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Collection/Office of Origin: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: Correspondence Files

OA/ID Number: 62021
Folder ID Number: 62021-002

Folder Title:
Executive Office of the President: White House Memoranda (1) [5 of 5] [1991]

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Withdrawal/Redaction Sheet

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Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01. Report	Annual Report on International Activities in Science and Technology for Fiscal Year 1990 [part 4] (62 pp.)	5/91	(b)(1)	

Collection:

Record Group: Bush Presidential Records

Office: Science and Technology Policy, Office of (OSTP)

Series: Bromley, D. Allan, Files

Subseries: Correspondence Files

WHORM Cat.:

File Location: Executive Office of the President: White House Memoranda (1) [5 of 5] [1991]

Date Closed:	2/24/2010	OA/ID Number:	62021-002
FOIA/SYS Case #:	2005-0336-F	Appeal Case #:	
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AR Disposition:		MR Disposition:	
AR Disposition Date:		MR Disposition Date:	

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

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(b)(1) National security classified information [(b)(1) of the FOIA]
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(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
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(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

"CORRESPONDENCE TRACKING"

TYPE: WHITE HOUSE MEMO DOCUMENT NUMBER: 9123652
ORIGINATOR: 02 STATUS C DIRECTORATE STATUS

FROM: BRADY, Phillip D.: Assistant to the President and Staff
Secretary

TO: DR. D.A. BROMLEY

DATE OF
CORRESPONDENCE: 05/07/91

SUBJECT: ARTICLE FOR TRILOGY MAGAZINE: "A NEW
ENVIRONMENTALISM" BY PRESIDENT GEORGE BUSH.

DIRECTORATE STAFF
ASSIGNED: ENVIRONMENT ASSIGNED:

ACTION STAFF
REQUIRED: FOR DAB'S SIGNATURE ACTION:

SENDER'S DUE DATE: 05/08/91
OSTP DUE DATE: 05/08/91 STAFF DUE DATE
DATE COMPLETED: 05/08/91 DATE COMPLETED/DEPT:

COPIES TO: D. Allan Bromley
Ken Yale

WHITE HOUSE TRACKING #: CONTACT PERSON: TONY SNOW
PHONE: EXT: X2930
REMARKS:

OSTP RECEIVED: 05/07/91 FILE: P-EOP-WHITE HOUSE MEMO
DEPT RECEIVED:

3652

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF SCIENCE AND TECHNOLOGY POLICY
WASHINGTON, D.C. 20506

Date: May 8, 1991

TO: Tony Snow

FROM: KENNETH P. YALE *Ky*
Chief of Staff

Attached are our comments. Please call if you have any questions.

We would like to review the final document, with the changes that were recommended, to ensure that specific issues in which we are involved are correctly related.

Thank you.

Ken

Amy - files, pls.

VICKIE call re: Qs

Document No. _____

WHITE HOUSE STAFFING MEMORANDUM

DATE: 5/7/91 ACTION/CONCURRENCE/COMMENT DUE BY: 4:00PM, WEDNESDAY, MAY
ARTICLE FOR TRILOGY MAGAZINE: "A NEW ENVIRONMENTALISM"
BY PRESIDENT GEORGE BUSH
SUBJECT: _____

	ACTION FYI			ACTION FYI	
VICE PRESIDENT	☐	☒	MCCLURE	☒	☐
SUNUNU	☐	☒	PETERSMEYER	☒	☐
SCOWCROFT	☒	☐	PORTER	☒	☐
DARMAN	☒	☐	ROGICH	☒	☐
BRADY	☐	☒	SMITH	☒	☐
BROMLEY	☒	☐	UNTERMAYER	☐	☐
CARD	☐	☒	ROGERS	☐	☒
DEMAREST	☒	☐	DELAND	☐	☒
FITZWATER	☐	☒	SNOW	☐	☒
GRAY	☒	☐	_____	☐	☐
HOLIDAY	☒	☐	_____	☐	☐

REMARKS:

Please provide comments on the attached article directly to Tony Snow, x2930, Rm. 122, with a copy to this office NO LATER THAN 4:00PM, WEDNESDAY, MAY 8. Thank you.

RESPONSE:

PHILLIP D. BRADY
Assistant to the President
and Staff Secretary
Ext. 2702

91 MAY -7 PM 12:12

"A NEW ENVIRONMENTALISM"
BY PRESIDENT GEORGE BUSH
FOR TRILOGY MAGAZINE

Note: Trilogy also plans to run a side-bar
profile of CEO Chairman Michael Deland.

America is experiencing a remarkable upsurge in the environmental ethic. Working together with Congress, state and local governments, and the private sector, we've made environmental advances that will make for measurable improvement in the quality of life for every American. At the same time, urgent environmental challenges demand action.

Landmarks in Environmental Protection

In two years' time, we've made great progress in protecting our environment. Our accomplishments begin with landmark legislation expanding the original Clean Air Act to address acid rain, urban smog and other pollutants. Our strengthened commitment to the environment is evident in other ways as well: in our crackdown on environmental lawbreakers; in the passage of the most environmentally-sensitive farm legislation ever; the expansion of our national park system, forest and wildlife refuges; and finally, in an international pact to protect the Earth's ozone layer.

Here at home, we launched "America the Beautiful," a massive reforestation program that emphasizes volunteerism and public-private partnerships. This initiative recognizes that trees are more than sources of shade; reforestation is a critical part of our renewable resources. Each tree acts to counter carbon dioxide buildup, and provides an environmental legacy for future

generations. The ambitious goal of "America the Beautiful" is to plant one billion trees each year from now to the year 2000.

Our progress, like the policies we've put in place, reflects a growing recognition of the need to preserve and rebuild functioning ecosystems throughout the world. We have outlined a national strategy -- an action plan combining the energies and resources of government, industry and individuals -- to make continued progress on environmental quality. This national environmental strategy is based upon six principles:

- * Incentives that harness the power and ingenuity of the marketplace in service of the environment;
- * Stewardship of our natural resources;
- * Creative partnerships, combining the resources of all levels of government, industry and citizen volunteers;
- * Cooperative international efforts to address global problems;
- * Pollution prevention; and
- * Firm and fair enforcement of environmental laws.

Agenda for the Environment

Each of these strategic principles shapes our agenda for the year ahead. I've identified five issues where action is imperative. We must:

- * Amend the Clean Water Act, to improve the quality of waters, coasts, and wetlands -- and to incorporate innovative, market-based features;
- * Create a Cabinet-level Department of the Environment;
- * Implement a national energy strategy that provides increased energy efficiency, increased use of alternative fuels, and promotes responsible development of U.S. energy resources;
- * Expand access to America's rich natural heritage of recreation areas and parks and wildlife refuges; and

- * Forge new international agreements to protect the global climate, safeguard the world's forests and biological diversity, and strengthen the economies and environments of emerging democratic nations.

Environmental stewardship is more than a matter of government action alone. This belief is behind two initiatives that I'm convinced will tap the vast resources of the private sector and of each American citizen to make it their business to improve the environment.

President's Commission on Environmental Quality

First, I have established a blue-ribbon panel of leaders from the environmental, conservation, business, academic and foundation community. This group, the **President's Commission on Environmental Quality**, will help promote innovative, voluntary private sector initiatives. Led by Council of Environmental Quality Chairman Michael Deland, the Commission will spearhead new ways of thinking to achieve a sound ecology and a strong economy.

Commission members will serve as an important link between government and the diverse interests they represent, and I challenge them to develop an action agenda for environmental improvement.

President's Environment and Conservation Challenge Awards

Second, I have created a new Presidential awards program to identify outstanding achievements in the conservation and environmental areas. In the fall of 1991, I intend to honor a select group of individuals and organizations who best exemplify the cooperative, innovative spirit which I believe offers our greatest hope for permanent environmental progress.

The President's Challenge Awards will be given in four areas: 1) Partnership; 2) Environmental Quality Management; 3) Innovation; and 4) Education and Communication. Up to three awards will be given in each category.

Partnership awards will recognize cooperative environmental efforts among, for example, local groups, governments and businesses.

Environmental Quality Management awards will go to pioneering organizations that have integrated environmental concern into overall management practices. This award will demonstrate that high quality, competitive goods and services are compatible with environmental responsibility.

Innovation awards will honor individuals and teams who demonstrate exceptional vision and creativity in the development of products, programs, technologies or services that are environmentally sensitive and economically practical.

Finally, our Education and Communications awards will recognize individuals or organizations that raise public environmental literacy and contribute to the development of an environmental ethic.

Setting Our Goals

Americans today understand that protecting the environment is our responsibility; that the way we live and work effects the world around us. We also realize that economic and environmental concerns are not elements of a zero sum game. We have the opportunity to pursue environmental quality hand in hand with sound economic growth.

This is →
trouble.
Our env'l ethic
is dynamic.

Our environmental ethic is as old as America ~~itself~~ -- part of the inheritance we enjoy, and the legacy we leave to others.

had
has matured to consider the environment as a legacy, as a balance of interests, and as a foundation for the security and well-being of our children.

In earlier times, Americans such as Theodore Roosevelt, John Muir and Gifford Pinchot pioneered efforts to protect our lands and our wildlife. Safeguarding the environment is more than a program or policy. It is a moral issue -- something we owe our families and future generations.

Fortunately, we can expect that creativity, vision and hard work -- qualities that have always been central to the American character -- will help us leave business-as-usual behind, and build better solutions to the environmental challenges of our age.

#

The time is right for action. I have challenged my Cabinet to find new and innovative ways to mesh environmental and economic goals in federal policymaking, and expect this Commission to do the same in the private sector.

"CORRESPONDENCE TRACKING"

TYPE: WHITE HOUSE MEMO

DOCUMENT NUMBER: 9121324

FROM: BRADY, Phillip D.: WHITE HOUSE

TO: DR. BROMLEY

DATE OF
CORRESPONDENCE: 05/06/91

SUBJECT: FY '90 ANNUAL REPORT OF THE NATIONAL INSTITUTE OF
BUILDING SCIENCES.

ASSIGNED TO: INDUSTRIAL

ACTION REQUIRED: REVIEW/COMMENT

SENDER'S DUE DATE: 05/16/91

OSTP DUE DATE: 05/16/91

DATE COMPLETED: 5/13/91

COPIES TO: D. Allan Bromley
Damar Hawkins
PHYSICAL SCIENCES

WHITE HOUSE TRACKING #:

CONTACT PERSON:

REMARKS:

*Good report. No objections.
WOP 5/13/91*

DATE RECEIVED: 05/06/91

FILE: WHITE HOUSE MEMO

921324

Document No. 235556SS

WHITE HOUSE STAFFING MEMORANDUM

DATE: 5/6/91 ACTION/CONCURRENCE/COMMENT DUE BY: 5/16/91

SUBJECT: FY '90 ANNUAL REPORT OF THE NATIONAL INSTITUTE OF BUILDING SCIENCES

	ACTION FYI			ACTION FYI	
VICE PRESIDENT	☐	☐	MCCLURE	☐	☐
SUNUNU	☐	☐	PETERSMEYER	☐	☐
SCOWCROFT	☐	☐	PORTER	☒	☐
DARMAN	☒	☐	ROGICH	☐	☐
BRADY	☐	☒	SMITH	☐	☐
BROMLEY	☒	☐	UNTERMAYER	☐	☐
CARD	☐	☐	CLERK	☐	☒
DEMAREST	☐	☐		☐	☐
FITZWATER	☐	☐		☐	☐
GRAY	☐	☐		☐	☐
HOLIDAY	☒	☐		☐	☐

REMARKS:

Please provide comments/recommendations on the attached directly to this office by THURSDAY, MAY 16, 1991. Thank you.

PLEASE RETURN REPORT TO THIS OFFICE.

RESPONSE:

PHILLIP D. BRADY
Assistant to the President
and Staff Secretary
Ext. 2702

- D R A F T -

TO THE CONGRESS OF THE UNITED STATES:

In accordance with the requirements of section 809 of the Housing and Community Development Act of 1974, as amended (12 U.S.C. 1701j-1(j)), I transmit herewith the fourteenth annual Report of the National Institute of Building Sciences for fiscal year 1990.

THE WHITE HOUSE,

- D R A F T -

This draft transmittal message to the Congress prepared by the Executive Clerk's office.

TO THE CONGRESS OF THE UNITED STATES:

In accordance with the requirements of section 809 of the Housing and Community Development Act of 1974 (12 U.S.C. 1701j-2(i)), I transmit herewith the thirteenth annual Report of of the National Institute of Building Sciences for 1989.

Cy Burk

THE WHITE HOUSE,

August 3, 1990.

— COPY OF LAST TRANSMITTAL —

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LETTER TO THE PRESIDENT

October 1, 1990

Dear Mr. President:

The National Institute of Building Sciences (NIBS) is pleased to present herewith its 1990 Annual Report in accordance with its authorizing legislation, Public Law 93-383, Section 809.

Mr. President, 1990 has been a year of notable change in politics, economics, and social issues both internationally and at home. As a result, the ways we address global as well as national technological and regulatory issues is constantly changing.

What has been most startling is the speed in which change now occurs.

Similarly, the frame of reference in which the world's housing and building community operates is changing more rapidly than ever. The products, the systems, the strategies, and the regulatory environment evolve almost daily. But, with these changes many of the fundamental needs and primary opportunities remain.

The Institute recognizes the importance of being able to stay abreast of the issues. Over the past 18 months NIBS has streamlined the way it identifies and addresses issues. By doing so, NIBS will significantly increase its value to the nation and the building community.

During 1990, for example, the Institute was able to move quickly on some relatively new issues that will have enormous impact on the building community. In February we co-hosted a major national symposium with McGraw-Hill's Engineering News-Record and the National Institute of Standards and Technology magazine to identify the probable impact of the unification of the 12 European nations in 1992 on this country's standards, testing, certification, design and construction practices. In the Fall, a well attended symposium on the Americans with Disabilities Act (ADA) outlined for the first time how the ADA will impact the nation's housing and building community. From this symposium we provided valuable input from participating industry leaders to the Architectural and Transportation Barriers Compliance Board (ATBCB) and the U.S. Department of Justice.

In the Fall, our annual membership meeting identified specific issues on which the building community should focus. Issues found to be the most critical included the need for a clear, comprehensive and coordinated national housing policy; international harmonization of standards and product approval;

and sound indoor air quality criteria. These are just a few of the identified issues that are elaborated within this report.

In the realm of on-going programs, NIBS' Construction Criteria Base continues to be hailed by design professionals worldwide and federal construction agencies as the model source of information for the building community. With now more than 1,100 subscribers, this state-of-the-art computer accessible CD-ROM system provides more than 800,000 pages of up-to-date federal and private construction criteria for use by federal agencies and the private sector. This virtually unmatched library of technical industry information, which is updated quarterly, is currently distributed on four optical discs that can be efficiently and easily accessed through a personal computer.

In 1990, NIBS, through the efforts of some of the nation's leading experts on land use and housing published a handbook that introduces a wide range of innovative approaches designed to streamline the land-use regulations process and reduce the expense resulting from needlessly burdensome land-use regulations.

Through a privately financed effort, NIBS completed its development of a smoke toxicity test method and submitted it to voluntary standards organizations for their development into a national standard which will help to reduce fatalities in building fires. More than 100 of the nation's leading experts on smoke toxicity participated in this Institute effort designed to resolve this complex and highly controversial issue.

On the environmental front, our work in the areas of lead-based paint in housing, radon mitigation, and in managing asbestos in buildings continues to garner much public interest and support. In these highly controversial areas, NIBS plans to continue its research and development of technical criteria to assist the nation's effort to develop the best and most cost-effective solutions. In addition, work on several new sections to the best selling NIBS asbestos guide specification neared completion.

NIBS' role as the catalyst for discussions and meetings on a number of highly technical projects continues to attract industry-wide support. For example, our Building Thermal Envelope Coordinating Council conducted a workshop on heat flux in building envelopes. And our widely acclaimed Building Seismic Safety Council has numerous volunteers nationwide working diligently on the 1991 update to the National Earthquake Hazard Reduction Program Seismic Provisions. The membership of NIBS' Wood Protection Council in 1990 worked towards revising and expanding its Guidelines for Protection of Wood Against Decay and Termite Attack.

All these efforts were undertaken by the National Institute of Building Sciences because leaders in industry and government

recognized that no other national organization could so quickly and effectively galvanize experts and leaders in the necessary fields of science, industry and government to address these major national concerns.

NIBS makes every effort to ensure that it serves as a neutral forum in which tough issues can be addressed fairly and evenhandedly. The Institute's unique capacity to bring public and private forces together in these common efforts has served the public in a most efficient and cost-effective way. Thousands of man-hours have been contributed by volunteers from both public and private organizations.

Mr. President, clearly the decade of the 1990s has opened as one of great challenge to the nation. And while we struggle to restrengthen our financial footings, the technical sectors of the American building and housing community must continue to explore new horizons. As you can see in the pages that follow, we at NIBS continue to undertake challenges that we alone, because of our unique charter and make-up, are able to address in the comprehensive ways needed to assure success.

Because the areas of our expertise are so critical to maintaining the quality of life and assuring the adequate health and safety of occupants of the nation's built environment, we ask you and your Administration to increase the utilization of the Institute's capabilities by federal agencies. This is consistent with the authorizing legislation and our goal to become self-supporting. We seek to benefit the nation through our balanced role as a bridge between the governmental and private sectors. Modest federal funding would enable us to maintain our autonomous role in the building community.

We look forward to welcoming forthcoming Presidentially appointed members to the Institute's board of directors and strengthening our connections to the Administration. We look to the Administration and the Congress to recognize the importance and value of maintaining a strong, independent, non-partisan, organization to assist the nation's largest business sector effectively address major national concerns.

Respectfully,

William B. King
Chairman

David A. Harris, AIA
President

ABOUT THE INSTITUTE

Nearly 20 years ago the U.S. Congress conceived of an organization that could serve as an interface between government and the private sector and which could bring together all participants in the building process to improve the building regulatory environment and facilitate the introduction of new and existing products and technology into the building process.

As part of the Housing and Community Development Act of 1974, Congress authorized "to be established... an authoritative, non-profit, non-governmental instrument to be known as the National Institute of Building Sciences."

Over the past few years, information dissemination, such as in the areas of construction criteria, seismic safety provisions, land use, asbestos management and abatement to name but a few, has become a major part of NIBS yearly output. As a result, the Institute's Board of Direction in 1990 rewrote the Institute's mission statement as follows:

The mission of the National Institute of Building Sciences is to serve the public interest by promoting a more rational regulatory environment for the building community by facilitating the introduction of new and innovative technology, and disseminating nationally-recognized technical information.

Because NIBS is not a government agency it must work to maintain complete objectivity in the manner in which projects are conducted and financed. The Institute's unique balance of its funding is important so no single group can dominate or hold undue influence over NIBS and its work and assures the maintenance and free exchange of information and views between private and public sectors.

Initially supported primarily by Congressionally appropriated funds, the Institute is now financed predominately by corporate and organizational contributions, contracts, memberships, subscriptions to its Construction Criteria Base, and publications sales. Congressional appropriations are invested in project activities identified by NIBS' Board of Directors as critical to the public interest. This modest Federal support is essential to maintaining an independent and unbiased base of support.

Midway through its second decade, the Institute has become a most effective public-private partnership serving as a forum for resolution of significant problems and potential problems by bringing together representatives from the building community at large and from all appropriate private trade, professional, and

labor organizations; private and public standards, code and testing bodies; public regulatory agencies; and consumer groups.

NIBS is organized as a nongovernmental, nonprofit 501(c)3 corporation under the direction of a 21-member board of directors. Fifteen of the board members are elected and six are appointed by the President of the United States with the advice and consent of the U.S. Senate.

The Institute also serves as the umbrella organization for a number of other bodies organized to address certain specific building science-related issues. The Building Seismic Safety Council (BSSC) addresses problems related to the development of improved seismic safety provisions, the Wood Protection Council (WPC) brings together organizations and individuals interested in addressing topics pertaining to the protection of wood structures from decay and wood destroying organisms, and the Building Thermal Envelope Coordinating Council (BTECC) promotes cooperation between those factions of the public and private sectors that conduct research pertaining to the development of energy efficient building envelope systems. The activities of these Councils are described elsewhere in this report.

BOARD OF DIRECTORS

The Institute's board of directors consists of 21 members. Six to represent the public interest are appointed by the President of the United States with the advice and consent of the U.S. Senate. The remaining 15 members are elected from the nation's building community and include consumer and public interest representatives as well as representatives of industry. A majority of the NIBS board reflect public interests.

In 1990, William B. King, director of government relations for Armstrong World Industries, served as chairman. Robert C. Gibson, P.E., president and chief executive officer of Clark, Nexsen, Owen, Barbieri & Gibson, P.C., was vice chairman. Carol B. Meeks, Ph.D., professor in the College of Family and Consumer Sciences at the University of Georgia, was secretary. And Robert W. Lisle, chairman and chief executive officer of Farnham Corporation, was treasurer.

Wayne P. Ellis, nationally recognized standards expert, former chairman of the board of ASTM, and long time member and leader of Institute projects was elected to fill the remaining two years of a three year board position vacated by the resignation of an industry sector member.

Vacant board positions need to be filled by the Administration in order to continue appropriate communications between the Institute and the Administration and assure the balance between public and private interests deemed necessary by the authorizing legislation.

CONSULTATIVE COUNCIL

NIBS' Consultative Council is a 36-member elected representative body. Through its deliberations and the work of its various committees the Council serves as a principal resource for NIBS' Board of Directors. This is particularly true as it provides advice and executes consensus projects.

The Council members are elected for three-year terms by the NIBS membership-at-large.

The membership of the Council is representative of the various interests of the building community. Each year, 12 members are elected to the Council, one from each of 12 membership classifications. The classifications are based on a member's primary trade, occupational or business affiliation, and have been established to ensure that the interests of the building community are represented in the make-up of the Consultative Council and for guidance in determining the balance and representation on consensus project committees.

In addition to serving as a communication link between the building community and the Board of Directors, the Council is responsible for overseeing consensus projects. The Council has developed and maintains rules and procedures for the conduct of consensus projects. The rules are made available to all members of consensus project committees to ensure that everyone involved in a project understands the basic rules on voting eligibility, balloting procedures, minority opinions, and the procedure for achieving consensus.

The Council carries out its many functions through its committee structure. The principal committees are the Steering Committee, Operations Committee, and Planning Committee.

The Steering Committee acts on behalf of the Council between the regularly scheduled meetings of the full Council.

The Planning Committee identifies and analyzes emerging issues for consideration by the Council before making recommendations to the Institute's Board, and participates in the activities of the Board's Planning Committee.

The Operations Committee is responsible for the conduct of consensus projects assigned by the Board of Directors to the Consultative Council. The Operations Committee ensures that the composition of the consensus project committees are balanced and representative of public and consumer industry interests; and that the meetings, balloting, and requests for submission of minority opinions are carried out in accordance with the Consultative Council rules and procedures.

During the past year the Operations Committee also refined the uniform format for consensus project reports which was

recommended by the Council and adopted by the Board of Directors.

The Consultative Council shares the responsibility with the Board of Directors for the conduct of NIBS' Annual Meeting.

The only operating state chapter of NIBS--the Ohio Consultative Council--held several meetings during 1990 to address local issues. The well-attended annual meeting, Nov. 19 in Columbus, Ohio, included discussions and presentations on energy conservation, fire requirement of the Ohio Basic Building Code, living with radon and lead in buildings and residential sprinklers. Kerry Illes, a practicing architect, served as president of the Ohio council in 1990.

MEMBERSHIP

During the 1990 fiscal period membership increased approximately nine percent from 655 to 717. Membership in the Institute is open to all interested parties as provided in the enabling legislation. Individuals are eligible to become either public interest or industry sector members. Organizations who wish to support the Institute in achieving its objectives may become sustaining or contributing organizations. Sustaining and contributing organizations may designate up to five individuals to be Institute members. The membership classifications are defined as follows:

Institute Member-Public Interest. Open to any individual employed by, or otherwise affiliated with government, consumer organizations, non-profit research and educational organizations, or the media; and architects, professional engineers or other design professionals who are not employees of nor have a financial interest in corporate organizations that produce, sell, distribute or install building products or materials; and individuals retired from public service or industry.

Institute Member-Industry. Open to any individual not qualifying for membership in the "public interest " category and including persons employed by or otherwise associated with construction, labor organizations, home builders, building or construction contractors; producers, distributors or manufacturers of building products; trade and professional associations; organizations engaged in real estate, finance or research and testing of building products; and code and standards organizations.

Sustaining Organization (Public or Industry). Any corporation, trade or professional association, government agency, non-profit organization, individual or others desiring to provide additional support for and participation with the Institute to achieve the goals and objectives established by U.S. Congress (Public-Law 93-383). Sustaining organizations may designate up to five individuals from their organization to be Institute Members.

NIBS 12TH ANNUAL MEETING
IDENTIFIES CRITICAL BUILDING COMMUNITY ISSUES

For the first time in the 13 year history of NIBS, the Institute's membership devoted an entire annual meeting to single out those issues of greatest importance to the building community.

"This is the beginning of a process to identify the issues that will shape our future," Robert Gibson, P.E., chairman of the annual meeting committee, told those who attended the Nov. 7-8, 1990 meeting in Washington, D.C.

Prior to the 1990 meeting, members of NIBS had been surveyed to determine which areas pose the most challenge to the building community. Based on the findings of this survey, those attending the meeting participated in roundtable discussions on the following topic areas: the environment, competitiveness, housing and residential infrastructure.

Each roundtable discussion identified issues of concern in one of the three subject areas and presented them at the general session. The following priority issues and general recommendations were identified by the attendees and are being reviewed and considered by the Consultative Council's Planning Committee:

1. STANDARDS AND PRODUCT APPROVAL: The relaxation of trade barriers and an expanding global economy are creating pressure for the development and use of universally acceptable building standards, codes, and product approval systems.
2. CONSTRUCTION QUALITY: Quality in the constructed product, like other products, is essential to maintain competitiveness. Quality control in construction is complicated because of the complexity of the construction process; and the differing responsibilities of designers, contractors, subcontractors, product/equipment manufacturers, fabricators, and suppliers who are normally assembled to produce a single constructed product and are then disbanded.
3. BUSINESS ENVIRONMENT FOR COMPETITIVENESS: Government policy and the U.S. product and professional liability legal system should be positive factors and not disincentives to U.S. competitiveness. Leadership is needed in the formulation and adoption of policies leading to capital formation, and the imposition of a burdensome professional and product liability system needs to be eased.
4. TECHNOLOGY TO IMPROVE COMPETITION: More new technologies need to be developed and assimilated more quickly into the building process.

With the exception of building product/equipment manufacturers and material suppliers, most technological advancements come from outside the construction industry. The R&D commitments of design and construction firms is very minimal. Similarly, construction-related R&D and academia and government is limited by comparison to other developed countries.

5. QUALITY OF THE INDOOR ENVIRONMENT: The building community should provide leadership in determining environmental policy related to the indoor environment.

At this time there is confusion over terms and little consensus on methodologies used in making policy decisions related to the indoor environment. A suggested first step in establishing such policy is to define objectives, terms, and evaluation criteria used to measure success.

6. SOCIETAL/PUBLIC ENVIRONMENTAL POLICY: The building community should be a major player in determining public environmental policy.

Presently there is semantic confusion over terms and little consensus on methodologies used in making environmental policy decisions. The first step in establishing such policy is to define the objectives to be achieved, terms, and evaluation criteria which will be used to measure success. This data could be incorporated into the national environmental debate upon which public policy decisions might be based.

7. A NATIONAL HOUSING PRIORITY/PLAN: The U.S. needs a defined and coordinated approach to providing housing for its people.

Affordable housing has reached a critical stage. The ranks of the homeless are increasing. There is a shortage of affordable rental units for low-income people and the percentage of income paid for rent by this group is increasing thus exacerbating the possibilities for homelessness. The federal government which traditionally has provided low-income housing has had limited involvement since the early 1980s. The small amount of low-income housing that is presently built is done with one-time combinations of public and private financing. Buying a house has gotten beyond the reach of middle-income first time home buyers and move up buyers are now experiencing difficulty affording their next residence.

8. FINANCING INFRASTRUCTURE: Financing infrastructure for new development has become more complicated and cost prohibitive in recent years and new financing initiatives are needed. In many parts of the country the cost of new

infrastructure is no longer borne by the community at large but by developers who pass on the costs to home buyers. Since the mid-1970s communities across the country have attempted to limit growth through a number of means including charging impact fees for installation of new infrastructure and/or requiring developers to install infrastructure if building permits are to be granted. In addition, the costs of installing infrastructure have increased.

9. HOUSING EDUCATION: State-of-the-art information on methods for producing affordable housing, financing housing and using model building codes must be put into practice by the legislators, builders and others.

Various means for creating affordable housing, financing housing and building housing to the latest codes are well documented in printed literature. However, states, counties and municipalities operate housing and regulatory programs which do not take advantage of documented workable practices. Builders still over-build houses according to local practices rather than the latest technology as represented in model codes. Public reaction to innovative means of regulating housing reflect a lack of understanding of the issues which have created housing affordability problems.

BUILDING SEISMIC SAFETY COUNCIL

The 1988 Armenian and the 1989 Loma Prieta earthquakes have shown that even a moderately severe earthquake is one of nature's most terrifying and devastating events. Collapsing buildings and falling debris can take tens of thousands of lives and earthquake damage can cripple emergency response and recovery efforts. Many of these immediate cost estimates don't include long term losses to business and individuals.

The United States has not suffered a severe earthquake (8.0 and above) for many decades, but the potential for incredible disruption, damage, and death exists since more than 70 million Americans in 44 states are constantly at risk from moderate to severe earthquakes. Of special concern are the central and eastern parts of the nation for it is here that several of the largest U.S. earthquakes occurred in the past.

Since the most recent of these severe earthquakes occurred over 100 years ago, most assume that they won't occur again. Therefore, little has been done in these areas to design and construct earthquake-resistant buildings and other facilities essential to modern life such as bridges and other transportation system components, oil and gas pipelines, electric power and communication systems, and water and sewer systems.

NIBS' Building Seismic Safety Council (BSSC) is a unique instrument for dealing with the complex regulatory environment and the related technical, social, and economic issues involved in developing and promulgating nationally applicable building earthquake hazard mitigation regulatory provisions that can mitigate the threat to life safety and property from seismic hazard across the United States.

BSSC was established in 1979, under the auspices of NIBS, as an independent, voluntary membership body to bring together all of the needed expertise and all the relevant public and private interests to resolve issues related to the seismic safety of buildings and to overcome jurisdictional problems by providing authoritative guidance and assistance backed by broad consensus.

BSSC's 54 member organizations represent the full spectrum of building community interests such as planning, design, construction, regulation, and utilization of buildings.

The nationally applicable building earthquake provisions on which BSSC has been working directly support the National Earthquake Hazards Reduction Program. Known as the NEHRP Recommended Provisions for the Development of Seismic Regulations for New Buildings, the Provisions are beginning to achieve the degree of national recognition and use that NIBS hoped for since the Council's inception more than a decade ago. Many who have been involved in the Council's activities believe that its efforts have contributed measurably to an environment that fosters

improved seismic safety for all Americans and increased awareness of the seismic hazard in areas at risk east of the Rocky Mountains. During the past year, the Council has been involved in a variety of initiatives and activities that will enhance this position in the year to come.

The 1991 Edition of the NEHRP Recommended Provisions will be the third edition of this landmark document, which is the centerpiece of the BSSC Program on Improved Seismic Safety Provisions and which is intended to serve as an up-to-date source document for use by all interested members of the building community. The effort to develop the 1991 Edition (Phase IV of the BSSC program) was initiated in late 1988, even before the 1988 Edition had been printed and distributed. To date, almost 150 experts have been involved in the update effort (all serve without compensation) and participate in or more of the following subcommittees:

- Seismic Hazard Mapping
- Structural Design Criteria and Analysis
- Foundations
- Cast-in-Place/Precast Concrete Structures
- Masonry Structures
- Steel Structures
- Wood Structures
- Mechanical-Electrical Systems and Building Equipment and Architectural Elements
- Quality Assurance
- Interface with Codes and Standards
- Composite Structures

The BSSC activities to stimulate widespread use of the NEHRP Recommended Provisions (Phase V of the BSSC program) are based on a 1986 plan developed by the BSSC in recognition of the fact that stimulating change in the U.S. building industry is difficult because of the tremendous diversity within and among the many segments of the industry, the very local nature of building activities and regulation, and the differences in the dynamics of the many thousands of communities across the nation. With respect to encouraging widespread use of the Provisions, the plan acknowledged that the difficulty would be even greater because:

- Many communities in areas with potentially high seismic

risk, especially those east of the Rocky Mountains, are unaware of the seismic hazard;

- Communities often are threatened by a number of natural hazards, some of which are far more apparent or frequent in occurrence than earthquakes, and little attention has been given to developing multi-hazard mitigation programs; and
- Local jurisdictions in some areas more or less compete with one another for economic development and any increase in requirements that might put them at a disadvantage will not be considered unless the need is blatantly obvious or sufficient pressure is brought to bear by the public.

On the other hand, the plan also recognized that awareness of seismic hazards and of the NEHRP Recommended Provisions was growing and would continue to grow as a result of continuing BSSC activities such as the planned triennial updating of the Provisions. Thus, those involved in directing the project concluded that while spectacular short-term results could not be expected, considerable progress could be made during a relatively short period and that the momentum of the effort would increase with each "success" achieved.

In developing the plan, the BSSC examined the existing building stock and current trends in construction as well as the role and composition of a large number of building community organizations. This assessment led to the BSSC conclusion that the Federal Emergency Management Agency (FEMA) should concentrate its available resources on:

- Convincing the builders and developers of apartment buildings, elementary and secondary schools, health care facilities, hotels and motels, and office buildings of the need for and benefits of using the Provisions in the design and construction of their facilities;
- Convincing the investors in and insurers of such buildings of the need for and benefits of using the Provisions in the design and construction of the buildings they finance and insure;
- Educating design professionals and code officials at the local level in application of the Provisions;
- Stimulating inclusion of the Provisions in the model codes and appropriate national standards;
- Increasing the general level of seismic hazard awareness among public officials and key public interest and citizens groups; and
- Providing a central focus for information development and dissemination and assistance and referral services.

In an effort to achieve many of these goals, BSSC during 1990 initiated a series of training seminars on earthquake risk awareness and the availability and application of the Provisions.

BSSC's work in 1990 was made possible with funding from FEMA and thousands of volunteer hours on the part of many of the nation's leading experts on seismic design and construction.

BUILDING THERMAL ENVELOPE COORDINATING COUNCIL (BTECC)

Although the membership of the Building Thermal Envelope Coordinating Council (BTECC) remains small, it has consistently been one of the most active of NIBS.

The Council was formed in 1982, when NIBS was asked to create a broadly representative group to coordinate the nation's research and development efforts to increase the energy efficient performance of the building envelope. Those who structured BTECC's organization, noted that all of the nation's residential and non-residential structures consume approximately one-third of the total energy used by the U.S. and costs well in excess of \$100 billion per year. And while there has been a lack of coordination of the various researching bodies to assure those efforts are coordinated and complimentary, BTECC has already had some impact on rectifying this situation.

Periodic workshops, symposiums and membership meetings have generally been very well attended since the Council's creation.

In 1990, BTECC held three, three-day meetings. At each of the three meeting, members of the six BTECC Research Coordinating Committees (RCCs) met during the first day, with the second day devoted to formal presentations on timely issues, and day three reserved for a roundtable meeting of the Council's 21-member Board of Direction.

A workshop held in Hanover, New Hampshire, explored the applications and interpretation of results of in-situ heat flux measurements in buildings.

BTECC members also explored the feasibility of developing a system to track current research and publications on building thermal envelope systems. The results will be released in 1991.

Organized under the auspices of NIBS, with the Institute serving as secretariat, BTECC continues to find new ways to stimulate and coordinate non-proprietary research and technical activities.

The four RCCs through which BTECC members achieve their progress are based on the following subject areas:

- o Building thermal envelope materials;
- o Fenestration - thermal and daylighting;
- o Moisture control in buildings; and
- o Air infiltration and ventilation.

WOOD PROTECTION COUNCIL

In 1983, the Council on the Protection of Buildings from Wood Destroying Organisms (later to become the Wood Protection Council) was formed under the auspices of NIBS. The goal of the Council is to promote the development and use of safe and effective control technologies for the protection of new and existing buildings from damage by decay and wood destroying organisms.

The members are active and dedicated in the pursuit of the Wood Protection Council's goals. During 1990, the WPC's Codes and Standards Committee continued its work to revise and expand its document, Guidelines for Protection of Wood Against Decay and Termite Attack. The WPC also continued its effort to develop guide specifications for procurement of treated wood and for soil treatment. The activities of the WPC have been specifically targeted to:

- o Promote the development and use of sound technical and economic guidelines for active and passive methods for protecting structures including new and existing buildings, and other structures, through the use of current technologies;
- o Improve the education of responsible public officials, building community members, and the public;
- o Improve the dissemination of relevant technical information;
- o Promote effective and current codes, standards, federal specifications and standards, and other technical criteria; and
- o Promote the research and assessment of new types of construction, new control methods, health effects of pesticides, and deactivation procedures for pesticide residues.

The most recent WPC publication available from NIBS is the proceedings from a 1988 workshop entitled "A New Look at Wood Protection." In addition to the many technical presentations, this workshop looked at the impact of recent pesticide regulations which have essentially removed the most effective termiticides from the marketplace.

CONSTRUCTION CRITERIA BASE

When design professionals design federal buildings they now have convenient access to approximately one million pages of guide specs, reference standards, codes, diagrams and design guidelines available through a singular source. In the past, in order for a design firm to maintain a conventional library of current information required a busy full-time librarian and a moderately sized library which usually proved impossible to keep up-to-date.

While computers have greatly improved and streamlined the manner in which this information is used, many of the earliest systems called on the user to "pay as you go." Since the process of designing and specifying can be a time consuming process even with a computer, NIBS worked closely with several federal agencies to develop a system in which the entire library of information is updated every three months and delivered in its entirety to subscribers to this service.

What once required hours of sifting and searching, now takes only minutes or even seconds thanks to NIBS' state-of-the-art computer based Construction Criteria Base (CCB).

Widely considered a major innovation in the building industry, CCB is revolutionizing the distribution, maintenance, and use of design and construction information and thereby resulting in increased productivity, decreased costs, and a better built environment.

Hundreds of trade associations, professional societies, federal, state, and local government agencies, and codes and standard organizations develop, promulgate and maintain thousands of documents required during the design and construction process. With the NIBS system now in place, a growing number of these organizations, more than 115 by the close of 1990, agreed to incorporate their information on the CCB system.

What truly sets CCB apart from other information retrieval systems is that access to quarterly updated information is unlimited and quick, rather than providing access to an on-line system where the user hooks up to a mainframe computer and pays per usage.

CCB grew out of research conducted by NIBS in 1986 and supported by the Department of Defense, the Naval Facilities Engineering Command, and the Army Corps of Engineers who requested NIBS' assistance in seeking an innovative way of distributing current construction criteria to their field offices and private firms providing design and construction services to the agencies.

Today, CCB is a set of four compact discs containing the complete, current, approved texts and graphics of guide

specifications, standards, guidelines, manuals, codes, regulations and other design and construction information from multiple federal sources including NAVFAC, COE, VA, NASA, OSHA, GSA, DOE, and from a wide range of private organizations including model building code organizations, trade associations and professional societies.

CCB uses state-of-the-art optical disc or CD-ROM (Compact Disc-Read Only Memory) technology--based on the same principle as music CDs--to provide immediate, integrated, and comprehensive access to these unprecedented quantities of information. One 4.7-inch compact disc can hold as much information as about 250,000 printed pages, or the equivalent of about 1,650 floppy diskettes.

Through the use of this advanced technology, CCB fosters the true integration of these widely dispersed information data bases through rapid full text search and retrieval and data manipulation. In addition graphics which are contained in the data bases are incorporated in CCB and can be called up to the computer screen for viewing, panning, zooming, and quality printing.

CCB was the first operational CD-ROM system in the construction industry. Launched in 1987 with 97 pilot subscribers, CCB had more than 1,100 annual subscribers in 1990. The objectives for the program are to provide a central source of design and construction criteria needed in the practice of design and construction; provide this source of information at the lowest possible cost in order to increase its dissemination to all sectors of the building community; and to provide state-of-the-art enhancements to increase the usefulness and responsiveness of the information during design and construction.

In 1990, NIBS tripled the amount of criteria on the system, added significantly to the number of federal agencies including information on and using the program, continued the process to add referenced standards from the private sector, included another major model building code system, and added new software features to improve the system's organization and accessibility.

The CCB program responds directly to two major parts of the Institute's authorizing legislation: to facilitate the development of new technology and to disseminate technical criteria to the building community.

LAND-USE GUIDELINES

In 1990, NIBS published the Land-Use Regulations Handbook. It identifies zoning techniques and various land use practices which can increase the effective use of our limited supply of developable land, thereby increasing the amount of affordable housing without compromising the integrity or quality of the environment. This is accomplished by introducing a wide range of innovative approaches designed to streamline the land-use regulatory process and reduce the expense resulting from overly burdensome land-use regulations.

The handbook, which is the result of the concerted efforts of professionals in the building community, also serves as a reference and primer on the topic of land-use for those who are not in the industry, yet would like to learn the basics of land-use.

The handbook represents the most recent product of NIBS Land Use Task force that was formed in 1987. The task force was formed to address the problem of growing regulation and its impact on the rising cost of the land on which residential structures are built. Land costs now represent 25 percent of the total price of a typical single family home in the U.S., while in the late 1950's the land generally constituted only ten percent of the total cost.

Restrictions often prevent the developer from making the most efficient use of the land and they reduce the amount of land available. Opportunities to significantly reduce costs are not possible if development standards exceed accepted norms or if they cannot be modified to meet the needs of specific projects.

In 1987, the task force held fact-finding hearings at seven locations throughout the U.S. The hearings were conducted to identify acceptable standards and regulations which may result in reduced costs and which might be included in guidelines for incorporation into land development codes.

Members of the volunteer task force, consisting of professionals from the fields of planning, architecture and construction, found that considerable amounts of time and money are being lost in private negotiations, planning commission meetings and zoning hearings because current approaches are often outdated, fragmented, and variable.

Criteria and standards are often adopted or continued by communities without consideration of the range of available alternatives and without consideration of the impact of many of the involved costs. The Task Force heard that developers will ask for variances or changes in regulations to accommodate a project but will never use the opportunities (such as cluster developments and zero lot lines) created by the regulations in a second or third project. Often variances are given for specific

projects but are not incorporated into regulations to benefit future use.

The task force oversaw the writing of the handbook, which is designed for use by local planning officials, planning professionals, developers, builders and other interested parties involved in the planning and zoning process. Preparation of the land-use handbook was accomplished through a joint venture between the National Association of Home Builders (NAHB), the American Planning Association (APA) and NIBS. The Urban Land Institute (ULI) also contributed to the effort.

EVALUATING CRITERIA IN THE U.S. COURTS DESIGN GUIDE

In 1990 - 91, the U.S. General Services Administration (GSA) has budgeted for 42 court facility construction projects costing \$1.5 million or more each. At least ten completely new court houses will be built during this period and many more are planned to handle the increasing case load.

Under contract with the Administrative Office of the U.S. Courts (AOUSC), NIBS continued a project that will play a key role in the design and construction of future facilities, costing millions of dollars. Court officials say the results of the NIBS project, to be published in 1991, will affect existing court facilities to be remodeled and new facilities scheduled for construction.

The facilities of the federal court system, including hundreds of courtrooms and auxiliary spaces, are no longer able to keep up with the growing number of legal cases and modern technology that is increasingly becoming a part of our nation's judicial system.

Virtually every court in the country is now in some stage of automating files and records. Many electrical systems are not capable of handling the increased workload. Computer systems, video cameras and TV monitors are increasingly being installed into building systems not designed to house them. Lighting and acoustics in courtrooms and other spaces are often insufficient. Security is frequently found to be inadequate, and courtrooms are often too small to handle the growing number of cases and persons involved with each case.

In 1989, NIBS began a two-year project for the Administrative Office of the U.S. Courts (AOUSC) to evaluate and develop the criteria used by architects and judges in the design of federal courts. The criteria, published in a document called the U.S. Courts Design Guide, is used by the General Services Administration (GSA) in their design and construction program for U.S. Court facilities. Work on criteria development has been performed by a team of consultants under the direction of NIBS and a principal consultant retained to oversee technical aspects of the work.

Throughout 1989, data was gathered by visiting federal courthouses of different sizes, age, types of tenancy and in different geographic locations. Interviews were conducted with judges from the circuit, district and bankruptcy courts, and with personnel from the clerks' offices, probation, pretrial, public defender and other court-related departments. Information on court and departmental organization, operation and personnel was compiled to gain an understanding of functional and spatial requirements.

In 1990 data collected in the previous year was used by the

consultant team to develop a set of criteria for new federal court facilities in each of the following areas: space, furniture and finishes; security; acoustics; mechanical-electrical systems, and automation systems. Criteria has been organized into a guide containing chapters describing: an overview of the U.S. Courts; general guidelines which constitute a judges's guide to criteria; specific criteria guidelines, spatial diagrams and matrix tables of criteria for use by design professionals; and chapters on existing, historic and other types of court facilities, special security considerations and budgetary considerations.

Specific design guidelines are organized into ten chapters covering each major court function including: courtrooms, judges' chambers, ancillary courtroom spaces, jury facilities, court library, clerk's office, judiciary related offices such as the U.S. Probation Office, the U.S. Marshals Service Office, and other court and building related facilities.

The Space and Facilities Committee of the U.S. Judicial Conference, and an especially appointed subcommittee of judges have reviewed drafts of the criteria throughout their development. A finalized version will be submitted to the Judicial Conference for approval in 1991.

EPA RADON

The U.S. Environmental Protection Agency (EPA) estimates that from 5,000 to 20,000 lung cancer deaths per year in the U.S. are caused by exposure to radon, a colorless, odorless, tasteless, radioactive gas that occurs naturally in soil, underground water, and outdoor air. According to the EPA, soil gas entering homes through exposed soil in crawl spaces, through cracks and openings in slab-on-grade floors and through below grade walls and floors are the primary radon sources.

Radon levels in homes across the country vary extensively. While many agree that action is needed, concern over unnecessarily increasing the cost of new housing cannot be overlooked. Especially, since the probability that a home will have a radon problem is unlikely and cannot be accurately predicted.

In 1990, NIBS completed its work to advise the EPA on the development of proposed construction standards and techniques for controlling radon levels in new buildings. Public Law 100-551 required such model standards and techniques to be made available by EPA to the public by June 1, 1990.

Effective radon control in buildings involves modifications to many current building materials, systems and methods. In addition to the radon related role of these components, they also function to meet a host of other needs such as structural integrity, fire safety, moisture control, and ventilation. Thus, it is imperative that modifications in components of a home intended to reduce radon infiltration avoid negative effects on the component's performance for other needs.

Standards and building codes have been developed and refined over the years to respond to these needs. In addressing the radon problem, it is critical to avoid both negating what has been achieved in meeting other building performance needs, and creating conflicts between new and existing provisions. Thus, it is important to integrate the knowledge of radon specialists with experts in other building performance areas.

Under a cost sharing agreement with the EPA, NIBS was first asked to evaluate, and based on the result was then asked to rewrite the EPA's draft document, Model Standards and Techniques for Controlling Radon Levels within New Buildings. To guide this project, NIBS formed a project committee comprised of federal, state and local model code and standards writing organizations, government officials, product manufacturers, design professionals, contractors, builders, and others with experience and interest in radon and related building performance.

Subsequently, in 1990, NIBS presented to the EPA the Project Committee's report: Methods and Techniques for Reducing Radon Levels within New Buildings for reducing radon in new residential

one and two family dwellings and other residential structures not exceeding three stories. The report opens with a section recommending the use of the document as a guideline because of unresolved issues such as the need for a map which describes radon hazards geographically, the extent of the responsibility of the homebuilder in radon reduction, and the lack of scientific data on the performance of radon reduction systems.

The remainder of the document describes radon reduction for new buildings constructed on basement and slab-on-grade foundations as a three step process which includes sealing radon entry routes in a dwelling, installation of a soil depressurization system, and taking steps to reduce the stack effect in a dwelling. Guidance is also offered for crawlspaces and combination foundations. Two options for radon reduction are proposed for high potential and all other areas respectively: first, to incorporate during initial construction all applicable radon resistant construction techniques in the document; and second, to incorporate those radon resistant techniques that cannot be added easily after completion of the building and to complete a long-term radon test within one year after occupancy to assess radon reduction performance. The document is available as an Institute publication.

BUILDING TECHNOLOGY RESEARCH AGENDA

The housing and building industry in the U.S. is fortunate to have access to non-proprietary research conducted in its behalf by the federal government's Building and Fire Research Laboratory (BFRL).

During 1990 NIBS continued its program to support the building related programs at this division of the National Institute of Standards and Technology. In an effort to assure that the federal funds are wisely invested in activities of most use to the building community, NIBS regularly provides a comprehensive technical research agenda for their work pertaining to housing and building.

The recommendations are developed by NIBS by polling the nation's building community to determine what areas of research are most important in the four specific areas of fire safety research, building materials, building environment and building structures. The more than 120 recommendations submitted are being evaluated and prioritized by the nearly 150 members of NIBS' project committee.

ASBESTOS IN BUILDINGS

The federal government has determined that breathing airborne asbestos fibers constitutes a health risk. It emphasizes that asbestos-containing building materials, in good condition and undisturbed, are not necessarily a health hazard. As a result, the need for practical technical guidance on how to properly deal with existing asbestos in buildings has grown dramatically.

Initially, public fear of asbestos resulted in massive removal efforts by often unqualified contractors. Removal under these circumstances frequently resulted in greater health risks to workers and others exposed. New views on this approach, reviewed by the health science community and the federal government now supports management of stable asbestos-containing materials in place as the preferred action.

NIBS' guide, Asbestos Abatement and Management in Buildings: Model Guide Specifications, provides pragmatic technical information to help those in the housing and building industry objectively deal with the problem. Originally published in 1986, it remains one of the most widely used technical documents on abatement and maintenance and repair of asbestos-containing materials in buildings. In addition to its use by designers, environmental consultants, building owners and others, it is used as a text for many training courses.

The 1988 edition of the guide incorporated requirements resulting from new federal regulations and provisions for new products, equipment and procedures, and refinements in existing practices for asbestos abatement, maintenance and repair. Several thousand copies of this edition have been disseminated. Additional work was performed in 1990 to develop sections on non-friable asbestos-containing materials like flooring, roofing shingles, and exterior siding. These sections and a new introduction are now undergoing review.

The Institute, in cooperation with the Environmental Protection Agency, is beginning the development of a technical procedures manual for managing asbestos-containing materials in buildings. The guide will provide detailed step-by-step procedures for individuals responsible to manage buildings as well as employees or contractors actually conducting the work. One of the new manual's primary objectives is to protect workers, which due to their assignments, are more likely to come in frequent contact with asbestos-containing building materials.

LEAD-BASED PAINT

Lead-based paint exists in 57 million U.S. homes, according to a report released in 1990 by the U.S. Department of Housing and Urban Development (HUD). Many health scientists believe that lead-based paint health hazards in housing, although first discovered nearly a century ago, have been virtually unaddressed until recently.

The U.S. government banned the use of lead in paints used for residential purposes in the 1970s. But before that lead-based paint was widely used in home construction and maintenance.

Health scientists agree that lead causes serious toxic effects in the human body. Those most at risk from the consequences of exposure to lead are infants and children under the age of seven, and unborn children affected through their mothers' exposure to lead. Studies indicate that excessive levels of lead in the bloodstream can hamper a child's mental and physical development, resulting in such side effects as lower intelligence, slower physical reaction times, and a shortened attention span. In extremely severe exposures, convulsions, comas and death have been known to occur. Moreover, health scientists are now recommending significant reductions in acceptable blood-lead levels in children, thus further increasing the number of children believed to be affected.

Between 1976 and 1980, more than 780,000 American pre-school children had excessive levels of lead in their blood, according to the American Academy of Pediatrics. In middle-aged males, recent studies have indicated an association between blood-lead levels and increased blood pressure.

Today, lead-containing paint, water, soil and dust are believed to be the major sources of lead contaminants. Typically, in a housing unit, the primary manner in which lead enters the human body is believed to be through dust particles containing lead which fall on window sills and other surfaces throughout a house. The dust is then picked up on the fingers and ingested, especially by young children--those most at risk.

Federal attention to this problem goes back to 1971, when Congress passed the Lead-Based Paint Poisoning Prevention Act (LBPPPA), thereby prohibiting the use of lead-based paint (LBP) in residential structures constructed or rehabilitated by the federal government or with federal assistance. Subsequent amendments to the LBPPPA directed the federal government to establish procedures to eliminate LBP poisoning in housing constructed before 1950, covered by mortgage insurance or housing assistance payments.

NIBS' efforts to address the lead-based paint issue began in 1987, when it convened a task force to define the current issues and recommend appropriate action. The task force outlined

numerous recommendations. One was a call for the development of technical guidelines for abating the LBP hazard.

In late 1988 and early 1989, NIBS, under contract to HUD, developed technical guidelines for the testing, abatement, clean-up and disposal of LBP during an intensive six-month program. These guidelines were written and approved by a project committee using NIBS' consensus process. NIBS' committee was comprised of some of the nation's leading experts on lead-based paint. The committee also included those who would need the guidance--designers, housing remodelers, contractors, testing agents and owners to insure the guide contained the information needed.

The 72-member project committee oversaw the production of a technical guide which prescribed current methods used to 1) test for lead in paint, 2) abate various types of LBP-containing surfaces and surface conditions, 3) protect workers and building residents, 4) clean-up lead-contaminated residue, and 5) properly dispose of resulting waste. In March 1989, the final 238-page document, entitled Lead-Based Paint Testing, Abatement, Cleanup and Disposal Guidelines, was submitted to HUD. The NIBS Guide was used by HUD to develop its September 1990 document Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing.

The lead-based paint problem continues to suffer from the lack of definitive health standards for worker protection, ambient air borne and dust levels in occupied dwelling units in the process of being remodeled, and clearance levels of lead-bearing dust in abated units. Although OSHA is working on the worker protection standard, the NIBS' task force has recommended that the federal government address the latter need as soon as possible.

As useful as the long awaited HUD Interim Guide is, it is not intended to, and cannot serve as a complete tool for design professionals and contractors to define the scope and responsibilities of parties to lead-based paint testing and abatement contracts for an individual home or multi-unit housing authorities. HUD and EPA, the primary federal agencies with funds and responsibilities for this issue, are considering a NIBS proposal to develop a guide specification for the testing and abatement of lead-based paint in buildings.

TASK FORCE ON MANUFACTURED HOUSING

An ad hoc task force, created at the January 1990 meeting of NIBS' Consultative Council, met during 1990 to discuss potential roles for NIBS in the realm of manufactured housing.

Representatives of the National Science Foundation, U.S. Department of Housing and Urban Development (HUD) and U.S. Department of Energy (DOE) described potential roles for the Institute.

The first role identified by the task force is for NIBS to assess the status of research and development activities for factory built housing in the U.S. This role would be particularly significant considering that HUD does not have a research and development activity from which it can obtain information about current technology. HUD is the federal agency that certifies all manufactured housing in the U.S.

The task force chose to change its name to the NIBS task force on factory built housing so that it can include modular housing in its future discussions.

COMBUSTION TOXICITY/FIRE HAZARDS

Toxic smoke continues to be the principal killer and cause of injury in building fires, particularly residential fires, according to the nation's fire experts. They report that approximately two-thirds of the fire-related fatalities in the U.S. are the result of smoke inhalation. This startling statistic, which has not wavered significantly despite recent improvements in building fire safety, is the reason NIBS initiated a project to explore the combustion toxicity of building products and furnishings.

In the initial discussions on this subject at meetings held by NIBS in the early 1980s, some believed that a major cause of the U.S. experience was the growing use of man-made materials, especially in the contents of buildings. Others claimed that fires could be adequately controlled through the use of detection and preventive devices. There was confusion stemming from conflicting reports, with no agreement on a course of action. It was also clear that there was no single solution.

For several years, NIBS had followed closely the growing public interest in combustion toxicity of building products and furnishings. In pursuit of its Congressionally authorized role of rationalizing the building regulatory process through the development and use of performance criteria, the Institute held conferences in 1982 and 1984 in which representatives of some 80 organizations participated. All points of view were brought out in the discussions that took place on use of new techniques, changes in fire death rates and other dynamics of the issue. Conferees concluded that smoke toxicity resulting from fires in buildings was a matter of concern; however, they noted that there was insufficient data on which to base any new form of regulation.

Between 1986 and 1988, the Institute convened three meetings of well informed scientists and fire experts from the public and private sectors to examine the "state-of-the-art" technology in fire and life safety practices. The purpose was to provide an overview of the related issues' complexities and controversies. Current levels of computerized fire modeling were reviewed and considered to be promising but premature for practical use.

Because several states were seeking or considering legislative remedies, all with differing requirements, NIBS was encouraged to undertake the development of a new performance based test to measure the potential combustion toxic hazard of building products and building contents. The goal was to submit the proposed test method and supporting data to appropriate voluntary consensus standards organization so that all parties could adhere to a nationally recognized uniform standard which responds to today's performance needs.

The Institute's Board of Directors endorsed the

recommendation. Funding commitments were secured from the private sector to help defray the costs of this three-year project. Public entities at federal, state and local levels joined the private professionals by contributing technical and practical advice.

Altogether more than 150 people have participated in the project with some 70 serving on a steering committee. A specialty contractor conducted laboratory research experiments which were identified and monitored by NIBS' working group of seven experts. The initial assignment of perfecting the test apparatus and testing some 20 different product configurations was largely completed during 1989.

NIBS' goal was to develop a draft smoke toxicity test method for submission to and consideration by established voluntary consensus standards writing organizations. There was no intent to achieve consensus on the test method through the NIBS process due to the complexity and controversial nature of the issue. Such consensus is to be achieved through a rigorous voluntary standards process.

During 1990 the Institute completed its work on the draft test procedure. The Project's Steering Committee recommend that the NIBS' board of directors release the final project technical report and NIBS' draft test method to ASTM Committee E-5 and the National Fire Protection Association's Fire Test Committee. NIBS' board of directors accepted the recommendation and the test method has been transmitted to the aforementioned standards writing organizations.

Further, NIBS recognizes that there are alternative protocols being developed using the NIBS test apparatus and encourages the widest practical use and continued development of this apparatus.

The Institute sincerely appreciates the significant contributions provided this program by hundreds of professionals from the public and private sectors. The dedicated efforts of Wayne Ellis who chaired the project Steering Committee, Henry J. Roux, who chaired the Work Group who actually designed and produced the procedure, and NIBS' former president, Gene C. Brewer who shepherded the program from it inception exemplify the steadfast contributions of all who took part in this worthwhile program.

GSA TECHNOLOGY AND INFORMATION TRANSFER

The General Services Administration's Public Buildings Service (PBS) is responsible for more than 200 million square feet of workspace housing nearly one million federal employees. In discharging this responsibility, PBS generates large amounts of technical information, which is used by PBS staff and outside contractors in the planning, design, construction, operation and maintenance of federal facilities.

One of nine statements included in PBS' January 1990 Strategic Plan asserts that "PBS will take a more active role in adapting new, proven technologies and supporting innovation and research to incorporate changing technological developments in the provision of services to our clients." A specific step toward that objective as identified in the Strategic Plan Statement is to "develop a formal system for translating established research or lessons learned into standards and criteria for direct use by PBS."

NIBS was retained by GSA in 1990 to identify the resources that were currently available in the PBS, to determine where improvements in the transfer of technical information were needed, and to develop recommendations for an improved technical information transfer system.

This effort involved identifying and analyzing numerous PBS documents that provide information on new technologies and lessons learned within PBS, PBS' standards and criteria documents that are derived from PBS staff experience. The procedures followed in the development and maintenance of PBS standards and criteria were also studied. Interviews were conducted with PBS Central Office and National Capital Region Office personnel, representatives of other federal agencies, and private organizations responsible for significant facility planning, design, construction, operation and maintenance programs.

The status reports regularly produced by PBS operating units often contain valuable lessons learned and other technical information with a wide range of applications. PBS also develops and promulgates a series of official guidance documents for use by PBS staff members and outside contractors. PBS also uses a number of standards and criteria documents produced by other federal agencies and private organizations.

NIBS has found that PBS can make better use of the lessons learned and other technical information included in its survey and reports to update its standards and criteria. This would require a more effective means for compiling and disseminating report documents to the responsible PBS staff, providing suitable personnel and procedures for regularly performing update functions, and improving the dissemination of revised standards and criteria documents both internally and externally. Other improvements can be made by archiving important survey and report

documents for reference purposes, and by making PBS referenced standards and criteria, produced by other organizations, available in a central location.

These and other improvements would be facilitated by utilizing suitable and available automated electronic means for storing and disseminating the documents, particularly where this included appropriate information search and retrieval capabilities to facilitate identification of specific information relevant to the immediate need.

The technology transfer system recommended for use by PBS includes procedures for the generation and archiving of selected PBS surveys and reports on a special PBS Reference Disc, and the updating and dissemination of PBS standards and criteria documents, with other related federal and industry standard documents, on the existing NIBS Construction Criteria Base compact disc.

The recommended PBS technology transfer system can be implemented over a twelve-month period and benefits will be derived almost immediately.

ACCESSIBILITY FOR THE DISABLED

The Americans With Disabilities Act (ADA) was signed into law on July 26, 1990. The intent of Title III, Public Accessibility, is to make the built environment accessible to persons with disabilities.

On September 26, 1990, NIBS hosted a day-long forum in Arlington, Virginia, to explore ways of making the new law work within the framework of the existing building regulatory process. Among those who participated in the meeting were representatives of the Architectural and Transportation Barriers Compliance Board (ATBCB), the Civil Rights Division of the U.S. Department of Justice, model building code groups, engineering and architectural firms, building owner groups, disabled rights groups, Congressional staff, and state and municipal building commissions.

Many of the speakers voiced the opinion that there is virtually unanimous agreement among sectors of the building community that the intent of the ADA is worthy. With regard to achieving the law's objectives it was suggested by many that:

- * A procedure for developing ADA accessibility standards suitable in format for use in the nation's building codes;
- * A procedure for incorporating ADA accessibility standards into the nation's existing building regulatory process;
- * Effective dissemination of ADA regulations and standards; and
- * Effective methods to update regulations, codes, and standards applicable to the ADA in order to allow for the appropriate use of new technology and assure the most efficient and effective response to ADA for the long term.

The law provides for the issuance of regulations by federal agencies and enforcement through federal courts. The law also allows the federal government to certify that state and local building codes establish accessibility requirements which meet or exceed the requirements of the law.

This option potentially involves thousands of codes--a formidable task. However, there are no provisions to certify the three nationally recognized model building codes, upon which the majority of state and local building codes are based. Also, there are no provisions for recertifying codes after they are updated, an annual occurrence in many jurisdictions. The rule's proposals for making positive use of the nation's existing building regulatory process are woefully insufficient. This is

most apparent to those who have spent careers using and improving the building regulatory process; it is most important to those responsible to implement the ADA.

There are many opportunities for difficulty. For example, local governments may not ask for their codes to be certified? Many believe there are no incentives for local jurisdictions to seek certification. Local code authorities and model code organizations may find it necessary to delete disability provisions from their codes in order to avoid conflicts with the ADA and potential liability.

While federal agencies must utilize the prescribed procedures to promulgate rules, the law contains sufficient flexibility to make more appropriate use of the nation's voluntary consensus standards and model codes which have long addressed accessibility for the disabled. From the perspective of the building community--including many federal agency professionals--the potential for achieving timely, cost-effective and cooperative implementation and enforcement of this law is significantly lessened by the proposed rules already issued.

To most effectively implement the ADA it is important to maximize the use of the existing, well organized infrastructure which successfully sets standards and provides enforcement for the multitude of other building health, safety, and general welfare needs. Fire safety; structural integrity against seismic, wind and snow loads; ventilation to provide fresh air; and many other needs are achieved through the nation's voluntary standards and model codes process. Accessibility needs too, can continue to be best achieved through effective use of this system.

The Department of Justice needs to make a firm commitment to effectively use this nation's voluntary standards and codes development process and the in-place state and local building code system for implementing the ADA. Although many organizations would have to work together cooperatively to develop and successfully implement the best approach, it will foster the best way, perhaps the only way, to insure a long term answer to making the built environment accessible to all.

COMPARISON OF CODES FOR HEALTH CARE FACILITIES

A 1988 letter to NIBS from the Administrator of the Health Care Financing Administration of the U.S. Department of Health and Human Services (HHS) requested NIBS' advice on the extent to which model codes published by the three model code groups, Building Officials and Code Administrators International (BOCA), Southern Building Code Congress International (SBCCI), and International Conference of Building Officials (ICBO), are comparable to National Fire Protection Association (NFPA) standards and whether they "adequately protect" patients and personnel in institutional health care occupancies certified for participation in Medicare and Medicaid.

A federal conference report of the Omnibus Budget Reconciliation Act of 1987, mandates the use of the NFPA Life Safety Code for nursing facilities with certain exceptions. Also, the 1988 HHS regulation for Medicare/Medicaid Programs; Fire Safety Standards for Hospitals, Skilled Nursing Facilities (SNF), Hospices, Intermediate Care Facilities (ICF), and Ambulatory Surgical Centers (ASC) incorporates by reference the 1985 edition of the Life Safety Code.

To respond to the Administrator's request NIBS has formed a project committee comprised of representatives of model code and standards writing organizations, product manufacturers, state fire marshals, health care facility operators, design professionals, representatives of health care organizations, federal and state officials and others with interest and experience in the subject.

During 1990, the newly formed NIBS project committee initiated a project to conduct a comprehensive comparison of the technical provisions relating to facility construction, occupancy, operation, and maintenance as contained in the three model code systems and applicable provisions of the Life Safety Code. The comparison will determine the extent to which the model codes are comparable to NFPA standards and whether they adequately protect patients and personnel in institutional health care occupancies certified for participation in Medicare and Medicaid.

The Life Safety Code was deemed by HHS to "adequately protect patients and personnel in institutional health care occupancies." Consequently, for the purpose of this study the Life Safety Code will be the frame of reference for comparison of the three model code systems.

BUILDING THERMAL ENVELOPE DESIGN GUIDELINES

NIBS and its Building Thermal Envelope Coordinating Council (BTECC) began assisting the National Institute of Standards and Technology (NIST) in the preparation of guidelines for the design of building thermal envelopes. NIST is preparing the guidelines under contract to the U.S. General Services Administration (GSA). GSA intends to use the final guidelines for federal office buildings.

During Part One of the project, in 1990 NIBS solicited voluntary contributions of technical materials from the entire construction community. The project committee evaluated and commented to NIST on all contributions received.

In Part Two of the project, NIBS will review and comment on the format and content of the guidelines as NIST progresses through various drafts. The NIBS committee will thoroughly review the final draft of guidelines and produce a consensus report documenting its evaluation.

FOREIGN INFLUENCES IN THE U.S. BUILDING INDUSTRY

The domestic construction volume in 1989 was almost \$500 billion, nearly 13 percent of our Gross Domestic Product, not counting production and transportation of construction materials and equipment. Construction employs over 5.5 million people, making it the country's largest single industry.

The public and private sectors of America's housing and building industry spend approximately one twelfth of one percent of their total revenues on research and development. Japan spends approximately two and a half times this amount. It has been reported that in 1989, foreign investors owned 46 percent of the prime commercial real estate in Los Angeles, Calif., 33 percent in Washington, D.C., and 39 percent in Houston, Texas.

In the United States, these facts and figures are generally viewed with a sense of alarm. They are seen as signs that America is losing its world leadership role in design and construction, or that some foreign companies may soon overrun our markets with building products and services. But how justified is this sense of alarm? What does the recent awareness of foreign influences really mean? And, more importantly, what should be done by the public and private sectors to meet these challenges? The answers to such questions are vital to our economy.

The Institute's 1987 foreign influences task force found that this problem was and still is not well understood. The task force's broad approach to the issue addressed six specific areas: research and development, foreign investment, innovation and technology, construction and materials, productivity and quality, and foreign entries into the building industry.

NIBS' 1989 report "Foreign Influences in the U.S. Building Industry" places the foreign influences issue in perspective with historical and economic trends. Its concluding chapter demonstrates that the issue of foreign influences should be viewed in terms of opportunities to the nation's building industry.

In 1990, the Institute, through a cooperative effort with NIST's Center for Building Technology and Engineering News Record (ENR) magazine sponsored a national roundtable at which some of the nation's leading experts on international building industry trade and production examined product approval processes, codes and standards, certification, testing procedures, and the licensing of construction and design professionals by the 12 nations of Europe expected to be in effect by 1992.

The conference was initiated to focus national attention on the efforts of the European community to form a unified market unencumbered by regulatory barriers between individual countries. Information brought out during the conference included the

following:

1. If the United States expects to have an impact on international standards, more emphasis must be placed on fostering acceptance and use of U.S. standards in foreign countries, especially developing countries.
2. U.S. involvement in the International Standardization Organization (ISO) must increase significantly. Currently, this country holds the secretariat for only three of the 33 construction related ISO technical committees and 43 of 531 technical subcommittees.
3. Most foreign countries subsidize the involvement of their technical experts through government support. As a result, U.S. involvement has considerably less depth of technical capability than the counterpart delegations of much smaller countries.
4. Local code officials in this country need to be able to rely on the testing entities providing information on which approvals are based. If national treaties "require" acceptance of foreign products without such a reliable process, the nation's process to assure building safety could be seriously threatened.
5. Current licensing of design professionals are more stringent in the United States than in many foreign countries. If the nation is required to allow less qualified professionals to practice as a result of international agreements, the country's requirements for experience, education and examination could be inappropriately diluted.
6. Regardless of the specific actions taken by this country, most agreed the federal government and the private sector organizations responsible for aspects of the nation's standards, testing, certification, and licensing need to work together cooperatively and effectively to assure this country isn't left out of these international activities.
7. Because of its unique aspects, solutions to seemingly similar issues confronting other sectors of the nation's economy may not work well, or at all, to resolve international needs in these areas for the building and construction process. Since so many public and private organizations are involved, a focused coordination effort is needed to assure success.

SUSTAINING AND CONTRIBUTING ORGANIZATIONS

A number of organizations, representing a broad cross-section of the building community, go well beyond the step of supporting NIBS' activities as members and project participants. The following organizations are saluted for providing additional financial assistance to support the goals and objectives of the Institute as established by the U.S. Congress and the Institute's Board of Directors.

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The Building Seismic Safety Council is an independent, voluntary body established under the auspices of the National Institute of Building Sciences. Its fundamental purpose is to enhance public safety by providing a national forum that fosters improved seismic safety provisions for use by the building community in the planning, design, construction, regulation, and utilization of buildings.

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