

RESEARCH AND INNOVATION IN THE BUILDING REGULATORY PROCESS

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Otis M. Mader's Complete 1976 Testimony

"The National Institute of Building Sciences—A Progress Report"

Year-by-Year History • Who's Who • What NIBS Wanted • How the Work Was Left

Prepared from historical NBS publications and the supplied research record

Executive Summary

The historical record shows two related but distinct certification tracks emerging in the early 1970s. Operation Breakthrough tested system-level certification of industrialized housing. Project LEAP developed the criteria for deciding whether the agencies performing analysis, testing, inspection, and compliance assurance were competent. NBS and NCSBCS transferred the LEAP work to ASTM, where it became ASTM E541 in 1975.

NIBS entered through a separate statutory pathway. Created in the 1974 Housing and Community Development Act, it was designed as a nongovernmental national coordinating institution for building science, performance criteria, standards, evaluation, prequalification, information, and regulatory acceptance.

Otis M. Mader's 1976 keynote is important because it reveals the original NIBS blueprint in its own words. NIBS intended to become the authoritative national source, coordinate research and standards, create a national evaluation and prequalification system, organize a national code-and-standards information system, facilitate regulatory acceptance, and become financially self-sustaining.

The speech does not identify Project LEAP or ASTM E541, even though E541 had already been produced from NBS/NCSBCS research and addressed the qualification of agencies carrying out systems analysis and compliance assurance for manufactured buildings. That omission leaves a crucial part of the certification history outside the NIBS narrative.

Mader also makes clear that the plan was unfinished in 1976. NIBS had only recently incorporated, had temporary offices, was searching for a president and staff, had not completed its detailed mission statement, had not yet organized the Consultative Council, and was operating on a temporary HUD grant while pursuing larger federal seed funding.

Core finding

By 1976, NIBS was presenting a national evaluation and prequalification system as a central future mission, while the earlier NBS/NCSBCS/ASTM pathway that produced ASTM E541 was not named in the keynote.

Source note: NBS Special Publication 473, pp. 7–16 (printed pagination); Operation Breakthrough, Project LEAP, and ASTM E541 report supplied by the user.

1. Scope and Method

This report separates documented history from interpretation. The chronology and quotations are drawn from the attached NBS conference proceedings, the supplied Operation Breakthrough–LEAP–ASTM E541 research report, and the 2026 testimony concerning revival of housing-system certification. The report maps institutional roles and omissions; it does not assign motives.

- Part I reconstructs the chronology.
- Part II identifies the principal institutions and individuals.
- Part III summarizes what Mader said NIBS wanted.
- Part IV explains how the NIBS project was left in 1976.
- Appendix A reproduces Mader's complete keynote testimony.

2. Year-by-Year Chronology

Date	Event	Why It Matters
1967	NCSBCS is formed.	The states create a national forum focused on building-code and regulatory problems.
1968	Congress authorizes HUD experimentation with new housing technologies.	This becomes the legal foundation for Operation Breakthrough.
1969–1973	HUD conducts Operation Breakthrough.	The program tests system-level evaluation and certification of industrialized housing producers.
1970	NCSBCS asks the National Bureau of Standards to develop a laboratory and agency accreditation program.	The request launches the technical pathway that becomes Project LEAP.
January 1971	NBS initiates Project LEAP.	LEAP develops criteria for evaluating organizations performing analysis, testing, and compliance assurance.
1971–1975	The Coordinated Evaluation System develops model documents for state use.	CES addresses how states could operationalize and accept qualified third-party evaluation and inspection.
April 1973	NCSBCS prepares LEAP material dividing services into analysis, testing, and compliance assurance.	These are the core functions later reflected in ASTM E541.
1973–1975	LEAP produces research reports; NBS and NCSBCS transmit them to ASTM.	Government and state research moves into the national consensus process.
1974	Congress creates NIBS under the Housing and Community Development Act.	A separate nongovernmental institution is authorized to coordinate building science, standards, evaluation, and acceptance.
1975	ASTM E541 reaches consensus.	The agency-qualification framework for systems analysis and compliance assurance becomes a national consensus standard.
April 1976	President Ford nominates Otis M. Mader as first chairman and organizer of NIBS.	The initial NIBS governance structure begins to take shape.
July 9, 1976	The initial NIBS directors are sworn in.	The unusual ceremony reflects the hybrid character of a nongovernmental institution receiving federal seed money.
September 8, 1976	NIBS is chartered as a nonprofit corporation in Washington, D.C.	NIBS becomes operational but remains in startup mode.
September 21–22, 1976	Mader delivers the keynote at the first NBS/NCSBCS Joint Conference.	He publicly presents the national NIBS blueprint.

Date	Event	Why It Matters
June 1977	NBS publishes the conference proceedings as Special Publication 473.	The complete NIBS keynote enters the permanent federal record.
2019	ASTM E541 is withdrawn.	The older building-specific pathway temporarily disappears from ASTM's active catalog.
2022	ASTM E541 is reinstated.	The consensus pathway returns and remains part of the current certification debate.
2023–2026	HUD-supported research and congressional testimony revive the NIBS housing-system certification concept.	The unfinished 1974 mandate is presented as a current implementation pathway.

3. Who's Who

National Bureau of Standards (NBS): Federal technical agency, now NIST. Conducted building research, supported Operation Breakthrough, developed Project LEAP with NCSBCS, and published the 1977 conference proceedings.

National Institute of Standards and Technology (NIST): Successor to NBS. Modern conformity-assessment work includes ISO-based laboratory accreditation, conformity-assessment recognition, and mutual-recognition systems.

National Conference of States on Building Codes and Standards (NCSBCS): State-centered organization that requested the LEAP program, worked with NBS, supported interstate reciprocity, and co-sponsored the 1976 conference.

Project LEAP: Laboratory Evaluation and Accreditation Program. Developed criteria for evaluating organizations carrying out analysis, testing, and compliance assurance.

ASTM Committee E32 / ASTM E541: ASTM converted the LEAP research into a national consensus standard for agencies engaged in systems analysis and compliance assurance for manufactured buildings.

Operation Breakthrough: HUD demonstration program that tested industrialized housing systems and system-level certification concepts.

National Institute of Building Sciences (NIBS): Nongovernmental institution created by Congress in 1974 to serve as a national coordinating source for building science, performance criteria, standards, evaluation, information, and regulatory acceptance.

Otis M. Mader: Alcoa executive and first chairman/organizer of NIBS. Delivered the 1976 keynote setting out NIBS's proposed mission and structure.

James G. Gross: Chief of the NBS Office of Building Standards and Codes Services; introduced the conference and described the lack of a unified U.S. building-regulatory system.

Glen R. Swenson: President of NCSBCS and a member of the initial NIBS board. Presented NIBS as a natural ally of NCSBCS.

HUD: Sponsored Operation Breakthrough, participated in NIBS board formation, provided NIBS startup funding, and remains central to current housing-certification policy.

National Academy of Sciences / Academies–Research Council: Screened possible NIBS board nominees and was identified as an adviser during NIBS startup.

Model-code organizations: Expected by Mader to help implement NIBS programs and spread technological change with order and uniformity.

4. What Otis M. Mader Said NIBS Wanted

Mader's speech was not a narrow progress update. It was an institutional design document. The following objectives appear directly in the keynote.

Authoritative national source — NIBS would seek acceptance as the authoritative national source for building science, technology, performance criteria, standards, and the building process.

National research agenda — It would identify research needs, define major innovation issues, and stimulate or administer research across public agencies, private organizations, and universities.

Performance criteria and standards — It would develop a system for formulating, promulgating, and maintaining nationally recognized building performance criteria and technical provisions.

Evaluation and prequalification — It would create a national system for evaluating and prequalifying existing and new building technologies.

National information system — It would assemble and analyze codes, standards, and regulatory provisions in a data bank accessible through multiple routes.

Regulatory acceptance — It would develop methods for introducing its innovations, criteria, and standards to federal, state, and local officials and facilitating acceptance.

Implementation through existing organizations — NIBS would delegate much of the technical work while retaining the coordinating role.

Consultative Council — A broad council of trade, professional, labor, standards, code, testing, regulatory, and consumer interests would provide advice and help implement programs.

Model-code implementation — Mader expected NCSBCS and model-code organizations to be effective channels for rapid, orderly, and uniform implementation.

Financial self-sufficiency — NIBS was directed to pursue initiatives that would eventually make it financially self-sustaining.

5. The Crucial Language

“single authoritative nationally recognized institution to provide for the evaluation of new technology and to facilitate introduction of such innovations and their acceptance at the Federal, State and local levels.”

“Develop a system that permits the formulation, promulgation, and maintenance of nationally recognized building performance criteria and standards...”

“Create a national system for the evaluation and prequalification of existing and new building technologies.”

“NIBS will not write codes but will be a vast technological resource for those who do.”

6. The Missing Middle: Project LEAP and ASTM E541

The keynote's description of a future national evaluation and prequalification system must be read beside the earlier LEAP history. Before the keynote was delivered, NCSBCS had already asked NBS to build an accreditation mechanism; NBS had already developed LEAP; NBS and NCSBCS had already transferred the work to ASTM; and ASTM E541 had already reached consensus.

- Operation Breakthrough addressed the certification of housing systems and producers.
- Project LEAP addressed the competence of the organizations carrying out analysis, testing, inspection, and compliance assurance.
- ASTM E541 preserved that agency-qualification work in a national consensus standard.
- The 1976 NIBS keynote does not name Project LEAP or ASTM E541.

This distinction is essential. A broader housing-system certification framework and an agency-qualification standard are not identical. They are complementary layers. Any national certification system needs a defensible answer to the question: who is competent to evaluate, inspect, test, and assure compliance?

7. How They Left It in 1976

Mader did not claim that the NIBS system was complete. His own testimony shows a startup organization with an ambitious blueprint but substantial unfinished work.

Area	Status at the End of Mader's Testimony
Corporate status	NIBS had been chartered as a nonprofit in Washington, D.C. only days before the conference.
Leadership	The board was operating, but NIBS was still searching for its first full-time president and paid staff.
Mission	The detailed mission statement was not finished; only an abbreviated statement had been prepared for budget purposes.
Consultative Council	The council intended to connect NIBS with the entire building community had not yet been organized.
Funding	NIBS was operating on a temporary \$140,000 HUD grant.
Federal seed money	A five-year budget sought support for the \$10 million authorized by Congress.
Additional financing	NIBS expected to develop another \$10 million in resources and ultimately become self-sustaining.
Programs	NIBS had established committees and public-agency contacts, but the national systems for evaluation, information, and implementation remained proposed strategies.
Implementation model	The board would set policy; staff would organize programs; outside organizations would perform much of the work; the Consultative Council and model-code organizations would help disseminate and implement the results.

In plain language: they left NIBS with the statutory authority, the board, an initial federal funding path, a proposed national architecture, and a plan to work through existing organizations—but without the fully operational evaluation, prequalification, information, or implementation systems described in the speech.

8. Additional Important Connections

Hybrid public/private design: NIBS was described as nongovernmental, yet its initial board was nominated through the White House–HUD–National Academy pathway, directors were sworn in, and startup funding came from HUD.

Influence without formal code writing: Mader expressly said NIBS would not write codes. Its influence would come from research agendas, standards and performance criteria, evaluation systems, information control, regulatory facilitation, contracts, and partnerships with code organizations.

Delegation with central coordination: Congress directed NIBS to use existing public and private technical organizations. That structure allows the hub to coordinate while outside bodies research, write, test, evaluate, and implement.

Model-code bridge: Mader expected model-code organizations and NCSBCS to carry successful NIBS programs into practical regulatory use.

Financial model: The plan combined federal seed money, public-agency project funding, contracted technical work, and eventual self-sustainability.

Historical omission: The absence of LEAP and ASTM E541 from the keynote matters because the earlier NBS/NCSBCS pathway had already created the agency-qualification layer needed by any certification framework.

Present-day relevance: Modern proposals to revive housing-system certification under NIBS should be read alongside—not instead of—the earlier LEAP/E541 infrastructure.

9. Findings

- NIBS and NBS were separate institutions with different legal and organizational identities.
- Project LEAP and ASTM E541 came from the NBS/NCSBCS/ASTM pathway, not from NIBS.
- NIBS was intended to become the national coordinating hub for building technology, standards, evaluation, information, and regulatory acceptance.
- Mader’s 1976 speech described a broad national architecture but also confirmed that the organization was still at the beginning of implementation.
- The historical record contains an important gap between the completed LEAP/E541 agency-qualification work and the NIBS narrative of a national evaluation system still needing to be created.
- The work was left with authority and institutional structure in place, but with core systems, staffing, consultative machinery, and long-term funding still incomplete.

10. Principal Sources

- National Bureau of Standards, Research and Innovation in the Building Regulatory Process, NBS Special Publication 473 (June 1977), especially the opening session and Otis M. Mader keynote, printed pp. 1–16.

- Operation Breakthrough, Project LEAP, and ASTM E541: A History of Housing Certification Infrastructure and Its Contested Present (user-supplied research report).
- Dr. Ivan Rupnik, Written Testimony before the House Select Committee on Small Business, “Building the Future: How Small Home Builders are Closing America’s Housing Gap” (May 21, 2026).
- Historical LEAP excerpt supplied by the user describing the 1970 NCSBCS request, the January 1971 launch of LEAP, transfer of the reports to ASTM, and the 1975 E541 consensus result.

Appendix A

Complete Testimony of Otis M. Mader

"The National Institute of Building Sciences—A Progress Report"

Delivered September 21–22, 1976; published in NBS Special Publication 473, printed pages 7–16.

The National Institute of Building Sciences —A Progress Report by

Otis M. Mader Chairman of the Board of Directors National Institute of Building Sciences

Before I begin I want to tell you that I am not singly representing NIBS today. Other members of the National Institute of Building Sciences (NIBS) Board of Directors are present. They are Jasper Hawkins, Joseph Newman, Bob Schmitt and Glen R. Swenson.

More formally I can start my presentation.

Ladies and gentlemen of NCSBCS, BOCA, NACA, SBCC, HUD, CABO and other alphabetized organizations, I represent the National Institute of Building Sciences, NIBS, still another addition to the world of title abbreviations.

I want to speak to you today on EOPO - "Eternal Optimism Pays Off."

In 1969 I felt that the National Institute of Building Sciences would probably come formally into existence in 1971. But, of course, it didn't. So in 1971, I was sure that Congressman Moorhead and Senator Javits would be able to make it happen in 1973. Wrong again. Finally, with 1974 legislation enacted to create NIBS I was convinced that wrapping up the details and putting NIBS into existence would only be a matter of months. It was - about 20 of them.

Such a track record and timing was enough to turn a man to pessimism, even me. And I must admit that my confidence in the eventual success of NIBS was severely shaken when I learned who the White House had nominated as the first Chairman.

Fortunately, my optimism was resuscitated when I reviewed the list of Directors the White House nominated to serve with me. And believe me, when I called them together for the first time, my optimism reached new heights. I found them broadly representative of the whole building community, totally committed to the concept of NIBS, highly competent in their specific areas of involvement in the building community, and most important, completely unselfish in the time they are willing to devote to launching NIBS on a sound and meaningful course. I just hope that I can keep up with them. They travel fast.

So NIBS has finally been born. There has been strong support as you know from the building community for NIBS all along the seven-year path of creation. Understandably, there is today a healthy impatience in that community to see NIBS describe its role and "have at it." There is also, at this early time, divergency of understanding of the mission of NIBS - and that divergency has undoubtedly created concerns in some groups as to what NIBS is going to do for them. Indeed some groups may be concerned as to whether NIBS may do something to them. I can say today that NIBS is basically interested in doing something with the various sectors of the building community.

The Directors of NIBS and I share the impatience; and being totally normal, we find divergent opinions among ourselves on describing our mission and organizing to fulfill that mission. So we are determined to subvert our own impatience to the strong concern of carefully and thoughtfully deciding who we are and what we are - and indeed what we are not .

The whole building community must have input to those decisions and that means we will have to take time for appropriate communication. We are not only going to learn to walk before we learn to run, we are determined to learn to crawl before trying to walk.

My mission today as I understand from Glen is to review briefly for you the history of NIBS and then to tell you how we are doing in our crawling lessons.

A little history might help. In the late 1960 's the Douglas Commission was appointed to study urban problems within broad parameters and also to deal with certain specifics - one of which was to investigate whether the then existing proliferation and divergence of building codes and standards was a restraint to development and utilization of new technology that might improve the building process.

In brief, the Commission reported that the building community was highly populated, economically vital to the nation, but also highly fragmented. Similarly, over 8000 Federal, State and local code administering authorities existed, and there was substantial non- uniformity between them, as well as a lack of a system in existence to permit constant updating of codes and standards. The situation was believed to be a restraint to techno- logical progress. The Commission recommended creation of a National Institute that could lead, encourage, and assist the building community to develop, understand, accept, and implement new building technologies.

Most segments of the building community supported the need for such an activity, but only if it could be accomplished without moving toward Federal codes, standards and regu- lations for private construction.

Congressman Bill Moorhead and Senator Jacob Javits authorized bills that would create a "non-governmental" National Institute of Building Standards and then through a long frustrating period, the bills were delayed, tabled, returned to Committee, and caught by adjournments. Finally, a modified version creating a non-governmental National Institute of Building Sciences (certainly a broader title) was included as part of the 1974 Housing Act and became law with the President's signature.

The White House at that time requested HUD to develop recommended nominees to the Board of Directors of NIBS, and HUD in turn petitioned the National Academy of Science to screen and to submit substantial lists of people whose capabilities might be of interest to HUD for recommendation to the White House.

The burdensome process culminated with announcement of the White House nominees in May of this year. Senate confirmation under Senator Proxmire's Committee hearings were held in June, and the swearing-in ceremony was conducted July 9. There was a unique question as to whether the Directors should be sworn in since NIBS was to be a non- governmental institute. However, since Federal "seed money" would be received by NIBS at its outset, it was decided that the Directors should be sworn to office. Another sign that in this life, philosophy often has to defer to the fiscal responsibility of the situation!

Some of you have perhaps read those portions of the 1974 Housing Act that relate to authorizing NIBS. For those of you who have not, let me warn you that legislative prose is not known for its ability to excite or to enthrall!

Let me give you my Layman's interpretation of the basics of the Act that created NIBS.

In the Act, Congress deplores the lack of an authoritative national source for collect- ing, evaluating and disseminating advisory information on building science and technology that is related to achieving nationally-acceptable or nationally-compatible standards in the building industry. It sees that lack as an obstacle to technological and economic improvement of the building process with time.

The Act recognizes the contributions toward uniformity made by the model codes, but also acknowledges the problem of keeping those model codes technologically updated.

The Act proposes the National Institute of Building Sciences as the "single authorita- tive nationally recognized institution to provide for the evaluation of new technology and to facilitate introduction of such innovations and their acceptance at the Federal, State and local levels."

Please understand that the term "authoritative" in the Act is in no way used in a regulatory sense. "Authoritative" describes the image of NIBS when, by the demonstration of its competence, it has gained the confidence and participation of the clients it serves - which is the overall building community. That means the builders, the developers and the construction managers - the architects and the engineers - the lenders - the product manufacturers and the building trades of labor - the public officials administering

codes and standards, Federal, State and local. And, finally, it also means the consumer, and he could be anyone from a homeowner to the Federal Government.

The legislation does not propose that NIBS shall organize and staff to become technologically all things to all people. In fact, it specifically directs NIBS to encourage and to utilize the capabilities of existing private and public entities that are currently engaged in building research and technological activities across the country.

The Academies - Research Council — National Academy of Sciences - National Academy of Engineering - National Research Council — is named as an advisor along with other such knowledgeable organizations to assist during the start-up period of NIBS.

Organizationally there can be 15 to 21 Directors initially appointed by the President with a majority to be appointed as members in the public interest, Architects and engineers, public officials and consumer groups are considered as members in the public interest. Currently we have eighteen Directors with nine being public interest appointees. It is my understanding that the White House intends to fill the remaining three vacancies with public interest members placing the majority at 12 to 9. Frankly, I intend my own participation to be in the public interest as much as any other member, but technically I don't qualify by Congressional specifications.

The first chairman is appointed by the President and serves for one year from date of incorporation. Thereafter, he is elected by the Board of Directors as are all other officers.

The Board of Directors will at an early date be served by a full-time paid staff headed by a President reporting to the Board. The paid staff will contain the administrative, technological, and professional competence to carry on the day-to-day activities of NIBS within the policies and programs outlined by the Board of Directors.

So far, then, we have a working board and as I have described we will soon have a full-time central staff. Joe Newman heads the committee to search out candidates for President. But if NIBS is meant to serve the building community, it must have constant access to the input and advice from all sectors of the building community which, as you know, is highly populated but loosely knit. The communication device in the NIBS organization which will link NIBS to the building community- is known as the Consultative Council.

While I earlier threw a few darts at legislative language, in the case of the Consultative Council, I feel the language is clear and concise so let me read directly from the Act: "The Institute shall establish - with the advice and assistance of the Academies-Research Council and other agencies and organizations which are knowledgeable in the field of building technology - a Consultative Council, membership in which shall be available to representatives of all appropriate private trade, professional, and labor organizations; private and public standards, code, and testing bodies; public regulatory agencies; and consumer groups so as to insure a direct line of communication between such groups and the Institute and a vehicle for representative hearings on matters before the Institute."

When the Council is organized we will have the overall "non-governmental" organization as Congress visualized it. The Board of Directors, representative of the public and private building community, at the top to set NIBS policies and programs - the paid staff which will report to the Board, to organize and carry out the programs - and the Consultative Council to serve both the staff and the Board as a vast resource of technological advice and know-how and as a communication network to speed the effective utilization of new technology.

The task for NIBS has always seemed enormous to me but not all impracticable. I do not feel, however, that the enormity automatically requires the growth of a huge organization. To the contrary, I think NIBS needs to adopt a rigid principle of demonstrating how much can be done with little. Many of us criticize bureaucratic growth as inefficient and costly. If we really believe that a non-governmental activity can avoid it, NIBS is an opportunity to make that point in spades. I think the Board of Directors shares this attitude with me.

To some degree, Congress addressed that point by directing that NIBS should accomplish its responsibilities by assigning and delegating tasks and activities to the maximum extent practicable to existing organizations in the community with the technical competence to make meaningful contributions.

Now let me quickly review for you where the NIBS Board is today in our efforts to define who we are and what we are. The Board held a two-day orientation meeting concurrent with the swearing-in ceremony to get a fast start. Shortly thereafter seven basic committee groups were established to examine and to recommend to the Board policy positions in critical areas of the organizing process. These assignments were mission, staff activities, budget, liaison, incorporation, data collection and dissemination, and formation of the Consultative Council

At its first meeting the Board decided to meet monthly into 1977 until NIBS was effectively on stream and operating. To date we have held three such meetings plus appropriate Committee meetings necessary to feed times for decision to the Board of Directors meetings.

In some areas we are moving rapidly. As of September 8 we are chartered as a non-profit corporation in Washington, D.C. appropriately equipped with articles of incorporation and bylaws. We have established temporary quarters in the Joseph Henry Building in Washington, D.C. and we have a phone number and letterhead to prove we are in business. We have established the specifications for the experience and competence we need for the full-time paid staff. We are now filtering through the building community to search out appropriate candidates

We are now operating on a temporary budget funded by a \$140,000 grant from HUD which will sustain NIBS for a few months until we can achieve appropriation of funds originally authorized by Congress.

In that regard, we have prepared and are now submitting to the Office of Management and Budget (OMB) a five-year budget in support of the 10 million dollars authorized by Congress as seed money and in support of another 10 million dollars of financial resources that NIBS believes it can develop to become self-sustaining as Congress has directed. Since the budget is a 38-page document, I am not going to try to summarize it here today.

In fulfilling our needs for liaison work, we have established firm contact with many of the public agencies who will wish to fund projects with NIBS in a consultant role or as the management organization for accomplishment. A good example is the role that NIBS is expected to play in the orderly implementation of conservation standards required in the recent energy legislation.

In the building community itself we are beginning a program of communication in many forms, one of which is this opportunity to talk to NCSBCS here today. In such communication we have two aims - to tell you who we are and to solicit your input as to where we should go. NCSBCS input to NIBS, of course, should represent no problem since Glen Swenson is a hard working member of our Board and I might add he has had 100 percent attendance at our meetings.

Some other high priority goals of our organizational period are being approached with much sensitivity and very careful deliberation. One of those in the description of our mission, the delineation of responsibilities making up the mission, as well as the strategies required to fulfill the responsibilities. The Mission Committee has spent many hours compiling countless pages of laundry lists of things NIBS should do and, of equal importance, list of things NIBS should not try to do. While we are well into the task, we are weeks, perhaps months away, from a complete and detailed statement which we would consider a thoughtful enough document to submit to the building community for its reactions and suggestions. The task of mission description is too important to be hurried, so hurry we will not.

However, since some abbreviated form of mission statement was required for inclusion in our budget submissions, I think you might like me to read it to you.

The mission of the National Institute of Building Sciences is to improve the built environment and foster more effective use of the nation's building resources by stimulating development of needed scientific and technical knowledge and by ensuring that existing and yet to be formulated construction technologies are

rapidly introduced into and accepted by the building community. The Institute therefore will pursue activities and administer programs that:

- Ensure the Institute's acceptance as the nationally recognized source of information needed to encourage the adoption of beneficial procedures and practices in the field of building technology, particularly in relation to the development and use of national performance criteria and standards for building codes, and
- Stimulate the creation of mechanisms that foster closer interrelationships among all segments of the building community and promote clear understanding and acceptance of the Institute as a motivating and coordinating force.

Public agencies, private organizations, and educational institutions will be utilized by the Institute to conduct research, develop performance standards, and establish criteria for the testing, evaluation, and prequalification of all those elements that are inextricably a part of the building process and that affect its safety, cost, quality, and efficiency as well as the institute's acceptance by consumers.

To accomplish its mission, the Institute initially will employ eight strategies — it will:

1. Establish the Institute as the authoritative national source of information on building science and technology, performance criteria and standards, and the building process.
2. Identify areas in need of investigation and special study; formulate a building research agenda for the nation; define the significant issues related to innovation; and stimulate and administer research programs in various public agencies, private organizations, and educational institutions.
3. Develop a system that permits the formulation, promulgation, and maintenance of nationally recognized building performance criteria and standards and other related technical provisions.
4. Create a national system for the evaluation and prequalification of existing and new building technologies.
5. Establish and maintain a Building Regulation Information Program by assembling data and information on existing codes, standards, and other provisions related to the building process; analyzing all material; creating a data bank; and generating multiple routes of access.
6. Develop mechanisms to demonstrate, at all levels of public and private interest, how the building code process can be coordinated to become a system that consolidates the building community, supports those being regulated, and better serves the consumer.
7. Develop methods for introducing the scientific and technological innovations and performance criteria and standards the institute promulgates to regulatory officials at the local, State, and Federal levels and for facilitating their acceptance by these officials.
8. Pursue those initiatives that will permit the institute to become financially self-sustaining.

Each of these strategies will be implemented by a series of activities and programs. Activities involve direct action by the Institute, the Consultative Council, or the Institute's staff. Programs are those studies, investigations, and research efforts supporting the Institute's mission that are to be carried out under contract by various public agencies, private organizations, and educational institutions.

Augmenting that abbreviated statement of missions let me give you a few philosophical beliefs that we keep in mind as we further consider our mission.

NIBS is meant to serve all segments of the building community even though it was created by an addition to the Housing Act of 1974. NIBS can and will, however, prioritize its efforts toward those areas where it can demonstrate the earliest realized benefits and where its services appear to be in the greatest demand.

NIBS will not write codes but will be a vast technological resource for those who do.

NIBS will apply its influence and resources toward more rapid development and acceptance of performance criteria vs. prescriptive criteria.

NIBS intends to make it practicable for the system of codes and standards to be constantly updated from a technological standpoint.

NIBS will not assume responsibility for solving the sociological problems related to construction, but it must be sensitive to the social consequences of technological decisions.

NIBS will not involve itself in the business processes of construction except for how they encourage and react to development and acceptance of new technology.

We believe that NIBS can only become what the building community wants it to be. The many community segments are not only its clients but will be indeed a part of NIBS through participation in the Consultative Council.

Those philosophies bring me to the second major area of organization where NIBS is moving slowly in order to tap the ideas of those hundreds or perhaps thousands of organizations where NIBS is moving slowly in order to tap the ideas of those hundreds or perhaps thousands of organizations of the entire building community who will want to participate as members of the Consultative Council. That group will be a vast advisory and technological resource to NIBS and must be organized in such a way that its resources are available quickly, conveniently, and through an organizational concept that will encourage consensus and minimize interface frictions. That concept will probably include hearings on various matters and projects that are completely open to those building community segments that are most affected by the matter under discussion and best qualified to make a contribution toward technological progress

The NIBS Board of Directors will continue to be the source of policy and programs within which the NIBS full-time staff will operate. The Consultative Council in turn must be firmly linked to NIBS and its staff in order to contribute thinking on its policies and technological know how to its programs. Once a progressive program in NIBS has been successfully pursued, the results must be promulgated and implemented throughout the building community, and principally by the organized efforts of the Consultative Council. It is my personal belief and I think it is shared by the Board that NCSBCS and the model codes will be very effective components of the Consultative Council in their ability to implement technological progress quickly and with a sense of order and uniformity.

The third and last area in which we will travel carefully is the task of setting up a system to collect and disseminate technological data as they relate to codes and standards. This task also involves a possible system that by retrieval can tell an inquirer at any specific location what codes and regulations are applicable to a specific building use at that location.

There really seems no limit to the sphere of technological development to which NIBS can make a contribution if the basic fuels can be provided. There are 3 fuels — the first fuel is funding, sizeable but not huge, and eventually on a self-sustaining independent basis. The second is the human energy necessary to keep pushing forward. The third, and extremely important, is to gain and to hold the confidence and the participation of the entire building community through a necessarily complicated organizing process period.

In closing I can say the NIBS Directors have become strong enough and with feet big enough to take a firm stance and stay in balance, but our feet are not big enough or holy enough to walk on water! We will need to share a lot of boats in the days ahead to cross our river. We hope we can share yours.