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N O R T H E R N N E W S

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Shadow Work

COOL DOWN THE HOT LOT— WARM IT UP PASSIVELY

ABAG Planners Tell How to Design Solar Sensitive Subdivisions

Laws of Sun and State

Each year tens of thousands of housing units are built in subdivisions around the country. The vast majority of these units fail to take advantage of solar heating and natural cooling opportunities. Failure to use the natural advantages of a site wastes energy and in California, is against the law!

Residential solar systems can make significant contributions to our nation's energy supply and can become an accepted part of the mainstream housing construction industry. Solar technology is proven and widely available. Up until now most solar homes have been custom-designed for individual home buyers. However, the majority of new homes constructed today are "production homes." Land development companies annually produce thousands of these homes in conventional subdivisions and typically use about five basic models repeatedly.

Linda Morse and Steven Goldman, both planners with the Association of Bay Area Governments (ABAG) and authors of a newly published paper, "Designing and Evaluating A Solar Subdivision," are promoting the use of natural home heating and cooling through the introduction of special subdivision design and review techniques. A "solar subdivision" is one that uses some form of active and/or passive heating and cooling and may include a mix of dwelling unit types including single family detached homes and townhouse units.

To take advantage of natural heating, for example, Morse and Goldman argue that *access to the sun* is critical. If a subdivision is laid out without thought to solar access—a common occurrence—it may be impossible for even the best designer to develop functional solar homes there.

New State Laws

In California recent legislative actions call upon cities and counties to play a crucial role in promoting solar energy in new residential development. The Solar Rights Act of 1978 requires that tentative subdivision maps provide, to the extent feasible, opportunities for future passive or natural heating and cooling. The Act also gives local governments the authority to deny permits to developers who fail to meet these new requirements. A recent opinion from the State Attorney General affirmed this new local government power.

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ORLICK - NELSON - LAMPHIER ELECTED

Steven Orlick was elected Northern Section Director, with Peter Nelson and Joan Lamphier confirmed as Director Pro-Tem and Secretary/Treasurer respectively.

Approximately 10% of the entire Section membership voted, double the percentage of members voting during last year's board elections.

The new board takes office July 1.

Professional Development Seminar

HOW PUBLIC AGENCIES MANAGE LARGE-SCALE LAND DEVELOPMENT PROJECTS

The management of large-scale public land development projects may be obscure to planners who have not had the opportunity to participate in the full process. Project managers/planners working in San Francisco, Oakland, Emeryville, and Concord will describe how the development processes are organized and managed.

This seminar will be held July 20, 1983, from 7:00 to 9:00 p.m. at the offices of Whisler Patri, 590 Folsom Street (at 2nd Street), San Francisco. Take MUNI #15, 27, or 42.

Panelists include: Donald Black, Principal, Donald Black and Associates; Bernard Choden, Senior Urban Economic Analyst, Office of Economic Development and Employment, City of Oakland; Pat O'Keefe, Administrative Assistant, Concord Redevelopment Agency; and Helen Sause, Project Manager, San Francisco Redevelopment Agency.

Wine and cheese will be served before and after the seminar. To register, please call Mr. Chi-Hsin Shao at 558-5423 to make a reservation, and send your \$5/person check (made payable to APA) to 2447 32nd Avenue, San Francisco, 94116.

A follow-up seminar based on the developers' point of view will be held in September. Watch for future announcement.

Job applications now being accepted at the City of Gilroy for an assistant planner position. For further details, contact the Personnel Department, City of Gilroy, 7351 Rosanna Street, Gilroy, California, 95020. Closing date for applications is July 15, 1983.

* * *

The State Planning Conference will be held in Oakland next year and will be hosted by Northern Section. Norman Lind, Director of Planning for the City of Oakland has been appointed conference committee chairperson, with Gordon Jacobi and Ann Moore serving as co-chairs. Members interested in submitting ideas and/or participating on the committee should contact Mr. Jacobi at 839-9740.

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COASTAL ZONE MANAGEMENT 1983

When 600 planners interested in coastal management met in San Diego during the first week of June, they turned their attention toward the ocean. The National Coastal Zone Conference program reflected increasing activity in the oceans and concern among planners with the management of proliferating and sometimes conflicting ocean uses.

The 300 papers and presentations covered a wide range of subjects including fisheries, port and harbor development, wetland protection and restoration, public access to the coast, and others.

Probably the single most-discussed topic was **off-shore oil development**, especially with California as the Conference host and Nation's leader in coastal management practices. Featured speakers from the State on this subject included: Gordon Duffy, Secretary for Environmental Affairs (California); Michael Fischer, Executive Director of the California Coastal Commission; and Claire Dedrick, Executive Director of the State Lands Commission.

At least 32 of the papers in the published *Proceedings* of the Conference deal specifically with California, which makes the three volume, 2900 page document of potential interest to local planners. For those who did not attend the Conference, copies can be obtained by writing to the Publications Department, American Society of Civil Engineers, 345 East 47th Street, New York, New York, 10017, to the attention of Shiela Menaker. The price is \$180.

Jane Rogers

While this law provides a statewide mandate, it does not provide standards for designing solar subdivisions. Morse and Goldman have devised a set of guidelines to show local governments and developers how to design solar subdivisions which may be used either as design criteria as the site is being laid out or as review criteria when a tentative site plan is submitted to a city or county for approval.

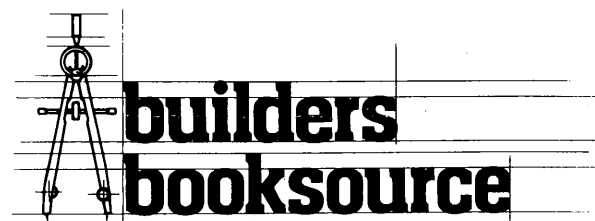
Design Guidelines

The guidelines focus on the problem of providing solar access by the proper location of buildings with respect to the sun and existing features of the building site. Several stress the importance of working with vegetation and earth forms to screen buildings and outdoor living areas from winter winds and/or to channel summer breezes so as to enhance natural ventilation of buildings and outdoor living areas.

Morse and Goldman also list a collection of simple analysis tools which can be used on topographic maps and subdivision plans to analyze shadow patterns, a vital element of solar subdivision design. These include tables of solar altitudes and azimuths, protractors, desk top calculators and the "solar access overlay"—a graphic device for determining the shadows cast by objects of various heights at each hour of the day.

The authors caution that "new nationwide trends emerging in the home building industry" may conflict with solar sensitive subdivision design. Small lot size, the increased popularity of townhouses and duplexes and high density development are among those cited. The challenge for public planners is to work with subdivision developers to translate principles of good solar design into long term consumer benefits, thus providing the developer with some distinct marketing advantages. Ultimately, the success of the solar subdivision will be determined at the marketplace.

Excerpt from "Designing and Evaluating A Solar Subdivision" by Linda Morse and Steve Goldman of ABAG. For further information, future publications and/or workshops, contact the authors at 841-9730.



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