

PLACE-MAKING IN CALIFORNIA'S CENTRAL VALLEY: REDESIGNING THE AVENUE 12 CORRIDOR, MADERA COUNTY

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The CRP Department developed a series of studies for the improvement of Avenue 12 in Madera Ranchos under a contract with the Madera County Planning Department. This community-based project included participatory visioning workshops, traffic studies and a transportation plan, and an urban design plan. The final reports were submitted to the county and the community, and the proposals are currently undergoing the public review process prior to adoption.

In 2008 the City and Regional Planning Department was approached by the Madera County Planning Department for the submission of a joint grant proposal to Caltrans. The county needed a plan on how to adapt Avenue 12 --one of the counties' major thoroughfares-- and the community of Madera Ranchos to increasing development and traffic demands in the region, and to a new Caltrans road planned to by-pass the community. Starting in July 2009, CRP's contract with the Madera County Planning Department resulted in the Avenue 12 Corridor Enhancement Project which had three distinct, but interrelated parts: (a) Community Visioning, (b) Transportation Plan, and (c) Corridor Redesign. The purpose of our work was to outline the impacts of the planned by-pass road and the increased traffic demands, to mitigate their impacts, and to present a redesign project for the Avenue 12 corridor which could help Madera Ranchos become a walkable and attractive community with a quality urban design and a strong sense of place.

In the summer of 2009 a visioning process with a series of community workshops in Madera Ranchos was conducted by assistant professor Umut Toker. This process resulted in the Madera Ranchos Vision Plan indicating the community's perceived problems, their needs and desires, as well the community's general ideas for the Avenue 12 Corridor. From the fall of 2009 to the summer of 2010, a series of transportation studies were carried out by associate professor Cornelius Nuworsoo, resulting in the Transportation Plan and a series of scenarios and recommendations. In the spring of 2010 a joint urban design studio with CRP and Landscape Architecture students --led by instructors Vicente del Rio and Vangeli Evangelopoulos-- developed the Avenue 12 Corridor Redesign Plan, encompassing ideas for the street itself as well as for public and private development along it. Finally, in the summer of 2010, final reports and recommendations were put together and submitted to the Madera County Planning Department, and are presently in the process of final approval by the community and the county planners.

Avenue 12 and Madera Ranchos

Avenue 12 is a two-lane country road that lies in the southeastern area of Madera County in the California Central Valley. It connects Highway 99 (SR 99) to the west and Highway 41 (SR 41) to the east and bisects the community of Madera Ranchos, concentrating sparse commercial and service uses. The Madera Ranchos area is a low density, middle income community with approximately 8,000 residents. It is surrounded by agricultural uses and the community's main features are the Madera Ranchos Liberty High School --located in the north-west corner of Road 36 and Avenue 12-- and sparse commercial and service uses along the avenue including a small outdated shopping center. In its present conditions, the two-mile stretch of Avenue 12 crossing the community -the object of our projects- is an unsafe and unattractive thoroughfare for both pedestrians and motorists, and development along it is of low aesthetical quality, very limited in terms of servicing the community, and unattractive to passers-by. There are no recreational opportunities and few places to meet, the community of Madera Ranchos is not memorable, and sense of place is practically nonexistent.

The complete reports for this project are available at: http://www.madera-county.com/rma/planningdept/planning_dept_docs.html

The study area is adjacent to the northwestern boundary of the City of Fresno and serves as a de facto expansion area for the Fresno metropolitan area. There are several projects in the pipeline for new residential and commercial developments both to the east and west of Madera Ranchos, many of which adjoin Avenue 12. The additional vehicle trips associated with these developments are anticipated to severely impact traffic flow on Avenue 12 and on the community. There were no viable alternatives to the private automobile at the time of this study. Thus the need was identified to address transportation alternatives in the plan.

Community Visioning

The community visioning process for Avenue 12 started in Summer 2009. Throughout this process, Cal Poly Visioning Team (Assistant Professor Umut Toker and graduate student assistant Adriana Neal) worked with Madera County Planning Department, their consultants and community members, facilitating the development of a vision plan for the project area. Following a participatory approach, an initial leadership meeting and three community workshops were held.

The process started with a leadership meeting attended by the County Planning staff, Supervisor Frank Bigelow and eleven community members. The objective of this meeting was to gather an understanding of fundamental issues, and ask the participants to contact other community members to encourage participation in the upcoming events. By participating in a “wish poem / have poem” exercise, participants identified their “wishes” for the future of the project area, as well as those features of the project area they were satisfied with. At the end of the meeting the ideas were summarized and participants were asked to invite their fellow community members to attend the forthcoming community workshops.

The following three community workshops were held at the Liberty High School. In Community Workshop 1, participants reviewed the findings from the “wish poem / have poem” exercise of the leadership meeting, and further developed ideas. They also provided information on major destinations in the project area, where they live, and where they most frequently cross Avenue 12. The first workshop ended with a discussion of desired land uses, densities, traffic calming techniques, lighting options and vegetation options for Avenue 12.

The ideas that were generated on Community Workshop 1 informed Cal Poly Visioning Team’s design of four participatory exercises that were used in the Community Workshops 1 and 2. Two exercises focused on land use, density and traffic calming solutions for Avenue 12. The Cal Poly visioning team prepared two posters: one displayed land use and density options and the other displayed traffic calming options; both posters also showed advantages and disadvantages of all options. Participants in both community workshops were asked to prioritize these options by placing dot stickers on their preferences. The next exercise was composed of a survey of vegetation and lighting options for Avenue 12. Cal Poly visioning team developed a survey listing (a) lighting and (b) native vegetation options for the project area, as well as their water consumption implications. Using these instruments, participants in Community Workshops 2 and 3 were able to prioritize their preferences for lighting, trees and shrubs.

Figure 1
Photos taken by residents for the exercise “Things I dislike about Avenue 12...”





Figure 2
Residents participating in one of the community workshops, designing their “ideal Avenue 12”.

Both community workshop finished with a “design your ideal Avenue 12” exercise. After discussing and identifying their land use, density, traffic calming, lighting and vegetation preferences, participants in both workshops were provided with a blank parcel map of the project area, a legend of land use / circulation options, and a set of color markers / pens. Community members then formed discussion teams of five to eight participants and developed plans of their envisioned “ideal” Avenue 12. In both community workshops, following this exercise, participant teams were asked to share their ideas with the group. After these three community workshops the same set of exercises was utilized by the County Planning staff and their consultants in a workshop at a local high school, which was attended by students.

Following the workshops, the Cal Poly visioning team was able to develop a vision plan for the project area. The Madera Ranchos Vision Plan was made available to the public through the County’s planning office as well as their website. It provided a basis for the upcoming phases of the project by summarizing community members’ needs and wishes. The plan document is composed of five main sections: project area inventory and analysis, history of the Madera Ranchos Community and project area, a summary of the participatory process, community participation outcomes, and the vision for Avenue 12. The vision section of the document discusses findings about land use, density, circulation, traffic calming, street lighting and vegetation preferences of community members.

The Transportation Plan

The Avenue 12 Transportation Plan’s major purpose was to outline the most favorable ways to divert the increased traffic around the Madera Ranchos community while still inviting travelers to stop and use the commercial areas. The construction of an express bypass by Caltrans and its impacts on the community formed the foundation for the plan. Results from an extensive analysis of the existing and future transportation system were combined with community visions and the urban design plan to derive a set of recommendations for future transportation improvements along the Avenue 12 corridor and in the general study area. Specific elements addressed in the plan include: a) area-wide roadway improvements; b) Avenue 12 specific roadway improvements; c) public transportation service to and from the Ranchos; d) bicycling and walking facilities in the Madera Ranchos area. The following are the major recommendations contained in the Avenue 12 Corridor Transportation Plan.

Improvements necessary for the area-wide transportation system to function properly under future build conditions include widening on the major east-west routes (Avenue 9, Avenue 12, Avenue 15 and SR 145) (Figure 3). Hand in hand with these improvements will be the need to extend and widen selected north-south roads (Road 33½, Road 36, and Road 39 ½) to create a grid network of major arteries that would enable alternative route choices and distribution of trips for an efficient circulation system. With the construction of the new express bypass, there will be possible geometric configurations of the connecting points with Avenue 12. Depending on funding and growth in traffic, it is conceivable that these connecting points may take on each of these configurations at various points in time. The first is a standard signalized intersection. The second, which is an alternative to the first as an initial treatment, is a roundabout. The third, an upgrade to the first two, is an interchange as in Figure 4.



The circulation plan includes several traffic control measures and redesign features that would foster safety and increase walkability through the Ranchos. Traffic calming along the commercial segment of Avenue 12 through town is to be accomplished with a series of traffic signals or roundabouts and raised crosswalks at strategic locations. Avenue 12's existing right-of-way permits the implementation of new street sections and a network of bicycle paths and lanes to serve the need for both short-distance transportation and recreation. Recommendations in the circulation plan include: two-way and one-way separated bicycle paths shared with pedestrians, on-street bicycle lanes, pedestrian trails, wide sidewalks, bulb-outs, street parking, and pedestrian crossings including raised cross-walks at selected locations (Figure 5).

Concerning public transportation, the plan recommends two forms of fixed route transit for the Madera Rancho and area residents. One is an upgrade of the limited existing fixed route service that would operate as local service with detours through the Rancho neighborhoods. The other is express fixed-route service, which should be inserted on the half hour during the morning and afternoon commute periods. Dial-a-ride transit is recommended to supplement fixed-route transit.

The Urban Design Plan

The Avenue 12 Corridor Redesign Plan resulted from a two-quarter long process which started in the spring with instructors Vicente del Rio and Vangeli Evangelopoulo--from the CRP and Landscape Architecture departments respectively--offering a joint urban design studio for students from both departments with the assistance of MCRP graduate student Anthony Kiet. In the summer, the instructors worked on systematizing the studio products, coordinating with the transportation plan, refinishing drawings, editing the text, and putting the final report together.

The Urban Design Joint Studio had 27 students from planning and 12 from landscape architecture. It was an excellent opportunity for an interdisciplinary hands-on project experience within a pedagogical context that replicated real professional life as close as possible: a client, a contract, and a specific product to deliver. The students experienced a

Figure 3
Madera Rancho, the two-mile stretch of Avenue 12 object of our plans, the location of the future by-pass and of the eastern connection point (see Figure 4).

Figure 4
The third alternative configuration for the connection between Avenue 12 and the by-pass.

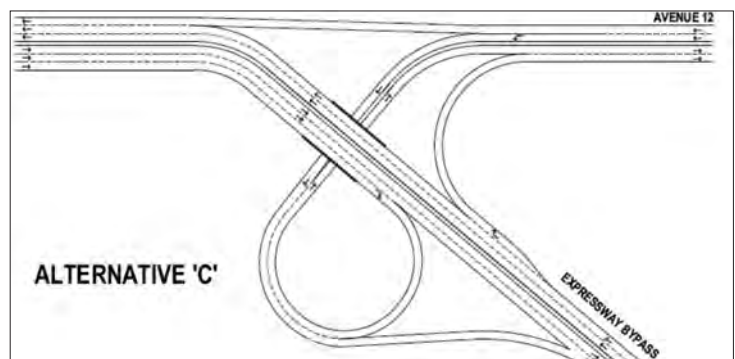




Figure 5
Proposed intersection
looking east along
Avenue 12. Example of
integration between the
transportation and urban
design plans.

design process that started with meeting with the client and understanding the problem, to presenting their proposals to the community in Madera Ranchos.

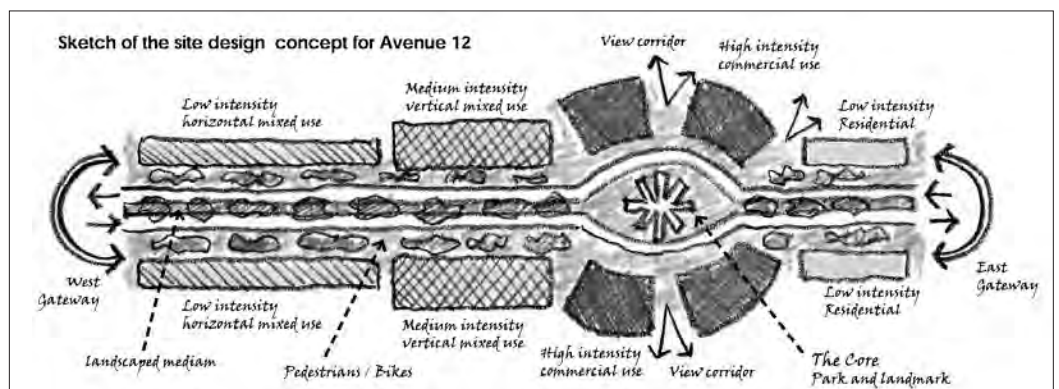
In the project's first phase, the students, divided into small interdisciplinary teams, studied the problem, the background information, and performed a site analysis that included a field visit and a series of observations and studies of Avenue 12 and its surroundings. Students used a pre-defined survey form to record existing development conditions, landscaping and

building features, land uses, maintenance and height of constructions. This data allowed the team to perform a figure-ground type of analysis of the existing development and spatial relationships through a comparison of maps showing building footprints, public and private spaces, vacant lots, and space dedicated to parking and driveways. During the field visit, the students also used a methodology recently developed for the Robert Wood Johnson Foundation to assess five urban design qualities along Avenue 12 (imageability, enclosure, human scale, transparency, and complexity).¹ These qualities are believed to encourage active living, walkability, and sense of place, and our project site scored very low on all of them. The same set of urban design qualities was later adopted by the class as a desired set of general goals and helped orient the design process.

¹ Ewing, E. et al. 2006.
*Identifying and Measuring
Urban Design Qualities
Related to Walkability.*
*Journal of Physical
Activity and Health* 3,
Suppl. 1, S223-S240.

Final inventory and analysis maps as well as a list of constraints and opportunities for development were put together by the students, who made a presentation to the Madera County Planning Department staff and their consultant (RBF). Based on the site analysis, the feedback from the presentation, and inspired by the study of more than thirty case studies, the students developed a concept plan for the Avenue 12 Corridor re-design. In a charrette-like environment, the studio was divided into two large groups who worked in defining two design visions, two sets of goals based on the Urban Design Qualities, two sets of objectives, and a number of design ideas. Two concepts for the redesign of the Avenue 12 Corridor resulted from this process, with short and long term implications, which the class presented to the Madera County Planning Department staff, the consultant (RBF), and other Cal Poly faculty. The comments from the audience helped the class combine both alternatives into one final concept adopted for further development (Figure 6). The final concept included: a) gateways at the

Figure 5
The concept plan for the
Avenue 12 Corridor,
showing the major uses
and the "almond"
roundabout and park
generating a central place.



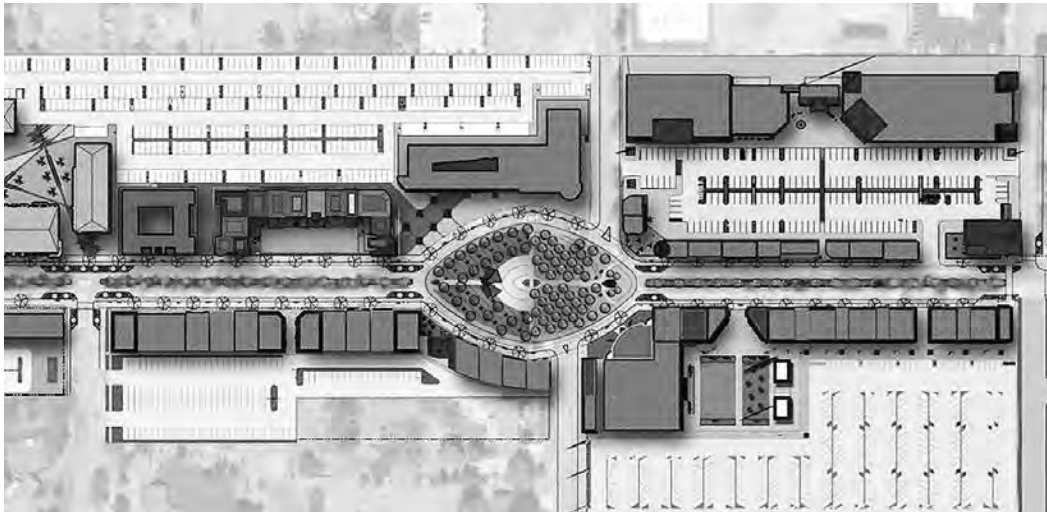


Figure 6
The central commercial core and the Almond Park. Various teams of students designed the park and the projects around it (f.i. Figure 8). Final computer rendering by V. Evangelopoulos. See also front cover illustration.

Madera Ranchos east and west entrances defined by monumentation and by the type/shape of development at the corners; b) concentration of residential use along the east and west portions of Avenue 12; c) generation of a strong commercial core with mixed-uses and a concentration of interesting places to socialize and recreate; d) provision of a central design element as a strong statement and placemaker; e) redesign of the corridor's right-of-way and provision of quality streetscaping in order to enhance safety and encourage walking and biking.

For the last design phase, the class was again subdivided into smaller interdisciplinary teams which developed specific design solutions for Avenue 12 and for the development of the private lots along it. The final Avenue 12 Corridor Redesign Plan envisions a total of 379,557 sq ft of new residential development; 231,047 sq ft of commercial; 50,494 sq ft of offices; 727,155 sq ft of parks; and 53,200 sq ft of public uses. The redesign proposal for the Avenue 12 itself included: a) skinning the corridor to one lane in each direction, providing curb parking and bulb-outs at the corners; b) landscaping, tree planting, seating areas, shared pedestrian and bicycle lanes as well as Class 2 bicycle lanes; wider sidewalks with bulb-outs, bike lanes, raised crossings, tree planting, vegetated medians, etc (see Figure 4); b) the design of a major urban design element, a large roundabout containing the Almond Plaza that will act as an identity giver, a central place for the community, and a traffic calming solution (Figure 6); c) ideas for a signage system and for street furniture and landscaping in public spaces; d) ideas for the development of six different sectors along the Avenue 12 Corridor.

The six design sectors along Avenue 12 (from west to east) are: West Gateway, Suburban Residential West, Community Parks, Commercial, Suburban Residential East, and East Gateway. In the West Gateway, a roundabout with a central monument marks the intersection of Road 36 and Avenue 12, and the two corner lots feature the Community Library with a park and a deli/eatery (Figure 7). The Suburban Residential West Design Sector concentrates single-family residential use, a system of pocket parks, and a few mixed-use as live-work units. In this sector, there is a shared pedestrian-bike path along the north side of Avenue 12 and a pedestrian path along the south side. A gateway at the avenue leads to a proposed 37-acre Community Park with recreational and sports facilities, community gardens, picnic areas, a community center, public restrooms, and a retention pool. A system of pedestrian and bike paths connects the park to the irrigation canal, running along it and looping around Madera Ranchos. The Commercial Core features more intense development with retail, office, department stores, a grocery store, a bank, a movie theatre, a hotel, intensive mixed uses and apartments, a fire station and a post office and a series of small public parks. In this sector, buildings are closer to the lot

fronts to enhance walkability and pedestrian connectivity with land uses (Figure 8). Along the the Commercial Core, Avenue 12 features a vegetated median separating eastbound from westbound vehicular traffic, and Class 1 bike lanes running on north and south sides between the curb parking and the sidewalk proper.

The Suburban Residential East Design Sector is located between the Commercial Core and the canal. The plan keeps the existing single-family housing on the north side of Avenue 12 since it is well consolidated and provides a good transition between Madera Ranchos and the surrounding agricultural land. On the south side, the existing orange grove is partially developed into a residential planned-unit development. Finally, the East Gateway Design Sector consists of several design features that provides the community with another recreational facility, including a lake, and monumentation that will make the community entrance from the east very distinct.

The final report also includes an assessment of the project proposals through the same criteria and methods used to study existing development during the Site Analysis phase. Firstly, the students evaluated their own proposals through the lenses of the same five urban design qualities that define walkability and sense of place, and filled in the same score sheet they used previously. They also produced another series of figure-ground maps and measured the resulting areas. The comparisons between the new maps and scores to those obtained for the existing development, indicate that the Avenue 12 Corridor Redesign Plan will be able to promote a better quality of life in Madera Ranchos and to enhance the community's identity, walkability, safety, aesthetics, and sense of place.



Figure 7

The west-gateway at the intersection of Avenue 12 with Road 36, opposite the Liberty High School. Students E. Gorman, W. Griffith and B. Reyes.



Figure 8

The south-west corner site across the Almond Park features a three-screen movie theatre and retail. Students M. Abselsated, B. Emerzian and K. Kabow.