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Kansas Legislative Research Department October 10, 1977

M I N U T E S

SPECIAL COMMITTEE ON FEDERAL AND STATE AFFAIRS

October 3, 1977

Room 532, State House

Members Present

Senator John Crofoot, Chairperson
Representative Ardena Matlack, Vice-Chairperson
Senator Leroy Hayden
Senator Frank Smith
Representative Carlos Cooper
Representative Stan Gibson
Representative Anthony Hensley
Representative Joseph Mikesic
Representative Tom Slattery
Representative Kathryn Sughrue

Senator Ed Reilly was excused.

Staff Present

Russ Mills, Kansas Legislative Research Department
Mary Ann Torrence, Revisor of Statutes Office

Morning Session

Proposal No. 27 - Physically Handicapped Standards

Senator John Crofoot, Chairperson, called the meeting to order at 10:00 a.m. The first order of business was consideration of the proposed bill concerning parking spaces for handicapped persons (R.S. 1578). The bill provides that, after January 1, 1979, all buildings constructed with governmental funds will have at least one parking space available for handicapped persons. The bill would prohibit any person, unless the vehicle bears special handicapped license plates issued by the Division of Vehicles, from parking in the designated spaces. A fine of not less than $5 is established for unauthorized use of the parking spaces.

Representative Matlack moved that R.S. 1578 be introduced and recommended favorably. Representative Cooper seconded the motion. The motion passed with no opposition.

The Committee discussed R.S. 1647, concerning tax credits for making buildings accessible to the handicapped. The bill would provide income tax credits for renovation of buildings and facilities to comply with the American National Standards Institute (ANSI) standards. It would also give an income tax credit for individuals who renovate their homes to comply with ANSI standards. The solar tax credit bill which the Kansas Legislature has already passed was used as a model for this bill. Representative Slattery moved to set a maximum tax credit for dwelling renovation of $1,250 in Section 2 of the bill. Representative Cooper seconded the motion. The motion passed with no opposition.

Staff reviewed R.S. 1627, concerning accessibility standards for certain buildings and facilities. Representative Sughrue moved to insert the following in the definition of public building: "and shall not apply to the common recreational facilities offered by an apartment complex or temporary lodging facility." Representative Gibson seconded the motion. The motion carried with no opposition.

Senator Hayden moved to change the effective date in Section 2 to January 1, 1980 in order to provide more lead time before the requirements take effect. Representative Matlack seconded the motion. The motion carried with no opposition.

Representative Matlack moved to strike the following paragraph in New Section 5 of the draft:

"The architect in charge of planning of the project shall certify as valid all data submitted and shall certify as reasonable and proper the proposal for waiver or modification of the standards established pursuant to this act." Representative Gibson seconded the motion. The motion carried with no opposition.

Representative Gibson moved to insert "or designated agency" after the word "body" in New Section 5 of the bill draft in order to permit a governing body to delegate the enforcement provisions to another agency. Representative Matlack seconded the motion. The motion passed with no opposition.

The Committee directed staff to revise New Section 5 of the draft so that an applicant for waiver must be notified of both denial or approval of the application.

Senator Hayden moved that the word "may" on line 28, page 4, of bill draft be changed to "shall" to require the granting of the waiver if the two stated conditions are met. Representative Cooper seconded the motion. The motion carried with no opposition.

Representative Slattery moved to strike New Section 6 from the bill. This section would permit a physically handicapped person to bring an action for damages if the person is injured or deprived of employment due to violations of the standards established in the bill. Concern was expressed that this provision would permit the filing of an excessive number of legal actions. Representative Matlack seconded the motion. The motion carried with no opposition.

The Committee discussed the penalty provision (class A misdemeanor) and decided to leave the bill as drafted. Representative Gibson moved that the bill, as amended, be introduced and recommended favorably. Representative Cooper seconded the motion. The motion carried with no opposition.

Representative Gibson moved to establish a maximum tax credit for building renovation of $10,000 in Section 3 of R.S. 1647. Representative Cooper seconded the motion. The motion passed with no opposition.

Representative Cooper moved that R.S. 1647, as amended, be introduced and recommended for passage. Representative Hensley seconded the motion. The motion carried with no opposition.

Staff reviewed the draft report on Proposal No. 27.

Afternoon Session

Proposal No. 26 - Insulation Standards

Staff reviewed the draft report on Proposal No. 26 - Insulation Standards. The Committee directed that the word "useless" on page 2, line 7, of the report be changed to "dangerous."

The Committee discussed a proposal presented by Wichita State University (Attachment I) to conduct flammability tests on building insulation materials. WSU proposed to test 35-40 subjects at a total cost of $11,594. Representative Cooper moved that Chairperson Crofoot write a letter to the Kansas Energy Office and encourage KEO to seek funding for such a project. Representative Matlack seconded the motion. The motion passed with no opposition. Staff was instructed to survey several trade associations to determine if a flame spread of 50 or less would present problems to any manufacturers. No action was taken on the draft bill.

Proposal No. 28 - State Real Estate Transactions

Staff reviewed the draft report on Proposal No 28 - State Real Estate Transactions, and the draft bill, R.S. 1577. Representative Cooper moved that R.S. 1577 be submitted to the 1978 Legislature favorably for passage. Representative Sughrue seconded the motion. The motion carried with no opposition.

Representative Matlack moved to adopt the Committee report on Proposal No. 28 - State Real Estate Transactions. Representative Hensley seconded the motion. The motion carried with no opposition.

Proposal No. 25 - Annual State Census

The Committee discussed Proposal No. 25 - Annual State Census. Representative Matlack stated that Kansas should continue to conduct its own census. She proposed further study before abolishing the present census. She noted a state census, conducted properly, would be more accurate than the federal, and that the Division of State Planning and Research should be in charge. Representative Gibson concurred that Kansas should not accept the federal census figures.

Representative Cooper moved that a bill be drafted to transfer authority for the annual state census from the Department of Agriculture to the Division of State Planning and Research and that the effective date of the act be set at July 1, 1979. Representative Matlack seconded the motion. The motion carried with no opposition.

Minutes

Representative Cooper moved to approve the minutes of the August 8-9 and September 8 Committee meetings. Senator Hayden seconded the motion. The minutes were approved.

Next Meeting

The next meeting will be held Monday, October 31, 1977, at 9:30 a.m.

The meeting was adjourned.

Prepared by J. Russell Mills, Jr.

Approved by Committee on:

10/31/77
(date)

Attachment I

FLAMMABILITY TEST ON BUILDING INSULATION MATERIALS

submitted to

Kansas Legislature Research Department

Engineering Technology
Wichita State University
September 27, 1977

Leslie L. Reed 9-27-77
Leslie L. Reed, Date
Principal Investigator

Gerald Rath 9-27-77
Gerald Rath, Director Date
Engineering Technology

C. V. Jakowatz 9-28-77
C. V. Jakowatz, Dean Date
College of Engineering

L. M. Sudermann 9/29/77
F. Sudermann, Director Date
Research and Sponsored Programs
(Authorized University Signatory)

Atch. I

Introduction

The recent energy situation has highlighted a problem that knowledgeable fire protection specialists have been aware of for quite some time. This increased concern has made the flammability of building insulation material a major topic of concern. This in turn, has focused a great deal of attention and concern on the existing test methods for insulation material. As a result of this attention the tests that were used just a few years ago have been found to be unacceptable for a number of materials. The most attention has been given to the various foamed plastics insulators.

The second area of concern was that the old tests did not correctly represent characteristics of the materials in their end use. The question arises; Do the tests accurately reflect how the products are to be used? The second question is, are we, as concerned individuals, allowing material to be placed in family dwellings that increases the hazard of that structure?

As the increased demand for insulation material continues to rise protection must be provided in the form of accurate and realistic fire tests. Information must be made available to ensure no dangerous product is generally available to the public. It is very interesting to note that of all the concerned parties throughout the nation, Kansas could be a front-runner in that they are acting and not talking.

The photographs on the following pages are examples of how foam insulation may react in a building fire situation. As can be seen the insulation has been heated to the point of melting and possibly igniting combustibles below the insulation. These photographs were taken at a recent fire investigation by the Sedgwick County fire department. It is a prime example of a customer purchasing what he thought was a non-combustible insulation. The proposed tests would help identify this type of potential problem before the insulation is installed in structures.

Important Parameters

The proposed fire tests to be used in our research are the Factory Mutual wall-ceiling channel tests and constructing wall panels with the various types of insulation material. The channel test will be used in testing the foam insulations and the panel test for the remaining three (3) types of insulation; slag, fiberglass, and cellulose.

The proposed channel test was developed to determine the comparative burning behavior of insulation materials and predict their potential for self-propagating fire spread in a building environment by measuring the maximum flame spread when exposed to a test fire.

The test method has shown excellent reproducibility and accuracy which was lacking in other fire tests designed to measure burning characteristics of insulation materials. This

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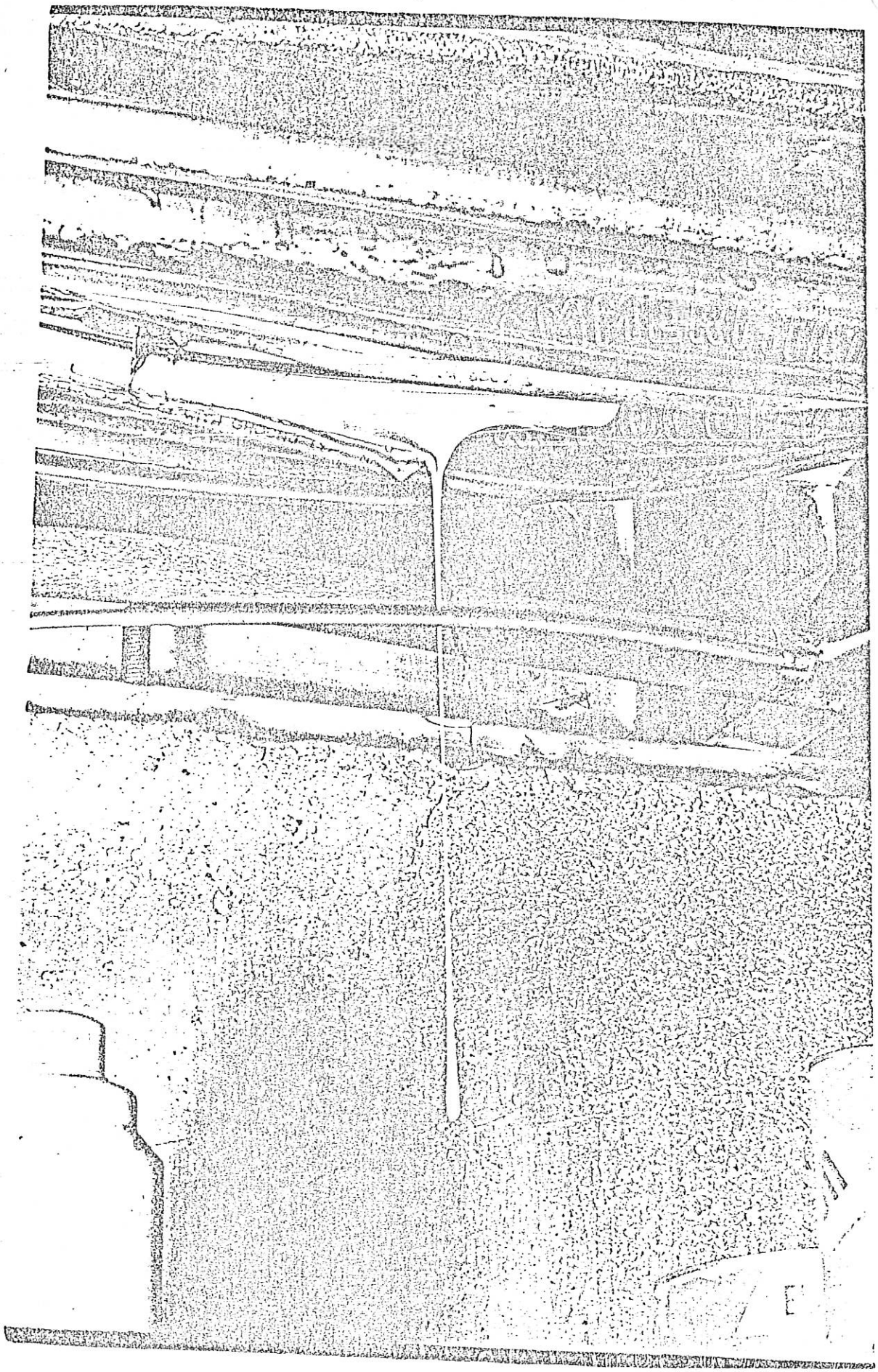

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fire test is extremely appropriate and realistic because it, also, incorporates three adjacent surfaces and produces a combined head flux associated with conductive, convection, and radiative properties of any burning building material.

The Factory Mutual Corporation who developed the wall-ceiling channel test have demonstrated that this test has a direct correlation with their large scale building corner test that they have been conducting since 1966. The channel test which was developed in 1974 is expected to replace the corner test for various materials in the near future.

The second test that will be conducted on the insulating material is the fire panel test. This is designed to get an accurate and realistic picture of the material in its end-use situation.

The channel test method has several advantages over all other flammability tests for foamed insulation. The most significant of these are: (1) its ability to predict the surface flame spread potential of foamed plastic building materials under building fire conditions; (2) its flexibility to test one, two, or three surfaces simultaneously--such as one wall, one wall and ceiling, two walls, two walls and ceiling, or ceiling only; and (3) its rigorous evaluation of foamed plastic building materials under building fire conditions.

The guiding factors for the tests include the following:

(1) The testing subjects should include all new insulation marketed in the state of Kansas. The nearest estimate of the number of subjects to be tested is approximately 35 - 40.

(2) The four (4) major types of insulation to be tested are:

    a) foam
    b) fiberglass
    c) cellulose
    d) slag

(3) The tests should reflect a range of possible conditions, such as:

    a) age
    b) adhesives used
    c) geometric configuration
    d) surface-to-air ratio
    e) energy sources

(4) The performance should be expressed in an objective manner.

(5) The test data should

    a) reflect the fire hazards of all material tested
    b) the insulation will be placed in a ranking order with reference to their flammability characteristics

c) the test data should be reported in an easily understandable manner

Based upon the test results, the State of Kansas will be in a position to make decisions regarding the fire safety aspects of the different products.

Test Methods

The tests to be used are the Factory Mutual wall-ceiling channel tests for foam insulation and the fire panel test for fiberglass, slag, and cellulose.

Fire test procedures for the channel test on foam:

(1) The material to be tested is installed on one or more surfaces of the test structures to satisfy the particular end-use status desired. See attached diagram of test structure.

(2) The exterior of the channel apparatus is maintained tight. All joints are caulked and sealed in such a manner so as to ensure a minimum of heat loss.

(3) The ignition source is a 12 inch square pan of heptane fuel installed in the fire end of the structure, geometrically centered, so that the pan sides are 9 inches from each side wall, and 1 inch from the back wall. When filled with 4 inches of heptane, the distance from the liquid surface to the underside of the ceiling is 72 inches.

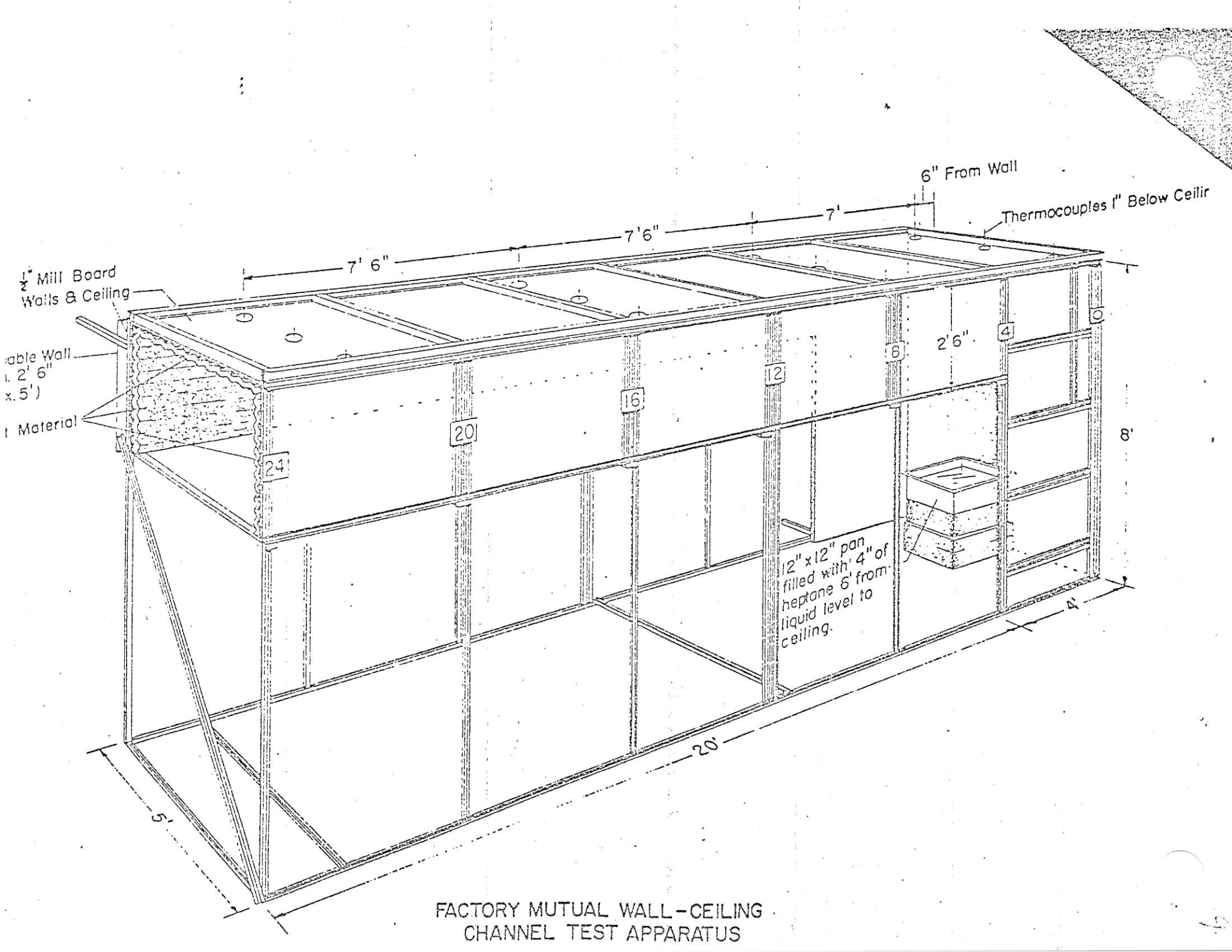
(4) Thermocouples are installed along the longitudinal center line 1 inch beneath the ceiling in air, at the following distances from the end wall: 6 inches, 6 feet, 12 feet, 18 feet, and 24 feet. At these distances, additional thermocouples are installed in air at the wall-ceiling intersections, 1 inch from the sample surface.

(5) The 4 inches of heptane in the steel pan when ignited produces a constant fire exposure of approximately 10,000 Btu/min. The amount of fuel and ceiling distance from the top of the liquid fuel have been established to produce the time-temperature curve. The test is normally conducted for a period of 10 minutes, but if flame propagation reaches the 24 foot mark in less time, the test is terminated.

(6) The time and distance of maximum flame spread by the product during the test are the principal parameters measured.

Test procedures for the panel tests:

The wood joist panel is constructued with the desired type of insulation applied. The structure is then tested with various types of ignition sources. Flame spread is noted and recorded for each type of insulation to be tested.



FACTORY MUTUAL WALL-CEILING
CHANNEL TEST APPARATUS

The end-use test, such as this, gives us an accurate and realistic picture of the way insulation will react in a building fire situation. It is simple but effective.

Time Factor and Testing Site

The major problem in conducting the insulation tests will be the physical gathering of all insulation marketed within the State of Kansas. The proposal schedule has attempted to anticipate problems in delivery.

Time estimate: 6 months.

The tests will be conducted at the fire training grounds of the City of Wichita. The Fire Department as well as the Fire Marshall are most anxious to be of help. A wind break will be constructed for the channel apparatus. I have discussed conducting the tests outside with the designer of the channel and he could find no problems with the wind break.

The fire panel tests will be conducted outside and also inside buildings at the training grounds.

Research Results

The data gained from the tests will give a realistic and accurate picture of the insulations' reactions in a building fire situation. We will be able to provide flame spread figures that can be applied to existing standards for flame spread. The insulations will also be placed in a ranking order with

reference to their flammability characteristics. The tests would also provide valuable burning characteristics of the insulation in actual end-use situations.

The data will provide information that can be used for regulatory or advisory purposes. However, the use of the data should remain the responsibility of the Legislative Committee. All test results will be reported in an easily understandable manner.

Proposed Budget

(February 22, 1978 - August 23, 1978)

Salaries and Wages	
Leslie L. Reed	
25% time, Feb. 22, 1978 - May 22, 1978	$ 1042
25% time May 23, 1978 - August 23, 1978	1042
Student Assistants	
3 @ 45 hours/month each	2025
Secretarial Services	145
Fringe Benefits	415
Construction Materials	1500
Construction Labor	1650
Instrumentation, Film and Film Development	500
Insulation and Adhesive Costs	600
Travel (to Topeka)	
(4 trips)	140
Communication Costs	100
Report Materials and Duplication	100
Indirect Costs (54.9% of Salaries & Wages)	2335
Total Costs	$ 11,594

The recording instrument for the temperature readings is being borrowed from the Mechanical Engineering Department. This is a costly instrument and represents a considerable savings to the project.