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Journal of the City and Regional Planning Department  
College of Architecture and Environmental Design, California Polytechnic State University

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It is my time to write about FOCUS, the California APA award winning journal, and what it means in the overall scheme of the City and Regional Planning Department. This is a year of transition for CRP. In 2007, we were ranked in the top 20 national planning programs by reputation, and in the top ten in three subject areas: plan making, zoning administration and technology. This is simply outstanding for a non-PhD granting institution. We hope to maintain, and even advance our rank in the future. The work presented in this issue demonstrates why CRP is a program of national significance and regional impact in California.

Part of this issue reflects CRP's continuing desire to make student learning relevant. The articles by Adrienne Greve and Jeff Hook about what they do in their classes provide some insight into what we do and who we are. Our students are on the cutting edge of new design and development research--as indicated by the articles on comparative design methods and LEED ND, in this issue. Read them and learn what is happening and how the research tries to separate the truth from the marketing hype. The tribute article for professor emeritus Michael McDougall shows the quality of faculty that CRP has been blessed with over the years, and how their teaching was based in practice. This legacy continues in CRP, as we do strive to link learning to professional practice throughout the educational experience for our students.

CRP is now more international than ever before. This is a good thing, as it fulfills part of the university overall mission statement for educating a more globally aware student. There are four articles with international content provided by students and alumni. These form a rich set of experiences. Jennifer Venema, for example, is the first CRP student to ever intern at the UN’s HABITAT headquarters in Nairobi, Kenya. I would also like to note that CRP has identified alumni practicing city planning in six countries outside of the US (e.g. England, Spain, New Zealand, Canada, Mexico, and Hong Kong). Faculty are also working to bring more international content to CRP as reflected in the del Rio article. We are also happy to share with you that Vicente del Rio and I are publishing a new book entitled Contemporary Urbanism in Brazil: After Brasilia this coming fall.

Making California safer has been a new effort for a team of CRP faculty. Ken Topping, Michael Boswell and myself partnered with the California Governors Office of Emergency Services to prepare the 2007 State Multi-Hazard Mitigation Plan. The Plan addresses disaster risks in California, creates goals for mitigation and explains how the State works to mitigate disaster impact. The Federal Disaster Management Agency (FEMA) gave the Plan “Enhanced” status, opening up the way for California to receive millions of
additional federal aid support funds in the case of future declared disaster events. Ken Topping’s article in this issue discusses this effort.

This is the year CRP turns 40 years old, and will are hoping that the sixth issue of FOCUS will be devoted to looking at our wonderful alumni, what they have done, what CRP has done for them, how they influence the practice of planning, and who they are now as people. It is also a good time for us to think about the contribution that CRP has made over the years to planning in California. We invite all of you to share with us any stories, thoughts, pictures, documents, or simply good times.

One aspect of FOCUS I wish to share is that we produce this wonderful annual volume with volunteer faculty and student support. Our managing editor, Vicente del Rio, and associate editor, Umut Toker, create FOCUS as part of their departmental service. We thank them and hope that you too appreciate their effort and dedication. As always, FOCUS is privately supported, so please think about becoming a supporter of this journal. We welcome articles by alumni and other planning professionals.

William Siembieda, Ph.D., AICP
Department Head
City and Regional Planning Department
Although we are very happy that FOCUS reached its fifth anniversary, we open this Editorial with a very sad note. CRP professor Michael McDougall passed away on April 8, 2007—a blow to all of us. Mike retired from Cal Poly after twenty years of teaching in CRP, and he had left a profound contribution. Last year, we were fortunate to have him collaborate with an article on his unique visual analysis and drawings of a small Italian town that he loved to visit. This was but a tiny example of his powerful analytical, teaching, and graphic skills. As teacher, colleague, and friend, he marked everybody’s life in Cal Poly in very special ways. Mike leaves behind a big void, and this issue is dedicated to him.

FOCUS’ Tribute to professor Michael McDougall starts with remarks by CAED assistant dean, Richard Zweifel, and San Luis Obispo County planning director, Vic Holanda. They were invited by Mike’s family to celebrate his life during a memorial at Cal Poly last year. Next, an article by his long-time friend Kalvin Platt, chairman of the SWA Group, reminds us of Mike’s involvement with the planning and design of Foster City by revisiting what is one of the most famous and successful new communities in California.

In the “Essays” section, Beth Fillerup writes about the history and trajectory of RRM Design. Starting in San Luis Obispo where they keep their main office, RRM became one of California’s leading planning and design firms, and they keep nurturing their strong ties to Cal Poly and the College of Architecture and Environmental Design. This year’s section on “Student and Faculty Work” has been expanded to make room for a lot of great material. Graduate students, Esther Valle and Elissa Black, open the section with articles on their master’s theses. Esther studied whether the New Urbanism and Participatory Design approaches are effectively providing a sense of community in their projects, by comparing four residential developments in California. Elissa discusses the implications of the LEED (Leadership in Energy and Environmental Design) national system and its criteria for neighborhood design from a planning perspective, making a case for the goals she is currently pursuing in her master’s thesis.

Lecturer, Jeff Hook follows by discussing the results and pedagogical implications of the senior project lab (CRP 463) that he has been teaching for CRP. This lab is a new alternative for students who opt out from pursuing their capstone graduation project as an independent two-quarter long effort, but would rather follow a more restricted agenda in a lab environment for one quarter. Next, lecturer, Ken Topping; professor, William Siembieda; and associate professor, Michael Boswell present us with a brief overview of their work as coordinators of one of the most important projects CRP has ever engaged in: the State of California Hazards Mitigation Plan 2007 Update. The process they led was a multi-level and inter-agency one-year effort that culminated with a new plan—recently adopted by the state and approved by FEMA—which sets a higher bar in facilitating mitigation and disaster preparedness in California. Recent class work is described in the following
two articles. Professor, Vicente del Rio addresses his summer third-year Community Design lab in which students responded to a real client and designed a residential resort in Bahia de Banderas, just north of Puerto Vallarta, Mexico. Assistant professor, Adrienne Greve and her students, Corbin Johnson and Kevin Waldron discuss CRP new elective Planning and Urban Ecology, in which the students monitor the impact of Cal Poly’s new student housing on the campus creek system. This section is closed with assistant professor, Umut Toker’s describing his 3-D computer modeling project for the City of San Luis Obispo and for San Luis Obispo Council of Governments. The project provides a powerful instrument for the simulation and control of development, and will facilitate community participation in the decision-making process.

In the “International Exchanges” section, two of FOCUSUS’ more constant collaborators, both seniors in the BSCRP program, write about their experiences abroad during the fall quarter. Christina Batteate went to Rio de Janeiro, Brazil, where she took an urban design studio at the Federal University, dealing with the upgrading of a squatter settlement, and interned at the UN-Habitat regional office for Latin America. Coincidentally, Jennifer Venema also works at the UN-Habitat, but as a volunteer intern in their headquarters at Nairobi, Kenya, and she writes about the incredible experience she gained from that.

For FOCUS’ closing section, “Spotlight,” we interviewed Sean Nicholas, from the MCRP class of 2005, who is now an associate planner with the city of San Clemente, CA. Sean talked to us about his impressions of the program and about his professional trajectory since graduation. Next, Jamie Macartney (BSCRP, 2006) writes about his story since he left CRP and got a job in Urbanism+, one of New Zealand’s top urban design firms in Auckland, where he has been involved with important plans and projects. Finally, we present the reader with the abstracts of all MCRP theses and projects defended in the past year.

We are planning surprises for next year’s FOCUS. The CRP Department will be celebrating its 40th anniversary and a series of events are being planned. The department is proud of being around for so long, of counting on the excellence of its excellent students and faculty who bring in so many awards, and have been pushing programs to the top list in the state and in the nation in both undergraduate and graduate education. FOCUS is interested in featuring alumni work, be it in the form of an article, a portfolio of work, or an interview. If you are an alumnus and are interested in contributing, we encourage you to get in touch with us.

Vicente del Rio, Ph.D.
Managing editor
Professor, City and Regional Planning Department
Silvio Soares Macedo, Ph.D.
Professor of Architecture, State University of Sao Paulo, Brazil. Special for FOCUS.
A memorial to CRP professor Michael McDougall was held at Cal Poly’s Rotunda Lecture Room on Saturday, May 19, 2007. During the ceremony, former teaching colleague, Richard Zweifel and former student, Vic Holanda were invited by Mike’s family to speak, share their memories, and help celebrate his life.

Remarks by Richard Zweifel

I am grateful for the opportunity to help celebrate a life that has made such a positive difference in so many other lives. I am sure if we could each choose, we would have wanted to put any need for this tribute way into the future. Although my words will not be adequate, I want to express the College’s sincere gratitude for Mike’s many contributions to education and to Cal Poly. However, I mostly want to share a little of my own feelings for his gift.

Mike, along with “Texas” John Stuart, were my first officemates when I came to teach at Cal Poly in January 1973. As a young guy, who hadn’t have any teaching experience beyond TA work as a graduate student (and not a whole lot of life experience for that matter), I couldn’t have had a better professional start because of these two and the other special people I came to know during those early years.

My real story is about Mike helping to contribute to my losing a job and starting to drink...let me explain.

I came to Cal Poly not because I had lofty goals of teaching—I just needed a job. I was waiting for a work permit to be able to start an urban design position I had accepted in Northern Ireland. When the permit finally came, it was because of what I learned and experienced from Mike and others that I chose to turn it down in order to stay teaching at Cal Poly. Mike helped to open my eyes to other possibilities, high professional standards, interdisciplinary work and so many other things. So, in a way, he really did cost me a job, but it was the best thing that could have ever happened. I lost a job and gained a career.

Mike truly knew a lot about a lot of things. What I found so special was that he took the time to mentor a young colleague (me). I doubt he ever even used the term “mentor”; he simply did all the right things to encourage, teach and share by example without making it seem like a lesson. Mike did what he did in such a wonderful way largely as a natural extension of his personality. He certainly had my attention and respect because of his extensive professional work (this guy really knew what he was doing), but what made such a difference, was his sincere interest in people and his infectious humor. Although the jokes have long since passed from my memory, his delivery and the twinkle in his eye will always be there. The more outrageous the punch line, the brighter his smile.

Mike’s style was one of offering by example and real concern and not by giving instructions. I felt he really did take an interest in what I was doing...and perhaps should do.

Which brings me to the drinking part. Before knowing Mike, I never drank coffee... and that was one of the first things he said would never do... Often when we were both in the office and I was scrambling to keep a little ahead of my students, Mike would suggest that I not loose the “big picture” and insist that we go to the “Cellar” in old Ag. Ed. and have coffee.
I now understand what was really happening: he was teaching a young guy without having it seem like any teaching was actually going on. Mike gave the right amount of encouragement to see people succeed.

I have to tell you, however, I do still hold a little grudge for lost cookies…my dear Grandmother would carefully wrap up and send from Wisconsin her special home-baked Swiss cookies. More than once, I returned to the office to find Mike and John relaxing and sampling the cookies before I had a chance to open them. The two of them were always apologetic, blaming each other, but unrepentant and ready to do it again. It is a terrific memory because of the character of the two of them.

Mike was a very good teacher and influenced my life and others perhaps more than he knew. If only we could all leave memories like that…

I found a little poem that reminded me of Mike. It’s called “After Glow.” I don’t know the author, but wanted to share it with all of you.

I’d like the memory of me to be a happy one.
I’d like to leave an after glow of smiles when life is done.
I’d like to leave an echo whispering softly down the ways,
Of happy times and laughing times and bright and sunny days.
I’d like the tears of those who grieve, to dry before the sun
of happy memories that I leave when life is done.

A true talent in so many ways, I know Mike has left us all with many smiles.

Remarks by Vic Holanda

“Be the change you want to see in the world” (Gandhi)... Mike shared those words with us on Graduation day, 1975. The following year in June of 1976, I started my career as the Planning Director for the City of Calistoga. My career took me to the City of Napa, Mendocino County, Stanislaus County, a couple of years in real estate development, six years as Governor Wilson’s Director of Permit Assistant (including a tour of duty on the California Coastal Commission), and eventually back here in San Luis Obispo County as the Planning Director in 1999. Returning to “SLO” brought back fond memories as a student at Poly. I even saw Mike a few times at “1865” with Bill Howard or Joe Kourakis. I remember thanking Mike one time over a glass of wine and reminding him what he told me on graduation day.

Back then, there was a recognition ceremony for the graduates in the City and Regional Planning Department, held in the “Patio” (behind “Engineering 21”). I recall mingling with my friends, relatives, and fellow classmates when I bumped into Mike. Mike and I took a short walk down a path, leaving the laughter and conversations behind us. “Well, you did it Vic. Congratulations,” he said. I thanked him, but I distinctly remember saying to him, “Now what? All this investment and change in my life and no job prospect.” He just smiled the McDougall smile, and said “Change… ‘Be the change you want to see in the world’…Gandhi said that, Vic. You, my friend, are the one to be that change.” Those words and his kind counsel stuck with me all these years, and I must say I am truly grateful for Mike’s counsel.
I recall meeting Mike in my sophomore year. Everyone went through the same program for the first two years. You actually went into your major in your junior year. Back then, I wanted to be an Architect.

We all "survived" the summer quarter (1st year) and were anxious to get started in our second year. Word got around that there were some new instructors coming on board and a new Team Teaching approach was going to be tried.

Joe Kourakis, Ed Ward, and Mike McDougall were the names we heard. All the students were impressed with their credentials and real world experience. Little did we know that they were all going to be very demanding of our time and extremely critical of our work. We soon learned that there was little sympathy and no empathy for creative excuses for late work or incomplete assignments. The expectations were high and competition wide-ranging. The opportunity to "learn by doing" was always there, but individual responsibility and teamwork was a dominant theme. Ken Schwartz, Joe, Frank Hendricks, Ben Polk, Ed Ward, Steve Orlick and others demanded that you deliver your best efforts, but to always work with and help others.

“Second Year Design” was the turning point for all us. If you didn’t succeed in “design,” chances were you weren’t going on to the Architecture program. “Second Year Design” was an extremely demanding program, which pushed your capabilities to the limit. The assignments and “last minute” assignments created an extremely stressful atmosphere. My goal was to become an Architect, but I soon realized that, in order to attain that goal, I had to succeed in all aspects of the math curriculum as well as design. Towards the end of “Second Year” Mike and I had several conversations about my struggles with “Second Year Design” and math, as well as opportunities in Planning. Mike never talked about my weaknesses in architecture; he just talked about how I could apply my talents or as he put it, my unique “character,” in the planning profession.

Mike, as far as I can recall, never really criticized anyone. In fact, I don’t think he ever said a negative thing about anyone. Anyway, Mike would have these conversations with me about becoming a Planner and how important it was to have vision sustained by moral character. To him, this meant genuine friendship, loyalty, teamwork, cooperation, poise-under-fire, enthusiasm, a competitive spirit, and—above all—self-control. He would say to me, because I was one of the older students, and a service veteran, I had the character and capabilities to lead in the planning profession. Mike was a true gentleman and a mentor who made you work in ways you never thought of working before. He brought out the best in every student. He made the pursuit of continuous improvement a routine that to this day I still practice.

I graduated from a very good Planning program at an outstanding University (Cal Poly), and I have the diploma to prove it. However, it was Mike who in actuality taught me how to become an honorable Planner—in the fullest, most highly perfected manner he knew how—with genuine character.

Although modest and unassuming, Mike was a great teacher, a great mentor, a great example, and a very, very great friend. We who were fortunate to have been his students are better planners and better human beings for having known and studied under him. Over the last 20-some years, his perceptive and insightful counsel during the time I was a naïve and inexperienced student has sustained me through the trials and tribulations of my professional career.

Those words he quoted to me on graduation day: “Be the change you want to see in the world” have made a difference in so many lives, especially mine as a professional planner. Thank you, Mike.
Foster City - A New City on the Bay
A Tribute to Professor Michael McDougall
Kalvin Platt

As a tribute to Michael McDougall, long-time friend and colleague, Kalvin Platt revisits the project for Foster City, a planned community in the San Francisco Bay Area. Mike was a principal planner and designer of this successful story of a new community which, as early as 1958, pioneered several planning and urban design maxims that we value today in good place-making and sustainability. Foster City is a lesson for all of us.

In the early 1960s; when I came to California as a planner and joined Wilsey, Ham, and Blair, an Engineering and Planning Company in Millbrae; I met Michael McDougall. He was working on Foster City, a new town along the San Francisco Bay. The sinuous “Venice-like” lagoon system that formed the backbone of the plan amazed me with its inherent beauty and appropriateness to the natural sloughs that ran along the Bay. What also amazed me was that this was a Master Planned New Town, the first significant effort of this post-WWII large scale planning concept in California and it had begun to be built as planned.

This article, then, is about Foster City and its remarkable evolution from plan to successful community. It is a story about how a mixture of good timing, vision, creativity, can-do mentality, and true determination started a process with a good plan and stuck to that plan throughout more than 57 years of its fruition into a well balanced, beautiful community in every sense of that word. Not without turmoil, and not without some modification, Foster City was the American Dream realized—a place to do better, to be better, and to share that good fortune with fellow citizens.

That dream was also the driving force behind the life story of the planner who gave Foster City its physical shape and character. Michael McDougall, who from 1972 to 1993 taught City and Regional Planning at Cal Poly, San Luis Obispo, was born in Swatow, China of Portuguese-Scots-Chinese heritage. He lived in Bombay, India during WWII, was educated in Hong Kong, London, and Cornell University, and became an American citizen in 1967. His background in British New Towns Planning and urban design gave him insight into how to use these new concepts of planning in the design of Foster City. He worked closely with his immediate superior, Abraham Krushkhov at Wilsey, Ham, and Blair, who was also a visionary, looking for an alternative kind of development in the design of Foster City to counter the sprawl that was devouring the farmlands of the Bay Area.

I. Significance of Foster City as a Planned New Town

Although the U.S. had sporadic experiences with planned towns before World War II, they mainly consisted of utopian or company towns, railroad suburbs, or “greenbelt” communities such as Radburn or Baldwin Park. After World War II, the magnitude of need for new housing and towns worldwide led designers, initially in devastated Britain, to the New Town Movement. In America, the city of Reston, Virginia echoed needs from decades of depression and war, and started the U.S. New Town movement in the 1950s. Later, a Master Plan developed between 1958 and 1961 for Foster City, which led the way in California as a balanced, planned New Town.

The plan, approved by the San Mateo County Board of Supervisors in 1961, while modified in detail over its 46 years, remains remarkably similar in concept and design to the original. The original concept, to develop a balanced community able to function physically, economically, and socially to meet the needs and desires of its residents has been magnificently accomplished.
Physically, the community is a hallmark of beauty and function, the “island of blue lagoons” of its early marketing claims. It has a good circulation system including city-wide shuttles connecting to Bay Area Transit, and award-winning major commercial and residential neighborhoods. Socially, the community pioneered equal opportunity housing at a time when that was unfortunately uncommon, and has a diverse mixture of people unlike most suburban enclaves on the San Francisco Peninsula. Jobs at all levels have always been available from the beginning and have kept up to a remarkable jobs/housing balance to this day. Affordability of housing marked the beginnings of Foster City, but it has eroded, just as the entire housing-deficient Bay Area. Economically, the city enjoys fiscal resources that allow for high maintenance standards on infrastructure and facilities, good schools, and excellent recreation and park facilities. This is in great part through the establishment of the Estero Municipal Improvement District (EMID) by the California Legislature in 1960. Foster City was thus the beginning of a concept of “pay as you go” for infrastructure and facilities that is now an established methodology in California new development through Community Services Districts, Mello-Roos financing, etc.

Foster City is a great success, and being so is therefore a great example of how Planned Communities, or New Towns can be a superior way to have development occur with mitigation of the impacts of growth built into the planned balance of land use, infrastructure, and public finance.

II. A Short History of the Planning and Development of Foster City

Brewers Island

In the late 19th Century, the state of California (illegally by most expert opinions) sold land in San Francisco bay to local farmers, industries or salt producers. Brewers Island, located halfway between San Francisco and San Jose on the Peninsula, was reclaimed with dikes as a 2,200-acre dairy farm and 550 acres of salt evaporation ponds. 2,600 acres of the Island was optioned in 1958 by T. Jack Foster, a successful businessman from Texas and Oklahoma, and previously Mayor of Norman, Oklahoma. During World War II, he helped increase the status of the University of Oklahoma in Norman by bringing in Military technical and medical facilities. After the war, he built military and private residential developments in California, Texas and the Southwest. He envisioned Brewers Island as an opportunity for a longer term development venture, one in which he could involve his three sons, who were scattered across the country.

T. Jack Foster’s broad experience in business and development, as Mayor of a large city and as an institution builder with the University of Oklahoma, combined with his desire to involve the next generation of his family, led him to think longer term and of a city rather than a subdivision on Brewers Island. His sons carried on the family’s linkage to Foster City in name and concept after his death in 1968. He is remembered fondly in Foster City and is commemorated in a sculpture in front of the new City Hall.

Engineering and Design

Foster’s initial partner on Brewers Island was Dick Grant, a successful San Francisco developer who was bought out early on by the Fosters. Grant was instrumental in bringing in the local engineering firm of Wilsey, Ham and Blair who shaped the plan for Foster City into a workable and elegant concept.

Originally, the Corps of Engineers and the County Engineer wanted eight to twelve feet of fill spread over the island to provide positive gravity drainage to the bay. The Fosters’ highly experienced soils consultant Dames & Moore concluded this projected 45 million cubic feet of fill would create substantial settlement of the underlying soils, if that amount could even be found nearby, or more
importantly, could ever be an economic venture. Instead Wilsey, Ham and Blair explored another concept.

Wilsey, Ham and Blair was lead by Lee Ham, a Civil Engineer of a new generation that put good creative design over textbook manuals. His firm included a planning section led by Abraham Krushkhov, and included Michael McDougall as Principal Planner. Krushkhov, a former professor of Public Administration and planner in Santa Clara County, favored creative physical design as the foundation for planning. He fit into Lee Ham’s belief that engineering not only made things work but could do that as well as make them beautiful. This connection of enlightened engineers and planners with physical planning orientation within Wilsey, Ham and Blair enabled the evolution of an elegant alternative solution to the fill problem. What was adopted as the backbone of the plan proved to be both problem-solving and beautiful. The lagoon system that would enable drainage of developed areas with only 4 to 5 feet of fill also became a beautiful “blue lagoon” and a backbone for the recreation system of boats, waterfront parks and houses.

The new lagoons were also a reminder of the natural sloughs that coursed the bay lowlands. In the winter, the lagoons are lowered two feet to enable storm water to drain into them and be held while large pumps removed the storm water into the bay. Here, again, engineering factors such as the optimal distances for pumping and for drainage were incorporated into the aesthetics of the lagoon system, avoiding a “channel-ized” or a rectilinear approach and producing the meandering curvilinear system of lagoons and natural slough-like shapes.

The design and character of the lagoon system and how it worked with the New Town plan is shown dramatically in an early drawing by Michael McDougall while he was in the planning group at Wilsey, Ham and Blair (see cover and figure 4). McDougall was a key player due to his great ability to communicate through drawing, his studies in Hong Kong and London at the height of the British New Town Movement, and his graduate studies at Cornell, exposing him to the American style of private enterprise development. His skills and talent allowed him at Foster City to realize Lee Ham’s belief that engineering and aesthetics are intrinsically interwoven. McDougall and Krushkhov continued working on Foster City even after they left Wilsey, Ham and Blair for the planning firm Ruth+Krushkhov (R+K). McDougall even stayed involved as a design consultant after he left R+K years later.

The kind of creativity that brought this key combination of elements into being spurred other creative engineering solutions. The fill was sand and shell found at the San Bruno shoals north of the San Francisco Airport, purchased from the state for a million dollars, and dredged and barged to the site. The sand/shell combination formed a hard layer over the bay mud island with good results for development. A system of a grid of concrete grade beams over the sand layer became the foundation for all light housing and commercial
structures. The quality of this method was proven in the 1989 Loma Prieta Earthquake where damage was extremely rare in contrast to other low-lying areas of the bay. And differentiated settlement was relatively inconsequential compared to those other areas. To this day, Foster City neighborhoods have never been flooded.

The engineering of the lagoon edges and bridges over the waterways were all done with engineering and design results in mind. The bridges are graceful arches that enable sailboats to traverse the lagoon system. Streetlights and fire hydrants won design awards with their distinctive “Foster City Blue” color. Street trees line the well-designed arterial streets and neighborhoods. Also, all electric lines were set underground, which was a new scale for PG&E and became the foundation of later large-scale projects throughout California.

The Estero Municipal Improvement District (EMID)

The establishment of the Estero Municipal Improvement District in 1960 by the California Legislature was the first time special improvement districts were used for such a large and mixed urban use rather than solely for agricultural or industrial projects. The District could issue bonds to provide

Figure 3
Schematic land use plan.
(from a T. Jack Foster & Sons brochure, 1963.)
for construction and to collect taxes from beneficiary users. A three-member Board of Directors governed the District based upon one vote per dollar of assessed validation.

The fact that this put the EMID under the control of the developers, that it could tax homeowners, and that there was no debt limitation suggested this process, while facilitating the beginning of Foster City, would come back to haunt the process as the city developed toward its goal of 35,000 population. In 1963, Foster produced a copyrighted brochure with three options for the future: 1) maintain the EMID, 2) annex to the City of San Mateo, and 3) incorporate as a Separate City.

**The Plan for Foster City, 1961**

Table 1 shows the land uses that were planned for Foster City in 1961, and then slightly revised in 1966. Table 2 shows the planning targets for population, housing and jobs in 1961 and 1966. The plan adopted by San Mateo County on June 13, 1961, in the words of a Ruth+Krushkov report “…transforms a low lying site (with strategic locational advantages) into a water oriented community of beauty and utility to include: serpentine lagoons. Man-made islands, waterfront parks, apartment towers, clustered homes, landscaped boulevards, a central townscape and variegated job complexes”.

The plan encouraged a wide range of housing types, even in the early phases and a balanced relationship of living and working areas. It emphasized the development of distinctive types of housing for “…accommodation of the full life cycle for most of the population,” and “a full component of community facilities (schools, parks, shopping centers, churches, etc,) for the resident population.” Also, the plan set processes for architectural review.

Unique features in the neighborhood areas were “micro-neighborhoods.” The larger neighborhood areas were broken into smaller units of 50 lots and approximately 200 people to which “the resident can readily identify.” The county approved plan applied techniques of planned unit development to allow varying lot sizes and setbacks, and the overall neighborhoods were mixed at about 60% single family and 40% multifamily. This produced higher densities than the typical San Mateo County subdivisions. With 11,000 housing units planned for 1,360 residential acres, the overall residential density of 8 units per acre produced a more sustainable development, even by current day standards.

### Table 1
**Foster City Plan; distribution of land uses.**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Total area / acres</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1961 Plan</td>
</tr>
<tr>
<td>Residential</td>
<td>1,360</td>
</tr>
<tr>
<td>Commercial Recreation</td>
<td>150</td>
</tr>
<tr>
<td>Industrial Service Commercial</td>
<td>310</td>
</tr>
<tr>
<td>Schools</td>
<td>180</td>
</tr>
<tr>
<td>Churches</td>
<td>40</td>
</tr>
<tr>
<td>Parks/Lagoons</td>
<td>230</td>
</tr>
<tr>
<td>Municipal</td>
<td>30</td>
</tr>
<tr>
<td>Streets</td>
<td>300</td>
</tr>
<tr>
<td>Total</td>
<td>2,600</td>
</tr>
</tbody>
</table>

### Table 2
**Foster City Plan Targets.**

<table>
<thead>
<tr>
<th></th>
<th>1961 Plan</th>
<th>1966 Revised Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acreage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>35,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Housing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SF</td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td>Townhouses</td>
<td>2,600</td>
<td>2,184</td>
</tr>
<tr>
<td>Garden Apts.</td>
<td>2,000</td>
<td>2,516</td>
</tr>
<tr>
<td>High-rise apts.</td>
<td>1,400</td>
<td>1,300</td>
</tr>
<tr>
<td>Total</td>
<td>11,000</td>
<td>11,000</td>
</tr>
<tr>
<td>Average population / household</td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Jobs</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Jobs / Housing balance</td>
<td>0.9</td>
<td>0.9</td>
</tr>
</tbody>
</table>
The overall density and mixed uses of the plan, the jobs, community facilities, and open space, and the use of micro neighborhoods were leading edge planning concepts of the day. It shows that Foster City was at many levels a pioneering and visionary plan.

**The Builders**

Foster City as a major New Town was also a pioneer in the separation of the process of development into two phases: what is now known as “horizontal development” or land development, and what is known as “vertical development,” or building homes, commercial or industrial buildings, institutional or other special kinds of buildings. Foster’s organization, working with EMID did the basic lot development including fill, drainage, utilities, roads and bridges. Then builders who specialized in residential, commercial or industrial buildings came in under Foster’s management.

Unlike Levittown, which was built by a home builder who did both horizontal and vertical development, Foster City could avoid the large tracts of similar houses that stigmatized much of suburban sprawl, and be built more like an older city by a number of builders with different price ranges and architectural styles. In Foster City, the Fosters went beyond the typical land sales of other planned communities, which also used different builders, but which sold large tracts of land within the community where the builders did produce a uniformity of homes. The Fosters, partially because they had to create the land with fill that required time to settle before homes could be built, and partly because they were interested in a more diverse mix of homes, selected the builders carefully for quality and gave them scattered small sites where they would build a smaller number of homes. This gave the community much more diverse neighborhoods as to the style and cost of homes. They also developed on a neighborhood-by-neighborhood phasing assuring that parks and shopping were built along with the houses in one area before they moved to another area.

*Figure 4*

Bird’s eye view rendering of the master plan, by Michael McDougall, 1960.
For the home builders, the Fosters chose Eichler Homes for their contemporary design, Duc and Elliot for their classic floor plans, and, at the lower end, Kay Homes, a popular ranch style builder. They had Kay hire an architect to revise their first plans to better meet his goals for these homes, and demanded corner and waterfront homes follow through around the building with the architectural treatment. Some custom homes were also built on waterfront lots. In 1964, the first home was sold at $23,000 and occupied in a neighborhood by Kay Homes.

In 1965, a waterfront home designed by James Levenson won a Sunset Magazine Award. In the 1970s, Whalers Cove, a number of homes by Fisher-Friedman Architects also received the Sunset Magazine Award. In 1976, The Islands, a condominium project designed by the same firm, received an Award of Excellence from the Architectural Record, and an Award of Merit from the American Institute of Architects and House and Home magazine. These projects helped put Foster City on the map for quality and architectural integrity. The Islands projects still are the focal point of the Foster City Central Lagoon, seen from Leo Ryan Park across the Lagoon.

Schools in Foster City

Schools were a problem because, although school sites could be planned for and reserved, the San Mateo School Board would decide when its school would be built and staffed. In many cases this caused a delay in the planned “neighborhood schools.” The San Mateo elementary and high school districts, beset with growth and financial issues elsewhere in their large districts, did not support the development of Foster City, causing its residents a “problem” that continues to this day. Being part of a larger school district has meant that residents had to fight for special bond issues to build the Foster City elementary and middle schools. District-wide attendance problems for high school students meant that the high school in the plan was never built, and the site was later sold. To this day, students travel long distances to high schools outside of Foster City.

This problem was by no means unique to Foster City and has its origin in the multitude of school districts in California and their sometimes poor relation to the areas they serve. It was a flaw in the otherwise masterful management by the Fosters of the early development of the New City.

When the Irvine Ranch was in planning for its development in the 1960s, right after Foster City, the planners wisely saw the schools issue as critical to the huge ranch and its subsequent development as a series of New Towns and Planned Communities. Ray Watson, chief planner for Irvine at that time and later President of the Irvine Ranch, lobbied to have the Irvine Unified School District boundaries cover major portions of the ranch, and established a working relationship with the school district that resulted in a closely coordinated development of homes and schools throughout the Ranch and in the City of Irvine. Mr. Watson says he feels this decision about schools was one of the most important functional decisions made and has contributed vastly to the success of the Irvine communities.

The Foster City Community Association (FCCA)

The school problem led to the creation of the Foster City Community Association in 1964, and the association was successful in getting bond issues for schools in Foster City. But the larger issue of governance galvanized the FCCA to take on the broader issue of citizen involvement in the New Town.

As taxes levied by the EMID increased, homeowners wanted more say on how the District was run. They wanted a voice on the Board and with intense effort by the FCCA, 1967 legislation was passed by the state to increase the EMID Board to 5 members, 2 elected by residents. As the city grew, the issues of governance became more strident. Investigations of the potential annexation of Foster City
by the City of San Mateo faltered by the barrier created by the 101 Freeway, the large indebtedness of EMID, and the independent mindedness of Foster City residents.

In 1970, Foster City representatives appeared before the new Local Agencies Formation Commission (LAFCO) to make their case for incorporation. Two items were key to approval: demonstrated fiscal self support and the uncertainties for the future fueled by the desire of the Fosters to sell the remaining undeveloped areas of the city to Centex, a Dallas development company for $15 million.

**Foster City Becomes a City**

In 1971 the elections held for incorporation of Foster City passed by a 98% vote! The City Council was elected and they took over the functions of the EMID. However, the mid 1970s were tumultuous for the new city. Centex was not the Fosters, and strife took hold in every deliberation. It wasn’t until 1977, after the City Council gave increased executive powers to the City Manager, that the City began to settle down into an efficient governing mode.

Even so, throughout the turmoil, the city maintained vital control over planning. With quality as an issue after Centex took control of the undeveloped lands, the city maintained an active Site and Architectural Review Board and the City’s Planning Commission continued the policy of the San Mateo County Planning Commission’s strict adherence to the Master Plan. In the early 1980s, Foster City came into its own as a city dedicated to serving its residents and maintaining the quality of the New Town Plan.

The travails of Foster City as a New Town played against a larger American issue of the feasibility of New Towns, given the experience of intense cycles of real estate development. The first American New Towns--Reston, Virginia and Columbia, Maryland--got into financial distress and had to be rescued: Reston by acquisition by the Gulf Oil Corporation and Columbia by the Federal Government. Title VII of The Housing and New Community Development Act of 1970 was created to incite private developers to build New Towns as a way to combat sprawl in a more efficient and socially relevant form of new development. The program quickly became bogged down in “red tape” and political maneuvering. Throughout the country, and unlike Columbia which was a well conceived plan, developments that were poorly conceived or in need of financial backing applied as “New Towns.” The extremely difficult real estate market conditions in the mid 70s doomed many of those ventures and the program became discredited. The dramatic up and down fluctuations of the housing market in those decades made long term land holding almost impossible for private developers.

Due to the quality of its initial plan and developments and to EMID, FCCA, committed local residents and politicians, Foster City made it through these hard times to thrive in the 80s and 90s to essential build out. It became a prime example of the intrinsic value of the New Town model.

**Transportation**

At first, access to Foster City was indirect, via Third Avenue in San Mateo, which was also the only access to the old San Mateo Hayward Bridge. The bridge was replaced in the 1960s with a modern span and more direct access from Highway 101 was via East Hillsdale Boulevard running through Foster City. This route quickly became congested in the 1970s and the state had plans to extend Highway 92 from the bridge west to 101 and eventually up the hill to the planned 280 Freeway. Intense lobbying by Foster City gained the funds to create a freeway to freeway interchange at 101 and 92 by the early 1980s, and the 92 Freeway became a reality, greatly improving access to Foster City and the San Mateo Bridge.
Early in the 1970s, the city studied ways to improve public transportation to and within Foster City. Routes were set, and a bus system was begun and then incorporated into the San Mateo County Transit District (SAMTRANS). Eventually a shuttle bus system became employed throughout Foster City, serving all the areas of the city and connecting to shopping in San Mateo, and to the new BART Millbrae station and CALTRAIN.

Creating the Center

The final neighborhoods of Foster City, with their schools, parks, churches, and small shopping centers were built out in the 1980s. The commercial areas of the city extending on both sides of the Highway 92 San Mateo Bridge corridor had begun small scale development in the early decades of the city, but larger scale commercial development would be delayed. The attempt to get a major shopping center within the Town Center site opposite the Central Lagoon was thwarted when the regional center went to a site in San Mateo directly adjacent to Foster City in the early 1980s. Later on in the 1980s, two major projects were proposed to essentially build out the remainder of the commercial and Town Center sites. Transpacific Development at the Town Center site opposite the Central Lagoon proposed and built the Metro Center, and Vintage Properties proposed and built the large Vintage Business Park with office, hotel, and industrial projects. Both projects were built to high standards and essentially completed the jobs and commercial areas of the city.

Metro Center, with its architectural composition of structures centered on the Lagoon and Ryan Park, culminates with a 22-story central tower that put Foster City “on the map.” This complex holds the headquarters for VISA as well as many other high quality businesses. Metro Center has a pedestrian mall that links to the Lagoon and Park, and in many ways is a more successful Town Center than the traditional shopping center that sits nearby in San Mateo.

III. Accomplishments and Perspectives

Accomplishments

When the 1961 Plan for Foster City is compared to the 2007 City Map, the result is an extraordinary example of a plan well conceived and well implemented. The overall land area of the city remains the same, as does the configuration of the Lagoon system, the major roadway network, the land use configurations and major public facilities. Neighborhood configuration is faithful to the original plan.
as is the wise configuration of commercial and industrial uses along the then planned 19th Avenue Freeway (now the Arthur Younger Highway 92 Freeway).

Moving these commercial uses to the north part of Foster City at once gives them regional access without disturbing the sanctity of the residential neighborhoods to the south, and moves these uses to a location where they can act as buffers to the Freeway and Airport noise issues.

The planners and engineers got it right! Small shopping centers serve each set of neighborhoods and schools; parks and churches are well distributed among them. Each neighborhood has a relationship to the bay or lagoon system, credibly implementing the “island of blue lagoons” in the 1963 marketing literature. Yes, given the right sky conditions, the lagoons are blue to this day!

Foster City—belying the infamous Herb Caen 1962 quote—“sounds like a company town in Eastern Pennsylvania” but is an incredibly imaginative and beautiful city with a unique identity that very well places it on the San Francisco Bay. It is one of the best examples in the Bay Area of the use of water as a civic image. Not blessed with the famous hill views to the Bay that make up the basic image of the San Francisco region, the mirror-like stillness of the lagoons reflect the various parts of the city into a magical third dimension.

The 2007 estimated population of Foster City at 30,000 approximates but falls somewhat short of the 35,000 projection. The housing types in Table 3 show a similar distribution between planned and projected housing types with the exception of the build out having a much higher proportion of apartments than in the original plan. Even though the projected total number of units was 11,000 and 12,000 were built, the lower population per dwelling unit average contributes to the lower overall population.

Two factors seem to point out the reason for the lesser population. One is the faster conversion of this “infill” site near San Francisco and the airport to multifamily rather than family units with fewer persons per unit as shown above. The other is the incredible run up in prices for bayfront real estate due to the infill effect and the advent of the Bay Conservation and Development Commission (BCDC) that came into being after Foster City was begun. The BCDC severely limited residential development or even other kinds of non-marine development along the entire San Francisco Bay. The high prices resulting from these limitations lessened the ability of families with children to gain access to Foster City in its later years of development.
Redwood Shores, a planned community on Leslie Salt lands directly south of Foster City was one of the last large-scale developments on the Bay. Influenced by the planning approach at Foster City, Redwood Shores also attained a higher density, higher quality mixed use development.

Foster City Community Development Director, Richard Marks had several conclusions about the original Master Plan based upon his twenty years of experience in bringing the plan to fruition. First, he praised the land use patterns in the original Master Plan, which clustered the nine neighborhoods around the lagoon and bay in the eastern and southern reaches of the city. The heavier commercial and industrial uses were located on the northern and western reaches adjacent to Highway 92. This allowed for easy accessibility from the commercial areas to the surrounding region and to the residential areas but there was enough separation to buffer any conflict with the neighborhoods. This buffer gave the city the ability to work with later modifications of the commercial developments such as the construction of the landmark 22-story Metro Center development in the 1980s without undue impacts to the neighborhoods. This is testimony to how a good plan can help in the planning process and overcome Nimbyism.

Mr. Marks also mentioned another landmark in the final payoff of the original EMID bonds in 2007. Led by an efficient and responsive local government they controlled, the residents basically paid off the mortgage in 44 years: not bad for building a city given most individual homes carry a thirty-year mortgage.

He was also positive about the circulation system in the original plan which, in short, “works.” This is particularly noteworthy for an Island Community with a central lagoon system where there are inherent circulation limitations. With just a minor change in configuration, Edgewater Boulevard now connects directly to Mariners Island Boulevard and the Bridgepointe Shopping Center. This development on a small section of the original Brewers Island was not part of the original property planned as Foster City and remains in San Mateo, but contains the major regional shopping center in the area.

Some Perspectives on Foster City

In an article written in the San Francisco Chronicle in 1963, Alan Temko—the Pulitzer Prize-winning architectural critic—wrote about Foster City and called it a project that could be a masterpiece. Mr.

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**Table 3**

Foster City Plan comparisons.

<table>
<thead>
<tr>
<th></th>
<th>1961 Plan</th>
<th>1966 Revised Plan</th>
<th>2007 (actual)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acreage in city</td>
<td>2,600</td>
<td>2,670</td>
<td>2,670</td>
</tr>
<tr>
<td>Population</td>
<td>35,000</td>
<td>35,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Jobs</td>
<td>10,000</td>
<td>10,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Housing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Family</td>
<td>5,000</td>
<td>5,000</td>
<td>4,571</td>
</tr>
<tr>
<td>Townhouses</td>
<td>2,600</td>
<td>2,184</td>
<td>2,205</td>
</tr>
<tr>
<td>Garden Apt. or condo.</td>
<td>2,000</td>
<td>2,516</td>
<td>1,956</td>
</tr>
<tr>
<td>Apartments</td>
<td>1,400</td>
<td>1,300</td>
<td>3,793</td>
</tr>
<tr>
<td>Total Housing</td>
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<td>11,000</td>
<td>12,525</td>
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<tr>
<td>Population / Household</td>
<td>3.2</td>
<td>3.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Jobs / Housing Balance</td>
<td>0.9</td>
<td>0.9</td>
<td>1.66</td>
</tr>
</tbody>
</table>

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**Figures 9 & 10**

Looking north and south over Foster City, 2007.
(photos by K. Platt)
Temko’s enthusiasm came in main from the announcement at that time of the engagement of the foremost figures in Modern Architecture, Le Corbusier and Mies Van der Rohe, to design the first two apartment towers. These concept designs were in fact done, but were never built.

In his article, Mr. Temko also spoke highly of the planning work by Wilsey, Ham and Blair, Abraham Krushkov and Michael McDougall, as well as Eichler Homes. He had the right instincts about the effort. Maybe a masterpiece should have been reserved for the great architectural masters, but Foster City became a beautiful place and a community masterpiece of its own.

In 1965, the San Francisco Museum of Art mounted an exhibition “Design of a City: Foster City” which was the first time that a community development was featured in a major American museum. The Museum picked up the proposal of Mies Van der Rohe, but also featured a ten-foot square mural of the land use plan by Ruth and Krushkov. By this time Abraam Krushkov and Michael McDougal had left Wilsey, Ham and Blair but continued to work intensely on the development team for Foster City. (At that time, I had followed them to R+K, but continued to not be involved directly with Foster City.)

The museum exhibition was comprehensive and featured the design of the lagoons, islands, neighborhoods and homes, and even the unique “street furniture” and bridges. The museum brochure for the exhibit summarized it as “the concept of a new city stimulates the creative mind. A city can be likened to a collage in which the contrast and variety of elements produce a vitality through an interaction of structures […] it is not buildings alone that make the city. It is also the spaces between the buildings […] the streets, the walks, the yards, the plazas, the parks, and, in case of Foster City, the Waterways.”

Missed Opportunities

Building the Mies Van der Rohe towers or the work by Le Corbusier at Foster City proved to be too difficult for the brand new city. Another missed opportunity was the inability of the San Mateo School District to build a high school in Foster City. The lack of the high school was not a flaw in the plan, since the site was designated in an appropriate location. The failure was in the governance structure which allowed the district to balance its enrollment by requiring the Foster City students to commute to underutilized schools in other communities. The district finally sold the site for development.

Another missed opportunity that was better missed than accomplished was the proposed freeway that was to run along the bay edge of Foster City traversing the entire peninsula. Although shown on the original plan, this proposal by CALTRANS was never embraced into the planning concepts. It was there because this bad idea was then current policy and had to be acknowledged. The advent of Foster City and BCDC makes this freeway a plan never to be resurrected.

Finally, the decision of the developers to locate the regional shopping center on a small piece of Brewers Island that was not part of Foster City rather than locate it at the Designated Town Center Site was a mixed result. A small reconfiguration of Edgewater Boulevard made the site easily accessible to the city, which lost this significant tax base. However, the Metro Center which was later built on the Town Center Site created a better relationship to the lagoon than the internally oriented traditional shopping center, provided a landmark 22-story tower overlooking the large central lagoon, and provided office jobs more related to the residents of Foster City.
IV. Making a Difference: Learning from Foster City

The experience of planning and realizing Foster City offers four major lessons for city planners.

How a Developer Can Enhance Community

Today we tend to consider “developer” and “community” as two incompatible concepts. But here we have it: a developer who did everything he could to think long term, care about people and continually think of how he could create a better place. His larger-than-life statue sitting out in front of City Hall (with no graffiti) says it can be done. T. Jack Foster cared about that which he was doing—building community—and he did it well, almost as if he was following the “Community Builders Handbook” of circa 1954 by the Urban Land Institute. And he was not the only one; James Rouse at Columbia, and Don Bren at Irvine carry on the tradition—Bren with a recent $20 million grant to the Irvine Unified School District for added courses in art, music, and science.

A Better Way to Grow With Less Negative Impact

By planning well from the beginning, Foster City optimized its road system, created a jobs-housing balance, built solid diversified neighborhoods that are as desirable today as when they were built, used an innovative financing technique to pay its way for growth, and established a tightly-knit community which to this day loves its town and is fiercely protective of it. Foster City was “infill” development as the larger Peninsula had sprawled well beyond the site in the late 1940s and 1950s.

The Relationship Between Good Engineering and Aesthetics

At Foster City there is no chain link fenced concrete channels or tinker toy bridges where function trumps beauty. It is apparent everywhere that this is a man-made city, but it represents the belief that you can solve functional issues and do it elegantly and with a spirit. Design—whether engineering design, architectural design, landscape design, or graphic design—must solve problems in a way as to create a positive reaction from the user. This has been done at Foster City. It drains well, stands up to earthquakes, gets you where you want to go…and is beautiful!

The plan used a previously-filled island in the Bay and added a minimum of new fill in a manner proven to enhance the structural response and prevent flooding. It also provided new water areas to the existing island.

How an Individual Planner Can Make a Difference

Michael McDougall’s visionary sketch of Foster City, made 56 years ago, is imagined as one flies over the completed city. You would be able to see practically the same view by actually getting in a plane today and looking at the real city from above. His kind of vision, his sensitivity to what could or would make
living in, working in, or visiting a city become a pleasurable experience, and his understanding of what it takes to have a real community enabled him to draw that city for all of us to see before it was accomplished.

In 1960, Michael wrote about the plan:

“Foster City was the first attempt in the West to create a city in toto, complete with employment and all the community facilities and services designed as a single balanced composition. It represents the logical breakthrough in scale from the shopping centers, industrial parks and housing projects of recent decades to an integrated union of all these elements. It rests in part on 14 years of British experience in this field, but is tailor-made to California standards, and expresses the indigenous contemporary culture of the San Francisco Bay Area.”

The major billboard that sat at the barren entry to Foster City at the time Michael drew his sketch said "We’re Building a Dream Here." Michael was able to make that dream possible by his plans and his abilities. In collaboration with T. Jack Foster, Abraam Krushkhov, Wilsey, Ham and Blair, City and County officials, builders and developers, and in the end with the initial, present, and future members of the Foster City community, he helped start a process that created a New Town! This process has no end as Foster City and its residents face the 21st century as a viable and beautiful community. It is important that he was there to start the process, but it is more important that he did it well!

Sources:


8. Interview with Richard Marks, Foster City Community Development Director, City of Foster City, November 2007.

9. Personal notes, archives, and aerial sketch of Foster City, 1960, Michael McDougall.
Figure 16
Foster City; 2007.
(from Google Earth; december 2007)
This article tells us the history of RRM Design Group, a successful local firm that specializes in architecture, civil engineering, landscape architecture, planning, and surveying. Founded in 1974, RRM has strong links to Cal Poly and holds its headquarters in San Luis Obispo with offices in San Clemente, Sausalito, and Oakdale. The firm is known for the quality of their work and its concern for livability and sustainability. Learn more about RRM at www.rrmdesign.com.

It is not uncommon to hear of a Cal Poly graduate heading a start-up that becomes a national phenomenon. Do Jamba Juice® or Lindamood-Bell® come to mind? Combined with an entrepreneurial spirit, Cal Poly’s “Learn by Doing” philosophy has proven to be a strong catalyst for graduates to create successful business ventures. But once out of the University environment, how do these new graduates keep the momentum going?

RRM Design Group (RRM), an established San Luis Obispo-headquartered design firm, understands what it takes to succeed. Cal Poly graduates have played a significant role in RRM’s longevity. Approximately 60% of RRM’s current staff members and four of their nine shareholders are Cal Poly alumni.*

RRM started as a local San Luis Obispo Architecture firm in 1974. They have since grown into a widely known and respected California design firm, providing architecture, civil engineering, exhibit design, landscape architecture, planning, and surveying services. RRM started with four employees, and has grown to a professional staff of over 150 with four offices throughout the state.

RRM’s strategies and observations from the last 33 years in business provide insight to those looking to start a venture of their own.

1974-1980: The Art of the Possible

Taking A Chance

In 1974, three College of Architecture and Environmental Design students, Bob Richmond, Rob Rossi, and Ken Wolff, asked each other, “Can we start an architectural firm in San Luis Obispo that can make us successful and that will endure over time?” The answer was an unequivocal “Yes!” They recruited Professor Tom Priest, and on November 18, 1974, Priest, Richmond, Wolff, and Rossi (PRWR) was born. Rossi was appointed as President.

Armed with little more than enthusiasm—and Tom Priest’s architectural license—PRWR became widely known in San Luis Obispo as “that place on Marsh Street where the lights stay on all night.”

Running A Business Can Be Tough

"In those early days, it was all about figuring ourselves out professionally and financially," recalls Rossi. "Success was about paying the bills. We were able to build a strong bond from that early collaboration, the desire to succeed, and the desire to do good architecture."

Figuring themselves out turned out to be harder than they imagined. With no business experience, PRWR was functionally bankrupt by 1976, the same year Victor Montgomery* joined the firm.
“My first few months were tough,” remembers Montgomery. “The nation was just coming out of The Oil Shock Recession, and business was hard. We had to borrow money to make payroll.” When asked why he persevered, he is nonplussed. “I love to be in business. What better life is there?”

Working Hard As A Team

One of the first projects commissioned to PRWR, Victoria Square in downtown San Luis Obispo, was a bonding experience for the group. PRWR was hired to design a 12-unit residential complex. When the firm showed their Victorian-style concepts to their developer client, they were fired on the spot. “We felt it was the right idea,” says Rossi. “We stuck by our design as good architecture.”

The project was picked up by another developer who was thrilled about PRWR’s vision, but the project was halted once again—this time by the city. PRWR worked hard to keep the project moving forward. And move forward it did. Upon completion, recognition and publicity validated the firm’s strong stance. Victoria Square won the prestigious Building Industry Association (BIA) Gold Nugget award, the Homes for Better Living Award from AIA/Housing Magazine (a national AIA award), and the highest local award from the Obispo Beautiful Association (Award of Merit), and was also published in a Swedish magazine as an early example of urban infill.

Struggling together on the project brought the team even closer. “Victoria Square was a turning point for the firm,” says Rossi. “It was never an internal issue. Each of us put the views of the team ahead of our own. We pulled together.”

1981-1990: Creating Environments People Enjoy®

Restructuring For Growth

In 1981, Montgomery succeeded Rossi as President, and the company was re-named Richmond Rossi Montgomery (RRM). Rossi left RRM, moving on to local development projects. With an established Architecture Group in 1983, Montgomery recruited long time friend, T. Keith Gurnee*, to build and diversify RRM’s Planning services. A former City Councilman for San Luis Obispo and a former Planning Director for Morro Bay, Gurnee was well suited for this role. He led the successful
completion of key local planning projects, including the Pismo Pier in Pismo Beach and the Varian Ranch Ag Cluster in San Luis Obispo. Continued success fostered company growth—they had 28 employees by 1982.

Creating A Clear Identity

In 1985, RRM changed its name to RRM Design Group, and created its Mission Statement: Creating Environments People Enjoy®, which remains the key message of RRM’s philosophy.

RRM’s CEO, Erik Justesen, expresses great satisfaction in regards to their mission. “It embodies the culture of our firm,” he states. “It is our driving force. Decisions, both long-term and short-term, are focused on what ultimately will provide enjoyment to our clients and employees.”

This clear focus led to more growth and market expansion, developing portfolios in Urban Waterfront Design, Master Planned Golf Communities, and Commercial/Office Design. One RRM solution to land use concerns resulted in the first Agricultural Clustering Ordinance in the State. RRM subsequently designed and obtained approvals for Varian Ranch, the first pilot project under the ordinance.

As RRM increased its range of projects, they required additional in-house expertise. Future shareholders John Wilbanks* (Planning), Erik Justesen*, and Jeff Ferber* (Landscape Architecture) were hired, and Civil Engineering was added as a new service.

Looking Towards The Future

As RRM began to grow, shareholders started thinking about RRM’s future. In a first attempt at a Long Range Plan (LRP) document, shareholders wrote down their future goals. Strengths, weaknesses, staffing needs, and billing forecasts were incorporated.

In regards to the initial LRP document, Montgomery thinks back, “It was very simple. This ‘document’ was three sheets of hand written notes on yellow lined paper. At that point, long range planning was more of a compelling statement to each other that we were in this for the long haul.”

Realizing there was potential for future work in the Central Valley, Gurnee began traveling to tap into these new markets. After landing a number of projects in Merced, Modesto, and Sacramento, it became apparent that the firm would not only have to expand its staff to meet the growing body of work, it would need to have offices closer to the work sites.
1991–2000: Reaching Beyond the Central Coast

Defining Detailed Long Term Plans

As the 90’s recession hit the nation, RRM continued to grow, as did the confidence in its long-term future. The shareholders created and adopted a more formal LRP as the outline for future planning. “This new LRP included visioning for the long-term future, goals for 5, 10, and 20 year increments of the future, and an implementation plan,” explains Montgomery.

Sustaining Growth

In 1991, John Wilbanks* opened RRM’s first branch office in Modesto. He became a shareholder in 1992. “About 1985, Keith and Vic involved me in their discussion regarding long-range growth of the corporation,” John recalls. “In my recollection, it is in those meetings that RRM’s long-range plan was changed from being a single location, campus-style corporate headquarters in San Luis Obispo to being a corporation with multiple offices of 50 to 70 people each. We felt this would allow us to maintain the unique family culture that RRM has historically provided while growing the company.”

This new office offered planning services for projects, such as the Lincoln Downtown Urban Design Plan, Del Rio West in Stanislaus County, the Newman Downtown Revitalization Plan, and the Lincoln Twelve Bridges Specific Plan. With new projects in Modesto and commissions for the Venice Beach Ocean Front Walk Refurbishment Plan, the Calabasas Old Town Revitalization Plan, and city parks projects for San Luis Obispo and Modesto, RRM began to emerge as a leader in urban design. It was also during this period that a deliberate niche marketing effort of the Architecture Division—fire stations—was established.

In 1995, RRM acquired Tierra Engineering, and future shareholders Jerry Michael and Tim Walters brought new capabilities to the firm, expanding on Civil Engineering services and adding Surveying services. By 1996, the Modesto office relocated to Oakdale, California, the “Gateway to Yosemite.” The Oakdale office quickly grew to a staff of 12 employees working on projects throughout the Central Valley, from Fresno to north of Sacramento. In 1998, Greg Peters was hired as the CFO. Shortly thereafter, in 1999, future shareholder Kirk Van Cleave was hired to manage Oakdale’s Architecture Group and Jerry Michael became a shareholder of the company.


2001-2007: The Business Matures

Refining Business Practices

At the beginning of the new millennium, RRM reached a milestone of over 100 employees. RRM opened offices in Healdsburg (which moved to Sausalito in 2006) and San Juan Capistrano (which moved to San Clemente in 2007), and designed their new headquarters in San Luis Obispo. Erik Justesen and Jeff Ferber were named shareholders in 2000, followed by Greg Peters in 2002.

The scope and scale of RRM’s projects continued to grow, and many of the largest projects designed by the firm were implemented. As RRM grew and matured, the firm’s business management practices began to require significant focus. Personnel Management, Human Resources, Finance and Capital Management, Long Term Planning, and Ownership Transition began to be the language of managing the firm.

During the period from 2000 through 2004 managers and owners of the firm focused heavily on learning the language of business. The firm adopted a clear ownership transition plan and began implementing it, focusing very specifically on assuring that the firm will survive the transition from the current owners to new generations of owners who will lead the firm into the future.

The firm’s Board of Director membership was limited (to 5 members) for the first time in its history. The firm also sought to significantly widen the knowledge base for future leadership and management through the creation of several committees of the Board of Directors, which included participation by the firm’s Associates. These committees were given significant review and decision making authority in aspects of the firm’s operations, such as employee benefits, insurance, compensation, and professional practice and technology.

The first major change in RRM’s management/leadership was the transition to a new CEO, Erik Justesen, in 2006. As CEO, Erik has built a reputation for caring about RRM’s “Family Culture.” In addition, sustainability has become a strong focus of RRM’s expertise and core values.

“Our staff members are spirited, dedicated, and extremely talented. They are the source of energy, excitement, and ideas that add value to our clients projects,” explains Erik. “As a leader at RRM, I strive to ensure that our employees feel valued for their contributions, and that they feel a part of our RRM Family.”

Additional shareholders were named in 2007: Kirk Van Cleave and Tim Walters. RRM’s ownership transition will continue in 2008 and 2009, resulting in a new leadership team for future decades.
2001-2007: The Business Matures

Defining Target Markets

Having created and begun implementing a leadership and ownership transition plan, RRM took a closer look at their services and how these services were structured for delivery and for marketing. It was time to clearly align these services with staff’s professional passions, market demand, and client expectations.

RRM strategically reorganized and re-branded itself with a market-focused philosophy, selecting six market sectors to reflect the firm’s experience, provide services to a solid cross section of public and private clientele, and provide work and growth opportunities to its employees.

Community Planning & Design: RRM’s Planning and Engineering groups plan and design for new communities and neighborhoods. Typical services include Infrastructure Master Plans, Specific Plans, and Community Plans. Recent projects include the Northeast Turlock Master Plan, Copper Trails Neighborhood Master Plan in Ceres, and The Woodlands Specific Plan in Nipomo.

Civic & Public Safety: The Architecture group does pre-design and design for civic buildings and public safety facilities. Typical services include feasibility studies and building design. Recent projects include the Ventura County Emergency Operations Center and Hollywood Fire Station No. 82. This group has three completed, three under construction, and for in progress LEED certified Fire Stations throughout California, including the State’s first “Gold” certified station. They also maintain their own website for fire station design: www.firestationdesign.com.

Education: The Architecture group also does pre-design and design for education campuses and facilities. Typical services include programming, feasibility studies, master planning, and building design. Recent projects include the Cal Poly Master Plan, the Cal Poly Alex Spanos Stadium, and the San Juan Capistrano University Master Plan.

Parks, Trails & Open Space: The Landscape Architecture group designs parks, trails, open space and their related facilities. Typical services include design of parks, trails, and open space plans. Recent projects include the El Corazon Community Park Master Plan in Oceanside, Santa Ana River Bike Trail in Riverside, and the Venice Beach Skate Park.

Urban Revitalization: The Planning and Architecture groups plan and design for existing communities and urban neighborhoods. Typical services include revitalization or new design of streetscapes, downtowns, and waterfront areas. Recent projects include the Huntington Beach Downtown Specific Plan, Platinum Gateway Mixed Use in Anaheim, the Scotts Valley Town Center Specific Plan and EIR, and the Marina Beach Strategic Plan.

Each of these areas of the firm are consistent with RRM’s desire to maintain involvement in communities where their offices reside. Recently completed San Luis Obispo local projects include the Paso Robles’ Rabbit Ridge Winery, the Madonna Plaza Revitalization, and Dalidio Ranch Master Plan.
Learn By Doing

The first few years of the 21st century have been a period of significant planning for RRM’s future, creating the tools and structure that will allow it to continue to grow in coming decades. Although the days and nights spent on campus learning individual professions are in their past, the lesson of “learn by doing” and the spirit it embodies continue.

“Going forward, we believe that the effort spent in developing our firm’s infrastructure is key to allowing future generations of practitioners to focus upon their craft and become masters of client service and "Creating Environments People Enjoy®,” explains Montgomery.

Figure 6
Cal Poly State University Master Plan; San Luis Obispo, CA.
Figure 7
The Woodlands Specific Plan; Nipomo Mesa, CA.

Figure 8
Downtown Huntington Park Specific Plan; Huntington Park, CA.

Figure 9
Twelve Bridges Master Planned Golf Community; Lincoln, CA.

Figure 10
Pismo Beach Promenade, Urban Design Revitalization Plan; Pismo Beach, CA.
How to plan and design for a sense of community is an increasingly important challenge for our profession. In her master’s thesis, Esther Valle investigated how two contemporary design approaches—New Urbanism and Participatory Design—face this challenge and their claims through a comparative study of four residential projects in California.

Creating a sense of community for residents is becoming more important each day. One prominent school of thought is New Urbanism which claims it can generate a sense of community through specific design principles. Another approach is Participatory Design which claims that residents are more likely to have a sense of community if they are able to participate throughout the development process.

This article is an account of my study of the actual relationship between New Urbanism principles and Participatory Design methods and sense of community (Valle, 2007). The study was based on a comparative research between four multi-family developments in California. Carlton Court in Hollywood and Manzanita Walk in Anaheim were selected as the two projects designed according to New Urbanist principles. Bernal Gateway in San Francisco and Oak Court in Palo Alto were selected as communities developed by Participatory Design. There was an average of a 28% response rate among all of the case studies (Table 1). Distinct from existing research, which mainly focused on single-family suburban homes, all communities in my study are a mix of urban middle-, low-, and very low-income households with diverse ethnic backgrounds.

Based on the methods and earlier findings of Talen (1999), Lund (2002), McMillan and Chavis (1986), and Unger and Wandersman (1985), my research goal was to determine the contributing attributes that heightened resident sense of community. Although social in nature, my study was a qualified approach to answering a question posed by various authors: How do these two approaches contribute to the residents’ sense of community?

New Urbanism claims that specific design concepts and elements increase the frequency of social interaction, thus increasing sense of community (Skjaeveland et al., 1996). However, Talen (1999) argues that the relationship between physical design and the psyche of sense of community is not a direct correlation; it depends on how the relationship is conceptualized.

Distinctly, Participatory Design methods claim that community participation in the design process eliminates environmental alienation and fosters a sense of community through collaboration, as well as providing people with a voice (Hester, 1990). For example, Beierle and Cayford (2002) conducted an analysis of 239 public participation cases over the past thirty years and demonstrated that participant motivation and agency responsiveness are key factors in community development.

<table>
<thead>
<tr>
<th>Case Study</th>
<th>Units</th>
<th>Response rate</th>
<th>Male</th>
<th>Female</th>
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<tr>
<td>NU 1: Carlton Court</td>
<td>60</td>
<td>25%</td>
<td>53%</td>
<td>47%</td>
</tr>
<tr>
<td>NU 2: Manzanita Walk</td>
<td>48</td>
<td>29%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>PD 1: Bernal Gateway</td>
<td>55</td>
<td>27%</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>PD 2: Oak Court</td>
<td>53</td>
<td>30%</td>
<td>19%</td>
<td>81%</td>
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Four specific objectives served as a framework to my study: 1) to compare the end-products of New Urbanism design and Participatory design, 2) to investigate the contributions of the social environment to residents' sense of community, 3) to investigate the contribution of the physical environment to residents' sense of community, and 4) to investigate the role of face-to-face interaction in sense of community.

In my study “sense of community” was defined as a reflection of a community’s social environment, integrating factors such as sense of mutual aid, neighborhood security, sense of belonging and membership, shared values, and attachment to place (McMillan & Chavis, 1986; Nassar & Julian, 1995; Brower, 1996). Factors reflecting the resident’s environment were also considered, such as emotional safety (Unger & Wandersman, 1982; Skjaeveland, et al., 1996), social networking (Wellman, 1981), social cohesion (Jacobs, 1961), resident satisfaction and tenure (Glynn, 1981), and neighboring (social interaction) (Weiss, 1982).

The analytical method and evaluation criteria used to analyze the information obtained and to measure sense of community was based on McMillan and Chavis (1986) measurement criteria, on the descriptions of the two concepts at hand, and on the various factors considered for the analysis of a resident’s sense of community (Table 2). Three methods were used to gather data. A door-to-door survey included yes-and-no and open-ended answers. A cognitive mapping exercise allowed residents to identify their immediate and larger physical surroundings. Interviews with developers allowed the gathering of data on the development process.

The findings indicated that the residents of the communities developed with significant public participation (Participatory Design), Oak Court and Bernal Gateway, have the strongest sense of community. Oak Court in Palo Alto ranked as the area with the strongest sense of community overall; 81% of residents were satisfied. This strong sense of community is attributed to the design process and also to the amenities and formal settings available. For example, a community room was located on-site and it encouraged quality interaction among residents. 81% of residents used the facilities, which coincides with a residents’ strong sense of community. Additionally, 93% of Bernal Gateway residents used the facilities available within their development. Most respondents residing within Oak Court, 88%, felt comfortable to ask their neighbor for a favor, such as a cup of sugar or to borrow tools. This is complimentary to Glynn’s (1981) findings with the linkage between a heightened sense of community and the number of residents known by each person.

One of the New Urbanist communities, Manzanita Walk, had the least amount of resident sense of community, which can be attributed to the lack of a formal setting for residents to interact: only 57% of the respondents felt a sense of community. Additionally, through the cognitive mapping completed by all respondents, it was apparent that residents living in multi-family homes register places they visit as part of their daily routine, such as a grocery store and school, more than the actual design of their

<table>
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<tr>
<th>Variable</th>
<th>Constructs</th>
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<tr>
<td>Membership</td>
<td>Tenure / Feel part of community/ Attachment to community</td>
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<tr>
<td>Face-to-face Interaction</td>
<td>1st Name Basis</td>
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<tr>
<td>Influence</td>
<td>Importance of opinion/ Influence over others decisions / Making a difference/ Trusting others opinions</td>
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<tr>
<td>Integration/Fulfillment of Needs</td>
<td>Satisfaction / Privacy respected/ Shared values with neighbors/ Comfort level / Physical Aesthetics</td>
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<tr>
<td>Emotional Connection</td>
<td>Neighborhood investment / Being involved / Use of community features</td>
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<td>Physical Environment</td>
<td>Cognitive</td>
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community. This suggests that New Urbanist design principles may not be of significant importance to sense of community among diverse multi-family homes, and that they may be more appropriate to more homogeneous neighborhoods such as single-family suburban homes. Diverse and multi-family communities establish a distinct challenge that designers are often unaware of.

Although the sample size of my research was relatively small and only four case studies were analyzed, the diversity of household incomes and ethnicity in all of the case studies make it relevant and unique. Results ultimately suggest that sense of community cannot be entirely related to either specific design guidelines or to having public participation in the design process alone. Although it is evident that residents value sense of community, they interpret it differently.

There are three significant findings from this study. First, a sense of community is attributed to the type of interaction that residents have. These interactions are mostly caused by the use of community facilities, such as a community room and resident programs. Resident programs are prominent in both of the Participatory Design case studies. New Urbanism claims that their design principles are shaped to encourage resident interaction and increase the chances of fostering sense of community. However, informal interaction between residents is not enough to significantly affect an individual’s sense of community. Second, according to McMillan and Chavis (1986), membership and influence measurement indicators are vital tools in analyzing residents’ sense of community. Accordingly, in this study, resident tenure is not a significant factor in a resident’s sense of community. Third, through cognitive map analysis, it is obvious that individuals living in dense urban areas identify major neighboring structures rather than their immediate physical surroundings, suggesting that design is not as important as providing access to everyday needs, such as a grocery store and school.
It is difficult to say whether New Urbanist design principles alone or Participatory Design are primary contributors to a sense of community when the quality of interaction appears to contribute significantly more. Nevertheless, public participation throughout the development process does increase sense of community, since people are encouraged to work together, creating the potential for a continuous quality interaction thereafter. The research results indicate an association between public involvement in developing their community and a stronger sense of attachment, hence a stronger sense of community. Public participation also helps the designers become conscious of the desires of potential users, allowing them to create a satisfying environment designed to accommodate resident needs. Developers should consider involving the public more throughout a community development process in all types of neighborhoods.

Both New Urbanism and Participatory Design can contribute with factors that foster sense of community. This research study has revealed that, in the context of the four case studies, there is a difference between the sense of community that residents feel in both types of developments. Further research could explore different variables, such as how having a community room with organized events contributes to sense of community, what kind of role diversity plays in sharing personal values and thus heightening sense of community, and how significant design is to low and very low-income households.

References


Elissa Black is currently completing her Master’s in City and Regional Planning at Cal Poly, San Luis Obispo. Her research interests include green neighborhood design, affordable housing, and the use of Geographic Information Systems (GIS) in regional land use planning.

The US Green Building Council’s LEED (Leadership in Energy and Environmental Design) national system became the country’s prominent promoter of green design practices. In expanding their approach towards environmental sustainability, the GBC is now developing standards for neighborhood development. In this essay, Elissa Black discusses these important issues and their implications for planning practice, giving us a hint of the master’s project she is currently developing.

“The development community will play an increasingly key role in slowing climate change. Shrinking household size, marathon commutes, and cultural preferences are boosting the demand for compact, walkable neighborhoods.” –Michael Davidson, manager of the Campaign for Sensible Growth (Stromberg, 2007, p.53)

The Leadership in Energy and Environmental Design (LEED) is a national rating system developed by the United States Green Building Council (USGBC). The LEED rating system certifies development projects based on sustainability criteria. Prior to 2007 LEED certified only individual buildings. A new LEED rating system has emerged, LEED for Neighborhood Development (LEED-ND), which is intended to certify development projects that consist of anywhere from a series of buildings to entire neighborhoods (Javid, 2007). LEED-ND was developed by a partnership of the USGBC, the Congress for New Urbanism and the Natural Resources Defense Council (NRDC). The new LEED-ND rating system may have far reaching potential to encourage the greening of entire neighborhood developments and master planned communities.

In 2007, the LEED-ND pilot program commenced with 238 participants, but the official rating system is not expected to launch until early 2009. As of August 2007, the state of Illinois had enacted legislature that will provide financial incentives for private development projects that are LEED-ND certified (Stromberg, 2007). “The act is attractive to legislators and developers because it is non-regulatory and offers incentives for creating these types of communities without imposing government standards” (Stromberg 2007: 53). A new city in North Korea, New Songdo City, is using LEED-ND standards to guide the development of the entire city (Clements, 2007). The new rating system has gained worldwide popularity. But, as LEED-ND is still in its infancy, there are bound to be issues that arise regarding its effectiveness as a national set of development standards intended to generate green neighborhood development.

Background: The Evolution of LEED Rating Systems

The USGBC was formed as a coalition of building-related organizations who sought a forum to consider the economic, environmental, and social costs and benefits generated by design and construction options (Soloman, 2005). The USGBC piloted the first green-building rating system, LEED for New Construction and Major Renovations (LEED-NC), in 1999, which certified individual buildings based on specific green building standards. By March 2000, version 2.0 of LEED-NC was publicly launched.

One of the original missions of the USGBC in implementing this new tool was to help transform the building and real estate markets (Soloman, 2005). Since the inception of LEED, renewable green
building resources and materials have become more widely available and more competitive than they ever were (Kirk, 2006). The real estate market has also been affected as green building features, valued by consumers for their economic efficiency in utilities and environmental friendliness, are used as marketing tools. LEED has greatly impacted the building and real estate markets: "[LEED] helps to ensure that users and buyers receive the environmental benefits they pay for, giving green building practices credibility in corporate America" (Kirk, 2006: 73).

The success with LEED-NC led the USGBC to create additional rating systems for various aspects of buildings, such as commercial interiors (LEED-Cl), core and shell (LEED-CS), and existing building operations and maintenance (LEED-EB). The latest additions have been LEED for homes (LEED-H), and LEED-ND. The LEED-ND pilot program was released in early 2007 and derives many of its standards from the most recently updated version of LEED-NC. It became apparent to many in the green building industry that a green building was not really ‘green’ if it wasn’t located with respect to its regional context, in its relation to other buildings, housing, transportation, and services.

To create a LEED rating system that would consider multiple buildings or whole neighborhoods within their greater context, the LEED-ND team formulated a rating system that would be made up of four major categories: Smart Location and Linkage, Neighborhood Pattern and Design, Green Construction and Technology, and Innovation and Design Process. The scope of LEED-ND is much larger than previous rating systems to include not only environmental concerns, but social issues as well. For example, as an incentive to developers to provide a diversity of housing types and affordability in their project, 10% of the total Neighborhood Pattern and Design points available are offered for diverse and affordable housing.

The LEED rating system has grown to be the most recognized green building assessment tool in the United States (Muse, 2006). Across the country various architecture, landscape architecture, and planning firms boast that they have the most LEED Accredited Professionals (AP) employed within their city limits, state, or even country. In an online report by Building Design and Construction, 50 of the nation’s top design firms were ranked according to the number of LEED APs employed within their firm. The list totaled 40,000 LEED APs as of July, 2007, working in private firms across the nation. The firms at the top of the list who employed the most LEED APs (not as a percentage of total employed, but in raw numbers) were Perkins+Will, Gensler, HOK, Stantec, and the Turner Corp (Barista, 2007).

The LEED rating system has already made a significant imprint on the development world and it has continued to evolve over time, but it is far from perfect. LEED is praised as the driving force behind major changes in the real estate and building markets to make green building materials and resources more competitive (Kirk, 2006). However, along with the many praises for the rating system, LEED has been criticized for several reasons as follows.

**Issues with the LEED Certification Process**

As process can be just as important to the success of an ‘implementation tool’ as the tool itself, two main concerns with the LEED certification process have been identified in recent literature.

One of the most common criticisms is that the LEED certification process is too expensive. Depending on the size of a project the cost to register with the USGBC to acquire LEED certification can be very expensive (Kuzyk, 2006; Solomon, 2005; Schendler, Udall, 2005). In July 2007, more than 370 LEED-ND pilot program applications were received by the USGBC. Of those, 238 applicants paid
anywhere from $8,000 to $20,000 to the USGBC to officially register their project for the certification process. What happened to the other 138 that didn’t register for the pilot program? Could a high registration fee deter developers from pursuing certification for their ‘green’ project?

“The danger is that LEED certification will cannibalize funds that otherwise could be used to improve a building. Developers face a choice: pursue LEED – or purchase a photovoltaic system, daylighting, or efficiency upgrades” (Schendler & Udall, 2005: 2).

The second criticism of the LEED process is that it is too complex, time consuming, and bureaucratic (Soloman, 2005; Muse, 2006; Schendler & Udall, 2005). A recent article that discusses an analysis by the National Association of Home Builders states that “most [LEED-ND] applicants in most instances would have to go through more than 200 steps to complete the application process” (NAHB, 2007).

**Issues with the Effectiveness of LEED Standards**

The following issues regarding the effectiveness of LEED standards to generate green projects have been identified: the financial feasibility of building green, the lack of life-cycle analysis of building techniques and materials, and the regional and contextual inappropriateness of a set of national development standards—the ‘one size fits all’ conundrum. The financial feasibility of building green may not be directly affected by the USGBC alone; other market related factors that the USGBC has no control over affect the costs of building green. LEED has had a history of influencing the green building market by helping to drive the competitiveness of green building materials, which is beneficial for the green building market. But, the USGBC must balance that with their responsibility to set forth standards that are reasonable for developers and builders to achieve. If LEED standards incur unreasonable and excessive costs to developers, then only very few development projects can be certified under the LEED system, which results in limited participation in the program. To ensure that more projects can participate and more diversity can exist, LEED standards must be reasonable for developers to pursue.

Currently, the debate as to whether building green is more expensive than traditional building is a hot topic among builders, developers, and designers. On one side, the argument is made that the reality of building green is that it is much more expensive than conventional building and therefore less feasible (Schendler, 2005), while others claim that there is no significant difference in the average cost of green buildings versus non-green buildings (Langdon, 2007).

The second concern regarding LEED standards is that it currently does not take into account life-cycle analysis, or “the scientific discipline of measuring resources and energy consumed, and the environmental impact created by a particular product throughout its life” (Soloman, 2005: p. 138). Given that LEED is set up to award one point per credit, it does not give incentive for building strategies that utilize the least environmentally damaging materials; the same amount of points are awarded among different strategies that vary in environmental impact. A more sophisticated system would allow for a range of points within each credit, based on life cycle analysis of the different materials (Soloman, 2005).

The third, and perhaps most important issue in terms of implementing successful green neighborhood development standards, is the issue of regional and contextual appropriateness. LEED has been frequently criticized as a set of broad national standards that are bioregionally insensitive. In the case of climate differences, which affect the use of water, “water conservation is more of a priority in hot,
dry climates, yet the USGBC awards the same number of credits for water conservation in Seattle as in Phoenix” (Soloman, 2005: 3).

If, in some cases, LEED can be bioregionally insensitive, how does it fair in its sensitivity to other site-specific circumstances? Though not yet supported by substantial research, the supposition has been made that some LEED credits are not appropriate for certain contexts. The USGBC certifies a building based on verification that it is achieving the intended objectives set forth by the LEED rating system and it is assumed that the LEED credits pursued are beneficial to the environment. But, there has been some evidence suggesting that, in limited cases, unintended consequences have resulted in LEED certified projects that “inadvertently fail to benefit the environment” (Bray & McCurry, 2006). In two cases, Bray and McCurry (2006) found that, because projects were so intent on acquiring LEED certification, they actually pursued credits that didn’t produce a sustainable outcome in the specific context of their project.

In one case, involving a ‘sustainable sites’ credit, the applicant built bicycle storage and change/shower facilities into the project in order to achieve the ‘alternative transportation’ credit. The credit is intended to encourage building occupants and users to bicycle as a means of transportation to and from the site, but, because this specific site was in a rural area within a state park and located on a mountaintop, it was not conducive to bicycle access. Thus, the credit’s intent was not achieved; employees still used gas-powered vehicles as their mode of transportation to and from the building. In addition, the construction of shower/change facilities and installation of bike racks was a wasteful use of building resources since they are not used, thus creating a negative environmental impact instead of a positive one (Bray & McCurry, 2006). This is one example of how developers may pursue LEED credits as a means of getting their project certified even if it requires implementing building criteria that aren’t appropriate for their project site and could result in hurting the environment.

[The] USGBC developed a simple, universal system in which one goal, or credit, receives one point... USGBC volunteers “knew that it was clumsy and limited, and many wanted to wait until it could be put on more scientific footing, but more wanted to get something out quickly.” Berkebile continues, “What was shocking was that many agencies and cities so quickly embraced it as their tool, not realizing that it was not regional, did not do life-cycle analysis, and was focused on corporate buildings. (Soloman, 2005: p. 138)

**Effectiveness of LEED-ND: What is “Green Neighborhood Development”?**

To better understand how LEED-ND might be an effective tool for developers to build, and municipalities to encourage green neighborhood developments, it is crucial to understand what LEED-ND intends to do and how the rating system defines ‘green neighborhood development.’ Each of the three major components of LEED-ND articulate different objectives related to green development.

The Green Construction and Technology component is intended to reduce the environmental impact of buildings; most of its criteria are based on the original LEED-NC green building standards. Therefore, criticisms and praise of LEED-NC standards, such as those offered above, are applicable to evaluation of LEED-ND’s Green Construction and Technology component. As for the other two components of LEED-ND, Smart Location and Linkage and Neighborhood Pattern and Design are comprised of standards that relate to the neighborhood’s scale of development. Thus, their standards constitute the gist of how LEED-ND defines green neighborhood development.
The Smart Location and Linkage criteria defines green neighborhood development as urban infill, brownfield redevelopment, or largely urban oriented development (Javid, 2007). A logical and valid effort to combat unsustainable sprawl and greenfield development, its pre-requisite could be problematic for some projects that may not be truly urban but may not be contributing to sprawl either. Neighborhood development projects in semi-rural areas that may strive to be “green” through pursuing LEED-ND criteria may find the Smart Location and Linkage pre-requisite difficult to obtain (NAHB, 2007). A potential challenge for developers and the USGBC is how to define green neighborhood development in terms of urban versus rural contexts.

In other aspects of neighborhood development related to urban design, specific design concepts that have gained popularity lately have been identified as being sustainable or green. Some of these concepts have their roots in traditional neighborhood design and the urban design principles set forth by The Congress for New Urbanism. Research that provides a critical analysis of New Urbanist design principles is relevant to the critique of LEED-ND, as the Congress for New Urbanism is a LEED-ND partner responsible for drafting the LEED-ND pilot program standards. For example, the Neighborhood Pattern and Design component promotes the idea of creating “community” by implementing specific traditional neighborhood design standards, the outcome of which has been a topic of recent debate among New Urbanism critics (Brain, 2005; Nasar, 2003).

Studies have also been conducted that examine the effectiveness of managing transportation demand by designing neighborhoods that contain mixed uses and encourage alternative modes of transportation, another traditional neighborhood concept that is put forth in LEED-ND standards.

It is evident that LEED-ND has already become an accepted set of development standards by many, even while the program has yet to officially launch. It is conceivable that LEED-ND, being so new, is not ready to be widely implemented without first discovering whether or not it works properly. Identifying the strengths and weaknesses of the program is a necessary step before adopting it as our own set of standards.

**Conclusion**

Studies that offer a critical analysis of the LEED-ND certification process are needed to better understand concerns regarding the significance of the cost of the LEED certification process and difficulty that comes with overly bureaucratic process. In addition, it will be crucial in this phase of the LEED-ND pilot program to analyze the robustness of its standards in generating green neighborhood development. Special attention should be given to the concern that LEED-ND is a broad set of national standards that are not tailored to meet the specific needs of different regions or site contexts.

A case study strategy that would follow a development project through the certification process and track its success in using the LEED-ND standards may be one method to generate this analysis. For my Master’s in City and Regional Planning professional project I will be using such a case study methodology to critically analyze LEED-ND process and standards from a planning perspective to better understand the possibilities and challenges of green neighborhood development. The primary case will be a neighborhood development project located in Paso Robles, California, a semi-rural community in the Central Coast region. The project, “River Oaks, the Next Chapter,” is 270 acres of mixed uses, including residential, recreational, and commercial. The case study will be conducted in two phases: first, by preparing LEED-ND certification documents for the project, and second, by reviewing the results of the process through a review committee and analyzing the outcome in relation
to selected comparable projects. The review phase will involve the formation of a review committee made up of local LEED APs, academics, and planning / urban design professionals. The review committee will be asked to evaluate “River Oaks” in terms of green neighborhood development.

LEED-ND has great potential to influence the world of planning and development. The USGBC recognizes the evolutionary nature of developing LEED standards. The more the LEED rating systems are put to the test, the more constructive criticism can be offered to improve them for the future. The results of my investigation may contribute to a better understanding of the impacts of the LEED-ND in the development of greener and more sustainable communities.

Figure 1
The case-study, Paso Robles, River Oaks I, and the illustrative master plan of River Oaks, the Next Chapter. (courtesy Estrella Associates)
References:


Javid, David. (2007). LEED-ND is coming: are you ready? How to implement green planning and design principles now. APA California Planner, March-April, 13-16.

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Two years ago, the CRP Department started to offer CRP 463 Senior Project Lab, as an option for students who, for different reasons, could not or decided not to take the two-quarter-long individually oriented and supervised senior project. Since then Jeff Hook has been teaching this lab, and brings us some comments on the student output and the importance of this capstone lab.

In planning education, as in life, one size doesn't fit all. Cal Poly's City and Regional Planning program "fits" students' diverse needs and learning styles through a new and flexible approach to completing Senior Project. To earn the Bachelor of Science degree in City and Regional Planning at Cal Poly, students must complete a senior project or thesis. The senior project is the culmination of the student's planning studies and represents the high-quality work expected of 4th and 5th year planning students about to enter the profession. In the past, students who chose to do a senior project had one option: to complete the senior project over two quarters, working with a faculty advisor who guides the student in what is, essentially, independent study. This approach has worked well for many students. For others, schedule conflicts or the need for more structured learning and faculty interaction made completing the traditional two-quarter senior project a daunting task.

Seniors now have another option for completing their senior project. It's called CRP 463, Senior Projects. It provides an alternative for students who choose to complete their senior project in one quarter, working in an intensive, highly-structured course format. As the capstone course in the undergraduate City and Regional Planning program, CRP 463 has two overarching objectives: (1) to apply planning theory and practice in solving problems related to the built environment through research, field studies and the preparation of project plans and supporting documents that meet senior project requirements, and (2) to develop skills and confidence in working under professional planning conditions, structure and standards.

For the undergraduate student intent on finishing senior project in one quarter, this is not an easy task. The course requires an extraordinary level of organization, time management and self-discipline to stay on schedule and meet course requirements. But, based on the results from “pilot” courses offered Spring Quarter 2006 and 2007, the benefits and the results are encouraging. Students were given a development site and chose their project from several potential development scenarios. They evaluated the site, researched case studies and served as “consultants” to provide the City with site analyses, conceptual and preliminary development plans, environmental studies and other required deliverables.
Professional quality work is the overarching goal. In 2006, students focused on the South Broad Street Corridor, a 135-acre site within the bounds of Broad Street, the railroad, South Street and Orcutt Road being considered by the City of San Luis Obispo for mixed-use infill development.

In 2007, students worked on the Sunset Drive-In property, a 50-acre site in San Luis Obispo near the intersection of Prado Road and State Highway 101. Each student signed a “consultant services contract” with the instructor and held “client meetings” every Thursday on a pre-determined schedule. Client meetings lasted 30 minutes and, at each, students were responsible for specific deliverables based on an approved workschedule.

For both sites, students completed a full range of planning studies and plans with either an environmental or urban design focus. Background research, site analyses, case studies, policy analysis, design exploration and synthesis and environmental review were used to support final recommendations presented in the final written project. Students then presented and defended their findings and recommendations at a meeting attended by students, faculty and community representatives. The following graphics give a taste of the high quality of the students’ senior projects. Besides being the capstone experience of the students’ formal planning education, CRP 463 may also be a springboard for their planning careers in “Life 101.”
MAKING CALIFORNIA SAFER: CRP PREPARES THE 2007 STATE HAZARD MITIGATION PLAN
KEN TOPPING, WILLIAM SIEMBIEDA, AND MICHAEL BOSWELL

For a little over a year, a Cal Poly team—led by these featured authors—was engaged in preparing California’s Hazard Mitigation Plan, which was officially adopted in December 2007. This important work proves the capacity of Cal Poly and, specifically, the CRP Department in engaging in community outreach. The plan will facilitate mitigation planning and actions by the various federal, state, and local agencies and stakeholders, leading the way towards a safer California.

The City and Regional Planning Department has helped the State of California become a leader in planning for safety and long-term community sustainability in the face of ongoing earthquakes, floods, wildfires and other natural and human-caused disasters. In a partnership with the Governor’s Office of Emergency Services (OES) a faculty-student team from Cal Poly prepared the 2007 State of California Multi-Hazard Mitigation Plan, which was adopted on October 8, 2007 by OES Director Henry Renteria.

The 2007 Plan was designated as an Enhanced State Mitigation Plan on December 17, 2007, after being initially approved in October 2007 as a Standard Plan, meeting minimum legal requirements. The Enhanced Plan designation is good for the next three years, until the 2010 Plan is submitted for FEMA approval.

An Enhanced Plan designation assures eligibility for substantially greater amounts of mitigation funding than a Standard Plan. This means that, after future disasters, California will get federal mitigation grant funding amounting to tens of millions of mitigation dollars for disasters the size of the October 2007 wildfires and hundreds of millions for mitigation after a catastrophic disaster. Only 11 other state plans have such designations.

About the Plan

The 2007 State of California Multi-Hazard Mitigation Plan (SHMP or Plan) tells the story of how California has successfully organized to implement hazard mitigation programs to strengthen the state’s resilience in the face of future disasters.¹ The Plan describes past and current hazard mitigation activities and outlines future disaster loss reduction goals, strategies, and actions. It provides guidance for hazard mitigation activities, highlighting partnerships among local, state, and federal organizations as well as the private sector.

An overall purpose of the 2007 Plan is to facilitate mitigation planning and actions by state agencies, local governments, private businesses, and citizens. Plan goals are to:

- Significantly reduce life loss and injuries;
- Minimize damage to structures and property from disasters, as well as disruption of essential

¹ The Plan can be retrieved from http://hazardmitigation.oes.ca.gov/plan/state_multi-hazard_mitigation_plan_shmp.
Hazard mitigation involves making physical changes to communities to permanently reduce risk of disaster losses, whereas, emergency preparedness concentrates on improving readiness to respond to a disaster, such as assembling emergency equipment, food, shelter, and medicine. Common hazard mitigation examples include:

- Strengthening seismically vulnerable buildings against earthquakes;
- Elevating homes above flood levels;
- Clearing flammable vegetation from around structures to reduce wildfire risk;
- Avoiding development in hazard prone areas.

One successful example of hazard mitigation documented by CRP researchers is a flood barrier wall erected around two mobile home parks in Yountville after floods had twice damaged the parks and forced evacuations of many elderly residents in the mid-1990s. On December 31, 2005, floodwaters from the nearby Napa River reached a maximum height of four feet from the top of the barrier wall, but no floodwater entered the mobile home parks. The flood wall project cost approximately $4.2 million with $3.2 million funded from FEMA hazard mitigation funds. The Cal Poly team estimated a cost savings of approximately $1.6 million for this single event, a savings which will be multiplied many times over by future floods in the area.

A generally preferred mitigation approach is to mitigate hazard risk before disasters happen through preventive community design strategies, which keep people and development out of harm’s way. It is much easier, cheaper for taxpayers, and less disruptive to normal human activity to prevent disaster damage or destruction through building more wisely in relation to natural hazards.

The 2007 Plan provides a foundation for a variety of public and private sector stakeholders to identify key issues, challenges, and opportunities for making California more resilient and robust in the years to come. During the next three years, OES will be monitoring, evaluating, and updating this Plan. The State will work with a wide variety of public and private sector groups to focus on the implementation of key strategic actions identified in the 2007 Plan.
Cal Poly is now in preliminary discussions with OES regarding a possible contract to implement portions of the 2007 Plan and prepare the 2010 Plan. Key items of work under discussion include continuation of local hazard mitigation plan review and implementation of the State Mitigation Assessment Resource Team (SMART) loss avoidance tracking system.

- In the preparation of the 2007 Plan, a team of four CRP graduate students supervised by Mike Boswell assessed 436 FEMA-approved Local Hazard Mitigation Plans, leading to recommendations for the 2007 Plan on how to strengthen local planning. This work is proposed to be continued to help build local government mitigation planning capacity throughout California.

- The SMART loss avoidance tracking system was successfully tested in the 2007 Plan with the Yountville mitigation project. Cal Poly is proposing to help OES develop and implement the SMART system over the next three years. The system would field teams of faculty specialists from CSU system campuses after disasters to evaluate previously completed mitigation projects and determine the actual disaster losses avoided in relation to the initial costs of federal investment in projects. Cal Poly would help train and certify participating specialists under an MOU between OES and the CSU system.

In recent years, Cal Poly has built up substantial expertise in hazard mitigation theory and practice. An International Symposium on Urban Disaster Risk Reduction and Regeneration, sponsored by the College of Architecture and Environmental Design in November of 2005, has led to significant interdisciplinary curriculum advancements.²

New courses include “Disaster-Resistant Sustainable Communities,” a lower-division University-wide offering currently qualifying for science credit, and “Community Safety Planning and Design,” an upper-division and graduate elective geared to students intent on design and natural resource management careers.

According to CRP Department head, Bill Siembieda, “Efforts to expand hazard mitigation knowledge across disciplinary boundaries has produced a foundation of know-how which adds real meaning to Cal Poly’s motto of ‘learn by doing.’”


Note: The Cal Poly 2007 Plan project team included project director Ken Topping, and co-directors William J. Siembieda and Michael R. Boswell. Also participating were faculty advisors Professors Rakesh Goel and Robb Moss of the College of Civil and Environmental Engineering, Chris Dicus of the Natural Resources Management Department, and James Sena of the Orfalea College of Business, as well as Boykin Witherspoon, GIS director for Cal Poly Pomona. CRP graduate assistants participating in the research were Geof Chiapella, James David, Matt Maxwell, and Lily Schinsing.
In the summer of 2007, a third-year design class was challenged by a real project and real clients: to plan and design a residential resort in the coastal Mexican pueblo of Lo de Marco, in the beautiful Bahia de Banderas, on the cost of Nayarit just north of Puerto Vallarta. Acting as if they were consultants, the students responded extremely well to the challenge and did a great job of creating unique and feasible ideas.

In the summer 2007, the CRP department offered a third-year urban design studio (CRP 341: Community Design Lab), which turned out to be an excellent exercise for the students involved, and also a lot of fun. As a professional, I had recently been involved in some consulting with a local San Luis Obispo firm that was submitting a development proposal for a small residential resort and hotel in Bahia de Banderas, state of Nayarit, Mexico. During the previous spring, I had visited the area with the firm’s representatives, and we had made a brief development proposal and concept diagram. While we were waiting for a response from the Nayarit state government, I got the firm interested in having my studio take on this project during the summer. The class would take the brief and diagram as a start, and develop design alternatives, helping the firm to “think outside the box,” and presenting fresh ideas. It was a good fit with Cal Poly’s “learn-by-doing” philosophy and the CRP Department’s “hands-on” approach, with a real client and a real project. It also presented the students with a totally new task which occurs often in real-life situations: to get engaged in a project within a context you do not know much about and you cannot visit in person.

The project site is located in Bahia de Banderas, north of Puerto Vallarta, one of Mexico’s most famous coastal resorts on the Pacific coast. Also close is Nuevo Vallarta, an expansion of Puerto Vallarta to the north, where new expensive resorts and multimillion-dollar residential developments attract rich vacationers and retirees. Bahia de Banderas is in the state of Nayarit’s coastal region, which is the object of intense governmental master planning in order to conciliate tourism, development and the preservation of natural resources. The open bay, a beach of white sands, a mountain range, and a river estuary limit the site. Just across this estuary is the pueblo of Lo de Marco, a small village originally settled by a fishing community. Although the beach, the spectacular landscape, and the pueblo were attracting an increasing number of tourists, Lo de Marco’s historic and vernacular architecture and slow pace of life were perfectly preserved.

Besides having to respond to a site and context they were not familiar with, the students faced other challenges. The project site was extended to the coastal highway just south of the pueblo, totaling almost 250 acres (the original client’s site was approximately 90 acres). Students had to expand the original program, incorporate other elements of their choice in the resort planning, and decide for the phasing of the development. The river estuary and its riparian vegetation were a preservation area, and
had to be integrated to the project, and the existing topography and landscape had to be respected as much as possible. The project had to be integrated to the pueblo not only morphologically but also socially, culturally, and economically. It was within the interest of all stakeholders (clients, Mexican government, and local community) that the resort is respectful of the local social, cultural, and environmental contexts, and that it provides the area with a positive sustainable development with positive reflections for all. Students adopted the clients’ name and vision for the resort: Serenidad de Lo de Marco: “an international-level quality destination resort that will respond to the site’s and the region’s development potential, as well as to the coastal tourist-oriented efforts of the Estado de Nayarit. Its unique planning and design approach will be responsive to the local eco-system, to the beauty of the natural landscape, and to the economic, social, and cultural needs of the community of Lo de Marcos.”

Thus, in this studio, the students faced a “real situation” and encountered the same problems, constraints, limitations, and frustrations as in dealing with a real project: limited time and information. They were “hired” as “consultants” to develop a concept plan in a context they had to develop an understanding of on all possible levels: cultural, political, environmental, social, regulatory, market, etc. Programming and design development became two strongly complementary phases in their work. Much like international consultants, they dealt with a big challenge: they could not visit the site and had limited time and access to information. In the end, the class was very successful and the students were able to come up with extremely interesting and feasible plans, making the clients happy with their performance and helping them to think “outside the box.” The class had 19 students divided into 6 design teams. The following images and descriptions are excerpts from two final reports (some reports had up to 60 pages 11 X 17” format!) from the projects that received the highest rankings from the clients. The clients were happy with the results because they were provided with several seriously inspiring design approaches and ideas. Presently, they are waiting for a final response from the Nayarit state government to their development proposal, and then, hopefully, they will be able to consider developing some of the class’ ideas.

Project 1: Ryan Brough, Nadege Dubuisson, Cal Garcia, and Chris Gomez Ortigoza

The concept for the area given to us by the architects called for an original design leading to our vision statement for Serenidad en Lo De Marco. Our’s should be a unique resort, offering a cultural experience integrated to the town while providing the modern amenities of an international high-quality resort destination that coexists with the natural elements. Creating a “unique” resort is a difficult task, and there are numerous resorts scattered along the Pacific Coast of Mexico, all attempting to be unique. Many rely on golf courses as their main draw, and it became clear to us that a resort of our size could not properly accommodate a professional golf course; moreover, such a feature would also have high environmental impacts. We decided on a high-quality equestrian center and multiple recreational activities linked to the beautiful natural environment.

Our design for Serenidad en Lo de Marco integrates key elements of open space: recreation, residential, and agricultural use, bringing together two different worlds of the new and the old. Adapted to the natural terrain, site planning incorporates a clearly defined structure and nodes strategically placed throughout the project to serve different purposes while interacting with one another. The circulation pattern allows for an easy mobility between the three different development phases; connectivity provides for the site to work as a whole. The three development phases are integrated but can stand alone, and will culminate in a unique international residential resort.
Phase 1A will comprise the northwestern part of the site, in the original smaller project site. A clear gateway will mark the entrance from the village of Lo de Marcos. As more land is acquired and other phases developed, the main circulation patterns will originate from a new off-ramp directly connected to Mex-200, the coastal highway. This first phase will include a 250-room luxury hotel with six adjacent bungalows that are accessible via golf carts. Pedestrian space will also exist throughout the site with direct beach access from the hotel area. In order to limit auto circulation, a 60,000-sq ft two-level parking structure with valet parking will be available. Together with other amenities to guests and visitors, a tennis club will serve as the main recreation in Phase 1A. Also included is a 12,500-sq ft education center and boardwalk along the estuary and lagoon, providing opportunities to visitors and Lo de Marco residents to interact and learn from the surrounding environment. Open space is preserved and enhanced throughout this phase in order to retain the natural character and view sheds that make this site so unique.

Phase 1B comprises most of the northern part of the project site. Access will follow directly from the road established during Phase 1A, leading to a meandering road up the hill to the 28 townhomes, 16 luxury estates, and ending at a 3,000-sq ft spa and a 7,000-sq ft restaurant with ocean views. The luxury estates are sited to explore the amazing views and respond to the natural setting, while still preserving a sense of privacy. A system of open spaces and bio-swales will create natural barriers...
between the estates and the hillside townhouses which will still hold their own view sheds even if in a denser setting. At the pinnacle of the hill are a luxury spa and a top quality restaurant with breath taking views, which will serve cuisine using locally-grown produce. Next to the spa, 5 honeymoon suites are designed in a way to truly offer a romantic natural feel and a greater sense of privacy. A large portion of this phase has been left to be open space/preserved land because of the natural topography.

Phase 2 occupied the central portion of our project site in a relatively flat area bordered by the river. It will be access from Phase 1A until Phase 3 is developed. This phase comprises elements integrated in a sustainable relationship. It will focus on a state-of-the art equestrian center with 24 horse stalls, 36 equestrian estates, and a small organic agricultural field that will provide produce for the resort. This flat area provides for optimal sun exposure and the opportunity for energy conservation through solar panels. Also in this phase are soccer facilities that will integrate the life of the resort with the neighboring pueblo. Phase 3 encompasses the southernmost part of the project site, bordered at the North by a river and South by the highway Mex-200. It includes a main entrance into the resort that would alleviate traffic through Lo de Marcos, a plaza with a small church and a retail center around it, together with affordable housing for workers in the resort and other patrons. In this location, the water and sewage treatment plant would be buffered from views by abundant landscaping.

Project 2: Nancy Cole, Eric Anaya, and Lorie Ingam

When developing the Monteon [eco] Resort Development Plan, ecotourism is the theoretical framework underlying the design decisions, ‘focusing on the local culture, wilderness adventures, volunteering, and learning new ways to live on the planet.’ We asked ourselves how to develop on the site in such a way that has the least amount of impact on the environment, optimizing local resources (including material, energy, and water resources), and maximizing the benefit for the Lo de Marcos population. The visionary process included the development of five major design criteria: (a) land use, (b) connectivity, (c) green building, (d) architectural style, and (e) landscape conservation.

Our eco-friendly design concepts incorporate the utilization of local materials and skills to reflect the native architectural typologies, designing buildings that respond to the natural climate and view-sheds of the site, and utilizing local flora for landscaping. Phase One centers around developing visitors’ sense of nature and place. Outdoor activities include hikes, kayaking, other sports and guided nature tours of the region and the nearby village of Lo de Marcos, and encouraging patronage of the farmers’ market. The organic farm beyond the south edge of Phase One provides local, organic agriculture for the resort, while providing jobs to the inhabitants of Lo de Marco. The agricultural site is selected based on its stream area, and the low slope. Indoor activities include a workshop space,
ballroom, a library, a full conservatory, and a multi-purpose room in which guests can host large parties. Approximately 50 percent of the first phase of the site will be preserved.

Since the beginning of the quarter, we decided that the resort would be an eco-resort, and, after receiving great feedback from the clients and guest speakers, we expanded on our idea further. To entice people to come to our facility, our project would be a high-tech ecological resort, which means that in our design we will be using the latest and greatest ecological technology available while providing appealing eco-activities to our guests. We incorporate eco-design and all solutions consider resources that are natural, so natural that they can be recycled to the earth without causing damage. Through this cycle we hope that it will repeat the natural regularity of living things. In our project we would also like to include methods such as sustainability and green building. The hillside villas, for instance, are long and thin to dissipate the heat, with internal courtyards that set up patterns of cross-ventilation and increase the ratio of surface area to volume. Deep overhanging eaves are provided for essential weather protection for exterior surfaces. Villas will be designed to respond to the natural micro- and macroclimate of the area to maximize energy efficiency, and will use photovoltaic systems. The design will involve as little disruption as possible and composting waste systems will be installed.

Our central “plaza,” which, in Mexican culture, is where most social activities are located, will be an educational center. Here locals and tourists can learn about the numerous features of the resort. They can learn about all the eco technology used on site such as energy efficiency, material choice and use, site impact, water use and efficiency, longevity and flexibility. Also, Mexico has such a rich, artistic heritage of song, dance, architecture, art, and artifacts, which are colorful and unique. These are all elements that can be used to support the creation of a sense of a place. Tourists may learn about the town of Lo de Marcos, the culture of the town, or of Mexico in general. Since our resort is meant to be one of the top eco tourist resorts, we would offer workshops focusing

Figures 7 & 8
Team 2: Concept diagram of complete project, and 3D Model of the first phase.
on sustainable practices: green building, energy efficiency, straw bale building, etc. Our target demographics are mainly professionals that desire to learn more about eco design in a beautiful tropical setting, so we feel it would be appropriate to include workshops for those professionals. For non-professionals, they would learn through the educational center as well as the educational/environmental tours or they may just relax and enjoy the natural environment.

Figures 8 & 9
Team 2: Computer simulations of the design concepts inserted into photos of the area. On the left, the lagoon and the Eco-Center. On the right, the beach views from the villas.
Since recently joining the CRP department, Adrienne Greve has been using her background in the sciences to strengthen the relationship between the fields of planning and urban ecology with a particular emphasis on water systems. In this article, together with seniors Corbin Johnson and Kevin Waldron, she writes about her new elective and an important class project, which is monitoring the impacts of the new campus housing on the campus creek system.

In an urban area or human-dominated setting, ecological systems such as creeks become places where human and biophysical processes not only coexist, but directly interact and influence each other. Urban Ecology is a fairly new field of study that integrates the social sciences, natural sciences, and humanities (Alberti et al. 2003). Urban Ecology provides a conceptual framework to understand the interaction of human systems (e.g. social, built, economic, etc.) and biophysical processes. If a system is understood to be comprised of both human and biophysical processes, any study of this system must assess both. During the spring quarter of 2007, a group of CRP students devised a monitoring system to do just that as part of a new course, Planning and Urban Ecology. The focus of the study was Brizzolara Creek located on the Cal Poly campus. In an effort to understand both the ecological and social long-term impacts of the new LEED-certified student housing (Poly Canyon Village, PVC) being built along the creek, students designed a monitoring program and collected ecological and social data. The data collection included stream channel morphology measurement and social surveys.

Monitoring Program Design

The goal of the monitoring program was to track long-term changes in stream channel morphology as it responds to land use change in its contributing watershed and to understand the evolving role of Brizzolara Creek on the Cal Poly campus as 2,700 students move in along its banks. Documenting these changes will provide data needed to inform management strategies to maintain key functions of the creek including ecological, social, cultural, and economic. We targeted seven points on the creek most likely to be affected by land use changes, particularly those associated with PCV (Fig.1). The Cal Poly community, defined as students, faculty, staff, and community members, was targeted to assess the social role of Brizzolara Creek through surveys. These data coupled with subsequent data collection in the future will allow better understanding of the creek’s response to land use changes and its role on campus.

Nine research questions were identified. Research questions were divided into three groups: stream channel morphology, social perception and knowledge, and interaction.

Stream channel morphology:

1. Does channel morphology and/or streambed substrate size distribution respond to management decisions (including restoration and mitigation) and changes in land cover (current and future construction)? Particularly:
   - Poly Canyon Village changes in land cover and runoff routing
   - Bridge construction and replacement

Social survey research questions:

2. What is the awareness and perception of Brizzolara Creek in the Cal Poly community?
3. How are the areas along Brizzolara Creek used? Who is using these areas?

4. What are the most valued and least valued aspects of Brizzolara Creek and associated areas?

5. What are the ‘cues’ informing perceptions of health?

6. What types of change does the Cal Poly community desire?

7. Will awareness and perceptions of Brizzolara Creek change with the new construction near the creek (for example, Poly Canyon Village and Engineering buildings)?

Interaction questions:

8. Are shifts in social perception and awareness related to shifts in channel condition?

9. Do management decisions influence both social awareness and ecological condition?

Data Collection Methods

A total of seven sites were selected on Brizzolara Creek for stream channel measurement and characterization. The purpose of these sites was to document conditions and trends in channel morphology, bed substrate composition, and other physical parameters. Methods were adapted from the US Geological Survey and California Department of Fish and Game (Fitzpatrick et al 1998, Flosi et al 1998).

The social survey was used to satisfy our goals of understanding the role or Brizzolara Creek in the Cal Poly community. The survey was broken into three parts: demographics, usership, and perception and knowledge. The following is a list of the open ended questions:

- Do you view Brizzolara Creek as healthy? On what do you base your assessment?
- What do you see as potential threats to the health of the creek?
- What do you value about the creek?
- What do you value least about the creek?
- If you could add/change anything about Brizzolara Creek, what would it be?
- How do you think Brizzolara Creek contributes to campus life?
- Is there anything else you would like to share?
Channel Morphology Results

Brizzolara Creek progresses from an environment with less development in the adjacent riparian areas to a more developed, urban environment, where the shape of the channel changes drastically. At the uppermost site (010, Fig.5), the channel is wide and relatively shallow compared to farther downstream cross-sections. The width and shallow depth illustrate a channel that has room to migrate and utilize its associated flood plain during high flows. As one moves downstream, the channel is noticeably more incised and narrow as it is confined to a narrow path dictated by surrounding development.

Brizzolara Creek serves as spawning habitat for the threatened steelhead trout in high flow years. Substrate size distributions were evaluated based on the pebble-sized classes that provide spawning habitat. The majority of the pebble count data revealed unsuitable habitat for spawning steelhead trout, however, pebble counts immediately adjacent to PCV appeared to be most suitable, with the majority of the pebble count data falling within the specified range (Fig. 6). If change were to occur in the stream bed substrate distribution due to the new housing it will likely be apparent in future pebble counts and cross sections in these areas. A potential substrate change in these areas, specifically a finer sediment load deposition, commonly associated with runoff from developed environments, could result in the loss or change of viable steelhead habitat.

Social Survey Results

231 social surveys were collected and, based on a comparison to campus demographics, were viewed as representative of the campus community. Save for the initial demographic questions, the survey questions were open-ended. Prior to analysis, all responses were categorized into themes.
The social surveys sought to identify not only how the areas associated with the creek were used, but how the community viewed the creek. Most surprising was the result that nearly 25% of survey respondents were unaware that there was a creek on campus. The percentage grew to nearly 40% if confined to respondents who had been on campus for one year or less, indicating a need to build awareness. From the questions addressing perceptions of the creek, one of the recurring was a strong sense of a need for change, but little agreement on what the changes needed. Only 40% of respondents viewed the creek as healthy and nearly 80% expressed a desire for change. However, when asked what should be changed, no response was mentioned by more than 25% of respondents, and this change was a desire for increased water levels. The association between the presence of water and creek health may indicate a lack of awareness about creek function in arid and semi-arid climates, where creeks are expected to go dry during part of the year. Many students on the Cal Poly campus come from moist climates. When asked what was most valued about the creek, respondents overwhelmingly valued the Brizzolara Creek Area as an aesthetic resource.

Future Management Recommendations

While the channel morphology data will require several years of study to clearly indicate trends, the social survey results can be acted on immediately to affect positive change. The surveys identified a general lack of campus awareness concerning Brizzolara Creek. Because of this, our recommendation for future management of the creek is to focus on education and promoting usershhip. We believe that environmental stewardship can form from general awareness on campus. To help achieve this awareness, we propose the implementation of informational placards, creek art, and increased physical interaction with the creek on campus through clubs, the Week of Welcome (WOW), and campus tours.

- Placards promoting environmental awareness: As reflected in our survey results, the longer a student has been on campus directly correlates with their awareness of Brizzolara Creek’s existence. In order to shorten the time it takes to become aware, we propose several, highly visible awareness placards be placed in areas with high volumes of foot traffic. This is particularly important in coming years as PCV fills with thousands of new students, increasing the access and visibility of the creek.

- Creek Art: Creek art can create an ambiance--drawing people to recreate or relax--along the creek. It should not be limited to sculptures, tiles, or benches; rather, it should be incorporated into the very structure of bridges spanning the creek. The current Via Carta Bridge and downstream pedestrian crossing bridge fail to integrate visual appeal into their structural designs.

- University Programs: An integral part of creating a successful management program for Brizzolara Creek includes involving a wide array of people across campus. We would like to see Week of Welcome (WOW), Associated Students Incorporated (ASI), and environmental clubs take an active interest in programs for the creek. Each of these organizations could potentially educate students in urban ecology and create more environmental awareness across the campus. According to our surveys, approximately 25% of the campus is unaware of the Brizzolara Creek system. One potential awareness-raising activity would be a creek clean-up day that would satisfy our main goal of establishing campus-wide ecological citizenship. This would entail a once-a-year clean up, promoting outside community and student volunteers to help maintain Brizzolara.

Students Taking the Work One Step Further

Utilizing their experiences in the course Planning and Urban Ecology, five City and Regional Planning undergraduates have been compelled to use their senior projects as a means to enact positive change for both the physical and social health of Brizzolara Creek. Teaming theoretical knowledge with science, these projects dissolve the barrier between theory and practice by not merely identifying a problem, but providing sound solutions and implementing them.
Fifth-year BSCRP student, Erin Belfils seeks to bring change along the banks of Brizzolara Creek within a short timeframe. Erin is concentrating her efforts on the “H2” staff parking lot that abuts Brizzolara at the intersection of Highland Drive and Via Carta Road. Stormwater runoff and the associated pollution generated from this parking lot are piped directly into the creek. Erin’s project will consist of a redesign of this lot using many Low Impact Development (LID) principles to improve water quality and the utility of the site for both parking and pedestrians. Along with proposing design ideas and principles to help clean up and reduce the stormwater impact from the lot, Erin has included the redevelopment of part of this lot into a park into her design. During the preliminary stages of her project, Erin was alerted that the parking lot she chose to redevelop is slated to be removed for riparian habitat restoration about ten years down the road. Erin is continuing on with the project with the support of campus decision makers; after all, ten years of runoff control and reduced pollution otherwise dumped into Brizzolara Creek is well worth the time.

Similar to Erin’s project, but on a much larger scale, fourth-year BSCRP student, Melissa Cole is working to redesign the “H12” student and staff parking lot. Located along a substantial portion of the north bank of Brizzolara Creek, this parking lot slopes downhill towards the creek and surface runoff is routed directly into the creek via culverts. Running underneath her project site are two culverts routing additional storm water to Brizzolara from parking lots and infrastructure further uphill. Similar to Erin, Melissa is also seeking to use LID practices to reduce the amount of runoff entering the creek and filter out pollutants. A fiscal and feasibility analysis will also be integrated into her project. The H12 parking lot is full of challenges for Melissa to conquer, including issues of slope, layout and design, and the need to keep the same number of available parking spaces.

While the two parking lot LID design proposals are geared more towards immediate implementation and construction goals, fourth-year BSCRP students, Corbin Johnson and Doug McIntyre’s project consists of both short-term and long-term plans concerning Brizzolara Creek. East Creek Road, an eroding dirt service road runs along the north bank of Brizzolara from Via Carta Road on the east to the intersection of Highland Drive and California Boulevard on the west. Corbin and Doug aim to produce a plan to revitalize East Creek Road into a multiuse pathway to serve as an educational and travel corridor complete with benches, ponder points, educational placards, and increased riparian habitat plantings. The intersection of Highland Drive, California Boulevard, and East Creek Road is a major focal point to one of the most used entrances to Cal Poly, so considerable effort will be spent to produce a plan that will improve the aesthetics in that particular area which will show off Cal Poly’s pride and care it shows for its campus and community. This portion of their project will be designed to be implemented in the near future.

Parallel, but on the opposite bank of East Creek Road, are two small parking lots (one of which is Erin Belfil’s study area) and a pathway within the riparian vegetation that connects the two. Seeing the existing pathway as a valuable asset to the community, and the pending removal of the two parking lots, Corbin and Doug will produce long range plans that address what may be suitably located in these areas in ten or so years when the space is available for revitalization. Possibilities include a park-like setting with social interaction, reflection, and outdoor classroom learning opportunities. Corbin and Doug plan to use natural and sustainable materials that are durable and fit in with the environment, and landscape with native plants that require low levels of maintenance, upkeep, and watering.

As Erin, Melissa, Doug, and Corbin focused primarily on the physical attributes of Brizzolara Creek, another project specifically hones in on the social components of Brizzolara Creek, citing awareness as the major opportunity for growth. This project aims to utilize Brizzolara Creek to expand the learning experience beyond the confines of the classroom. The project goals include building a stronger community, promoting awareness, and facilitating participation. These are all seen as components of broad-based environmental stewardship. Creating an atmosphere where stewardship can flourish requires direction, goals, and foresight. To fill this need, Kevin Waldron, a fifth-year BSCRP, is developing the Brizzolara Creek Outreach Program. First, Kevin identified goals bridging multiple disciplines. This resulted in the creation of the Brizzolara Creek Coalition, comprised of student groups, staff, and community leaders. The coalition is the critical element
in sustaining the broader outreach program. Moreover, this coalition is expected to grow as PCV exposes the new residents to the creek as never before. PCV presents a great opportunity, an opportunity to educate students on their local environments, giving them a greater understanding of environments worldwide. In an effort to build awareness beyond those living in PCV, Kevin aims to accomplish the creation of the first “Cal Poly Creek Day” scheduled early May 2008. Creek Day celebrates the value of Brizzolara Creek in our growing campus life through an array of activities ranging from restoration projects to educational booths. These activities aim to empower people to take ownership of an ecosystem they may have never understood how they and their peers affect, an ecosystem that relies heavily on the protection of us and society. The protection of Brizzolara Creek is, in fact, in our hands. Creek Day recognizes this and pronounces it to the Cal Poly and San Luis Obispo communities through restoration and maintenance activities.

Through restoration and maintenance activities, Creek Day acts as a forum for public participation, enticing active participation across multiple disciplines and interests to help clean the creek. Trash collection efforts, tree plantings, trail maintenance, vegetation restoration, creek bed enhancement and other necessities for Brizzolara Creek are implemented in order to promote the healthy existence of biophysical processes in an urban dominated setting.

Ultimately, the outreach program teamed with parking and creek pathway designs act as an agent for change to provide an ever-growing community an opportunity to build a healthier creek and a more informed public. Thanks to five Cal Poly students, this agent for change is reality and is empowering people to realize a better quality of life and environment.
Since joining the CRP Department in 2005, assistant professor, Umut Toker has been boosting the department’s capabilities in computer applications for planning, particularly 3-D digital modeling. He recently developed a 3-D model of downtown San Luis Obispo—which will eventually include the whole town—and is working on models for Arroyo Grande and Atascadero. These models, funded by the City of San Luis Obispo and SLOCOG, are powerful tools for development control, and will facilitate community participation.

In Fall 2006, the City and Regional Planning Department started working with the City of San Luis Obispo to create a digital three-dimensional model of Downtown San Luis Obispo. In a nine-month time frame a computer-based three-dimensional model was developed. The project consisted of three-dimensionally modeling an eighteen-block area of downtown San Luis Obispo in detail, as well as the remaining portions of the city in basic form. The objective was to develop a decision support tool that enables city staff, commissions, and the public to be able to visualize developer or municipal submitted proposals. This is especially important today, since the city is considering revising its height limits for downtown—an issue that has opened substantial debate. The project was composed of three main tasks, although the tasks were carried out somewhat simultaneously as the project developed.

Task 1 entailed development of the context for the 18-block project core area. Using the city’s GIS data and aerial photographs, the terrain, streets, and the existing buildings were modeled. In this process, raster terrain data was converted to TIN files, which in turn were made readable by CAD software, in this case, AutoCAD and SketchUp. The street structure of the city was overlaid on the 3D digital terrain. Finally, using the City of San Luis Obispo’s building footprint data and its elevation and height attributes, all buildings in the database were extruded to the provided height and elevated to the provided elevation (Figure 1).

The most complex task, Task 2 was the construction of a detailed 3-D digital model of the 18-block project core area. For this, high-resolution, up-to-date aerial photographs and roofline and curbline data of the project area were provided by the City of San Luis Obispo. Roofline and curbline data were originally in 3-D polyline format, which had to be processed to develop “closed” polylines, hence surfaces in SketchUp software. Once this process was complete, blocks, streets and buildings were created in basic, no-detail prismatic format. At this point, façade photographs of all buildings in the project area were taken. These photographs were mapped onto prismatic building models, which
made “carving” of façade details possible. At the end of this process, the 18-block project core area was modeled with all buildings and front façade details (Figure 2).

The final task, Task 3 was composed of building more details, additional elements into the project area, as well as the integration of the detailed 18-block project core and its context model. Using the high-resolution aerial photographs and façade photographs, trees, street furniture, parking meters, and further details of open spaces were built into the model. Finally, silhouettes of people were added to enhance the feeling of scale, and the two models (the detailed core model and the context model) were integrated (Figure 3).

The City of San Luis Obispo will start requiring project proposals to include a three-dimensional computer model, and will analyze proposals visually. The tool will not only provide accurate analysis, but also create significant potential for community input in the city’s development issues, such as building height, viewsheds, massing, thermal (sun angle), visual character, and morphology.

This process also inspired other communities on the central coast. In Fall 2007, the CRP department was contacted for another modeling project—this time by SLOCOG—for its Community 2050 process. While the San Luis Obispo project targeted developing a detailed model of the existing conditions, SLOCOG’s aim was to focus on the present and future of two urban corridors—Arroyo Grande’s Grand Avenue and Atascadero’s El Camino Real. Still under progress, this project will model these two urban corridors, depicting their existing state, and their potential future streetscapes in 2020, 2035, and 2050. All potential future streetscape projections and assumptions are completely provided by the Community Development Departments of these two cities, allowing the project supervisor to focus on 3-D modeling quality.

Use of this technology creates a new level of transparency in the decision making process, as shared file data and distributed images can be made available for multiple stakeholders. Both the City of San Luis Obispo and SLOCOG will be using these models to better inform stakeholders of how urban design decisions may affect their public space. Therefore, these and future similar projects will be of critical importance for communities that would like to make decisions through community involvement. The CRP Department wishes to further its efforts to develop cutting-edge methods of technology use and to support other communities with similar projects.
INTERNATIONAL EXCHANGES
Christina Batteate is a senior in the BSCRP program, Cal Poly San Luis Obispo. In 2007 she was the recipient of the Berrier Memorial and the McDougall Urban Design scholarships. She is professionally motivated by international development and by working with low-income communities. She has been a constant contributor to FOCUS.

In this paper, CRP senior, Christina Batteate writes about her participation in the international exchange program with the Federal University of Rio de Janeiro during the summer and fall quarters of 2007. Her experience included a class project for recycling old industrial buildings next to a squatter-settlement into new housing, and an internship with the United Nations Human Settlements Program in their regional office for Latin America.

The value of world travel and international student exchange goes so much farther than what one might expect. I’ve found that many people are intimidated by the prospect of world travel. Not knowing how to finance the trip or how to learn the language are common deterrents. What most don’t know is that all colleges offer some kind of financial aid, and higher amounts of aid are available to students studying abroad. Furthermore, a simple course or private tutor can have anyone speaking a new language within a couple of months. With a little planning and an adventurous spirit, world travel is possible. A quote I saw recently, which I think is applies well here, went something like this, “The things that scare us the most are often the most worth doing.” I’d like to take the opportunity to share how my study abroad experience in Rio de Janeiro, Brazil proved to be the most valuable investment of my life. The dollar to experience exchange heavily favors the student.

SCHOOL

Cal Poly’s City and Regional Planning (CRP) Department does a direct exchange with the Federal University of Rio de Janeiro (UFRJ) meaning that most classes taken qualify towards the CRP major. To supplement my Community Design Lab at Cal Poly, I took Projeto Urbano Alternativa (Alternative Urban Design Project) in Brazil. While the course requirements were roughly the same, the context within which our planning and design were conducted was so radically different from anything I’d ever encountered in the United States. Adaptability became my number one tool. Although it took a few weeks of classes before I felt totally comfortable with the language, I was, thankfully, not the only exchange student. There were students from Germany, France, Italy, Spain and Portugal all doing exchange through the UFRJ College of Architecture and Urbanism. Having such a diverse group of students also gave me insight into how planning is conducted in different parts of the world. Our professor, a Chilean by birth, had been working in Brazilian favelas (or slums) for about the last fifteen years and had a wealth of practical experience to offer us.

Our planning community for the semester was Morro de Timbau, a neighborhood in one of Rio de Janeiro’s larger favelas, Maré. Because favelas are informal, or constructed by the inhabitants, there is no municipal information about them. There are no street maps. Without census data, population counts within the neighborhood of Morro de Timbau range from 4,000 to 6,000 inhabitants. Morro de Timbau is just one neighborhood of seventeen that make up the whole favela of Maré. Maré has an estimated 113,000 to 132,000 inhabitants.
Since the community was basically built one block at a time with no help from the City, there are no maps of the intricate network of streets and alleys that make up the favela. Acute lack of physical and demographic community information made a site analysis quite different than what I was accustomed to in the U.S. In Figure 2 the highlighted area shows the urban fabric of the favela in contrast to a formalized city structure. The favela exhibits high density living with no logical transportation infrastructure and inexistence of formal public space. The formal neighborhood at the bottom right of the photo exhibits the qualities of a planned neighborhood with a grid street network and an evenly distributed building density. It was hard for me and my foreign classmates to imagine so many people, living in such high density, with virtually no public space, vegetation or city services.

As our groups’ site analysis progressed, we encountered even more obstacles to planning. The neighborhood of Morro de Timbau was the oldest in the favela of Maré. In its roughly forty years of existence, it had maxed out its spatial limitations. Inhabitants were living in five-story self-built structures, hanging precariously over nearly vertical slopes, and the neighborhood was rapidly sprawling into nearby abandoned industrial sites. Houses were going up at an alarming rate of about one per week, often filling an entire industrial site in a matter of months.

The need for intervention was apparent, but the means of intervening were not as straightforward. Within the communities of Rio’s favelas is an endemic distrust of government. This distrust, combined with low levels of literacy and education, make for a very complicated planning scenario. The most useful connection we had in the community was the president of the favelas’ version of a home owners association. The distinction being that, in favelas, nobody owns the land or their homes; they are squatters. Often, intervention is viewed as a threat that will result in citizen relocation and demolition of their homes and businesses. Our intentions were not such, but, unfortunately, these planning realities kept our class at a steady arms length away from real intervention.

Figure 2
The highlighted area shows the organic fabric of Favela da Mare and Morro do Timbau, in contrast with the surrounding formal city. On the left, the main highway access to the city, and on the right the island where the university campus is located. The more regular grid on the right side of the picture are housing projects built in the late 1980s to relocate families from squatter houses which had been built on stilts along the bayfront.
Though many aspects of the community were in poor physical condition, our team knew that to draw up an elaborate plan would be fruitless without the collaboration and support of the community. We also knew that bringing the community along to understand the process alone would take time. So, our team developed the following as our project goal: “Sustainability of the community through the realization of citizen rights, social inclusion, integration with the formal city, autonomy and self-management.” Our main instruments of achieving this goal were to create micro-credit schemes for residents of Morro de Timbau, to hold workshops with city planners and architects to open up the design process, and to create a participatory budget, like the one pioneered by the city of Porto Alegre, Brazil.

We envisioned creating a hub in the community where the activities listed above would take place. A family or group of families could get together and ask for a micro-loan to open a new business or build a group of houses. Workshops with planners and architects would help ensure the new structures were built to address the safety and health concerns associated with self-built structures. Eventually, with the trust built and education gained from the workshops, community members would be able to make meaningful dedications for the participatory budget. A participatory budget could be thought of as a piece of a pie, whereby the community obtains a certain portion of the city’s budget. Instead of conventional budgeting in which the city decides where to invest money, the community members vote annually on where they believe the funds would be best put to use. Micro-lending and participatory budgeting have been very successful in slum-upgrading and community development projects across the world.

The images in Figures 6 and 7 represent possible examples of how community members might use their loans to develop an industrial site. The first image is an example of a housing scheme that three families might consider building. The second is an example of a live/work unit. Buildings should happen as much as the participatory budget could leverage. The area we’d like to see become parks and gardens is currently abandoned space along a very polluted canal.

Despite the greater challenges in planning in a favela rather than in a community in the U. S., I still found myself using many of the same techniques I had learned at Cal Poly. The basic skill set of analysis, design and implementation can be adapted to fit in any community, in any scenario, anywhere in the world. In multiple planning projects, the final products will never be the same, but the processes will be strikingly similar.

**WORK**

Three days a week, I spent at my internship with United Nations Human Settlements Program-Regional Office for Latin America and the Caribbean (UN-HABITAT/ROLAC). I would have been wholly unprepared for the tasks asked of me had I not “learned by doing” how to be professional and work as a team at Cal Poly. Everything I was assigned to do was new to me. I had to be very succinct in forming questions to my peers and polite and respectful to my colleagues to be able to draw as much expertise from them as possible. By the end
of my time there, I found other colleagues asking me for help on assignments. That was definitely a crowning moment.

It was quite amazing to see how many projects across Central and South America were managed from just one office. Our office was in Rio de Janeiro, yet a colleague of mine was compiling urban indicators from across Latin America. I was tasked with organizing a conference in Peru and inviting the major players in the Latin American housing economy. On any given day, one or two of our bosses would be out of the country.

This is not to say that we didn’t conduct local projects, though. We had a number of ongoing projects with local municipalities in Brazil. Two interns were using the UN-HABITAT platform to conduct local projects on corporate social responsibility and community capacity building. The variety of work conducted under the UN-HABITAT umbrella was truly incredible.

For the last two months of my internship, I worked exclusively on a housing finance project in Central America. Our job, along with our partners, a U.S. based non-profit and Merrill Lynch, was to design and implement a project to finance and build two-million dollars worth of housing in Central America. Once again, I felt as if I’d been thrown into the boiling pot. I had never done anything like this in my life. The professionalism I learned at Cal Poly taught me to buckle down and ride it out without a complaint. After a lot of learning, working and formatting feedback, I was able to produce a project document that has now landed me a job with our partner, the U.S. based non-profit. At the expense of sounding over-gratuitous, I can’t emphasize enough the value of the “learn by doing” philosophy at

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**Figure 5**
The map shows the location of the abandoned industrial structures utilized in our project (in grey).

**Figures 6 & 7**
The map shows the location of the abandoned industrial structures utilized in our project (in grey). The renderings show possible ways that community members might use their loads to adapt the buildings into residential (6) and live-work (7) units.
Cal Poly. It prepared me so much for the challenges of real life by building character strong enough to make it through any challenge I will encounter in the work world.

**PLAY**

All my weekdays were filled with university or my internship, but I still had plenty of free-time on weekends and holidays. If I didn’t feel like traveling out of town, I could always hit up the Rio beaches, tropical trails, local museums, or samba clubs. My most memorable travelling experiences were weekend trips out of state to Ouro Preto and Trancoso. Ouro Preto is a historic colonial town, set upon steeper hills than San Francisco, with a calm pace to life. Trancoso was the perfect beach getaway, replete with freshly squeezed tropical fruit juices and some of the best seafood I’ve ever had. The most meaningful cultural experiences were definitely learning to dance the samba and hold down conversations in Portuguese. Each region of Brazil is so vastly different that I continued exploring and learning new things, even when I wasn’t technically in class. The things one learns, the work done, the places known, the people met, and the personal growth that occurs while studying abroad make it one of the most valuable investments I think anyone can make in life. So, leave your fears behind and cash in those dollars for an exchange experience that will boost career and confidence—and last a lifetime.

**Figure 8**

Interns at the door to the UN-HABITAT office in Rio de Janeiro. From left to right: Christina Batteteate, Marion Nicard des Rieux, Sailah Saaristo, and Hubert Morch. (photo H. Morch)

**Figures 9 & 10**
The author in the colonial town of Ouro Preto, and a view of one of the town’s many churches in its beautiful setting. (photos C. Batteate and V. del Rio, respectively)
In the fall quarter of 2007, Jennifer Venema went to Nairobi, Kenya, for a voluntary internship at the headquarters of the United Nations Human Settlements Program. She writes passionately about her fascinating experience in a totally new and sometimes conflictous environment, and sets an example for planning students.

Kenya is a land of complexities and contradictions. When I traveled there, it was the first time in my life when I have lived such complexities. As a city and regional planning major, I went there to intern as a volunteer at the United Nations. I am an idealist, and I wanted to believe that, through my work, I could offer knowledge and skills that would improve someone’s life somewhere—or at least that I could learn things through this internship which would allow me to make a contribution in the long term. Yet, my identity there was shaped by my being white: I was one of the elite, equipped with a college education and the ability to afford to come overseas.

I went despite my status as a typical in-debt American college student. I have been told that even the access to loans is a sign of wealth—it is a luxury most people in the world do not have; rather, their only desperate option for money comes through selling their children into prostitution or slavery. Being made so brutally aware of my place in the vast divides of society so suddenly—something I always knew but had never experienced—I have realized that I am not merely a sympathetic person working to do good, but that I am a sympathetic person who must learn how to utilize the gifts I have without incapacitating myself with confusion over my own obligations and entitlements.

Life in Kenya was very unreal and had a novel-like quality to it. It was the first time in my life that I have felt like a contradiction. One day, I spent an afternoon at a school in the slums of Mathare, holding hands with dirty children that were happy to simply swing arms with me. Most of these children were AIDS orphans. They grinned shyly at me, gently trying to push one another away for the honor of holding the white visitor’s hand, smiling their innocent smiles and pulling at my wrists, palms, and fingers with their grimy, un-washed little hands. As the group I was with left, we waved goodbye to the children as they scurried out after us, still grinning. We exited past mounds of filth, composed of trash and human and animal feces, which ragged goats and chickens picked through.

I finished this same day seated in a beautiful living room, the taint of the slum having been washed from me, seated in a plush chair, listening to music and light conversation while being served red wine and appetizers by a Kenyan servant. This was a dinner party at the house of a friend, another intern whose father is the ambassador of an Asian country to all of East Africa. I have been told that these extreme polarities are simply what life is like in a developing country. Yet, it was difficult to make sense of it, and disorienting to live in both extremes. I often simply felt bewildered.

Disparate Lives Meet in Nairobi

I found that as displaced as I was in Nairobi, I was often surprised at the simplicity to be enjoyed in familiar tasks taking place in an entirely different context. I realized that, to maintain my sanity, I would have to choose to focus on experiences that I could share with others and make sense of. For me, this may be the most appealing aspect of traveling: to fall into the everyday occurrences of an alien land, and for at least a moment to feel a part of them, understanding them—if one is daring enough—and, thus, enjoying them all the more.

Jennifer Venema is a senior in the BSCRP program, Cal Poly San Luis Obispo. In 2007 she was the recipient of the Ludvigsen and the Berrier Memorial scholarships, and the Hay Award for Environmental and Sustainable Design. She is interested in international development and she has been a constant contributor to FOCUS.

Note: Portions of this article appeared earlier in InterPlan, and are reproduced courtesy of the International Division of the American Planning Association.
One example was the weekly barbecues of my landlord, which he invited his tenants to. There were, at one time, up to eight of us, living in an old four-bedroom house. Whenever we went to his barbecues, we would find ourselves amused with the arguments of a group of aging friends, arguments that had been playing themselves out nearly every Saturday afternoon for over two decades. My landlord was Indian by ethnicity, but a Kenyan citizen with friends that were also of a surprising assortment. There were Pakistanis, British expatriates, a Chinese importer, an Indian businessmen and lawyers in their casual Saturday dress, a Kenyan-British magazine editor, a diabetes nurse from Minnesota, and then, of course, the odd interns. During my stay, the interns consisted of a sarcastic Londoner, a tall and athletic Dutch student of energy policy, a black Dutch journalist, a German planner, three Americans, one Indian-American, and their friends – which were often of some European nationality.

All together, this random assortment of people often made the weekly shared meal all the more enjoyable. I often found myself savoring flavors, listening to familiar American political conversation (which it seems impossible to escape, the world over), and partaking of this experience with diverse people from four different continents. Who would ever guess how many disparate lives can be brought together over Punjabi curry in an old bachelor’s home? And how many other similar occurrences take place everyday around the world, whenever people find something to share? In traveling it becomes easy, and at times, essential, to focus on commonalities between people. It often served for me as the starting point of fruitful friendships and rich experiences.

The primary commonality that defined my identity in Nairobi was that I was an intern at the United Nations Human Settlements Programme. As soon as I arrived, I found that I was sharing a house with other interns in various United Nations divisions. I met plenty of other interns there as well. Furthermore, I met other interns who were also studying planning. Suddenly, despite the fact that I was in Africa, I found myself surrounded with people immersed in planning even more than I was, people with whom I shared common professional interests, some of them pursuing master’s degrees and conducting thesis research.

My contact with these other young planners heightened my excitement about the field of planning and proved to me its diversity and usefulness. One acquaintance from Chile was practically living in a slum, initiating small, grass-roots projects, such as protecting a plot to maintain recreation space for children in the crowded slum, or trying to terrace land near the river to control erosion. Another friend had just come to Nairobi after doing field research in her native India, analyzing the politics of slum life. A German housemate was interviewing elite expatriate perceptions of public space in Nairobi, finding that, within it, elites did not perceive any such thing as public space, testifying to the
privatized nature of the city. Yet another university student was interviewing recent immigrants to the slum of Mathare to understand what drew and kept them there despite hardships. In the process of these interviews, she ended up raising money from her native Holland to fund a women’s group among some interviewees; this group eventually used the money to start a daycare center as an alternative for women to achieve a small measure of financial independence.

These diverse experiences illustrate what one with a background in planning can do once their imagination or interests are triggered. It was easy to be unduly intimidated by the experiences of many of the interns, but I tried to use my time with them as an opportunity to preview different aspects of the field and obtain ideas from those further along in their education and careers. I was able to use their insights to clarify my perceptions of the field of planning, and they were more than willing to let me pick their brains to understand the strengths and weaknesses of their graduate programs. I consider the relationships I built with other interns to be one of the most valuable aspects of my internship.

The Internship Experience

Asking fellow UN-HABITAT interns about their experiences and impression of the UN-HABITAT as an organization yielded varied answers, yet a significant number offered a common insight. They noted that while UN-HABITAT is a huge and sometimes inefficient organization, unable to implement its own proposals, in totality, it is the best the world has for the work it does. It is in a unique position, oriented with a global perspective to monitor and evaluate global trends to produce insight that can guide and instruct policy making in the realm of urban issues. It is singularly poised to initiate dialogue on issues of human settlements and cities that are of global concern.

Though critics may charge it with futility in offering knowledge and policy nobody actually implements, it is important to note that HABITAT’s role is not implementation per se. HABITAT’s mission is to “promote socially and environmentally sustainable human settlements development and the achievement of adequate shelter for all.” HABITAT is working towards this by monitoring trends, facilitating dialogue, financing projects, and creating partnerships. It emphasizes the importance of partnerships and of empowering civil society and governments to play a positive role in issues pertaining to human settlements. It works to create resources that others can rely on and utilize. In a sense, it creates knowledge that is a collective good and will benefit many, of whom very few, if any, are either motivated or equipped to produce independently. And while this alone is not sufficient to solve all the problems facing cities today, it is a critical start.

HABITAT’s work is not to supplant local actors; rather, it works to empower them. The Global Urban Observatory (GUO) of UN-HABITAT, where I interned, conducts much of the research and data generation of UN-HABITAT, information which is then used to educate and equip local actors
in city development. My internship involved one aspect of GUO’s knowledge generation to instruct policymaking: the State of the World’s Cities Report 2008/2009. This is a flagship UN document that is produced once every two years, and is created to educate the layperson (decision makers, the media, non-governmental organizations, etc.) in order to lead to better city policy. This year’s report is looking at the importance of integration of local, national, and regional policy in order to achieve a level of development that is sustainable in all aspects. It will synthesize a wealth of information to illustrate that coordinated development is critical in reducing inequality within cities. Rather than solely focus on economic growth, the city’s importance and proper role as part of a national system needs to be taken into account in order to truly improve the lives of citizens. For more information is available in the State of World Cities Report 2008/9 published by UN-HABITAT, due to be released early 2008.

My work on the report consisted entirely of research. I compiled a summary of city growth and decline trends for 135 cities in Latin America and the Caribbean, explaining factors according to a typology developed by my team. I also researched inequality measures for intra-city inequalities that depict disparities of wealth and income. My supervisor is now using my work in combination with that of other team members—which focused on the same topics but in different parts of the world—to create an in-depth global comparison and analysis of urban trends. This will form a portion of the body of the report. I also researched the provision of infrastructure in cities in the developing world to illustrate the importance of good policy in city government. Another supervisor used this work to depict that good policy can overcome the challenges of city growth, research that will also be used within the report.

**Justification of the Experience**

My experience was tremendously valuable from multiple perspectives. Primarily, I learned more about planning issues around the world and the professions of people involved in them. Secondly, I contributed to an important report that informs city policy. Thirdly, I learned about the complexities of a work environment and discovered the effort it requires to conduct deliberate and critical analysis in all work. Put shortly, my experience was indeed worth the miserable plane flight and tremendous amounts of money spent. I say this without even delving into my experiences of Nairobi as a city and the wonders of Kenya (including the Great Wildebeest Migration, one of the wonders of the natural world); describing these would require another story all together.

In conclusion, I encourage any student interested in traveling to pursue it—the beauty of studying planning is that we are studying the relationship between people and places, and that is a study which can be conducted virtually anywhere that people are to be found. Not only is planning relevant around the world, but one’s insights into planning will only be improved by the number of places one is able to experience and understand. I think, as I am sure many other students and professors in our program do, traveling should be an important component of any planner’s education. The experience
of new places enriches one’s understanding of the field. To get overseas, students can study abroad or try to work abroad. For those interested in working abroad, I recommend to be creative in their search and to look at websites of international organizations or firms. Do not be deterred if an internship is not paid; the experience justifies the burden of the costs. Cal Poly may be able to provide funds, and the International Division of the American Planning Association offers travel grants to students who are trying to study or work abroad. Also, be sure to utilize the resources you have, since professors have a wealth of information available to you. Now is the time for students to travel because it will only get more difficult the more entrenched into a career we become. For those graduating and wanting to get overseas, they should investigate the Fulbright Program or Peace Corps. There are venues out there help; it just takes a little determination to make it happen.

**Figures 7 and 8**
The cheetahs and the UN interns on a safari on a safari in the Masai Mara

**Figure 9**
An incredible rock formation at Hell’s Gate National Park in Kenya.
Every year FOCUS brings in news on CRP alumni through interviews and articles not only as a way to keep track of their whereabouts, but also to keep a critical eye on the work and pedagogies of the CRP Department. For this issue, we interviewed Sean Nicholas, a graduate of the MCRP class of 2005, who is an associate planner with the city of San Clemente, CA.

FOCUS: When did you graduate? Which degree did you get?

SEAN: I received my MCRP degree from Cal Poly in 2005, which looking back isn’t that long ago, but it seems like a lot has happened. While there, I completed a Masters Thesis which discussed the ways Mixed-Use Developments could be assessed to determine if they will be successful in their locations. Which meant I got to spend a year and a half hanging out with Vicente del Rio!

FOCUS: Describe your current job. What is your title and position in the organization? What are your primary responsibilities, and what type of work do you get involved with?

SEAN: I am currently an Associate Planner in Current Planning for the City of San Clemente, the southwestern most City in Orange County. My primary responsibilities are numerous, but I will do my best to touch on a few of the more important ones. First and foremost I am a representative of the city and as such have the fine opportunity to work with many wonderful citizens in the City of San Clemente. All sarcasm aside, the interface that we as Planners have with the general public is really important, and a lot of our job is Customer Service. As a planner, I am the moderator between the technical components of developing within a Coastal Community and helping people realize their dreams. Yes, it sounds corny, but the education process is important in teaching people how the development system works.

General Development review is another large part of what I do. Whether it is an Entitlement project for a Mixed-Use Development in the heart of downtown, or reviewing a single-family residence for applicable development standards so they can acquire a Building Permit, there is a variety of types of Development Reviews which we oversee and approve.

I would say Customer Service and Development Review are the two biggest components of my job, and the little things in between are variations of these two overarching responsibilities.

FOCUS: Briefly describe your previous jobs.

SEAN: I have had an opportunity to work in two communities before San Clemente. My first job was as an intern at the City of Grover Beach and subsequently was promoted to Planner I. During that time I was also the City Planner for the City of Guadalupe. Both were interesting, very different, and incredibly valuable in shaping the Planner that I am today. Grover Beach is a small beach Community in San Luis Obispo County that
is primarily residential, and while I was there I worked on numerous Planned Residential Development Projects (as I was there in the heart of the housing boom) and a few commercial projects along the Grand Avenue Corridor. Due to the housing boom, and the fact that at that time Grover Beach was more affordable in terms of land prices, I gained valuable knowledge about multitasking and making multiple deadlines.

In Guadalupe, the northwestern most city in Santa Barbara County, I was the only person in Community Development. I did everything. Because I was on my own from the beginning, I learned a level of confidence, decision-making ability, and independence in the work place that has been incredibly beneficial in moving forward with my career.

**FOCUS:** How is your education reflected in your work? Do you feel that the classes and skills from the MCRP program support your professional practice? What did the MCRP program provide that is fundamental to your professional practice?

**SEAN:** My education is reflected in my work because it created the foundation for my work place abilities. Presentation and people skills are essential to what I do and were some of the things we worked on most in the graduate program. In essence I have to be able to talk the talk. How I present myself to the public and address their concerns are big parts in keeping people happy. And a happy public makes a happy planner; believe me!

Presentation and communication skills are critical because one will not have a PowerPoint presentation for every project. Yes, one needs to have those skills, but he or she has to be able to have notes and simply talk about a project from a podium to a Planning Commission and City Council. From the various public outreaches, presentations, and projects we completed in the MCRP program—especially the Park Marina Area Design Plan in Redding, from the Project Planning studio—I have become very comfortable with public speaking and consider it one of my strongest abilities in the work place.

**FOCUS:** Which do you think are the strengths and weaknesses of the MCRP program?

**SEAN:** The Internship requirement the department has is one of the, if not the, best thing the MCRP program has. I can not speak enough on about how valuable that was in preparing me for the public sector. I am sure it is different if students do their internships in larger cities or in the private sector, but working for a small community like Grover Beach let me be hands on and fully understand the day to day job of a planner. Our education and course work is great in giving us the base tools and understanding of why things happen and what requirements are in place and for what reasons. Though, as a student, I remember thinking, “But what do they do all day?” Being in a planning department really allowed me to feel how the process works and what it meant to be a Planner. The only thing I wish I would have had an opportunity to do was to intern for a major development company whose goal it is to build as big as they can as well as making the most profit possible. People always looked at me funny when I said that, especially in the internship class, but
I thought an internship in that environment, especially knowing my interest in the public sector, would be interesting to see how the other side works. That is the benefit in the undergrad versus graduate programs:, time to do these things. Though don’t get me wrong, after four years at UC Santa Barbara and two more at Cal Poly, SLO, I was ready to graduate!

FOCUS: How is the mix between theory and practice in the MCRP program?

SEAN: I can honestly say that it is very good. In fact, I can also say that it is the reason I came to Cal Poly, San Luis Obispo. Doing my undergraduate at UC Santa Barbara and just discovering what a Planner was, I got a theoretical and analytical review of Planning. The equivalent of a thesis for my undergraduate degree in History was all about the impacts the Tennessee Valley Authority had on the Environment and Modern Day Planning (A real thriller; I assure you!), but, as I said above, even then I was wondering what a Planner does in everyday work. It is because of this drive that I turned down a place in the Graduate Program at UC Irvine to attend the more hands-on approach and experience of Cal Poly, San Luis Obispo. To this day, it is one of the best decisions I have made regarding my future.

Figure 4
Molly Blooms is an Irish bar with a multi-phase project, nearing completion of phase 1. By the end of phase 3 it will look like a traditional Irish cottage. (photo S. Nicholas)

FOCUS: What are the critical knowledge areas for planners entering the field? (e.g. land use law, research methods, zoning, housing finance, CEQA, etc.)

SEAN: You know, it is hard to say, because there are so many different ways to be a Planner. I remember hearing, in my 1st year, that one of the 2nd year students was going into Historical Preservation, and I remember thinking, “Dude, no way, what is this guy thinking, where the heck is he going to do that?!” Now I am working in a community with a very strong Historical Preservation movement! You just never know. The basics like zoning and CEQA are mandatory! Land Use Law is more important, I think, in the private sector, especially when it comes to a lot of CEQA related consulting. You will see that if you ever go to a CEQA review class, but it will also be helpful in preparing for the AICP. As far as housing finance and research methods, I have not used those as much. Financing would be more in the private sector, but it is important to know basic budgeting because even at my level I am handling several accounts, budgets, and, at times, consultants to complete different projects. What I use most from Research Methods are the analysis and interpretation of Zoning Ordinance.

FOCUS: What are the critical skills/tools for planners entering the field? (e.g. GIS, computer-based design, statistics, surveying, presentation, writing, etc.)

SEAN: Presentation and people skills are essential. I deal so much with the public, and being able to communicate is paramount! One of the best things I did to hone my people skills was to get a customer service job. For three years while in San Luis Obispo I worked for Martin and Weyrich Winery and learned how to build quick rapport with people and build relationships in which I could talk and communicate with a complete stranger. Obviously, I am not serving wine at the counter I am at now, but the basics apply. Building that rapport with my counter customer and to be able to communicate with them are still important. Not only does it make you as the planner look good, but it makes the City look good. GIS basics are helpful, too. We do not have GIS exactly but a program like GIS, so understanding the basic tools and how it works helps a lot, because a lot of programs are similar. Lastly, yes, I have to be able to write and, to be honest, and as most of my Professors would agree, this is not my strong point, but I continue to work on this tool.
**FOCUS:** What computer applications should planners know as they enter the field?

**SEAN:** New planners need to know PowerPoint and the frustrating program that is Word. PowerPoint is important, especially for those in-depth complicated projects in which pictures, timelines, outlines, and bullet points can help people follow along and understand the components of the project. Word is the single most frustrating program of all time! One can do a lot with it, though, so get to know the finer points and all the things you can do with Word. It actually would be beneficial to have a small section of the computer class that gets into all the formatting, charts, links, text boxes, image modification, and correction tools that are in Word, especially with the 2007 edition having just come out.

**FOCUS:** What was the most challenging aspect of moving from the MCRP program to professional practice?

**SEAN:** To be honest, the most difficult thing is having neither a summer nor Christmas break, the fact that I have to be responsible and functional at work, and the fact that showing up hung over at work, like some people used to for class, really won’t fly anymore! (Not that I ever did that!). But seriously, that is what I would say was the most difficult for me, because between my internships and the things we were doing in the program, when school was done I just went to work full time between Guadalupe and Grover Beach and it was nice being able to focus all of my time into being a Planner and getting all of my Planning responsibilities done while not having my Masters Thesis hanging over my head (though Vicente is the greatest and made it relatively painless!). It is nice to know that I work eight or nine hours a day, and when I am done, then it is my time to do as I want. That feeling was weird at first, and I remember thinking, “Really! I can just sit here and BBQ and watch the Angels on TV and not have homework? This is great!” So enjoy it! Plus the boost up in full-time pay helps as well!

**FOCUS:** What do you see as planning’s big challenges over the next 5-10 years, and what does Cal Poly need to teach students so that they may successfully engage these challenges?

**SEAN:** Again, I think every community is different, especially in terms of the big problems that face them. I think there are overarching problems that are regional concerns. Environmental concerns and issues are at the top of that list, in particular water supply. Also, here in San Clemente, we are facing build out, which means we will become a completely infill and redevelopment oriented community. This will most likely change the way development is perceived in our community. Are people going to be happy with larger mixed-use buildings in the downtown as allowed for in the Municipal Code currently? There are interesting times ahead, and I believe it is that way with all communities, especially with the fall out of the housing market; there will be a change in how development occurs as we move forward into the next 5 to 10 years. What will it be and how it will work? Well, we will roll with the punches, keep an open mind, and see what happens.
Graduating from the BSCRP in 2006, Jamie Macartney went back to work in New Zealand where he had spent a semester in 1994 with two classmates from CRP (see “Adventures in the Middle Kingdom” in Focus II, April 2005). He works as a planner and urban designer at Urbanism Plus in Auckland, one of New Zealand’s top planning/design firms, where he has been able to participate in several important projects (see also www.urbanismplus.com).

After graduating from college in June, 2006 I was faced with the age old question, “What to do now?” The choices seemed endless, unlike the end of high school when the choice was clear for most that the next four years would be spent in college. I studied abroad in the summer of 2004 in New Zealand and was itching to go back on a senior trip, but fell a little short in the funds department. My roommate and I decided to devise a plan that would allow us to get some work experience in the States before traveling to the South Pacific.

I researched Visas that would allow me to work odd jobs with little to no time commitments. New Zealand allows people between the ages of 18 and 30 a one-year visa (which can be extended) to live and work in the country.

An architecture firm I had previously worked for during school breaks in Southern California hired me for six months and put me on a team that handled large residential developments in Arizona. I worked under two planners that had extensive experience. The firm was mostly architects with a few planners scattered between different design teams.

**First Job**

After a few months of working, I noticed that young planners were allowed to do a wider range of jobs than the architects of the same age. Most young architects could spend weeks doing “red-line” corrections on a set of plans that they had no part in designing, as opposed to the young planners that would work on mostly new projects. One aspect of residential subdivision design in California and Arizona, in my experience, was that getting the maximum yield efficiency (highest unit count) seemed to be an overriding consideration in design projects.

In my experiences with design training at Cal Poly, I was never given a piece of land and asked to max it out with as many homes as possible, but this felt like a reality that I had to deal with, working in the private sector. Classes at Cal Poly were more interested in Solar Gain, Neo-Traditional Development, Nodes, Edges, and things of that nature. In areas like California and Arizona, good urban design principles seemed to be fine as long as they help or at least don’t hinder the overall business objective of a project. My immediate boss was an innovative designer and usually found ways to incorporate good principles as well as hit necessary unit counts. I learned that there is a delicate (and not always fair) balance between idealistic principles and the drivers of real world projects.

Due to my entry-level status/experience I was only asked to assist in a minimal amount of intellectual thinking during the design process. I found that, after six months of work, most of my time was spent as a part of a technical production line, utilizing programs such as AutoCAD and Photoshop—which, I should stress, are essential to anyone that wants to pursue a career in design. I was slowly gaining the knowledge to take a piece of land
and understand how a residential project could be developed; however, six months is not even close to enough time to comprehend the amount of thinking needed to understand the site design process. Within two weeks of finishing off my contract with the company, I was on a plane to New Zealand.

New Zealand

New Zealand is located about 6,500 miles southwest of California, and is roughly the size of Colorado. The country is split between two main islands, and the total population is just over 4 million people, 2/3rds of which live on the North Island. I live in Auckland which is in the North Island and by far the largest city in the country with 1.3 million people. Auckland is known as the capital of the South Pacific because it contains more pacific islanders than any other city in the island region. New Zealanders are called Kiwis named after their national flightless bird. The two official languages are English and Maori, which is the language of the indigenous people that resided in New Zealand before Europeans arrived. The Maori word for New Zealand is Aotearoa which means ‘Land of the Long White Cloud,’ and is more than fitting for the climate. The Maori were said to have found Aotearoa around 800 A.D. in large ocean canoes they had been paddling throughout the South Pacific from eastern Polynesia.

Down Time

After arriving in the country I set about relaxing and readjusting to life outside of the United States. I thought that I would be able to spend about 3 months just sitting around and taking small trips before I joined the workforce. I lasted 2 weeks before I began to feel kind of worthless because this was the first time in my life that I could literally “hang out” and not do much for an entire year. During summer breaks from school there was always that feeling that in three months I would be back into a routine, and after college it was only a matter of time before I had to get a real job and start life. Now I was delaying that real life part for at least another year.

Setting up my curriculum vitae (CV) took a bit of time because the format seems to change from country to country. In the States I learned that it is best to keep a resume to one page when applying to jobs directly out of college, but in New Zealand the graduate CV is usually about 3-4 pages and can even include a self portrait. I had no real idea of which firms to apply at so I decided to spend a few days on the internet and hope that something would catch my eye. I found that the best way to get a company’s attention was to first email my CV and then call the next day to make sure that it reached the correct people. After about three days, I had setup half a dozen interviews at various firms in the city.

Job Application Process

I decided against applying for jobs in the public sector because I wanted a chance to partake in the initial design process as opposed to reviewing designs that had already gone through countless

![Figure 2](attachment:image.jpg)
iterations (I later found the public sector does in fact lead some of New Zealand’s biggest design schemes). Most of the companies that I interviewed with were architecture firms that were being pushed over into urban design by market demands. These firms had planners, but they would specifically deal with report writing or the statutory approval processes (both land-use and building)-not urban design. Since most of these firms were looking to start urban design teams, they were interested in a designer with extensive experience that would be able to run a team, which obviously put me out of the running because I was a recent graduate.

Planning vs. Urban Design

During the interview process I realized that the definitions of a “planner” in the States and in New Zealand were different. In California, everyone in the planning and design field is usually referred to as a “planner.” In New Zealand planners tend to specifically deal with the process and urban designers specifically deal with the outcomes. I also realized that the field of urban design in New Zealand was relatively young in comparison to the States. Most aspects of land subdivision in New Zealand seemed to be designed by surveyors and engineers with occasional architectural input. For this reason, planners in New Zealand were much more accustomed to engaging with others’ designs through the statutory approval process as opposed to actually participating in creating a new design.

One of the main reasons that urban design come onto the scene later in New Zealand than in the States is because of the way land development has occurred. Until recently, low-density development patterns have flourished because of the abundance of available vacant land (and resultant low cost). As the country continues to grow and people are forced to live in closer proximity to one another, there has been more of a need for cohesive, integrated design and planning. In 2004, the Local Government Act was released, introducing an explicit directive towards sustainable development and strategic planning.

The most important statute that governs land development in New Zealand is the Resource Management Act (RMA), which is used to regulate access to natural and physical resources. Its underlying intention or goal is “sustainable management,” which is different from “sustainable development.” Introduced in 1991 and subsequently amended every few years, it replaced various previous legislation such as the Town and Country Planning Act and numerous individual documents dealing with specific issues, such as land use zonings. In order to develop land in New Zealand, people must abide by the RMA. Since its introduction, the RMA has proved to be relatively controversial, as its ambiguity affects both interpretation and implementation. I learned that a major part of good design is being able to realistically deliver it, so understanding the RMA is paramount in the design process within New Zealand.

Urbanismplus

I finally found a firm of just under ten people that dealt specifically with urban design. The company is called Urbanismplus and is run by Kobus Mentz, a Zimbabwean urban designer/planner. There were two other designers when I arrived: Brad, a senior designer from South Africa, and Rodrigo, an associate designer from Chile. The remaining employees were all planners/designers from New Zealand with various graduate and post graduate qualifications. I began to realize that most of the Urban Designers in the country were foreign because Urban Design was still in its infancy stages in New Zealand. I later found that there were three different types of people that would call themselves “Urban Designers” in New Zealand:
• New Zealanders with a background in architecture, planning, or landscape architecture that have slowly moved into the field.

• International people who spent most of their time in planning but knew enough about design get by as an urban designer in New Zealand based on the general lack of experience present in the specific field.

• Qualified urban designers, overwhelmingly foreign, that had experience and credentials in the design and development process, and could do more than produce quality renderings.

Most urban design companies in New Zealand have evolved from architectural, engineering, and or landscape architectural firms, which means that they usually have a biased outlook on urban design in general. Urbanismplus is one of the few companies that has dealt with only urban design from its conception, not having evolved from another type of development field. Kobus came to New Zealand 13 years prior to myself from the UK and began working as one of the country’s original “qualified” urban designers. Kobus thus far has lived and worked on three different continents, and has an abundance of experience from both the UK and South Africa. I soon knew that I was in for the apprenticeship of my life working under someone with as much knowledge as Kobus.

Urbanismplus has fewer than 10 people, and in such a small company every employee is able to partake in the planning, design, and business sides of projects. In the States, most of the major companies are so large that there are entire departments dedicated to very specific facets of the job, and most entry-level personnel don’t venture passed their job title. In less than one year, as an “urban planner,” I was able to: write proposals, planning documents, fee schedules, design projects that dealt with a number of different land uses and spatial scales (not only residential or commercial); partake in facilitation of public workshops; manage my own projects; and bill clients. Another major difference from working at a larger firm is that Urbanismplus was strictly a value-based company. Meaning that all the projects and outputs of the company were done in accordance with a stringent set of principles that were uncompromising. This even entailed refusing projects that would cause a concession of our values. Over time, this has created a positive reputation for the company, putting out work only of the highest caliber, and has proved to be a good business model seeing that developers and cities alike want the approval stamp of Urbanismplus on their projects.

I will take many experiences away from my time in New Zealand, but there are a few that are particularly worth noting:

**Livable Arterials**

• A strategic arterial street management for the next 30 years in Auckland City.

• Considerable pressure has been and will continue to be placed on the arterial network.

• Conventional approaches of merely widening the street cause a sterilization of the edges needed for employment, social contact, and other critical functions.
• Every kilometer of arterial streets was measured and analyzed to differentiate amenities (jobs, hospitals, parks, and so on).

• Not enough space to cater all is available; therefore, prioritization must be given.

• The process used urban design principles to develop a methodology to manage tension where different user groups exist, compete with, or complement one another.

• Four key emphases were developed: community, passenger transport, general vehicle, and freight.

• Every arterial was given an emphasis which was either brought about by necessity, desirability, or a compromise between different user groups.

• This project is now being implemented and is setting the tone for integrated transport and land use planning in the wider Auckland Region and New Zealand.

Rugby World Cup (RWC)

• The RWC is the third most watched sporting event in the world right behind the Soccer World Cup and the Olympics.

• In 2011, the RWC will be coming to New Zealand many of the important games (one of which is the RWC final) will be held at the Eden Park Stadium in Auckland.

• The RWC will place significant pressures on the Auckland region (especially on the movement system) with a large influx of both domestic and international fans.

• Questions arose about possibly fast-tracking major transportation projects in the area, which would have come to fruition at some point anyway, that would benefit both the RWC fans and the city’s greater transport needs.

• This project innovatively used urban design’s emphasis on inclusive, integrated thinking in the context of strategic, leveraged transport projects.

• The project developed in understanding of every aspect of the event, including transport interests taking into account long and short term growth, land use, community, open space, and other aspirations.

• It identified a range of transport initiatives that, if leveraged off the RWC, would offer substantial strategic advantages for Auckland residents not just in terms of transport efficiencies, but wider city development objectives. These include the re-designing of road and passenger transport infrastructure, as well as detailed street design upgrades. All of these are designed to maximize not only the efficiency

![Figure 4](image.png)

*Urban design plan for the Eden Park Stadium; Auckland, New Zealand. (used with permission from Urbanismplus)*
of transport at the RWC, but the overall advantage of the event to the City including economic capture and “spend,” legacy built environmental betterment, and presentation of the city to a potential global audience in the billions of people.

• At a simplistic level the project uses urban design to answer: (1) Where are we? (2) Where do we want to be? and (3) How can the RWC be an opportunity to help us move towards our goals?

Preston Downs

• Preston Downs is a proposed sustainable subdivision project located in West Melton, a settlement located approximately 20 km south west of Christchurch, New Zealand.

• The project seeks to provide 290 residential lots at various densities with the intention of providing an array of housing typologies to enable a demographically varied community.

• The development pattern has been undertaken in a manner that is integrated to offer the best possible end outcome, by encompassing blue (water), green (open spaces), community, and cultural components.

• The project integrate and future-proof development aspirations of surrounding sites.

• Large areas of open space are provided, both to offer amenity for higher density housing and to act as storm water run-off areas.

• The street layout has been designed in a manner that maximizes solar gain through appropriate lot orientation.

• Reserve and open space areas have been designed to be low maintenance with high ecological value. This is to reduce the carbon footprint of the project and offset ongoing maintenance associated with traditional mown lawn areas.

• Roads and reserves provide key view shafts to surrounding landscape features, both locally (key landscape features such as trees) and regionally (Southern Alps).

• Large external lots have been provided for both character reasons and to buffer the project to surrounding properties with greater landscaping opportunities.

• Provision has been made for a new community site and an array of exercise facilities throughout the development to encourage community use and interaction opportunities.
Final Thought

Upon entering Cal Poly, I struggled to define urban planning and was unsure if this was the correct path for the next phase of my life. After college I was still undecided if I wanted to pursue a career in a field which I really of which could not fully understand the intricacies and terminology. Now it’s been seven years and I have worked on different sides of the world. I still have yet to generate a definition, but each year I learn new things and with new experiences comes a greater understanding. I have come to the realization that the day I define “urban planning” will be the day that I no longer want to be in this field, because I will no longer be striving to learn.

*Figures 7 a, b & c*

Preston Downs residential development;
Christchurch, New Zealand.
(used with permission from Urbanismplus).
Although in the last couple of years the CRP Department has been implementing the new MCRP curriculum which now offers a final comprehensive planning studio as an option for students who prefer not to do a thesis or an independent project, the flow of quality individual research work continues. The following master’s theses and projects were defended in 2007, and both the CRP department and Cal Poly’s Kennedy Library hold copies for consultation.

Planning for Safety in the City of Desert Hot Springs  
Jeffrey Ryan Anderson

In the fall season of 2006, the City of Desert Hot Springs contracted the CRP Department for the update of the General Plan. This professional project builds on the General Plan update process for the Noise and Safety Element, with a focus on safety standards and specific safety issues present in Desert Hot Springs. The purpose was to identify and inform the city, decision makers, and the community of the natural and man-made safety hazards in the city. The report includes analysis of five major safety areas: geotechnical, flooding and hydrology, hazardous and toxic materials, fire and police protection, and emergency preparedness. This report concludes with a recommendations section.

Manglev In Southern California: Opportunities and Constraints Associated with a “Seamless” Airport Decentralization System and Regional Commuter Rail System  
Robert Betts

This study assesses the development of a seamless air and rail system to decentralize commercial passenger aviation activity in a regional scale network. “Seamless” is an environment in which the passenger does not feel like he/she leaves the system in order to transfer transportation modes. Based on the decentralization model, this study assesses the use of high-speed magnetic levitation (maglev) rail to connect nine different commercial aviation facilities spread out over 38,000 square miles in Southern California. The study provides a broad assessment of opportunities and constraints to enable planners and engineers to gain initial insight into how such a system would function. The findings recommend that a successful system would include planning at a regional scale led by a governing body composed of multiple stakeholders from multiple jurisdictions, and proactive planning and design.

The Bayside Sanctuary  
Craig Thomas Chinn

This thesis explores the likelihood of developing an integrated art, cultural, and entertainment district in Oakland, CA. Oakland was originally chosen for its central location, political context, and economic vitality. Site analysis, design planning theory, and case studies helped to identify an 80-acre site near Jack London Square along the oceanfront, and it is entirely owned by Oakland’s Port Authority. A design program, conceptual plan, and conceptual imagery were developed to provide basic guidance for the project titled “The Bayside Sanctuary,” a mixed-use development with a heavy accent on the interface with the water. There was strong enough evidence to indicate that the development of this project could flourish as an integrated arts, cultural, and entertainment district.
State of Conservation Report for the Land Conservancy of San Luis Obispo County: A Land Conservation GIS-Based Decision Support Model
Catherine Lambert

This professional project is a “state of conservation” analysis of San Luis Obispo County completed for the Land Conservancy of San Luis Obispo County. The project's unit of analysis is the landscape unit, created by the Land Conservancy, and the county is divided into one hundred discrete units. The project considers three inputs: targeted natural resources, developmental pressure, and current conservation efforts in the county. The Natural Resource and Developmental Pressure inputs consist of variables selected by the committee members based on their professional experience and knowledge. Once the variables were determined, points were distributed within each variable and a weight was assigned to each. ESRI ArcGIS was used to create weighted overlay models based on the inputs. The results identify major trends for conservation in the county, and a series of maps were created with the results. The information can be used by the Land Conservancy to facilitate strategic decision-making and the selection of conservation priorities.

Assessing the Effects of the “Big Three” Corporate Ownership on Colorado Ski Resort Community Development
Josh LeBombard

This study analyzed rates of overall growth, density, gentrification, and affordability in and on the periphery of seven Colorado ski resort communities (Aspen, Breckenridge, Crested Butte, Steamboat Springs, Telluride, Vail, and Winter Park) to determine whether their physical and socio-economic development patterns are affected by ownership of all the ski resorts by only three corporations. The study provides a structure in which to analyze ski resort community development patterns and practical data associated with developmental patterns. The results suggest that corporate ownership does cause a significantly higher rate of residential growth in and around the communities, significantly larger home sizes, and a significantly higher median home price. The findings will help the communities to further examine existing policies, growth rates, compact growth, second home ownership, and affordable housing in order to determine their adequacy. This work will contribute to future research of the relationship between corporate control of ski resorts and the general impacts on their communities.

The Regulation of Signs: An Evaluation and Revision of a Sign Ordinance
Jesena Lopez

The regulation of signs is a challenging part of municipal planning. Signs come in all shapes, sizes and colors and may be located in places such as a window, on a building or on a pole. Signs are also a form of communication that trigger First Amendment protection. Without regulation, excessive signage may clutter the streetscape, reduce community aesthetics, affect traffic safety or infringe on free speech protection. Municipalities must regulate signs within constitutional confines of the Amendment and with a careful balance of (1) the need for businesses and others to communicate with the public, (2) the need for the public to receive that communication and (3) community planning goals that relate to environmental aesthetics and traffic safety. This project reviews substantive issues in sign regulation and outlines a model of sign ordinance as the criteria to evaluate the City of Lompoc sign ordinance (May 1974). This project concludes with a proposed sign ordinance that is a user-friendly, easy to understand, implement and enforce.
Implementing an Appropriate Affordable Housing In-Lieu Fee Process for the City of Arroyo Grande, Calif.
Tyler J. Montgomery

This project's client is the City of Arroyo Grande which, like many cities in California, has an inclusionary housing requirement. For all new residential construction of more than a single unit, the City requires that a certain percentage of units is dedicated as affordable for low-income and moderate-income households. For developments of between two and six dwelling units, an affordable housing in-lieu fee may be used to satisfy the requirement. The City has no ordinance for assessing this fee, and this study determined the most appropriate method for determining it while maintaining conformance with the city's 2003 Housing Element. Based on a literature review, an evaluation of affordable housing fee practices in other jurisdictions in central and southern coastal California, and their policies' effectiveness and Housing Element compatibility, the present study recommends that the affordable housing in-lieu fee be based on a specific percentage of the difference between the median sale price of homes within the City for the previous calendar year and the sale price for a similar-sized unit affordable to a moderate-income household.

Finding Common Ground for Development: A Design Proposal for Arroyo Grande
Tamera Pullen

As urban growth and the need for housing consume natural resources and cultural history, cities struggle to balance simultaneous growth and preservation. This is a topic of heated debate among stakeholders, who often become opponents in the process. This project develops a design proposal for an area in Arroyo Grande, Calif. through a research-based approach informed by a literature review, a survey, and interviews. The positions and interests of a sample of stakeholders—the public, the local municipality’s planning agency, a developer, a landscape architect, and a professional planner—were examined to define key development issues and to identify commonalities of interests. The results are used to inform a design proposal for a 13.64-acre site which represents a nexus of interests including land use, roads, housing, quality, character, open space, and ecology. The proposal sought to achieve a satisfying solution to the competition between development and the city’s natural and cultural character.

Sense of Community: A Comparative Study between Two Design Methods, New Urbanism and Participatory Design
Esther Valle

New Urbanism and Participatory Design are two approaches claiming that their design processes and methods contribute to a sense of community. This thesis explores the relationships of New Urbanism principles and Participatory Design methods with sense of community through the evaluation of four multi-family developments in California--two for each approach. Differing from past research, all of the communities are urban middle, low and very low-income households with various ethnic backgrounds. The goal of the study is to determine the contributing attributes that heightened resident sense of community. The results indicate that residents of communities developed with significant public participation have the strongest community, and sense of community is attributed to amenities and formal settings which encourage interaction among residents. The cognitive mapping completed by respondents suggests that residents in multi-family housing consider places they visit as part of their daily routine, such as a grocery store and school, more of their community than the actual design of their neighborhood. Results imply that the Participatory Design method more successfully fosters a sense of community.
This journal highlights the work produced in the City and Regional Planning Department, Cal Poly, San Luis Obispo.

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