In the Works

Bulletin: 1985 Joint Professional Development Conference

Russell Berusch

The 1985 Joint North Carolina/Virginia Chapter American Planning Association Professional Development Conference was held October 3-5 at the Hotel Roanoke in Roanoke, Virginia. The conference was workshop-oriented and focused on site plan review, performance zoning, streamlining development review and development dispute negotiations.

Mr. Cofer of John I. Cofer and Associates from Richmond began the discussion by emphasizing the importance of a quality site plan review. He pointed out that the Virginia legislation currently offers little direction on reviewing a site plan, and that a site plan that is reviewed strictly at the staff level would help minimize ambiguity and improve relations between the public agency and the developer. A site plan review ordinance or accompanying guide should be adequately detailed so as to tell the designer what to address. In this way, points of mutual conflict can be avoided. To this end, a site plan review ordinance should include four statements: 1) the type of uses desired; 2) the scope and purpose of the review, including specific requirements of design, landscape preservation, parking and circulation; 3) the person who makes the final decisions; and 4) the procedures for review and site plan revisions.

Mr. Cofer also articulated some of the problems associated with site plan review procedures. Although a detailed plan is desirable, many reviews are over-concerned with unimportant specifics. Haggling over the "shape of a manhole cover" or the difference between "a Pine tree or a Magnolia," he noted, is counterproductive. Lengthy delays between plan submittal and response or conflicts between requirements also serve to retard and frustrate the development process.

Terry Harrington, Land Development Coordinator of Blacksburg, Virginia, brought the perspective of a staff member in a small agency to the conference. Mr. Harrington outlined three process principles of site plan review. First, zoning codes should provide standards for the review. The zoning administrator should be given the authority to waive, within limits, trivial or irrelevant requirements. Secondly, the agency must work consistently and frequently with the developer throughout the process in order to achieve both the community's and the developer's objectives. Finally, the development process must be made as time and cost efficient as possible for both the developer and the agency's staff. To link these principles, Mr. Harrington suggested the use of a checklist that should be distributed to all parties participating in the development process. Importance should also be placed on making on-site visits both before the site plan review and during construction.

Rex Todd, Director of Community Development of Garner, North Carolina and John Horne, Director of Planning of Albermarle County, Virginia led this conference's section on performance zoning. Mr. Todd proposed that individually tailored performance standards of two types, environmental and industrial, may be more effective than traditional specification standards in positively influencing the community's development. Industrial performance standards are concerned with the performance of man's use of the land. Environmental performance standards attempt to preserve or maintain a performance of the land already there. A number of steps lay at the heart of adopting performance zoning techniques. Some of these include:

- the identification and location on a series of map overlays of those natural and man-made systems which are present in the planning area.
- the identification and listing of the functions being performed by each system.
- a priority ranking of systems which serves to exclude from further study those sytems or functions of systems deemed not important enough to the community, so that a community can focus its planning efforts on those issues identified as critical, saving issues of lesser priority for later study.

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- Systems analysis is the most technical step of the process and consequently will require considerable literature research and assistance from experts knowledgeable of the various systems. The analysis must be directed toward answering the following questions relative to the measurement of the system's performance: what is the system's present level of use; what is the system's ultimate carrying capacity; and what is the remaining capacity of the system?
- Performance standards should be developed to set the goals and guidelines for each system and sub-system's functions. Once all performance standards are developed they should be incorporated into an ordinance format. The jurisdiction may wish to address directly the issue of whether zones are to be used, what type of zones, and what other requirements or restrictions inside each zone, besides performance standards, are desirable.
- The application of performance standards of the industrial and environmental type are not necessarily a replacement for existing zoning controls, but may be administered as supplementary regulations to the basic controls. At the very least, performance standards provide a platform from which to rethink and embellish upon traditional zoning practices.

Mr. John Horne talked about the use of residential performance standards by individual communities to encourage quality housing development. Some of the ideas behind residential performance standards are to eliminate the need for rezoning and the provision of flexibility in development and housing design. Essentially, residential performance standards make sure that developments satisfy the general performance requirements before construction approval is granted. In satisfying these requirements four basic characteristics should be encouraged: efficient land use patterns; reduced housing and public facility costs; energy efficient housing and housing patterns; and environmentally sensitive land use.

Mr. Horne also outlined the ideas behind the granting of density bonuses. If a developer surpasses certain requirements regarding environmental, open-space, recreation and energy conservation guidelines, he may be awarded a bonus of a fifteen percent increase in gross density. For example, a developer may be awarded a density bonus for erecting a play ground or a bike path.

The final session of the conference on resolving development disputes through mediation and negotiation was workshop oriented and was led by David Godschalk, a professor at the University of North Carolina at Chapel Hill, and by Bruce Dotson, Assistant Director of the Institute for Environmental Negotiation. Participants learned how to use the ideas discussed about development review as a forum for resolving the conflicts between the city and the developer in day-to-day interaction.

Strategies for Low Level Radioactive Waste Management

Frank M. Moore

Frank M. Moore received his law degree from the University of Georgia in 1984 and is currently working with the Conservation Foundation of North Carolina on the Hazardous Waste Public Participation Project.

Low-level radioactive waste is produced by several different categories of generators and consists of a broad range of materials. Nuclear power plants, industry, medical facilities, academic and government research institutions all contribute to the waste stream. In North Carolina there are some thirty low-level radioactive waste (LLRW) generators, including the nuclear reactor facilities of Carolina Power & Light at Southport, Duke Power at Cornelius, and General Electric at Wilmington, N.C. Research facilities at Duke, East Carolina, UNC-Chapel Hill, and Wake Forest also produce LLRW, or radwaste. Compared to other nuclear waste material, LLRW contains relatively small amounts of radioactivity, yet it constitutes the largest physical mass of nuclear waste generated.

Currently, commerical LLRW is shipped from the generating facility to one of the three remaining burial sites at Barnwell, South Carolina; Beatty, Nevada; and Hanford, Washington. Three other sites, Maxey Flats, Kentucky; West Valley, New York; and Sheffield, Illinois have been closed due to water infiltration and radionuclide migration. These sites are now monitored and maintained at

high costs to the host states. The nuclear power industry is the largest producer of radwaste, and opponents of the current waste management system argue that the industry should be held to a higher standard of responsibility.

The management of low-level radwaste has always been problematic. Burial technology has been proven ineffective in containing radioactivity. Traditional safeguards involved lining the trench and covering the stacked contents with clay, forming a domed top. The conventional wisdom was that the clay would prevent water intrusion, and the base would retard leaching sufficiently to prevent the escape of any radioactive material. But leakage has occurred, with results particularly poor in areas of high rainfall and delicate soil structures. Even when lined and covered with plastic, satisfactory isolation has not been achieved.

Federal regulations vicariously define low-level radioactive waste as any radioactive waste not defined to be high-level waste. This creates a broad category, and includes some very radioactive material, both in terms of radiation penetration and half-lives. These materials can be diluted to acceptable levels by the generators prior to shipment, but over time their concentration builds up at the burial site, making the amount of radiation far beyond that anticipated for radioactive waste disposal. It is much more appropriate to categorize waste according to its physical, chemical and nuclear properties so that effective nuclear technology and management procedures can be applied, including waste segregation, volume reduction, and above-ground storage.

A lack of adequate disposal space for radwaste is another growing problem. The capacity of the three operable burial facilities will soon be exhausted. South Carolina has refused to expand the capacity of its Barnwell site and has scheduled its closure by December 1, 1992. This becomes particularly critical as the nuclear power industry matures and older facilities reach their useful lives and are decommissioned, introducing massive amounts of contaminated material into the waste stream.

To address some of these problems, Congress passed the Low-level Radioactive Waste Policy Act of 1980. The legislation is based on the concept that each state should be responsible for the management of its own waste, and that LLRW can be most safely and efficiently managed on a regional basis. The act authorizes the states to form interstate compacts, with each compact acting as a waste management

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region that is able to exclude all waste not produced within its boundaries and to determine which member states will provide needed facilities. Instead of the remaining three waste burial sites, there could be as many as nine, and no one state would be required to carry the burden of hosting a facility for a large part of the country. The Low-Level Radioactive Waste Policy Act of 1980 may help to solve the problems of inequities and future waste facility capacity, but it fails to address the issues of effective waste isolation and industry accountability.

Several environmental groups, including the Conservation Council of North Carolina, the Conservation Foundation of North Carolina, and the Sierra Club, advocate the implementation of alternative management strategies. It is particularly appropriate that this issue receives increased attention as the regional compact commissions begin to determine the fate of their member states. The power to consider and implement new solutions to the problems of LLRW management is within the authority of the compact commissions. Unfortunately, due to the economic costs of change, industry pressures exist to preserve the traditional strategy of centralized facilities and waste integration.

A commercial incineration facility has been proposed for location in Bladen County, North Carolina. If licensed, it would be operated by U.S. Ecology, Inc., a firm whose nuclear experience includes the unsuccessful management of the dump sites at Maxey Flats and Sheffield, and the present management of the Hanford, Washington facility. According to its license application, the facility would have the capacity to receive and process all the projected waste volume for the entire Southeast for the life of the facility, giving it a potential

monopoly on low-level waste management in the region. There are also concerns about radioactive and hazardous emissions from the incinerator's stack that have not been fully addressed. The residents of surrounding counties and municipalities have organized United Concerned Citizens for Ecology, Inc. and the Coalition Against Radioactive Incineration to challenge the facility.

Opponents of the incinerator have petitioned North Carolina's Department of Human Resources to issue a declaratory ruling on the question of whether U.S. Ecology Inc. would be required to apply for a permit to handle hazardous waste, under the authority of the Resource Conservation and Recovery Act (RCRA), as well as a license to handle radioactive waste. A precedent has already been established by the 1984 case of *LEAF v. Hodel*, where the U.S. Department of Energy (DOE) was held subject to the permit requirements of RCRA. DOE has since proposed regulations affecting all DOE facilities handling mixed wastes, and the Environmental Protection Agency, the agency authorized to implement RCRA, is expected to propose its own rules soon. The question left unanswered, however, is the applicability of RCRA to commercial LLRW facilities, such as the proposed Bladen County incinerator, and it appears likely that North Carolina will play a major role in determining the outcome of this issue.

An appropriate LLRW management strategy could be based on two simple concepts: pollution prevention by effective isolation and industry accountability. Effective isolation can be defined as waste containment for the duration of its hazardous life. Material with a short hazardous life can be stored in temporary containment facilities before being disposed of as ordinary waste. Waste with longer half-lives should be isolated for perhaps hundreds of years in easily monitored, above-ground facilities. Such technology is already established at the Sequoyah facility in northeast Alabama. The problem of waste volume could be solved through the use of shredder-compactors. The overall scheme would keep as much radioactivity as possible on the site of production and place the responsibility of management on the generating facility. Effective monitoring techniques would be established at the facility, and an overall waste management plan would be developed specific to each facility's need according to the type and amount of waste produced.

Since North Carolina may be host to a new LLRW management facility in Bladen County, it should be seeking to bring into the region more effective technologies and more responsible strategies for the management of low-level radioactive waste.

This article is an extension of a White Paper on Low Level Radioactive Waste Management at the Conservation Council of North Carolina. Copies are available at cost. The opinions in the article are solely those of the author.

Planning Curriculum: Meeting the Challenge

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The Department of City and Regional Planning of the University of North Carolina at Chapel Hill has recently introduced two new teaching initiatives in Real Estate Development and Planning for Developing Countries. The following are brief descriptions of the purpose and design of the new curricula.

Planning in Developing Areas

In the fall semester, 1985, the Department of City and Regional Planning at the University of North Carolina at Chapel Hill established a new Masters level specialization in Planning in Developing Areas. The new curriculum is designed for both students from developing countries and North American students interested in pursuing careers in international planning and policy analysis.

The Department of City and Regional Planning has a long history of training students for planning work in developing countries, both at the Masters and PhD. level. Over fifty alumni of the Department are currently employed in international positions with organizations such as the World Bank, the United States Agency for International Development, consulting firms specializing in developing areas, and foreign governments. Foreign graduates of the Department have often returned to their home

countries to assume positions of major responsibility and prominence in the planning field.

The curriculum of the new international planning program includes five courses designed to introduce students to the special problems of planning in Third World countries, and to train students in development planning methods. Special emphasis is placed on developing skills in population planning, project evaluation and public investment theory, environmental and resource management in Third World countries, and microcomputer applications in development planning.

Some of the most difficult planning problems facing developing countries are related to improving the material living standards of their populations. For example, expertise in land use, housing, urban development, and water resources planning is urgently needed. Moreover, many developing countries face population growth rates and internal movement of population that result in hyperurbanization. Planners tackling such problems will certainly benefit from an understanding of the methods and experience of the planning profession in developed countries. Therefore, in addition to the Department's core requirements, students in the new masters program are encouraged to complete a second area of specialization in a field such as economic development or infrastructure planning in order to complement their studies in international planning.

Well-trained planners for Third World countries are in many ways better able to address the particular planning problems of their countries than are expatriot planners. An understanding of the peculiar dynamics operating within the society and economy of a given country, and of the needs and constraints which it faces serves as an advantage to one who has lived in that country and shares its culture. The new program in international planning will place special emphasis on training students from developing countries to fill the urgent need for well-qualified native planners.

It is also expected that many North American planning students will take advantage of the unique opportunities at the Department to study the problem of planning in developing countries. New opportunities are opening up for individuals skilled in microcomputer applications, urban financial management, infrastructure finance and planning, and population planning. The Department's new program will target such growth areas.

The new program will also serve as a focus for students of different disciplines on the UNC-CH campus who are interested in development issues. A wide range of courses on international topics are currently offered on the UNC-CH campus in departments such as sociology, geography, anthropology, economics, political science, the School of Public Health and the Institute of Latin American Studies. The Department's program in Planning in Developing Areas will serve as a focused central curriculum for these students.

In addition to course offerings at UNC-CH, the resources of the Triangle area offer students in the new masters program a unique set of research and employment opportunities in the field of international planning. Students from developing countries in particular may benefit from first-hand observation of the Research Triangle Park, one of the world's most successful planned research and education complexes.

Planning and Real Estate Development

For many years real estate has been taught as a separate discipline as well as a specialization within undergraduate and graduate programs in schools of business, law and design. With few notable exceptions, these programs have tended to focus on the legal, financial and other technical dimensions of real estate rather than on the development process. Recently, the Department of City and Regional Planning at the University of North Carolina at Chapel Hill has created an area of specialization in real estate development as part of its planning curriculum.

Although it is integrated into the Master of Regional Planning and Masters of Business Administration programs, the real estate specialization at the University of North Carolina has its own identity and is neither subordinate to land use planning nor considered to be a subarea of finance. It is truly a joint program. Of the eight key courses in the specialization, four are taught in the planning department, two in the business school, and two are cross-listed in both programs.

The four-course required sequence in real estate accounts for about a quarter of the student's total two year program. After these requirements have been met, students still have ample opportunity to obtain additional preparation in finance and investment analysis, site planning and design, land use planning, local public finance, housing, law, marketing or economic development.

Bolin Forest in Chapel Hill, NC

All students in the specialization receive in-depth, graduate-level training in topics essential to successful real estate practice. First year planning students learn the history of U.S. planning, the form and growth dynamics of cities and regions, economic analysis concerned with efficiency/equity tradeoffs and market interventions, microcomputer-based training in information management, multivariate statistics, discounting and decision analysis, and the methods of land use, economic development, or infrastructure planning. Real Estate Investment and Affordable Housing, offered in the Spring semester, relies heavily on the case method and applies discounted cash flow, rate of return analysis and other investment analysis techniques to public-private development programs, regulatory and national housing policy issues.

First year business students begin their training with courses in financial, operational, marketing and human resource management, general theory and techniques in integrative management, accounting, quantitative methods, and economics.

In the Fall semester of their second year, both planning and business students take courses in Real Property Decisions and Housing and Public Policy which provide overviews of the real estate field. Real Property Decisions emphasizes the developer's perspective on urban economics, valuation and taxation. The second part of the course focuses on deal structuring, syndication, and portfolio management. Housing and Public Policy emphasizes the public interest issues in real estate development; the structure and dynamics of local housing and real estate markets; local efforts to manage growth and to equitably allocate the public costs of growth between current and future generations; and, the mutual benefits of public-private cooperation.

Students round out their Fall programs by taking Development Dispute Resolution which focuses on the use of negotiation, bargaining and mediation techniques for resolving or avoiding development dispute; Real Estate Lending, which focuses on secondary mortgage markets or marketing research; or Project and Site Design, which trains non-designers in the fundamentals of site analysis, design and physical planning.

In the Spring semester, planning and business students take two capstone courses—the Development Process and Real Estate, Market and Feasibility. The former deals with the coordination, project timing and phasing, and risk mitigation of the development process. The latter is a synthesis course requiring fieldwork for the application of relevant theory and techniques to a real world project. Joint teams of planning and business students conduct the full range of market, financial, public policy, legal/regulatory, design, and construction studies to prove the feasibility of real estate projects they believe should be developed. The projects span the full range from an office park to the rehabilitation of a historic mill for use as a retail center.

Students also have the opportunity to pursue course work directly relevant to their career interests. For example, planning, students can take courses in public finance and investment, land use planning, economic and community development, historic preservation or urban revitalization. Business students can specialize in finance, marketing or property management.

The Department of City and Regional Planning of the University of North Carolina at Chapel Hill strives to extend the intellectual boundaries of the traditional real estate curriculum by bringing it within the framework of a public interest-oriented city planning program. □