TPC) for review. TPC consequently conducted open forums with campus constituencies to obtain feedback on the recommendations. In the near future, TPC will vote on which course of action, if any, to take. The course of action will then be forwarded to the Vice Chancellor of Business Affairs to whom TPC serves as an advisory body.

## Results

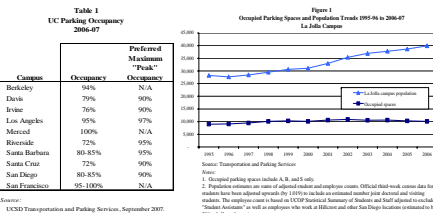


Table 5: Cost and Scope of Six Potential Parking Structure Models

Structure	Cost	Annual Debt Service	Total Spaces	Cost per Space	Spaces Displaced by Project	Net New Spaces	Cost per Net New Space
East Campus	\$ 11,652,000	\$ -	400	\$ 29,130	-	400	\$ 29,130
University Center	\$ 27,100,000	\$ 1,806,637	800	\$ 33,875	800	800	\$ 33,875
Riviera	\$ 30,321,000	\$ 2,036,093	1,700	\$ 29,600	427	1,273	\$ 39,630
School of Medicine	\$ 33,180,000	\$ 2,294,370	1,800	\$ 30,118	315	1,485	\$ 42,205
Muir	\$ 55,440,000	\$ 4,007,093	1,800	\$ 30,800	524	1,276	\$ 43,455
East Campus plus University Center	\$ 38,752,000	\$ 1,906,260	1,200	\$ 32,293	-	1,200	\$ 32,293

Notes:  
 1. Model assumes 0.5% growth in permit cost annually to 2012-13.  
 2. Projected parking permit fees are based on achieving 1.38 debt coverage ratio.  
 3. Model assumes \$11,652,000 cash contributing to any scenario.

## Results, continued

Table 2: Main Campus Parking Capacity, 2006-07 through 2012-13. Impact of 0.5% annual increase in parking demand from 2008-09 through 2012-13

Academic year	Project	Total spaces	Displaced spaces	Added spaces	Population	Vacant spaces	Spaces per capita	Vacancy rate
2006-07	Total Full Permit and Meter Spaces, Fall 2006 (actual)	14,100	-	-	38,600	2,960	0.37	21%
2007-08	Total Full Permit and Meter Spaces, Fall 2007 (actual)	14,634	998	1,401	39,600	3,040	0.37	21%
2008-09	Total Full Permit and Meter Spaces, Fall 2008 (estimated)	14,125	555	46	40,400	2,480	0.35	18%
2009-10	Total Full Permit and Meter Spaces, Fall 2009 (projected)	13,551	656	49	41,300	1,840	0.33	14%
2010-11	Total Full Permit and Meter Spaces, Fall 2010 (projected)	12,893	699	41	42,400	1,120	0.30	9%
2011-12	Total Full Permit and Meter Spaces, Fall 2011 (projected)	12,743	150	-	43,100	910	0.30	7%
2012-13	Total Full Permit and Meter Spaces, Fall 2012 (projected)	12,727	16	-	43,900	840	0.29	7%
2012-13	Total Full Permit and Meter Spaces, Winter 2013 (projected)	12,436	302	11	43,900	550	0.28	4%

Table 3: Parking Spaces and Population at Selected UC Campuses

Campus	Parking spaces	Population	Ratio of spaces to population
Berkeley	6,152	47,713	0.13
Davis	14,121	40,498	0.35
Irvine	13,812	32,759	0.42
Los Angeles	23,600	60,670	0.39
San Diego	15,943	38,600	0.41

Sources:  
 1. Parking space counts come from UC Annual Space Count.  
 2. Population numbers for Berkeley and Davis were calculated from information in their long-range development plans.  
 3. UCSD population information is extracted from campus payroll and personnel data as of October 2005.

Table 4: Monthly Permit Rates at Selected UC Campuses 2006-07

Permit type	Berkeley	Davis	Irvine	Los Angeles	San Diego
Administrators	\$120	\$47	\$58	\$73	\$91
Faculty	\$120	\$47	\$48	\$73	\$91
Reserved	\$173	N/A	\$85	\$105	\$170
Staff	\$89	\$47	\$58	\$59	\$79
Student	\$78	\$47	\$58	\$59	\$59

Note: Administrative managers at UCLA may choose between a mobility (37D) permit or a non-reserved (359) permit.

Table 6: Projected Parking Permit Fees through 2012-13

	Permits	Current Fees	Projected Monthly Fees	Projected Five Year Cumulative		Projected Average Annual Increases in	
				Monthly Parking Fees	Monthly Parking Fees	Monthly Parking Fees	Monthly Parking Fees
<b>East Campus</b>							
		% Annual Increase	4.5%				
A permits	\$93	\$116	\$23	25%	\$5		
B permits	\$81	\$101	\$20	25%	\$4		
S permits	\$61	\$76	\$15	25%	\$3		
<b>University Center</b>							
		% Annual Increase	6.6%				
A permits	\$93	\$128	\$35	38%	\$7		
B permits	\$81	\$111	\$30	37%	\$6		
S permits	\$61	\$84	\$23	38%	\$5		
<b>School of Medicine</b>							
		% Annual Increase	7.4%				
A permits	\$93	\$133	\$40	43%	\$8		
B permits	\$81	\$115	\$34	42%	\$7		
S permits	\$61	\$88	\$27	44%	\$5		
<b>Revelle</b>							
		% Annual Increase	9.5%				
A permits	\$93	\$148	\$55	59%	\$11		
B permits	\$81	\$127	\$46	57%	\$9		
S permits	\$61	\$96	\$35	57%	\$7		
<b>Muir</b>							
		% Annual Increase	10.2%				
A permits	\$93	\$150	\$57	61%	\$11		
B permits	\$81	\$131	\$50	62%	\$10		
S permits	\$61	\$99	\$38	62%	\$8		

## Conclusions/Applications

Since 1995, the campus has seen substantial growth in population, but the number of faculty, staff, and students who utilize parking facilities has remained relatively stable. Adding to the complexity of this situation, the influence of increased availability of alternative forms of transportation, higher fuel prices, telecommuting, and variable work schedules on parking permit purchase is not easily predictable. These uncertainties make financing the building of a new parking structure more uncertain than it may have been in the past.

To minimize financial risk, the campus may want to emphasize flexible approaches to providing adequate parking supply that do not require capital investment. These may include prohibiting resident freshmen students from buying parking permits, developing additional means of alternative transportation, or promoting variable work schedules.

To address future parking needs, the Transportation Policy Committee will review and evaluate the alternatives described above and propose a course of action. TPC will recommend a plan to the Vice Chancellor Business Affairs to provide adequate parking and transportation. If TPC recommends constructing a new parking structure as a means to meet projected demand and the Vice Chancellor Business Affairs endorses this decision, the Campus/Community Planning Committee will assess the proposed sites and recommend one that best promotes the quality of campus and community life.

In addition to evaluating mechanisms to manage parking supply and demand, TPC may consider authorizing a regular survey of transportation use by faculty, students, and staff as detailed information is not available concerning the subtleties of how individuals go about choosing one mode of public transport over another nor about what features of campus parking facilities are seen as desirable and those which need improvement.

TPC recommendations may include one or more of the following actions:

1. Encourage and expand use of Rideshare Programs, campus-run shuttles, informal ride sharing, and public transportation,
2. Restrict resident student parking access, and, if warranted
3. Construct new structured parking.

## Acknowledgements

Jeffrey Steindorf Associate Vice Chancellor, Campus Planning  
 Allison Bell, Research and Planning Analyst, Institutional Research  
 Mary O'Neill, Interim Director, Institutional Research  
 Sue Peerson, Director, Physical Planning  
 Brad Werdick, Sr. Planner, Physical Planning  
 Robert Clossin, Sr. Planner, Physical Planning  
 Brian D'Autremont, Director, Transportation and Parking Services  
 Sam Corbett, Assistant Director, Transportation and Parking Services  
 Tony Cherin, Director, Auxiliary and Plant Services