Theses and Professional Projects Abstracts

Master of City and Regional Planning, Cal poly San Luis Obispo

As the concluding phase for the Master of City and Regional Planning, the CRP department offers the student a choice between a final comprehensive planning studio, a thesis, or a project with a real client. The following abstracts are from master's theses and projects approved between April 2010 and April 2011, and are available to download from Cal Poly's Kennedy Library website.

Piedras Blancas Motel Feasibility Study and Redevelopment Alternatives
Gordon Douglas Anderson

The Piedras Blancas Motel is a 1950's era roadside motel located seven miles north of San Simeon and nine miles south of the San Luis Obispo/Monterey County line. It comprises 11 lodging units plus a cafe, laundry room, manager's apartment, and adjacent storage area. In 2005, the property was purchased using State, Federal, and private funds, and then transferred to the California Department of Parks and Recreation (State Parks). Although it has been closed to the public since 2005, the site offers day-use parking and convenient beach access. This professional project, under contract with the California Coastal Conservancy, provides information necessary for the future redevelopment of the Piedras Blancas Motel. It demonstrates the feasibility of a preferred development alternative through several analyses including: a structural analysis of the existing building(s), a constraints analysis, an evaluation of regulatory requirements, and an assessment of redevelopment options based on preliminary market research and financial analysis. The primary objective of the Coastal Conservancy and State Parks is to provide low-cost overnight lodging and visitor services along the Big Sur Coast. The Motel would serve as an alternative to existing expensive lodges or resorts as well as existing tent or RV camping that may not serve as an option for some visitors.

Water Conservation for the County of San Luis Obispo
Dimitri Theodore Antoniou

This master's professional project was requested by the County of San Luis Obispo to assist in its water conservation efforts and to help achieve a 20 percent per capita reduction of water use by the year 2020. It consists of a Handbook of Water Conservation Technologies and Practices (Handbook) and the Background Report for the Water Conservation Handbook (Background Report). The Handbook is organized based on Indoor and Outdoor water uses, and includes information on the type of technology, the benefits in terms of water saving potential, and the cost of implementation. It provides a quick guide to various water-conserving fixtures and appliances for developers and residents throughout the County. The Background Report is a supplemental document for the Handbook providing more in-depth descriptions and examples on each technology, besides a history on water conservation issues in California and San Luis Obispo. It looks at two case studies: on the water conservation efforts in Phoenix, Arizona and a plumbing retrofit project on the Cal Poly Campus awarded with a LEED certification for its water savings. The Background Report looks deeper into the use of community participatory planning in two water conservation plans: a Community Plan development in Arroyo Grande, California, and an Integrated Regional Water Management Plan in the Greater Los Angeles Region. The Background Report concludes by providing some cautionary advice on water conservation technologies and provides future recommendations for the county of San Luis Obispo to improve its water conservation efforts.

Assessing Potential Industry Growth for Economic Development in Oakland, CA
Sonia Aery

The City of Oakland has 42,000 people in its labor force who can be classified as the "working poor." In the last decade's recession, Oakland lost thousands of jobs, a phenomenon that makes the implementation of economic development strategies increasingly difficult. This study prepares a set of career ladders for long-term progression pathways to help individuals advance, particularly in high wage, high growth careers ladders for the population of Oakland.

Greywater as a Method of Water Conservation in Arroyo Grande
Danielle Castle

The purpose of this professional project is to address the practical implications of decentralized greywater usage in the City of Arroyo Grande. This professional project consists of two products: a brief greywater Guide for the City and a Background Report. The Guide, intended for city planners to use for general information about greywater systems, addresses Arroyo Grande's potable water shortage, the definition of greywater, the advantages and concerns about its use, the plants that are tolerant to it for irrigation; appropriate detergents for a greywater system; and a summary of the California greywater law. The Background Report discusses the City of Arroyo Grande's potable water conditions and how its water supply will be affected by growth; it is estimated that by the year 2030, Arroyo Grande's water demand will outgrow its water supply by 283 acre feet. Three case studies examine how water scarcity has prompted the successful use of greywater: the Hashemite Kingdom of Jordan; the Casa del Agua project in Arizona; and a local study in Santa Barbara, California. The report concludes with California greywater law, and how the recent change in August, 2009 has greatly increased the legal accessibility of greywater reuse as a method of water conservation. In combination with education and outreach among city officials and residents, greywater has the potential to play a major role in water conservation in Arroyo Grande.

Franklin Boulevard Redevelopment Project Area Market Analysis
Joshua Chapman

This market analysis of the Franklin Boulevard Redevelopment Project Area is divided into four sections: planning context, real estate market conditions, emerging market opportunities and case studies, and a conclusion. The data and the creative examples gathered are meant to contribute to the efforts towards the transformation of the area into a premier "urban" destination in the Sacramento Region, serving to aid stakeholders of the Franklin Boulevard Redevelopment Project Area, including residents, business owners, the City of Sacramento, County of Sacramento, Sacramento Housing and Redevelopment Agency (SHRA), and the North Franklin District Business Association (NFDBA).

Alternative Methods and Forums to Optimize Public Participation in the Planning Process
Joseph James David

The primary vehicle for local government participation is the public hearing, which is a formalized process that often elicits one-way communication from planner to public. This study reports that this process does not provide the necessary community involvement in decision-making. Alternative methods, such as workshops, are explored that break the formal mold of local government participation. Findings indicate that participation is more genuine in a loosely structured setting where face-to-face communication can occur between public and planner and among members of the public themselves. However, findings also suggest that genuine participation is not always appropriate given the intent of a public meeting. Many hearings are held at the end of the planning

process for development applications requiring quasi-judicial decisions based on standards. The key is getting public input on earlier legislative decisions about policies that define the standards themselves. This study concludes with a toolkit of techniques practitioners can use to enhance public participation, and observations about appropriate stages to implement these techniques in the planning process.

City of Davis Greenbelt Master Plan
Brandon Haydu

During the current update of the City of Davis' Parks and Recreation Facilities Master Plan, greenbelts were identified as a highly used and desired facility. This Greenbelt Master Plan is focused on the opportunities that greenbelts can provide as recreational and transportation facilities. The background studies included the analysis of community feedback, greenbelt coverage and capacity, as well as existing local, state, and federal design guidelines. The final plan aims at improving the greenbelt infrastructure in Davis through the year 2020 by utilizing a set of goals, objectives, policies, and programs, along with a greenbelt map.

City of South Lake Tahoe Subdivision Ordinance: An Opportunity for Smart Growth, Sustainability, and Application Streamlining
Hilary Kay Hodges

The City of South Lake Tahoe currently does not have an adopted subdivision ordinance. This has caused confusion about the approval process and regulatory requirements as well as delays in application processing. This Master's Project explores the opportunities created by a a subdivision ordinance that implements the City's General Plan and its smart growth and sustainability policies. Careful consideration was given not to achieve a streamlined process as well to not generating any cost increases associated with additional fees or off-site improvement requirements. This study was informed by a literature review on subdivision regulation and the regulatory environment in South Lake Tahoe as well as by consultation with other professionals. The final product is a draft subdivision ordinance and an analysis of how well the draft achieves the set goals.

Mixed-Income Housing: Assumptions and Realities
Kimberly M. Hoving

Current Federal, State, and local San Francisco housing policy advocates mixed-income housing as a positive approach to creating living environments for low-income families. Strategies for creating mixed-income housing environments include large-scale public housing re-development efforts, inclusionary housing policies, and the use of discretionary funding for mixed-income development projects. Researchers agree that there is not yet enough evidence to support that mixed-income strategies are achieving positive results and have noted that the expected outcomes for mixed-income strategies are founded upon a number of assumptions. It is assumed that a mix of households at varying income levels will result in greater stability, improved access to services and resources, opportunities for social networking, and greater social control leading. This study addresses the root of these assumptions and presents findings regarding the perceived success of mixed-income development in realizing desired outcomes. Results are presented based on in-depth interviews with housing industry experts. This study aims to provide a clearer picture of why mixed-income development has gained popularity and how the strategy may be better understood and utilized in future housing development.

Orizaba Urban Design Plan
Timothy J. Kelly

Located in central Long Beach, California, the Orizaba Design District was heavily influenced by the Pacific Electric Railroad that cuts through the area. Because of the railroad and its proximity to the Port of Long Beach,

it became mostly dedicated to industrial use until 2007 when a small group of business owners--including architects, graphic designers and interior designers--started to locate there, mainly along Coronado and Gladys avenues. These investments spurred further development and led to the realization of the area's potential to become a unique Design District. The Orizaba Urban Design Plan seeks to provide the City of Long Beach and local business owners with design guidance that capitalizes on development opportunities. The plan envisions Orizaba as a safe, pedestrian-friendly district that builds on the city's character. It incorporates site analysis and community participation into conceptual development, refines it into the plan's objectives for land-use and circulation elements, and explores sustainable design principles, particularly low impact development. A form-based code translates the plan's objectives into clear design standards including building envelopes, streetscape, visual quality, signage and way-finding, and street furniture.

Perceptions and Evaluation of an Urban Environment for Pedestrian Friendliness: A Case Study
Elizabeth H. Lee

Public health is increasingly important from both environmental and public health standpoints for the development of cities. From a planning perspective, one solution is to increase walkability and several methods are being developed to assess the quality of existing urban environments to help promote walkable communities. Although several US cities started to move towards pedestrian-oriented policies, this study concludes that the quality of pedestrian environments cannot be determined solely by using available assessment tools, and recommends additional analytical methods to provide a more complete approach. Although the physical conditions and the quality of the physical environment are important contributing factors to increase walkability, it is equally important to understand and consider the needs, preferences, and perceptions of the users in planning for pedestrian-friendly neighborhoods. This thesis addresses these issues through an assessment of the quality of the pedestrian environment in downtown San Luis Obispo and how it is perceived by its users.

Cost-Benefit Analysis of Greening an Older Modest-Sized Home
Delilah Zoe Leval

This professional project estimates the upfront costs and utility savings expected from greening an approximately 1,100 square foot home built in the 1950s in the San Francisco Bay Area. Two sets of upgrades (alternative and original) were compared for costs and benefits. The alternative set (which included ceiling insulation and omitted upgrading to dual-pane windows) clearly out performed the original set. The alternative set would be expected to reduce resident utility bills by 28% annually, and to prevent approximately 2,700 lbs of carbon dioxide emissions annually. The water efficiency upgrades were the best performing group of upgrades, as they had the lowest upfront cost and shortest payback period. Future very low-budget greening programs, in nearly all cases, should include a full-set of water fixture modifications, weatherstripping, and clotheslines. As budgets allow, other upgrades from alternative upgrades are recommended, such as ceiling fans, programmable thermostats, and ceiling insulation. Whenever possible, workforce development labor should be used to simultaneously reduce labor costs and multiply the social benefit of each project dollar by providing entry-level green collar jobs.

Emerging Trends in Greenhouse Gas Thresholds of Significance for Use Under The California Environmental Quality Act
Nancy E. Mathison

This study determined the state of the practice and emerging trends in developing greenhouse gas (GHG) thresholds of significance for use under the California Environmental Policy Act (CEQA). To describe the

adopted, proposed, or considered approaches for developing thresholds of significance by air districts and the thought processes behind these decisions, information was obtained through surveys and phone interviews from twelve employees of air districts in California State agencies and consultants that are considered experts on this issue. The results of this study include a matrix comparing the approaches of the three air districts that have adopted or proposed GHG thresholds of significance, and identification of the common themes from air districts' responses that do not have adopted or proposed thresholds. While the development of GHG thresholds of significance is an evolving practice, emerging trends in this practice were identified. These trends include providing flexibility in options, an emphasis on programmatic approaches and a preference of including bright-line thresholds and efficiency thresholds. Furthermore, this study concludes that while the three air districts that have proposed or adopted thresholds have laid the groundwork for other districts, some of the approaches, or the thresholds themselves may not be easily transferable based on regional differences. This study provides insight into how GHG emissions might be addressed in CEQA documents throughout the State.

Sense of Community and Neighborhood Design: A Comparative Case Study of Four Arroyo Grande Neighborhoods
Jamie Kathleen Smith Miss

The relationship between the built environment and human behavior is a common topic amongst New Urbanists who claim they can foster greater sense of community through the use of design. The goal of this study is to investigate the relationship between the built environment and sense of community and identify which physical properties positively affect sense of community. Building on findings by Glynn (1981), McMillan and Chavis (1986), Nasar and Julian (1995), Talen (1999) and Lund (2002), this thesis not only examines the physical properties claimed to foster sense of community but the social variables that literature has found to also affect sense of community among residents. Four residential developments in the City of Arroyo Grande, CA were surveyed on their perceived sense of community. The Village and Berry Gardens were selected as developments containing New Urbanist design elements, while Rancho Grande and Oak Park Leisure Gardens were selected as traditional suburban developments. Based on the four sense of community indicators used (membership, integration and fulfillment of needs, influence, and shared emotional connection) the results show a lack of relationship between the spatial variables in each residential development and the sense of community its residents have. The social variables, education, gender, age, and homogeneity, can account for the range of sense of community scores among physically similar developments as well as physically different. This implies that the built environment plays the role of a medium in which all factors influencing sense of community are stimulated rather than determining sense of community. **Improving Public Health through**

Urban Design: the Case of Delano, California
Adriana C. Neal

Emerging research shows a clear relationship between urban design and public health. Major issues affecting public health include cardiovascular disease, high rates of obesity, and associated diseases like Type 2 diabetes. These conditions can be attributed, in a large part, to personal habits, including diet and physical activity. Certain elements of urban design have an impact on personal habits and therefore affect health. This thesis explores the relationship between urban design and public health, first broadly, and then at a micro-scale using in the City of Delano, California, as a case study. An in-depth literature review is followed by a Community Health Assessment, a tool developed to gather data on existing conditions of urban design and public health in Delano. The findings informed a series of policy and urban design recommendations that will contribute to the improvement of the overall public health in Delano. The urban design recommendations were developed as a

document, titled "Healthy Delano Design Guidelines: A Guide to Health-Oriented Planning," to be used as a reference by the City of Delano.

The Relationship Between Quality of Life and LEED-ND Certified / Certifiable Neighborhoods
Stephanie Nicole Timm

The United States Green Building Council (USGBC) has developed a rating system that examines the sustainability of neighborhoods. They have specifically stated that that LEED-ND certified neighborhoods will protect and enhance residents' overall health, the natural environment, and quality-of-life. This study uses relevant quality of life indicators that are commonly identified by social scientists as accurate interpreters of the various quality-of-life domains to determine if there is, in fact, a relationship between LEED-ND and quality of life. Four of the ten domains examined were found to be related to LEED-ND certified/certifiable neighborhoods thus, to a certain extent, LEED-ND certification does increase quality of life as compared to traditional suburban neighborhoods.