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Sustainability and Interdisciplinary Education: Planning and the CAED Sustainable Environments Program

For the past fifteen years, through an interdepartmental effort, the College of Architecture and Environmental Design has been offering an interdisciplinary minor on Sustainable Environments. CRP professor Paul Wack, a devoted co-founder and one of its most popular instructors, writes about this unique and popular initiative which recently received a national educational award from the American Institute of Architects.

Planning is about the future. Tomorrow matters! This is one reason that the idea of sustainable communities is attractive to planners. Although defining sustainability has been a challenge to many, the idea that future generations have a rightful interest in the conduct of current human activity is basic to the planning profession (Wheeler, 2005). Another aspect of sustainability attractive to planners is reflected in the first law of ecology: "Everything is connected to everything else" (Commoner, 1971), which acknowledges the important relationship between the economic, environmental, and social forces of humanity. Added to the mix is the need to appreciate the scale of design which defines the scope of the built environment, including products, interiors, structures, landscapes, cities, regions, and the earth (Bartuska and Young, 1994).

The City and Regional Planning (CRP) Department has been part of the College of Architecture and Environmental Design's (CAED) interdisciplinary effort for the past 15 years to incorporate the idea of sustainability into the curriculum. Today, there is a CAED Sustainable Environments minor and three core EDES (Sustainable Environments) courses with rapidly increasing enrollments. It all started with a unique course offered by two CAED faculty members, Dan Panetta and Henry Hammer, entitled "Sustainable Community Development". It was an immediate success since the subject was not part of other existing courses on the campus. CAED faculty interest grew and the Sustainable Environments Emphasis (SEE) Group was established, including those that entered and won an American Institute of Architects (AIA) design competition involving an innovative waste recovery proposal for Los Osos.

From these beginnings, the SEE Group became a forum for faculty from several CAED departments to begin building a sustainability curriculum at the college level, starting with the EDES 406 (Sustainable Environments) course. This course was originally designed for about 30 students, seasoned with guest speakers and class discussion sessions

to exchange global to local ideas and information about sustainable principles and practice. One of the activities requires each class member to complete the "Ecological Footprint Quiz" to determine how many planets it takes to support their current lifestyle (Wackernagel and Rees, 1996). Most students consume resources and generate waste requiring the support of three to five planets, which is clearly not sustainable. However, from this information the students quickly develop ideas and practices to reduce their impact in the "learn by doing" tradition of Cal Poly.

Student demand increased allowing for the establishment of a studio course (EDES 408, Implementing Sustainable Principles) for students to apply what they learned in the first course. Every year, the EDES 408 final group projects are presented at a festive open house with many campus and community leaders invited to see the display of *powerpoint* presentations, brochures, and posters. Interest continued to build leading to the creation of a CAED Sustainable Environments (SE) minor and the addition of the EDES 410



Figure 1. Mr. Chris Bar, agent of the National Fish and Wildlife Service, discussing the beach environment with Cal Poly students at the Guadalupe Nipomo Dunes National Wildlife Refuge. (photo by Jonathan Reich)

(Advanced Implementation of Sustainable Principles) course to allow individual students to pursue specific projects from the studio course.

The popularity of the CAED sustainability curriculum has continued to expand almost exponentially. The EDES 406 course has increased to almost 80 students, with more students being turned away for lack of space and resources. The EDES 408 studio has expanded to more than 40, double its original design capacity. Restructuring has become necessary to meet demand, including the establishment of a theme for each academic year. Past years have included water, energy, housing, and consumption. This year it is values. Last year, through the efforts of Architecture professor Jonathan Reich, the CAED Sustainable Environments program received the top award from the American Institute of Architects Committee on the Environment (AIACOTE) for demonstrating exemplary initiative for teaching environmental awareness and ecological design.

Although systemic budgetary constraints remain a problem, with most faculty support over the years provided beyond normal teaching loads, student interest in sustainable planning, design and development continues to multiply. The CRP Department remains committed to the interdisciplinary value of this sustainability project and is hopeful that this award winning CAED program will continue to contribute to the educational experience of future planners and designers committed to the seventh generation.

For more information about Cal Poly's CAED Sustainable Minor, please write to Professor Margot McDonald at: mmcdonal@calpoly.edu

Figure 2.
One of the "Food Posters", a project proposing Cal Poly buying more local produce to serve on campus. It resulted in the university changing its food procurement and menu. (from EDES 408 - Implementing Sustainable Principles)

References

- Bartuska, T. & Young, G. (1994). *The Built Environment: Definition and Scope*. In *The Built Environment*. (pp. 5-6) Menlo Park: Crisp Publications.
- Commoner, B. (1971). *The closing circle: Nature, Man, and Technology*. New York : Knopf.
- Wackernagel, M. & Rees, W. (1996). *Ecological footprints for Beginners*. In *Our Ecological Footprint: Reducing human impact on the Earth*. (pp. 7-30). Gabriola Island, BC: The New Catalyst.
- Wheeler, S. (2004). *Planning for Sustainability: Creating Livable, Equitable, and Ecological Communities*. London: Routledge.

WHAT DO YOU EAT? A Cal Poly Farm to College Project

Strategies

Our project in no way is intended to be a complete solution to all of Cal Poly's food consumption problems. Rather it is intended to show the feasibility of creating positive change and promoting a dialogue about the numerous possibilities that do exist. There are many efforts going on across campus to increase sustainability, this project is just one of them. The biggest conclusion that we have reached is that the only way change will start to happen on this campus is if it is driven by us, the students, and powered by the help of administration, faculty and employees of this great campus we all



We propose to influence change mainly through education. We designed table tents that could easily be used in the various food establishments on campus to spread awareness about the positive aspects of eating locally-grown, organic food. We also decided that labeling food with comparison information as well as health and nutritional benefits would be another great way to educate individuals on what they eat here on campus.

It would also be great to see a campus organic food sales program. This program could include an organic salad bar or a taste test booth. There is also a great chance for student involvement in helping to market the Cal Poly Organic Farm, or even a new menu design to include organic foods at establishments on campus already.

Another great education event would be educational food demonstrations. We thought an "Organic Food Demo Night" would be a great way to integrate socializing and education all centered around great tasting organic food. A "Learn by Cooking" seminar would be another great way to teach individuals about how to cook great tasting organic food, as well as sticking to the Cal Poly motto.



Our ideas were adopted and altered from real-world proven tactics that are working and used at the University of Wisconsin, Madison in their "Farm to College" project.

Universities with Farm to College programs: Cornell University, Iowa State University, Kansas State University, Michigan State University, UC Davis, UC Santa Cruz, University of Maine, University of Minnesota, University of Nebraska, University of New Hampshire, University of Wisconsin, and Washington State University

Director of UM Dining Services Mark LaPaco has provided a large market for local growers by stocking the school's cafeterias and the Cascade Country Store with Montana-grown and processed products. He's pictured here with over a dozen Montana products for sale.



Farm to Vassar

The incentives are all positive for buying locally grown organic foods. Environmentally it is better for the soil, air and water. Socially it can result in safer working conditions as well as more nutritionally valuable foods. Economically it can increase profits and keep revenue local. All in all, buying locally just seems like the right thing to do.

So are you ready to see some change?



Edes 408, Winter 2005
Presented by **The Cabbage Patch Kids Group:**
Allegra D'Albert, Karlo Felix, Haley Gipe, Katie Hergenrather, Nick Ladd



downtown transit center and pedestrian street on monterey

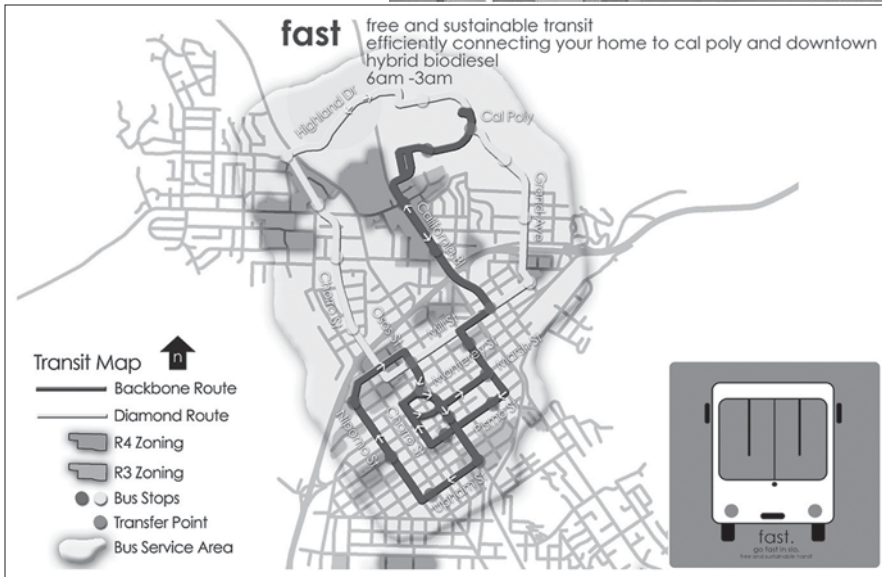


Figure 3 & 4.
The "Magic Bus Proposal", a project for an improved bus system for San Luis Obispo, including route planning, bus and signage design. (from EDES 408 - Implementing Sustainable Principles)

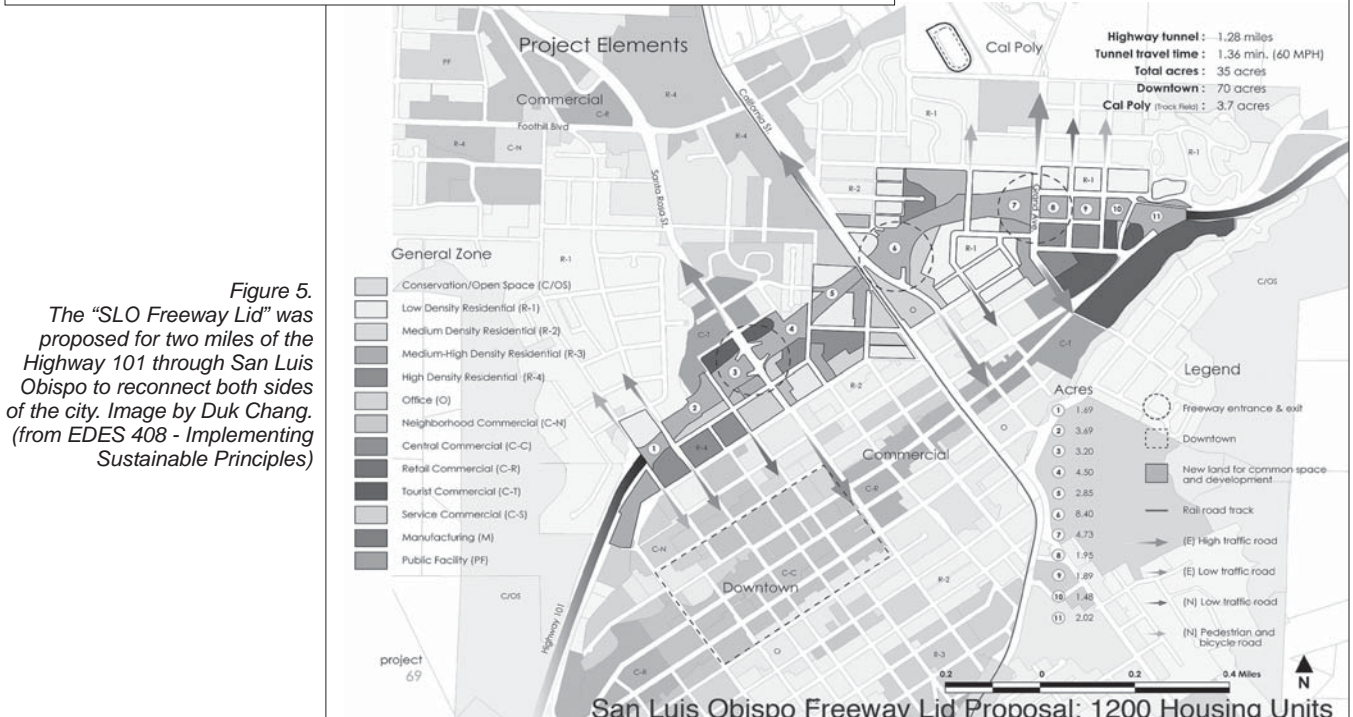


Figure 5.
The "SLO Freeway Lid" was proposed for two miles of the Highway 101 through San Luis Obispo to reconnect both sides of the city. Image by Duk Chang. (from EDES 408 - Implementing Sustainable Principles)