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National Conference of States on Building Codes and Standards, Inc.

1970 Chain Bridge Road, McLean, Virginia 22101

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MANAGEMENT PLAN

CONTRACT NO. EY-76-C-03-1230
MODEL TRAINING PROGRAM FOR STATES
AND LOCALITIES

Submitted by

NATIONAL CONFERENCE OF STATES ON BUILDING CODES AND STANDARDS, INC.
1970 Chain Bridge Road
McLean, VA 22102

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Henry S. Wakabayashi
Program Manager
October 12, 1978

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MANAGEMENT PLAN

I. PROJECT BACKGROUND SUMMARY

This document is a plan for the continuation of the Energy Conservation Program for State and Local Building Code Officials. The program is sponsored by the Department of Energy and carried out by a project team which includes the National Conference of States on Building Codes and Standards (NCSBCS), the Model Code Groups (BOCA, ICBO, SBCCI), and the National Academy of Code Administration (NACA) with the advise and cooperation of many government, industry, professional associations, and other interested and concerned organizations.

A. Brief History of the Program

The program actually began with the request by NCSBCS to the National Bureau of Standards in 1972 to develop design and evaluation criteria for energy conservation in new buildings. This, in turn, lead to the development of the energy standard ASHRAE 90-75 by the American Society of Heating, Refrigerating and Air-Conditioning Engineers. Recognizing that the development of the basic technical standard was only the first step in achieving energy conservation in buildings in actual practice, the Department of Energy (then ERDA) in early 1976, sponsored the current program to achieve four major goals:

- develop an enforceable model energy code utilizing ASHRAE 90-75 as the base technical document;
- develop and test a program of training and education, including course materials, training of instructors, and promoting courses of instruction throughout the nation;

- through their respective organizations, promote the adoption, promulgation and enforcement of the model code on a uniform, voluntary basis;
- coordinate these efforts with all governmental and private-sector organizations to obtain maximum utilization of all available resources to reduce energy consumption in buildings.

As can be seen by the nature of the goals, the program is action-oriented, e.g. develop the enforcement tools, train the personnel in their use, and assist in the field use of these tools -- utilizing all of the established building regulatory institutional arrangements in a coordinated manner and drawing upon the strengths of the traditional and well-developed voluntary consensus system in place in the United States.

B. Highlights of Results to Date

By any measure, the program to date has been eminently successful in achieving its interim goals. Key achievements include:

- the Model Code for Energy Conservation in New Building Construction has been developed and published. Distribution is being accomplished through the cooperative efforts of DOE, NCSBCS, and the Model Code Groups. As of September, 1978, over 4000 copies have been ordered from NCSBCS alone, and approximately 9000 copies have been distributed by NCSBCS and the Model Code Group.
- the basic training materials for the model code have been developed and tested in prototype field courses in four states. Final materials are ready for publication. Materials include:

ECT 000 - a basic primer on energy
in buildings designed for
general use, elected officials,
etc.,

ECT 100 - a course for field inspectors,

ECT 200 - designed for plan reviewers for average residential, commercial, small industrial buildings,

ECT 300 - a course designed for personnel concerned with more sophisticated, complex systems such as high rise buildings,

- implementation activities have been proceeding, at times even before publication of final documents. For example:
 - ICBO's code change committee has held hearings on the model energy code and a membership adoption vote is expected in October for inclusion in the 1979 edition of the Uniform Building Code,
 - SBCCI is proposing a code change to replace Appendix J of the Standard Building Code with the model code. Hearings were held in July with the adoption vote in October.
- with regard to education, the Model Code Groups, through their normal educational activities are currently conducting courses for their members at various locations throughout the country, and several states are conducting courses utilizing adaptations of the material;
- coordination and field awareness of the program has been achieved using many mechanisms including:
 - the four prototype courses (250 attendees),
 - national summer institute (130 attendees),
 - technical council meetings,
 - the regular annual, semi-annual, and committee week meetings of NCSBCS, BOCA, ICBO, SBCCI, NACA,
 - talks before a variety of association and professional group meetings,
 - specific meetings with various agencies and groups including NBS, HUD, NIBS, ASHRAE, etc.

In addition to the above specific accomplishments, of perhaps even greater far-reaching importance is the achievement of this

program in organizing what heretofore were rather diverse institutional mechanisms into a system for accomplishing the necessary steps in achieving a national goal. The resulting structure, naturally with strengthening and refinement, forms the basis for a dynamic system to correlate the activities of various groups and overcome code barriers, both technical and institutional, to adoption and implementation of energy-conserving regulations for buildings utilizing the voluntary consensus mechanisms.

II. PROJECT OBJECTIVES

It is recognized that the full achievement of minimum energy use in buildings, both new and existing, will require long-term efforts.¹ The following is a detailed description of major tasks to be achieved under the continuing contract:

Phase IV - Ongoing Conduct of Program

Task 1 - Update Model Code

As ASHRAE 90-75, the basic technical standard, is updated, it will be necessary to update the model code to reflect these changes. At present, ASHRAE 90-75 is undergoing the consensus change process and it is anticipated that 90-78 will be issued at the end of this year.

The following principal tasks are considered essential to be accomplished:

1) See "Five Year Program Plan for FY '78 and Future Years, Energy Conservation Program for State and Local Building Officials", August, 1978, by H. S. Wakabayashi, Energy Program Director, NCSBCS.

a. The project team will review and comment on ASHRAE in their deliberation of revisions to 90-75.

b. The project team attended the ASHRAE semi-annual meeting in Albuquerque, New Mexico.

c. The preliminary code update procedure will be reviewed by all concerned organizations and finalized.

d. The project team will attend the ASHRAE annual meeting in Philadelphia in late January 1979 to keep updated on the issuance of ASHRAE 90-75R (or ASHRAE 90-78).

e. Development of the final planning report as called for in the contract will be initiated shortly after the ASHRAE meeting in Philadelphia.

Task 2. - Monitoring Process

This will be a low-level activity since it is anticipated that NIBS will be developing a system to accomplish this function. NCSBCS will work closely with NIBS to insure that any system includes monitoring of training as well as adoption of the code, and that feed-back is relayed to the project team.

An interim report indicating the progress of this task will be submitted on or before 31 December 1978.

Task 3 - Training Material

a. The impact of ASHRAE 90-75R on the educational materials packages will be determined. Actual changes in the packages will not be made until the code is updated.

b. A detailed review and specific identification of visual training aids (slides and transparencies) for use by instructors will be conducted.

c. Supplementary examinations and homework problems will be developed.

d. To assure that state and local government policy and decision-makers, code administrators, building inspectors, and plan examiners are aware of the scope and details of the Model Code and training program, it is important to actively disseminate information on this program to these audiences.

The development of a video-taped presentation will be prepared to reach the above mentioned audiences on a local level. This presentation will record a meeting of the principal participants in the Model Energy Conservation Building Code Program. This includes representatives of DOE, NCSBCS and other appropriate program participants.

The contractor shall conduct the following tasks:

1. Develop a discussion agenda.
2. Arrange for participants.
3. Arrange for appropriate visuals.
4. Prepare duplicate copies of the video tape presentation.
5. Distribute video-tapes to organizations upon request.

Task 4 - Qualified Instructors

A key aspect of an effective implementation and enforcement program will be the availability of instructors at the state and local levels who are qualified to conduct courses for the building officials. This will be accomplished by a series of regional seminars or institutes which will be conducted over a multi-year period.

Three institutes have been conducted for the training of instructors to teach the ECT-100 and ECT-200 courses. The initial institute was held at the University of Utah in 1977 and the subsequent institutes were held at the University of Colorado and the University of Maine during the summer of 1978. All sessions were five days in length with a total of 133 state representatives participating.

In this task, NACA will be involved to insure that these programs are coordinated with a national plan for accrediting and training programs for certifying building officials.

Overall critiques and comments submitted by the participants indicate that these sessions were outstanding in every respect and fulfilled a much-needed requirement.

Task 5 - Training Program for States and Localities

Varying and heterogeneous training programs are being implemented by states in which the basic ECT educational series developed under this contract are being utilized.

Under this task, a report will be rendered wherein comments, recommendations and proposed training and education programs for states and localities will be addressed.

Task 6 - Regional Advisory Service Center

Given a situation wherein a state or a local jurisdiction has enacted appropriate legislation or regulations for the adoption of the Model Code for Energy Conservation in New Building Construction or Model Document for Code Officials on Solar Heating and Cooling of Buildings, it then becomes the inherent responsibility of the building code officials of that jurisdiction to implement and enforce the adopted regulatory provisions. In a large measure, the training and education program will provide substantial assistance to those responsible for the enforcement aspect of the code. However, training sessions alone are not considered to be wholly responsive to the enforcement and implementation phase of the code. Thus, it is necessary to make available to these state and local officials charged with the responsibility of implementing and enforcing the code, a centralized resource of technical expertise to provide assistance and advisory services on complex technical matters of the model code and other code-related issues. Therefore, as a significant part of the implementation and enforcement aspect of this program, two regional advisory service centers will be established on a prototype basis to ascertain the need for; determine the objectives/scope of work of; and ascertain required staffing pattern for a permanent and expanded program.

One of the first projects to be undertaken by the centers will be a survey of state building and energy officials to ascertain their critical needs for technical advice and to determine what technical resources are currently available to them.

Presently, a prototype advisory center has been established in New Mexico with substantial financial and personnel assistance being furnished at no expense to NCSBCS or the Federal government. The second site for the two advisory service centers, as called for under the contract, is presently being negotiated. It is anticipated that the second site will be finalized by November, 1978.

Task 7 - Winter Seminar

As a result of the highly successful seminar held during the summer of 1977 at the University of Utah for representatives of all the states, a follow-on winter seminar was held in Albuquerque, New Mexico, in February 1978 to update state personnel on national and state energy code activities and developments. Over 100 state energy and building code representatives attended and were brought up-to-date on the progress in all of the major energy programs now under way including:

- New construction (90-75)
- Retrofit program (100-P)
- Solar program
- HUD performance standard
- Operation & maintenance

Comments and critiques submitted by the participants indicate that the seminar objectives were very successfully achieved and that they unanimously recommended that a similar session be held in the near future.

Task 8 - Liaison With Other Code-Related Organizations

Up to this point in the program the project team has addressed the issue of uniformity through their respective organizations, e.g. NCSBCS, which is made up of state regulatory officials; and the model code groups, who have traditionally serviced the needs of local communities. A substantial number of larger cities, however, have developed their own codes to suit the particular needs of high-density urban populations. These larger cities have formed the Association of Major City Building Officials (AMCBO).

It is planned to actively enlist these larger cities through their organization, AMCBO, to actively participate in the energy code development, update and implementation process. The inclusion of AMCBO in this process on a more active basis will assist greatly in obtaining uniform energy provisions in all jurisdictions.

Other liaison activities completed and in process include:

- a. meeting of project team with ASHRAE in Atlanta in February, 1978;
- b. meeting of project team in Phoenix in February to review progress and formulate detailed plans for energy program activities;
- c. meeting of the project team and the Technical Council in Burlington, Vermont in March;
- d. meeting of the project team and the Technical Council in Portland, Oregon in June.

Task 9 - Technical Council

The Technical Council, established under the provisions of the original contract, involved principally the review of educational materials which were developed to support the implementation of the Model Code for Energy Conservation in New Building Construction.

In a large measure, the objectives of the original charter of the Technical Council have been fulfilled by the involvement by various Technical Council members in the completion of several educational activities as follows:

- Review of the original educational course materials.
- Observers in various prototype courses of the Energy Conservation Technology Series.
- Assisting in the screening and selection of Summer Institute applications.
- Participating in the Summer Institute sessions for qualified instructors.
- Participating in other related educational activities.

Subsequent developments under the contract strongly indicate that the role of the Technical Council should be enlarged or expanded to become more germane to the developing needs. As a result, an ad hoc committee

was formed to conduct such a study and to submit recommendations thereon. This report was completed in the summer of 1978 and a copy is attached. (Attachment A)

In the meantime, the NCSBCS Board of Directors has authorized the establishment of an ad hoc Energy Conservation Committee. A tentative organizational chart of this ad hoc committee is attached. (Attachment B)

The proposed NCSBCS Ad Hoc Committee expands substantially on the scope of the DOE/NCSBCS Technical Council to include a wider involvement in all energy matters, including for example, the issue of implementation of codes at state and local levels, concerns of consumer interests, public utilities and other energy conservation issues.

In light of the NCSBCS establishment of its own independent Energy Conservation Committee, a second ad hoc committee of the Technical Council has been formed to review and analyze the expanded role of the Technical Council in the light of NCSBCS actions. This ad hoc committee is scheduled to meet in early November to complete its recommendations to delineate and possibly amalgamate the roles of the two separate organizations presently envisioned.

A report of the ad hoc committee will be submitted for discussion in the December meeting of the Technical Council.

Phase V - Development of Energy Conservation Code and Training
Program for Existing Buildings

Task 1 - Model Energy Conservation Code for Existing
Buildings

ASHRAE 100, the standard for energy conservation in existing buildings, is well along in the review process and it is imperative that the project team be in a position to move quickly on code development when the Standard is finalized. Also, there is a substantial amount of activity on the federal, state and local levels in regard to the development of a separate rehabilitation code for existing buildings. It is important that these programs be monitored to insure that deliberations include energy considerations.

The sub-tasks include:

- a. Review and comment on ASHRAE 100-P and maintain liaison with the ASHRAE 100 Committee.
- b. Develop preliminary administrative provisions for a Model Code for Energy Conservation in Existing Buildings.

MANAGEMENT STRUCTURE

I. BACKGROUND OF STAFF

A. Experience with Energy Conservation Programs

As a team consisting of representatives of building code technical experts, professional educators, and consulting engineers, many years of combined experience in the fields of energy conservation, building design and construction and technical course development work are available for the ongoing energy conservation program for State and Local Building Code Officials.

B. Educational Credentials

Every member of the NCSBCS Project Team possesses, as a minimum, a Bachelors Degree in Engineering, Architecture or Education, and most of the team members have advanced degrees in their fields of expertise. Moreover, from a practical viewpoint, the members are either registered professional engineers or professional educators which indicates that the practical day-to-day requirements of teaching basic concepts of engineering applications and technology will not be overlooked. This is an important and underlying requirement in the development and implementation of an effective and challenging technical training program for energy use and conservation technicians.

1. Management personnel with at least five years of experience in policy analysis, planning and management activities:

H. S. Wakabayashi, P. E., National
Conference of States on Building
Codes and Standards, Inc.

W. C. Plouffe, Consultant, Charleswater
Associates

2. Technical personnel with at least five years of experience in energy conservation in building construction and mechanical systems:

H. S. Wakabayashi, P. E., National Conference of States on Building Codes and Standards, Inc.

Melvyn Green, P. E., Melvyn Green & Associates

T. H. Carter, P. E., Consultant (a/o 10/15/78)

Billy Manning, P. E., Southern Building Code Congress International, Inc.

Charles F. Sepsy, P. E., Ohio State University

Ali M. Kiper, P. E., George Washington University

3. Technical personnel with a minimum of two years of continuous experience within the last three years in developing and testing of educational materials:

H. S. Wakabayashi, P. E. National Conference of States on Building Codes and Standards, Inc.

Ali M. Kiper, P. E., George Washington University

Billy Manning, P. E., Southern Building Code Congress International, Inc.

4. Technical personnel with minimum of three years in planning and conducting workshops, seminars, and institutes:

H. S. Wakabayashi, P. E., National Conference of States on Building Codes and Standards, Inc.

Robert C. Wible, National Conference of States on Building Codes and Standards, Inc.

II. SUBCONTRACT MANAGEMENT

Subcontracting for technical services is anticipated with

the following groups:

Model Code Group

Building Officials and Code Administrators
International, Inc.
17926 South Halsted
Homewood, IL 60430

International Conference of Building Officials
5360 South Workman Mill Road
Whittier, CA 90601

Southern Building Code Congress International, Inc.
3617 Eighth Avenue, South
Birmingham, AL 35222

Consultants

Melvyn Green & Associates, Inc.
690 Sepulveda Boulevard
El Segundo, CA 90245

William C. Plouffe, President
Charleswater Associates, Inc.
600 Cleveland Street, Suite 990
Clearwater, FL 33515

T. H. Carter, P. E.
5511 Hoover Avenue
Whittier, CA 90601

Charles F. Sepsy
Professor & Research Supervisor
Department of Mechanical Engineering
The Ohio State University
206 West 18th Avenue
Columbus, OH 43210

III. PERSONNEL QUALIFICATIONS

HENRY S. WAKABAYASHI, P. E.
Program Director for Energy
National Conference of States on Building
Codes and Standards

Education:

B. S. Mechanical Engineering, University of Wyoming
M. S. Mechanical Engineering, University of Wyoming

Background:

Mr. Wakabayashi was engaged as a Senior Engineer with the Corps of Engineers, United States Army, in broad engineering practices in design and construction of military and civil works projects. Subsequently, he served as the Staff Director, General Engineering Division, DCPA, Department of Defense, Pentagon, and was responsible for developing and managing a nationwide program in engineering education in nuclear defense design against natural disasters.

As the Program Director for Energy with NCSBCS, he is responsible for the coordination and management in the development of the Model Code for Energy Conservation in New Building Construction and the supporting Energy Conservation Technology courses.

ALI M. KIPER
Professor of Mechanical Engineering
School of Engineering & Applied Science
The George Washington University
Washington, DC 20052

Education:

Master of Science in Mechanical Engineering, Technical
University of Istanbul
Master of Science in Mechanical Engineering, Purdue
University
Doctor of Philosophy, Purdue University

Background:

A registered Professional Engineer in the State of Maryland, his specialization and expertise are in Thermal Sciences, Energy Systems, HVAC Systems, Solar Heating and Cooling, Energy Conservation.

Currently Dr. Kiper is engaged in consulting activities in the field of Energy Management in Buildings. This includes HVAC design, computerized energy analysis, energy audits, study and implementation of energy conservation measures, life cycle cost analyses, HVAC central control systems, solar heating and cooling design, study of implications of adoption of ASHRAE Standard 90-75 or state and model codes.

ROBERT C. WIBLE
Information Director
National Conference of States on
Building Codes and Standards,
Inc. (NCSBCS)

Education:

The School of International Service
American University
Foreign Service Institute

Background:

Mr. Wible has eight years experience in private organizations and in the federal government as a professional communications director. He has been employed with NCSBCS for the past ten months as the organization's information director. In this capacity, he has been responsible for the organization's media relations and for writing and publishing NCSBCS' monthly newsletter, legislative bulletin and membership and conference materials. He has also been responsible for assisting in the arranging of NCSBCS conferences, calls for papers, speaker and panelist arrangements and other conference support activities.

With the United States Information Agency (USIA) for six years, Mr. Wible served as a Foreign Service Information Officer in India and Nepal. His USIA experience included the planning and execution of over 500 seminars, conferences, lectures, panel discussions, multi-media presentations and exhibits in support of U. S. Government objectives overseas. These programs included several series on the world energy crisis and American energy conservation efforts.

Mr. Wible, in both federal and private employment, has had extensive news media experience including the writing and producing of numerous video-tape and radio programs. Mr. Wible has also designed and managed several information and referral systems both overseas and in the United States.

BILLY MANNING, P. E.
Director of Education
Southern Building Code Congress International, Inc.

Education:

B. S. Building Construction, Virginia Polytechnic
Institute.

Background:

Before joining the Southern Building Code Congress as the Director of Education, Mr. Manning was the Director of Building and Zoning, Hillsborough County, Florida. He also served as the Director of the Auburn University Professional Advisory Center. This center was responsible for providing technical advice and guidance on disaster mitigation design to architects and engineers.

Mr. Manning has been a consulting engineer and project engineer for the U. S. Army Corps of Engineers. Additionally, he has taught numerous professional development courses for engineers and architects.

Billy Manning is a registered professional engineer in the States of Alabama, Florida, Georgia and West Virginia.

KENNETH M. SCHOONOVER, P. E.
Staff Engineer
Building Officials & Code Administrators
International, Inc.

Education:

Associate in Applied Science degree and a Bachelor of Science degree in Architectural and Building Construction Engineering from the Milwaukee School of Engineering

Background:

Mr. Schoonover's responsibilities at BOCA include project director of the ERDA/NCSBCS Model Code contract in addition to the regular duties of providing services to the members of BOCA through code interpretation, product evaluation and follow-up inspection.

MELVYN GREEN, P. E.
President & Chief Engineer
Melvyn Green & Associates, Inc.

Education:

B. S. Civil Engineering, University of Arizona

Background:

For six years Mr. Green was the Director of Building and Safety for the City of El Segundo, California. During this time, he served as Secretary-Treasurer for Los Angeles Basin Chapter - ICBO and as Code Changes Chairman.

For three years, he was Chief Engineer for Carlstrom Laboratories, Los Angeles, California, performing structural (construction), fire and environmental tests.

As President and Chief Engineer for Melvyn Green & Associates, Inc., Mel Green has acted as coordinator for the Model Energy Code and as a reviewer of HUD/FHA Solar Energy Standards. He is also active in the rehabilitation and analysis of historic structures.

Melvyn Green is a registered civil and structural engineer in California, Nevada, Colorado, New Mexico and Oregon.

T. H. CARTER, P. E.
Consultant
Whittier, California

Education:

B. S. Civil Engineering, California Institute of
Technology
Graduate Study in Advance Structures, University of
Southern California

Background:

T. H. (Nick) Carter, who has broad experience in the codes and standards field, has held the position of Executive Director of the International Conference of Building Officials (ICBO) for the last sixteen years. He was responsible for the direction of all activities of ICBO, including headquarters and national involvement.

Mr. Carter is a registered civil and structural engineer in California, and was a resident engineer for the Los Angeles Building Department prior to accepting the position of technical director of ICBO.

As a consultant, Mr. Carter has been involved in the development of the One- and Two-Family Dwelling Code and a report for the Douglas Commission on the building code situation in the United States.

CHARLES F. SEPSY, P. E.
Professor & Research Supervisor
Mechanical Engineering Department
Ohio State University

Education:

B. S. Mechanical Engineering, University of Tennessee
M. S. Mechanical Engineering, University of Rochester

Background:

Professor Sepsy's responsibility is in the area of environmental control and supervises all research in solar and building energy.

Professor Sepsy is an active member of ASHRAE and has served on a number of technical and policy committees. He has authored and co-authored many papers, theses and reports on a variety of subjects. As a consultant in engineering, Professor Sepsy has handled many industrial and military assignments.

In addition to his teaching duties, Professor Sepsy has supervised numerous research projects.

U. S. DEPARTMENT OF ENERGY

JAMES F. SHIVAR

PROGRAM MANAGER

PROJECT ORGANIZATION

ENERGY CONSERVATION PROGRAM FOR STATE & LOCAL BUILDING OFFICIALS

NCSBCS/DOE TECHNICAL COUNCIL ORGANIZATIONAL CHART

CONSTRAINTS/PROBLEM AREAS

The principal constraints/problem areas presently envisaged pertains to the scheduled activities of ASHRAE in the promulgation of Standard 90-75R and the 100P series. Since the work to be performed under this contract amendment is directly dependent upon the availability of the ASHRAE Standards (which are not expected until early 1979), completion of all work and services under Task 1 (Phase IV) and Task 1 (Phase V) will be accordingly delayed due to no fault of the NCSBCS Project Team. A more definitive status will be submitted as soon as ASHRAE schedules of standards promulgation activities are ascertained.

U. S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
MILESTONE PLAN AND MANAGEMENT REPORT

FORM APPROVED
FEB 1977

1. Contract Identification Model Training Program of States and Localities		2. Reporting Period July 1, 1978 through December 31, 1978		3. Contract Number EY-76-C-03-1230																							
4. Contractor (name, address) National Conference of States on Building Codes and Standards, Inc. 1970 Chain Bridge Road McLean, VA 22102		5. Contract Start Date May 5, 1976		6. Contract Completion Date December 31, 1978																							
7. Identification Number	8. Reporting Category (e.g., contract line item or work breakdown structure element)	9. Fiscal Years and Months																								10. Percent Complete	
		1978						1979																			
		J	A	S	O	N	D	J	F	M																	
PHASE IV Task 1	Update Model Code																								50 ①		
Task 2	Monitoring Process																								75		
Task 3	Training Materials																								50 ①		
3.5	Video-tape presentation																								20		
Task 4	Qualified Instructors																								100		
Task 5	Training Program for States and Localities																								40		
Task 6	Regional Advisory Service Center																								25		
Task 8	Liaison with Other Code-Related Organizations																								75		
Task 9	Technical Council																								75		
PHASE V Task 1	Model Energy Conservation Code for Existing Buildings																								50 ①		
11. Remarks		① Task 1 - Final review of proposed changes and their effects on the Model Code will depend on ASHRAE's issuance of the final modifications to ① Task 3 - Review of training materials to reflect update of Model Code to be made after Code updating process. ASHRAE 90-75. ① Phase V, Task 1 - Review of ASHRAE Standard 100P will depend on ASHRAE's issuance of final Standards.																									
12. Signature of Contractor's Project Manager and Date		13. Signature of Government Technical Representative and Date
October 12, 1978

1. Contract Identification						2. Contract Number FY-76-C-03-1230																						
Model Training Program of States and Localities																												
3. Contractor Name, Address: National Conference of States on Building Codes and Standards, Inc. 1970 Chain Bridge Road McLean, VA 22102						4. Contract Start Date May 5, 1976																						
						5. Contract Completion Date December 31, 1978																						
6. Identification Number	7. Reporting Category (e.g., contract line item or work breakdown structure element)	8. Planned Prior Fiscal Years	9. Actual Prior Fiscal Years	10. Planned Current Fiscal Year													11. Planned Future Fiscal Years					12. Planned Subsequent Fiscal Years to Completion	13. Total Planned (Columns 9 through 12)					
				1978				1979									a.	b.	c.	d.	e.							
J	A	S	O	N	D	Total																						
PHASE IV			1/78-6/78																									
Task 1	Update Model Code		920	130	88	116	37	88	88																			1467
Task 2	Monitoring Process		288	31	23	23	14	42	31																			452
Task 3	Training Materials		167	31	23	59	113	226	226																			845
Task 4	Qualified Instructors		0	195	152	554	0	0	0																			901
Task 5	Training Program for States and Localities		0	31	23	11	23	23	25																			136
Task 6	Regional Advisory Service Center		23	3	6	14	2	3	3																			54
Task 7	Winter Seminar		133	0	0	0	0	0	0																			133
Task 8	Liaison with Other Code-Related Organizations		0	31	23	23	56	56	57																			246
Task 9	Technical Council		0	31	23	116	14	14	99																			297
PHASE V																												
Task 1	Model Code for Energy Conservation in Existing Bldgs.		681	96	65	59	56	57	57																			1071
14. Total			2212	579	426	975	315	509	586																			5602
15. Remarks:						16. Manpower Expressed In: Exact Units						17. Manpower Plan Date October 12, 1978																
18. Signature of Contractor's Project Manager and Date October 12, 1978						19. Signature of Government Technical Representative and Date																						

COST PLAN

FORM APPROVED
ERDA 533P, 10-77

1. Contract Identification Model Training Program of States and Localities														2. Contract Number EY-76-C-03-1230										
3. Contractor (name, address) National Conference of States on Building Codes and Standards, Inc. 1970 Chain Bridge Road McLean, VA 22102														4. Contract Start Date May 5, 1976										
														5. Contract Completion Date December 31, 1978										
6. Identification Number	7. Reporting Category (e.g., contract line item or work breakdown structure element)	8. Planned Prior Fiscal Years	9. Actual Prior Fiscal Years	10. Planned Current Fiscal Year												11. Planned Future Fiscal Years					12. Planned Subsequent Fiscal Years to Completion	13. Total Planned Cost (Columns 9 through 12)		
				1978			1979								a	b	c	d	e					
				J	A	S		O	N	D						TOTAL								
PHASE IV	ONGOING CONDUCT OF PROGRAM		1/78-6/78																					
Task 1	Update Model Code		32.6	4.6	3.1	4.1		1.3	3.1	3.1						19.3								51.9
Task 2	Monitoring Process		10.2	1.1	.8	.8		.5	1.5	1.1						5.8								16.0
Task 3	Training Materials		10.6	1.1	.8	2.1		8.0	13.3	14.0						39.3								49.9
Task 4	Qualified Instructors		0	6.9	5.4	24.6		0	0	0						36.9								36.9
Task 5	Training Program for States and Localities		0	1.1	.8	.4		.0	.8	.9						4.8								4.8
Task 6	Regional Advisory Service Center		2.2	1.1	.2	2.0		5.4	5.5	5.5						19.7								21.9
Task 7	Winter Seminar		25.6	0	0	0		0	0	0						-								25.6
Task 8	Liaison with Other Code-Related Organizations		0	1.1	.8	.8		2.0	2.0	2.0						8.7								8.7
Task 9	Technical Council		0	1.1	.8	4.1		.5	.5	3.5						10.5								10.5
PHASE V	DEVELOPMENT OF ENERGY CONSERVATION CODE & TRAINING PROGRAM FOR EXISTING BUILDINGS																							
Task 1	Model Energy Conservation Code for Existing Buildings		24.1	3.4	2.3	2.1		2.0	2.0	2.0						13.8								37.9
14. Total			105.3	21.5	15.0	41.0		20.5	28.1	32.1						158.8								264.1*
15. Remarks *Allowance for OH & G&A year end adjustment from previous modification. \$21.0 plus \$243.1 (current contract) = \$264.1																	16. Dollars Expressed In: Thousands			17. Cost Plan Date October 12, 1978				
18. Signature of Contractor's Project Manager and Date (703) 790-5750 October 12, 1978				19. Signature of Contractor's Authorized Financial Representative and Date Controller Oct. 12, 1978				20. Signature of Government Technical Representative and Date																

PROJECT MANAGEMENT REPORT
TRAVEL PLAN FOR FISCAL YEAR 1979

1. Contract Identification Model Training Program of States and Localities											2. Contract Number EY-76-C-03-1230		
3. Contractor (name and address) National Conference of States on Building Codes and Standards, Inc. 1970 Chain Bridge Road McLean, VA 22102											4. Contract Start Date May 5, 1976		
											5. Contract Completion Date December 31, 1978		
6. Month	7. Travel			8. Number of		9. Expenses					10. WBS Elements Expenses To Be Charged To		
	a. Type	b. From	c. To	a. Trips	b. Men/Trip	a. Fares	b. Per Diem	c. Car Rental	d. Other	e. Total	f. Identification	g. Amount	
OCT	01	WASH DC	SANTA FE, NM	1	1	\$366	\$35	\$30	\$15	\$446	Task 6.2	\$446	
	08	WASH DC	TAMPA FL	1	1	\$190	\$105	\$20	\$15	\$330	Task 1.2	\$330	
NOV	11	CHICAGO IL	WASH DC	1	1	\$156	\$50	-	\$25	\$231	Task 3.5	\$231	
	11	LA CA	WASH DC	1	1	\$414	\$50	-	\$25	\$489	Task 3.5	\$489	
	11	BIRMINGHAM AL	WASH DC	1	1	\$164	\$50	-	\$25	\$239	Task 3.5	\$239	
	11	ATLANTA GA	WASH DC	1	1	\$143	\$50	-	\$25	\$223	Task 3.5	\$223	
	11	5 more participants from undetermined cities to WASH DC					\$900	\$250	-	\$125	\$1275	Task 3.5	\$1275
	11	WASH DC	NY NY	1	1	\$74	\$50	-	\$25	\$149	Task 3.5	\$149	
DEC	10	WASH DC	LAKE TAHOE CA	1	1	\$380	\$165	-	\$25	\$570	Task 9	\$570	
	10	6 participants from undetermined cities to Lake Tahoe, CA					\$2100	\$450	-	\$150	\$2700	Task 9	\$2700
	11	LAKE TAHOE CA	SANTA FE, NM	1	3	\$1350	\$150	\$30	\$30	\$1560	Task 6.2	\$1560	
*** SANTA FE, NM WASH DC													
11. Remarks											12. Dollars Expressed In: Exact Units		
Signature of Contractor's Project Manager and Date Anthony 12 1978											14. Signature of Government Technical Representative and Date

UNIVERSITY OF MAINE *at Orono***RECEIVED**

JUN 9 1978

Department of Civil Engineering

NCSBCSNCSBCS
Orono, Maine 04473
207-581-2551

June 6, 1978

TO: Technical Council Members

FROM: Ad Hoc Subcommittee on Future Technical Council Activities
and Responsibilities

SUBJ: Subcommittee Report and Preliminary Recommendations

The technical Council's response to the Ad Hoc Subcommittee's ten-question survey concerning future activities and responsibilities was gratifying. That so many of you took the time to thoughtfully respond in spite of the demands of a busy routine is indicative of your interest in the Council and its role of service to the nation through energy conservation. For your convenient reference, the ten questions with a summary of the majority responses are included as Attachment # 1.

The Ad Hoc Subcommittee met on May 8, 1978, at NCSBCS Headquarters, with Mr. Henry Wakabayashi, Energy Program Director. Discussion at the day-long meeting dealt with three major issues; the genesis of the Technical Council; the Council's projected role and scope of responsibilities; and the impact on that role and scope, of the ten-question survey results.

As to the genesis, Mr. Wakabayashi reviewed the original NCSBCS contract with ERDA (now DOE) which stated "An Ad Hoc Advisory Council shall be formed by NCSBCS with advice of cooperating groups to advise and make recommendations on the suitability and adequacy of course materials and training programs impacting on their areas of expertise." For reasons

outside our concern the "Advisory Council" was changed to "Technical Council," but the remaining language was unchanged, clearly stating the Council's ad hoc status and limited scope.

The original NCSBCS/DOE contract has successfully met its goals and by virtue of that success has generated national demand for additional and expanded expertise to apply toward the solution of state and local energy conservation problems. In response to these needs, NCSBCS and DOE are currently negotiating contract agreements which, in part, call for:

1. an updating of the Model Energy Conservation Code
2. a monitoring of the Model Energy Conservation Code progress
3. a training/demonstration program to develop qualified instructors
4. summer institutes
5. an assessment of deployment of technical data to building code officials
6. all final draft material to be submitted to the Technical Council for review and comment - their comments to be forwarded to the Department of Energy.

It is apparent from item 6 that the Technical Council would continue to exist in a more active and expanded role than in the past, if the proposed contract is successfully negotiated. Unsuccessful negotiations might logically result in the dissolution of the Council unless other circumstances intervened. After considering the contractual realities, the Subcommittee concluded that the Technical Council concept continued to have merit.

Having considered the genesis of the Council, proposed scope of activities, and advisability of its continuance, the Subcommittee then reviewed the responses to the ten-question survey. The following list of comments and recommendations, identified by pertinent question numbers, are the result of that review.

Question # 2 - Answered in the affirmative.

Question # 3 - Recommend that the Technical Council be involved in:

- a. Conceptual planning review of possible NCSBCS programs. Concepts to be reviewed may originate within the Council membership or the NCSBCS/Model Code staff.
- b. Review of NCSBCS/Model Code planning decisions relevant to proposed programs.
- c. Review of NCSBCS/Model Code implementation strategies relevant to proposed programs.
- d. Review of program progress.
- e. Review of program evaluation instruments, as applicable.

Question # 4 - Recommended that the Technical Council retain its present size, and:

- a. Place selected product manufacturers on information mailing list.
- b. Make provisions for adding to Council membership and an ad hoc basis.
- c. Periodically review membership to ensure an active roster.

Question # 5 - Recommended that the Technical Council elect its Chairman and Vice Chairman from the membership, and that:

- a. NCSBCS staff act as secretary and supply necessary administrative support.
- b. Meetings be held at least biannually with additional meetings to be called by the Chairman as necessary.
- c. Meeting agendas be prepared by the Chairman with NCSBCS staff assistance and circulated to Technical Council members at least thirty days prior to the meeting date. Supporting materials to be furnished with agenda as necessary and appropriate.
- d. Council recommendations be arrived at independently.

Question # 6 - Recommended that formal procedures be adopted whereby the Technical Council will be advised of the disposition of recommendations made to NCSBCS.

Question # 7 - Recommended that the Technical Council consider issues as an independent body with input by NCSBCS/Model Code staff as requested. (This question is closely allied with questions 3, 5, and 6.)

Question # 8 - The contract currently in negotiation between NCSBCS and DOE, requiring as it does that all final draft material be submitted to the Technical Council for review and comment and its comments forwarded to the Department of Energy, is, when combined with the recommendations for Question # 6, consistent with the Technical Council's recommendation in this regard.

Question #10 - Recommended that while remuneration for other than travel subsistence expenses not be allowed as a general rule, provision be made for special cases.

The basic thrust of the recommendations in this report is that the Technical Council and the NCSBCS/Model Code operations must maintain a productive, two way communication. And, even though an integral part of the NCSBCS/DOE agreement, the Technical Council, to maintain its credibility, must function as an independent body.

This report of the Ad Hoc Subcommittee's action and recommendations is submitted to the Technical Council for review and criticism. Please come to the Portland meeting prepared with suggestions for improvements.

Respectfully submitted,

Robert Dillon
Melvyn Green
Glendon Mayo
Elmo Morgan
Richard Nightingale, Chairman

RN/po

Attachment Enclosed

ATTACHMENT # 1

Question # 1 Do you feel that the Technical Council has been effective in the past? Why?

Answer # 1 No. The members not sufficiently aware of the Council's charge. Members involvement limited to meetings where subjects were presented and immediately critiqued.

Question # 2 Should the Technical Council assume a more active role in DOE/NCSBCS programs?

Answer # 2 Yes, if it is to achieve credibility.

Question # 3 If your answer to Question # 2 was affirmative, where should the Council place its emphasis - program review, program planning, program implementation, or, a combination of these?

Answer # 3 Technical Council should be involved in program planning, review, and implementation.

Question # 4 Is the present Technical Council acceptably constituted (i.e. size and diversity of interest)?

Answer # 4 Yes.

Question # 5 Should the Technical Council elect its own leadership, prepare its own agenda, and make independent recommendations?

Answer # 5 Yes.. Elect its own leadership, make independent recommendations, prepare agenda jointly with NCSBCS.

Question # 6 Should there be a formalized procedure by which DOE/NCSBCS informs the Technical Council of the disposition of recommendations, program progress, new issues, and decisions made?

Answer # 6 Yes

Question # 7 Do you feel that DOE/NCSBCS should submit formal planning and action issue oriented questions for the Technical Council's consideration? Should the Council consider these questions separately or jointly with DOE/NCSBCS?

Answer # 7 Yes. Questions to be submitted to Council allowing sufficient time for their review. Subsequent joint discussions with NCSBCS.

Question # 8 Should procedures be established that regulate the manner
in which DOE/NCSBSCS may promulgate the Technical Council's
endorsement of their activities?

Answer # 8 Yes.

Question # 9 Would you as a Technical Council member like to assume a
more active role in future Council activities?

Answer # 9 Yes

Question # 10 Would remuneration for your Technical Council efforts in any
way alter your answer to Question # 9?

Answer # 10 No

NCSBCS/ENERGY CONSERVATION AD HOC COMMITTEE

ACRONYMS

ACEC - American Consulting Engineer Council
AGCA - Associated General Contractors of America
AGA - American Gas Association
AIA - American Institute of Architects
AInsa - American Insurance Association
AISI - American Iron and Steel Institute
AMCBO - Association of Major City Building Officials
API - American Petroleum Institute
ASCE - American Society of Civil Engineers
ASEE - American Society of Engineering Educators
ASHRAE - American Society of Heating, Refrigerating and
Air Conditioning Engineers, Inc.
BOCA - Building Officials and Code Administrators International, Inc.
BOMA - Building Owners and Managers Association
CAN - Consumer Action Now
DOE - Department of Energy
EEI - Edison Electric Institute
ICBO - International Conference of Building Officials
NAC - National Association of Counties
NACUBO - National Association of College and University
Building Officials
NAHB - National Association of Home Builders
NAHM - National Association of Home Manufacturers
NCSBCS - National Conference of States on Building Codes and
Standards, Inc.
NFPA - National Forest Products Association
NOJC - National Oil Jobbers Council
NLC - National League of Cities
NLPGA - National Liquefied Petroleum Gas Association
NSPE - National Society of Professional Engineers
NMWIA - National Mineral Wool Insulation Association, Inc.
USCM - United States Conference of Mayors
PCI - Producers Consumers Incorporated
SBCCI - Southern Building Code Congress International, Inc.
VAC - Vacancy