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AIRCRAFT NOISE ABATEMENT

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HEARINGS

BEFORE THE

SUBCOMMITTEE ON TRANSPORTATION AND AERONAUTICS

OF THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

HOUSE OF REPRESENTATIVES

NINETIETH CONGRESS

FIRST AND SECOND SESSIONS

ON

H.R. 3400, H.R. 14146

BILLS TO AMEND THE FEDERAL AVIATION ACT OF 1958 TO AUTHORIZE AIRCRAFT NOISE ABATEMENT REGULATIONS, AND FOR OTHER PURPOSES

(And Similar Bills)

NOVEMBER 14, 15, 21, DECEMBER 5, 6, 1967; MARCH 19, 20, 1968

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CONTENTS

	Page
Hearings held on—	
November 14, 1967	1
November 15, 1967	51
November 21, 1967	83
December 5, 1967	129
December 6, 1967	149
March 19, 1968	165
March 20, 1968	175
Text of—	
H.R. 3400	1
H.R. 14146	7
Report on H.R. 3400 by—	
Bureau of the Budget	2
Civil Aeronautics Board	5
Defense Department	3
Housing and Urban Development Department	4
National Aeronautics and Space Administration	5
Transportation Department	2
Report on H.R. 14146 by—	
Bureau of the Budget	7
Civil Aeronautics Board	11
Defense Department	10
National Aeronautics and Space Administration	11
Transportation Department	8
Statement of—	
Addabbo, Hon. Joseph P., a Representative in Congress from the State of New York	31
Becker, William, assistant vice president, operations, Air Transport Association of America	83
Beitel, Albert F., aviation counsel, Minneapolis-St. Paul Metropolitan Airports Commission	166
Boggs, Hon. Hale, a Representative in Congress from the State of Louisiana	54
Boyd, Hon. Alan S., Secretary, Department of Transportation	71
Brasco, Hon. Frank J., a Representative in Congress from the State of New York	47
Brunelle, Capt. Vernon C., chairman, Committee on Noise Abatement, Air Line Pilots Association	132
Burnard, E. Thomas, executive vice president, Airport Operators Council International	110
Callaghan, Thomas P., assistant to the executive director, Massachusetts Port Authority	178
Celler, Hon. Emanuel, a Representative in Congress from the State of New York	175
Corman, Hon. James C., a Representative in Congress from the State of California	132
Delaney, Hon. James J., a Representative in Congress from the State of New York	65
Fascell, Hon. Dante B., a Representative in Congress from the State of Florida	12
Fino, Hon. Paul A., a Representative in Congress from the State of New York	21
Flynt, Hon. John J., Jr., a Representative in Congress from the State of Georgia	63
Foster, Charles R., Chief, Office of Noise Abatement, Department of Transportation	71

Statement of—Continued
Page
Fraser, Hon. Donald M., a Representative in Congress from the State of Minnesota 23
Gilbert, Hon. Jacob H., a Representative in Congress from the State of New York 37
Hall, Lawrence M., chairman, Minneapolis-St. Paul Metropolitan Airports Commission 166
Halpern, Hon. Seymour, a Representative in Congress from the State of New York 40
Hopkins, Dr. Bernard M., assistant superintendent, Inglewood (Calif.) Unified School District 188
Inouye, Hon. Daniel K., a U.S. Senator from the State of Hawaii 53
Karth, Hon. Joseph E., a Representative in Congress from the State of Minnesota 38
Keith, Hon. Hastings, a Representative in Congress from the State of Massachusetts 177
Kupferman, Hon. Theodore R., a Representative in Congress from the State of New York 69
MacGregor, Hon. Clark, a Representative in Congress from the State of Minnesota 28
Matheson, W. K., director of operations, Minneapolis-St. Paul Metropolitan Airports Commission 166
Matsunaga, Hon. Spark M., a Representative in Congress from the State of Hawaii 149
Merrill, Ted, president, Inglewood (Calif.) Unified School District 188
Minish, Hon. Joseph G., a Representative in Congress from the State of New Jersey 165
Mink, Hon. Patsy T., a Representative in Congress from the State of Hawaii 66
Ottinger, Hon. Richard L., a Representative in Congress from the State of New York 35
Pepper, Hon. Claude, a Representative in Congress from the State of Florida 51
Pucinski, Hon. Roman C., a Representative in Congress from the State of Illinois 129
Reid, Hon. Ogden R., a Representative in Congress from the State of New York 41
Robson, John E., General Counsel, Department of Transportation 71
Rogers, Hon. Byron G., a Representative in Congress from the State of Colorado 27
Rosenthal, Hon. Benjamin S., a Representative in Congress from the State of New York 48
Stephen, John E., general counsel, Air Transport Association of America 83
Tenzer, Hon. Herbert, a Representative in Congress from the State of New York 14
Waldrop, Frank C., chairman, The Committee Against National, Washington, D.C 181
Wilson, Hon. Charles H., a Representative in Congress from the State of California 43, 187
Wolff, Hon. Lester L., a Representative in Congress from the State of New York 45
Woods, John P., executive assistant, National Business Aircraft Association 151
Wydler, Hon. John W., a Representative in Congress from the State of New York 57
Additional information submitted for the record by—
Airport Operators Council International:
Letter dated October 6, 1967, to Hon. Harley O. Staggers 111
Letter dated March 20, 1968, to Hon. Samuel N. Friedel 197
Air Transport Association of America, prosposed language for bill on aircraft noise standards 103
American Association of Airport Executives, letter from F. R. Hoyt, executive director 194
Anderson, Neil H., chairman, Mayor Lindsay's Task Force on Noise Control (New York City), telegram 191
Burlington (Vt.) Airport Commission, letter from John A. MacKay, clerk, submitting resolution adopted by the Airport Operators Council International, October 14, 1966 195

Additional information submitted for the record by—Continued

Page

Cole Dynamics Corps., Elgin, Ill., letter from James D. Cole, president 199
Community Plans, Inc., letter, with attachments, from Carl E. Nielsen, president 201
Fascell, Hon. Dante B., letter from Alan C. Stewart, director, Dade County Port Authority 13
Federal Aviation Administration, letter, with attachments, dated December 8, 1967, re contractual requirements for the SST program 140
Hawaii Department of Transportation:
  Letter from E. Alvey Wright, acting director 191
  Statement of Fujio Matsuda, director 67
Naftalin, Arthur, mayor, Minneapolis, Minn.:
  Resolution adopted at the 1967 annual conference of the U.S. Conference of Mayors 190
  Statement 189
National Association of State Aviation Officials, letter from A. B. McMullen, executive vice president, with resolution adopted September 28, 1967 198
National Business Aircraft Association:
  Letter dated December 8, 1967, re general aviation use of La-Guardia, Kennedy, and Newark airports 162
  Noise abatement program, approved April 25, 1967, by the NBAA board of directors 152
Olson, Stanley W., mayor, Richfield, Minn., statement 190
Ottinger, Hon. Richard L.: Article entitled "Hush-Hush Agent Helps Airlines Beat Noise Ban," from the New York Times, October 20, 1967 35
Port of New York Authority, letter from Austin J. Tobin, executive director 192
Radin, Shelden H., Bethlehem, Pa., letter 200
Tenzer, Hon. Herbert: Article entitled "End Delay on Noise Abatement Legislation," from the Congressional Record, August 18, 1967 18
Transportation Department:
  Administration of aircraft noise certification program under H.R. 3400, statement on cost estimate of 75
  Instrumentation to achieve quieter airport approaches, statement on cost estimate of 80
Wood-Ridge (N.J.), Borough of, letter from Robert I. Stroesser, borough clerk, submitting resolution adopted by mayor and council 196
Wydler, Hon. John W.:
  Press release on aircraft noise, dated November 15, 1967 63
  Remarks on aircraft noise problem, from Congressional Record, September 30, 1966 60

AIRCRAFT NOISE ABATEMENT

TUESDAY, NOVEMBER 14, 1967

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND AERONAUTICS,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice, in room 2123, Rayburn House Office Building, Hon. Samuel N. Friedel (chairman of the subcommittee) presiding.

Mr. FRIEDEL. The subcommittee will please be in order. Today the Subcommittee on Transportation and Aeronautics of the Committee on Interstate and Foreign Commerce commences hearings on H.R. 3400 and related bills. This proposed legislation would authorize the Secretary of Transportation to prescribe standards for the measurement of aircraft noise and sonic boom and to establish regulations for their control and abatement. The regulations could then be applied to aircraft certification procedures.

On October 12, 1966, we held hearings on this subject. As I said then, it is a continuing problem and it deserves and requires our continuing interest and effort.

We have a number of Members of Congress who have a direct interest in this legislation and who are present to give their testimony on this subject this morning.

At this point in the record we will include the comments from the various departments and agencies on H.R. 3400.

(The bill, H.R. 3400, and departmental reports thereon, follow:)

[H.R. 3400, 90th Cong., first sess.]

A BILL To amend the Federal Aviation Act of 1958 to authorize aircraft noise abatement regulation, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That title VI of the Federal Aviation Act of 1958 (49 U.S.C. 1421–1430) is amended by adding at the end thereof the following new section:

"AIRCRAFT NOISE CONTROL ABATEMENT

"SEC. 611. (a) The Secretary of Transportation is empowered to prescribe and amend standards for the measurecent of aircraft noise and sonic boom and to prescribe and amend such rules and regulations as he may find necessary to provide for the control and abatement of aircraft noise and sonic boom including the application of such standards, rules, and regulations in the issuance, amendment, modification, suspension, or revocation of any certificate authorized by this title.

"(b) In any action to amend, modify, suspend, or revoke a certificate in which violation of aircraft noise or sonic boom standards, rules, or regulations is at issue, the certificate holder shall have the same notice and appeal rights as are contained in section 609, and in any appeal to the National Transportation Safety Board, the Board may amend, modify, or reverse the order of the Secretary if it finds that safety in air commerce or air transportation and the public interest do not require the affirmation of such order."

SEC. 2. That portion of the table of contents contained in the first section of the Federal Aviation Act of 1958 which appears under the center heading "TITLE V—SAFETY REGULATION OF CIVIL AERONAUTICS" is amended at the end thereof the following:

"Sec. 611. Aircraft noise control and abatement."

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., November 17, 1967.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
Rayburn House Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: This is in reply to your requests for the views of the Bureau of the Budget on H.R. 91, 92, 618, 1398, 2819, 3400, 5461, and 10523, bills which concern aircraft noise abatement regulation.

H.R. 3400 and H.R. 10523 are essentially identical to a draft of legislation submitted to the Congress by the Federal Aviation Agency on January 11, 1967. This legislative proposal resulted from a recommendation of a special interagency task group on aircraft noise headed by the President's Special Assistant for Science and Technology.

The Bureau of the Budget recommends enactment of H.R. 3400 or H.R. 10523 in preference to the other bills listed above. Enactment of either of these bills would be consistent with the Administration's objectives.

Sincerely yours,

WILFRED H. ROMMEL,
Assistant Director for Legislative Reference.

DEPARTMENT OF TRANSPORTATION,
OFFICE OF THE SECRETARY,
Washington, D.C., November 15, 1967.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in reply to your request for the views of this Department with respect to H.R. 91, H.R. 92, H.R. 618, H.R. 1102, H.R. 1110, H.R. 1398, H.R. 2819, H.R. 3400, H.R. 5461, H.R. 10523, and H.R. 11073, bills pertaining to the problem of aircraft noise.

Many of the bills (H.R. 91, H.R. 92, H.R. 618, H.R. 1398, H.R. 2819 and H.R. 10523) contain provisions authorizing the Department to issue rules and regulations designed to alleviate aircraft noise. In fact, some of the provisions are basically the same as the noise abatement legislation submitted to Congress by this Department introduced as H.R. 3400. That bill empowers the Secretary of Transportation to promulgate noise standards and regulations and to apply those regulations in the issuance, modification, or revocation of airman, aircraft, and other certificates authorized by Title VI of the Federal Aviation Act. Coupled with the existing authority found in Section 307 of the Federal Aviation Act authorizing the issuance of air traffic rules governing the flight of aircraft for the protection of persons and property on the ground, the new noise authority contained in H.R. 3400 should be adequate to permit the Department to engage in all the regulatory programs affecting the aeronautical industry which we believe will be needed for noise abatement and sonic boom control in the foreseeable future. We urge the enactment of H.R. 3400 in lieu of the other bills.

Three of the bills (H.R. 2819, H.R. 5461, and H.R. 618) provide, at least in part, for the conduct of noise research by the Department. We do not believe that additional legislation in this area is necessary. For several years, the Federal Aviation Administration has engaged in a considerable amount of noise research under the broad authority found in Sections 307 and 312 of the Federal Aviation Act. In addition, the Department of Transportation Act specifically authorizes the Secretary to undertake research and development relating to noise abatement, with particular attention to aircraft noise. In view of these authorities, we see no need for the additional research authority which these bills would grant.

H.R. 1110 would amend the Federal Aviation Act to establish specific standards and prohibitions regarding the operation of supersonic aircraft. Again, the Department bill (H.R. 3400) provides for the issuance of regulations concerning the control of sonic boom and supplies all the authority that is needed in that area. We believe it would be particularly inadvisable to establish by statute specific limitations relative to the generation of sonic boom overpressures as H.R. 1110 would do. We recommend that the establishment of any technical standards of this nature be accomplished through the regulatory process to insure flexibility in adjusting such standards as advances in technology are achieved.

Three of the bills (H.R. 91, H.R. 1398 and H.R. 2819) contain provisions authorizing the Federal Government to reimburse air carriers for expenses they incur in modifying or purchasing aircraft designed to comply with Government noise regulations; airport owners or operators for costs of modifying airports to comply with Government noise regulations; and States or municipalities for costs of acquiring land surrounding airports in order to reduce the effects of noise. Another bill (H.R. 11073) amends the Federal Airport Act to permit grant-in-aid funds to be applied to projects for the control of jet aircraft-created noise in classrooms of schools in close proximity to public airports.

These bills raise a number of complex questions as to the responsibilities respecting noise control of the various parties concerned with aircraft operations. In addition, they necessitate inquiries into the benefits those parties derive from these operations, and their ability to contribute financially or otherwise to the solution of the aircraft noise problem. Among these parties are the producers of aircraft, aircraft operators, local Governments which operate airports, passengers and other users of commercial aircraft, and the Federal Government. These are questions on which the Department has made some preliminary studies, but, at this juncture, we are not prepared to make a full response to them. Before venturing further into this area, it is essential that we await further progress in study efforts now under way aimed at determining the magnitude of the noise problem in individual areas and the likely cost and effectiveness of the various ways to alleviate noise.

Finally, H.R. 1102 would make the United States liable in any case in which it is established that an easement in airspace has been taken as a result of the operation of aircraft in accordance with air traffic rules prescribed by FAA. The Department opposes enactment of H.R. 1102. We believe that, while the Federal Government can provide leadership in the campaign to control noise, particularly in certain areas such as the regulation of flight and the certification of aircraft, a heavy responsibility must continue to be assumed by the industry which conducts aircraft operations and the local jurisdictions which are served by those operations and are engaged in the regulation of local land use. In no event do we believe that the Federal Government should assume the burden of providing the financial resources to make reimbursements for property loss due to aircraft noise. We know of no rationale to justify the assumption by the Federal Government of that cost burden.

We have been advised by the Bureau of the Budget that there would be no objection to the submission of this report from the standpoint of the Administration's program.

Sincerely yours,

JOHN L. SWEENEY,
Assistant Secretary for Public Affairs.

DEARTMENT OF THE AIR FORCE,
OFFICE OF THE SECRETARY,
Washington, D.C., August 17, 1967.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: Reference is made to your request to the Secretary of Defense for the views of the Department of Defense with respect to H.R.'s 91, 618, 1398, 3400, and 5461, 90th Congress, bills which concerns aircraft noise abatement regulation. The Department of the Air Force has been designated to express the views of the Department of Defense.

The Department of Defense is vitally interested in aircraft noise abatement and is presently conducting research and development related to noise reduction.

However, supersonic flight introduces still another noise disturbance—the sonic boom—a phenomenon for which no noise suppression system has been devised. The requirement for supersonic equipment and its use on a continuously expanding scale is an absolute military necessity. The provisions of these bills imply application to any or all aircraft and, being broad in scope, pose a potential threat to the flexibility of ground and air operation of military aircraft.

The Department of Defense would defer to the views of the Department of Transportation concerning the relative desirability of the above bills. We would recommend, if any such bill is favorably considered, that it be amended so as to apply only to civil aircraft.

This report has been coordinated within the Department of Defense in accordance with procedures prescribed by the Secretary of Defense.

The Bureau of the Budget advises that, from the standpoint of the Administration's program, there is no objection to the presentation of this report for the consideration of the Committee.

Sincerely,

ALEXANDER H. FLAX,
Assistant Secretary, Research and Development.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT,
Washington, D.C., September 11, 1967.

Subject: H.R. 3400, 90th Congress.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in further reply to your request for the views of this Department on H.R. 3400, a bill "To amend the Federal Aviation Act of 1958 to authorize aircraft noise abatement regulation, and for other purposes."

This bill would authorize the Secretary of Transportation to prescribe standards for the measurement of aircraft noise and sonic boom and to establish regulations for their control and abatement, which could be applied to air carrier and aircraft certification procedures under the Federal Aviation Act.

This Department recommends enactment of H.R. 3400.

This bill is an outgrowth of Federal task force studies, coordinated by the Office of Science and Technology, which have been exploring the problem of excessive aircraft noise levels. Three approaches have been formulated to meet this problem. First is the long-range technical objective of producing quieter aircraft; second, is the adoption of flight patterns to reduce noise; and third, is the encouragement of land use near airports that would minimize exposure to noise.

H.R. 3400 is directed to the first approach and it provides the means to assure that all feasible steps are taken to achieve quieter aircraft. At the present time certification of new aircraft is based solely on safety considerations. The use of an additional standard based on noise levels appears reasonable as well as effective.

It is generally recognized, however, that excessive noise cannot in the foreseeable future be entirely eliminated through improved engine design and flight patterns. This Department has been given the primary responsibility, with the assistance of other Federal agencies, of determining ways to encourage land use near airports compatible with prevailing noise levels. We have identified some 70 Federal assistance programs that could be used to encourage more compatible land use adjacent to airports. In this connection, the President has recently directed all Federal agencies to take noise abatement into account in administering relevant programs and to cooperate with this Department in efforts to control the problem of aircraft noise.

Accordingly, we support H.R. 3400 as one important part of an overall approach to reducing aircraft noise.

The Bureau of the Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely yours,

ROBERT C. WEAVER, *Secretary.*

CIVIL AERONAUTICS BOARD,
Washington, D.C., November 15, 1967.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in reply to your requests for the views of the Board with respect to H.R. 91, H.R. 92, H.R. 618, H.R. 1110, H.R. 1398, and H.R. 3400, all relating to the abatement of aircraft noise.

H.R. 3400 is identical in substance to draft legislation submitted to the Congress by the Federal Aviation Agency [Administration] pursuant to recommendations of an interagency task force charged with the responsibility for studying the noise problem and recommending what legislative or administrative actions are needed to alleviate it. Under the bill, the Secretary of Transportation would be empowered to prescribe aircraft noise and sonic boom standards, rules, and regulations in a manner similar to that now authorized under the Federal Aviation Act with respect to standards, rules, and regulations required in the interest of safety. Noise and sonic boom standards would be enforced in the same manner as safety standards are enforced. Certificate holders whose certificates were the subject of adverse actions for violations of such standards would have the same appeal rights as are provided by section 609 of the Act. However, appeals would be made to the National Transportation Safety Board in view of the fact that the safety and accident investigation functions of the Civil Aeronautics Board under titles VI and VII of the Act were transferred to the National Transportation Safety Board upon establishment of the Department of Transportation.

The Board is greatly interested in the abatement of aircraft noise and sonic boom, and favors the enactment of H.R. 3400.

In view of the Board's preference for H.R. 3400, it does not believe that detailed comments are required with respect to the other bills. However, in the event that consideration should be given to certain of the bills, the Board has the following comments to offer with respect to them. The Board defers to the views of the Secretary of Transportation as to (1) the desirability of reimbursing air carriers, airports, and States and municipalities for part of the costs involved in modifying equipment or acquiring land in order to comply with regulations of the Secretary (H.R. 91 and H.R. 1398), (2) the need for additional authority to carry out research and development programs concerning methods and devices for noise abatement (H.R. 618), and (3) whether prohibiting the operation of civil supersonic aircraft generating sonic boom over-pressures in excess of a specified level is the most appropriate method for the abatement of noise resulting from the operation of such aircraft (H.R. 1110).

The Board has been advised by the Bureau of the Budget that there is no objection to the submission of this report from the standpoint of the Administration's program.

Sincerely yours,

CHARLES S. MURPHY, *Chairman.*

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,
Washington, D.C., November 21, 1967.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This replies further to your request for the comments of the National Aeronautics and Space Administration on the bill H.R. 3400, "To amend the Federal Aviation Act of 1958 to authorize aircraft noise abatement regulation, and for other purposes."

The proposed legislation would authorize the Secretary of Transportation to establish standards for the measurement of aircraft noise and sonic booms and to promulgate and enforce regulations for the control and abatement thereof.

In recent years noise generated at airports and by aircraft and the impact thereof on people, communities and structures has been a matter of concern, not only to the Congress and the Executive Branch of the Government, but to the communities throughout the country which are exposed to heavy aircraft and airport traffic. The Federal agencies concerned include not only NASA, but the Departments of Defense, Commerce, Housing and Urban Development, and Transportation. As might be expected, the interests and responsibilities of the

interested agencies vary somewhat depending on the statutes under which they operate, but every possible effort has been made to coordinate and carry forward the noise research and prevention work of those agencies.

NASA's responsibility flows from its statutory duty to "contribute materially to . . . the improvement of the usefulness, performance, speed, safety and efficiency of aeronautical . . . vehicles." Funds for noise research have been regularly included in NASA's annual budgets and program authorizations and appropriations.

In his March 2, 1966, message to the Congress, recommending the establishment of a Department of Transportation (House Document 399) the President recognized the noise problem and its urgency.

He said, in part:

"The jet age has brought progress and prosperity to our air transportation system. Modern jets can carry passengers and freight across a continent at speeds close to that of sound.

"Yet this progress has created special problems of its own. Aircraft noise is a growing source of annoyance and concern to the thousands of citizens who live near many of our large airports. As more of our airports begin to accommodate jets and as the volume of air travel expands, the problem will take on added dimension.

"There are no simple or swift solutions. But it is clear that we must embark now on a concerted effort to alleviate the problems of aircraft noise. To this end, I am today directing the President's science advisor to work with the Administrators of the Federal Aviation Agency and the National Aeronautics and Space Administration, and the Secretaries of Commerce and of Housing and Urban Development, to frame an action program to attack this problem.

"I am asking this group to—

"Study the development of noise standards and the compatible uses of land near airports;

"Consult with local communities and industry; and, recommend legislative or administrative actions needed to move ahead in this area."

The President's action was in part based on recommendations, also published in March 1966, in a report of the Jet Aircraft Noise Panel of the Office of Science and Technology entitled, "Alleviation of Jet Aircraft Noise Near Airports." That report, which resulted from extended study of the problem, contains information on many aspects of the problem.

Following through on the President's request and using the above-mentioned report as a starting point for an integrated study of the problem, first the Director of the Office of Science and Technology and more recently the Secretary of the Department of Transportation have taken leadership in the study of aircraft noise and its related problems. The National Aeronautics and Space Administration and other interested and affected Executive Agencies are participating in that work.

It is important that aircraft and airport noise disturbances—especially where they exist in closely populated areas—be minimized as soon as possible. However, identification of the causes and the development of workable solutions thereto are difficult undertakings.

The Department of Transportation has authority to put into effect, necessary measures to assure aircraft and airport safety. When noise conditions are such as to affect safety, DOT can deal with them. It cannot, under its statutes, deal effectively with noise problems which are not related to safety. It is generally agreed by NASA and other agencies cooperating in the President's Government-wide program for the alleviation of aircraft and airport noise, that DOT's regulatory authority should permit it to act on noise problems, as such. That is precisely what H.R. 3400 would do.

Accordingly, while the National Aeronautics and Space Administration would, not, in general, recommend the enactment of major new authorities in the noise field—there are other such bills now pending before the Committee—until the work now going on has progressed to the point at which complete and effective recommendations can be made, it does recommend the enactment of H.R. 3400 providing for the development of standard rules and regulations with respect to aircraft noise as is now done for safety.

The Bureau of the Budget has advised that, from the standpoint of the Administration's program, there is no objection to the submission of this report to the Congress.

Sincerely yours,

ROBERT F. ALLNUTT,
Assistant Administrator for Legislative Affairs.

(H.R. 14146, introduced by Mr. Friedel, November 22, 1967, and departmental reports thereon, follow:)

[H.R. 14146, 90th Cong., first sess.]

A BILL To amend the Federal Aviation Act of 1958 to authorize the establishment of aircraft noise standards and the use of such standards in aircraft type certification, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Federal Aviation Act of 1958, as amended, is further amended by adding a new section 611 as follows:

"Aircraft Noise Standards

"(a) The Administrator is empowered and directed to prescribe and amend reasonable standards for the measurement of aircraft noise and sonic boom if he finds such action necessary and appropriate to encourage progress in aircraft noise abatement. Prior to issuing an aircraft type certificate under section 603 (a) (2), the Administrator shall find that the aircraft for which such certificate is sought meets such noise standards.

"Amendment, Modification, Suspension, and Revocation

"(b) The Administrator may issue an order amending, modifying, suspending, or revoking an aircraft type certificate if he determines that such action is necessary and appropriate to encourage progress in aircraft noise or sonic boom abatement and that the public interest requires such action. Prior to taking such action the Administrator shall advise the person or persons whose aircraft type certificate would be affected as to the reasons relied on by the Administrator, and shall provide such persons an opportunity to answer and to be heard as to why such certificate shall not be amended, modified, suspended, or revoked. Any person whose aircraft type certificate is affected by such an order of the Administrator may appeal the Administrator's order to the National Transportation Safety Board, and the Board may, after notice and hearing, amend, modify, or reverse the Administrator's order if it finds that the encouragement of progress in aircraft noise abatement or sonic boom abatement and the public interest do not require affirmation of the Administrator's order. In the conduct of its hearings the Board shall not be bound by findings of fact of the Administrator. The filing of an appeal with the Board shall stay the effectiveness of the Administration's order. Any persons substantially affected by the Board's order may obtain judicial review of such order under the provisions of section 1006, and the Administrator shall be made a party to such proceedings.

"(c) Nothing contained in subsections (a) and (b) of this section shall be deemed to empower the Administrator to amend, modify, suspend, or revoke any airworthiness certificate for purposes of aircraft noise or sonic boom abatement, nor shall the Administrator be empowered to take any action not consistent with the primacy of safety."

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., March 4, 1968.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in reply to your letter of November 27, 1967, requesting the views of the Bureau with respect to H.R. 14146, a bill "To amend the Federal Aviation Act of 1958 to authorize the establishment of aircraft noise standards and the use of such standards in aircraft type certification, and for other purposes."

The proposed legislation would authorize the Administrator of the Federal Aviation Administration to prescribe and amend reasonable standards for the measurement of aircraft noise and sonic boom, and to use such standards in aircraft type certification.

In a separate report to your Committee on this bill, the Department of Transportation has cited several reasons for opposing enactment of this legislation.

We concur in the views expressed by the Secretary of Transportation and for the reasons stated in his report we recommend against favorable consideration of H.R. 14146.

Sincerely yours,

WILFRED H. ROMMEL,
Assistant Director for Legislative Reference.

DEPARTMENT OF TRANSPORTATION,
OFFICE OF THE SECRETARY,
Washington, D.C., March 1, 1968.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: I refer to your request for this Department's comments on H.R. 14146, a bill relating to aircraft noise regulation. This is a bill proposed by the Air Transport Association of America (ATA) in testimony before the Transportation and Aeronautics Subcommittee last fall.

The ATA bill would require the Administrator of the Federal Aviation Administration to prescribe standards for the measurement of aircraft noise and sonic boom and to issue aircraft type certificates if the aircraft for which the certificate is sought meets noise standards. It would also authorize the Administrator to issue an order amending, modifying, suspending or revoking an aircraft type certificate if such action was necessary "to encourage progress in aircraft noise or sonic boom abatement" and if required in the public interest. Such orders would be subject to appeal to the National Transportation Safety Board and subsequent judicial review. The ATA bill would prohibit the Administrator from amending, modifying, suspending, or revoking any airworthiness certificate for purposes of aircraft noise or sonic boom abatement.

The Department is opposed to the ATA version of the noise abatement bill for a number of reasons:

1. The ATA bill would vest the authority for regulation of aircraft noise and sonic boom in the Administrator of the Federal Aviation Administration rather than the Secretary of Transportation. ATA offers as the reasons for this change from the Administration's bill the arguments that it would require the issuance of two type certificates, one for noise and one for safety, and that, in authorizing the Secretary to promulgate noise and sonic boom regulations, it could operate to subvert safety considerations to noise and sonic boom judgments.

Only one certificate would be issued, and two. The Secretary's authority under existing statutes to carry out operating programs has been routinely delegated to the Administrators of the modal administrations within the Department. In the same manner the administration of aircraft noise and sonic boom certifications would be operationally carried out by the Administrator of the Federal Aviation Administration in conjunction with his present activities relating to air safety. FAA personnel regularly engaged in certification activities would simply apply the noise and sonic boom standards in the course of their certification work. The practical administrative effect, therefore, would be similar to that proposed in the ATA bill. The difference, and we believe it to be a significant one, is that final decision-making authority with respect to noise abatement and sonic boom standards would be available to the Secretary should he choose to exercise it.

The ATA argument that safety considerations may be ignored if the Secretary is authorized to establish aircraft noise and sonic boom standards is difficult to understand. First, it overlooks the fact that the Department is totally committed to assuring safety in aviation and all other modes of transportation. Second, it overlooks the fundamental manner in which noise standards and safety standards interact. Both noise standards and safety standards must be set with full knowledge of, and complete reliance on the state of the aeronautical art. It would be clearly unreasonable to establish a noise standard having an adverse effect on safety which could not be corrected or compensated for by our existing technical knowledge. The real issue which is present, even in our current certification processes, concerns the cost of complying with a standard and whether the benefit is worth the added cost.

The FAA Administrator, acting under delegation from the Secretary, would not be free to set a noise standard without taking into consideration all its costs,

including those necessary to maintain an adequate level of safety. To assume that he or the Secretary would fail to weigh safety considerations, or weigh and then disregard them, is simply untenable. The need for compensating measures necessary to maintain safety, and their costs, would have to be considered in determining the reasonableness of the Government's action to apply a noise standard.

In vesting authority directly in the Administrator rather than the Secretary, the ATA bill is attempting to draw an analogy from the Department of Transportation Act. However, the logic of the statutory delegation of certain safety functions to the modal Administrators in the Department of Transportation Act, which was to insulate the safety regulatory function, has no application in the aircraft noise area. Congress has specifically directed the Secretary to develop a national transportation system which is compatible with other objectives, one of the foremost of which is improving the quality of our environment. The control of aircraft noise and sonic boom raises fundamental questions as to the compatibility of air transportation with the rest of our environment. The judgments to be exercised with respect to the environmental compatibility of our transportation systems are precisely the ones which are not best reserved to the Administrators of the modes of transportation involved. These broad environmental issues require a balancing of national interests, for which the Secretary must assume the ultimate responsibility within the Department.

2. The ATA bill seeks to make mandatory the imposition of aircraft noise and sonic boom certification. ATA argues that this is necessary in order to achieve maximum preemption by the Federal Government of the field of aircraft noise regulation. As a practical matter, and as ATA concedes in its testimony, the only regulatory authority left to local communities or airport operators is the authority of the airport operator, in the exercise of its proprietary function, to limit on noise grounds the kind of aircraft which may use its facility. The Department is firmly convinced that such authority in the airport operator should continue. Local communities should, if not inconsistent with overriding national interests, have the option to determine the effects of transportation on their environment. We do not believe that the mere presence of authority in the Federal Government to certify for noise purposes, or the exercise of that authority, should foreclose an airport operator from exercising his judgment or responding to the desires of the community with respect to aircraft noise. An action by an airport proprietor to exclude aircraft which exceed noise levels established by him does not conflict with the Federal authority to regulate air traffic.

The exercise of this and other authority by local communities should continue. Local communities select airport sites and determine where they best will serve community needs. They bear the responsibility for insuring compatible land use in the airport environs. They have the necessary promotional, proprietary, planning and land use authorities to carry out this responsibility. They have a very influential voice in determining the type of service they want through their appearances in route proceedings before the CAB. In short, given the limits imposed by aeronautical technology, the community can and should continue to bear a heavy share of the responsibility for assuring the compatibility of the air service they seek and enjoy with the environmental objectives of the community.

This combination of local authority and local interest provided the rationale for the Supreme Court's decision in *Griggs* v. *Allegheny County* in which the Court found the local airport authority, rather than the Federal Government, responsible for a "taking" of property due to aircraft noise. It would be unwise to take action which could raise argument undermining this rationale. We believe that total preemption of the aircraft noise regulatory field by the Federal Government, as recommended by ATA, could be so regarded.

3. The scope of the bill proposed by ATA is too narrow in that it authorizes only prospective noise abatement action. The Department believes that effective control of aircraft noise and sonic boom requires as a minimum (1) the authority to apply noise standards, rules, and regulations to the issuance of type certificates, both prospectively and retroactively to the date of the application therefor, and (2) the authority to prescribe standards, rules, and regulations affecting the operation of aircraft as may be necessary.

While quite obviously any governmental decision to require the retrofitting of existing aircraft to reduce noise levels would have to be very carefully weighed from the standpoint of the benefits to be gained versus the costs necessarily imposed, the authority to do so ought to be available should technology and circumstances indicate that such retrofitting was necessary in the public interest.

Industry and the public would be protected from the irresponsible exercise of that authority by the appeals permitted either to an impartial board or to the courts, as the case may be.

We would strenuously object to the ATA proposal prohibiting an action to amend, modify, suspend, or revoke an airworthiness certificate for noise abatement or sonic boom purposes. If an aircraft in operation by a carrier ceases to conform to its type certificate, an action against the airworthiness certificate should be available.

4. There are some serious technical deficiencies in the ATA bill. The bill would authorize the prescribing of standards only for "the measurement of aircraft noise and sonic boom." It will be necessary not only to establish standards for the measurement of noise but also to prescribe allowable noise emission levels which aircraft must meet. Measurement alone is insufficient. We also think the finding required to support the standard, that it is "necessary and appropriate to encourage progress in aircraft noise abatement," is too vague. We think the objective is to control and abate aircraft noise and this should be the finding necessary to support a standard. Of course, in any rule-making action, the test of reasonableness will also be present.

ATA expressed concern about the procedural protection of H.R. 3400. It is clear that section 1006 (which provides for appeal to the courts of decisions by the Board) will apply to actions taken against certificates for reasons of noise abatement and sonic boom under the proposed section 611. We believe it is unnecessary to repeat the provisions of section 1006 in section 611.

In summary, the Department would support a bill which (1) authorized the Secretary to prescribe and amend standards for the measurement of aircraft noise and sonic boom, and to prescribe standards, rules, and regulations as necessary to provide for the control and abatement of aircraft noise and sonic boom; (2) authorized the Secretary to apply such standards, rules, and regulations to the issuance of an aircraft type certificate, regardless of the date of the application for the certificate; (3) authorized the Secretary to amend, modify, suspend, or revoke type certificates and airworthiness certificates for noise or sonic boom purposes; and (4) authorized the National Transportation Safety Board to amend, modify, or reverse an order of the Secretary on a finding that the control and abatement of aircraft noise or sonic boom and the public interest did not require affirmation of the order. A bill incorporating these features would be acceptable to the Department and would be largely consistent with the position taken by ATA.

The Bureau of the Budget advises that from the standpoint of the Administration's program there is no objection to the submission of this report for the consideration of the Committee.

Sincerely yours,

JOHN L. SWEENEY,
Assistant Secretary for Public Affairs.

DEPARTMENT OF THE AIR FORCE,
OFFICE OF THE SECRETARY,
Washington, D.C., March 12, 1968.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: Reference is made to your request to the Secretary of Defense for the views of the Department of Defense with respect to H.R. 14146, 90th Congress, a bill "To amend the Federal Aviation Act of 1958 to authorize the establishment of aircraft noise standards and the use of such standards in aircraft type certification, and for other purposes". The Department of the Air Force has been designated to express the views of the Department of Defense.

The Department of Defense is vitally interested in aircraft noise abatement and is presently conducting active research related to noise reduction systems and methods. Supersonic flight, however, introduces a noise source—the sonic boom—for which noise reduction techniques or procedures are extremely limited. The requirement for supersonic equipment and its use on a continually expanding scale is an absolute military necessity. The provisions of this bill imply application to any and all aircraft and, being broad in scope, pose an unacceptable constraint on the flexibility of ground and air operation of military aircraft.

The Department of Defense, therefore, would oppose H.R. 14146 unless it were

amended to apply clearly only to civil aircraft. If so amended, the Department of Defense would defer to the Department of Transportation concerning the relative desirability of H.R. 14146.

This report has been coordinated within the Department of Defense in accordance with procedures prescribed by the Secretary of Defense.

The Bureau of the Budget advises that, from the standpoint of the Administration's program, there is no objection to the presentation of this report for the consideration of the Committee.

Sincerely,

ROBERT H. CHARLES,
Assistant Secretary of the Air Force
(Installations and Logistics).

CIVIL AERONAUTICS BOARD,
Washington, D.C., March 1, 1968.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in reply to your letter of November 27, 1967, requesting the views of the Board with respect to H.R. 14146, a bill "To amend the Federal Aviation Act of 1958 to authorize the establishment of aircraft noise standards and the use of such standards in aircraft type certification, and for other purposes."

H.R. 14146 would empower and direct the Administrator of the Federal Aviation Administration to prescribe reasonable standards for the measurement of aircraft noise and sonic boom if he finds such action necessary and appropriate to encourage progress in aircraft noise abatement. Before issuing an aircraft type certificate under the Act, the Administrator would be required to find that the aircraft involved met such standards. An aircraft type certificate could be amended, modified, suspended or revoked if the Administrator found that such action was necessary or appropriate to encourage progress in aircraft noise or sonic boom abatement, and was required by the public interest. Any person whose aircraft type certificate was affected by an order of the Administrator could appeal such order to the National Transportation Safety Board. Such Board would be authorized to amend, modify or reverse the Administrator's order if it found that the encouragement of progress in aircraft noise abatement or sonic boom abatement and the public interest did not require affirmation of such order. The judicial review provisions of the Act would be made applicable to noise and sonic boom certification procedures on appeal.

The purpose of the bill is similar to that of H.R. 3400, which is part of the legislative program of the Department of Transportation. However, H.R. 14146 differs principally from H.R. 3400 in that it vests the Administrator rather than the Secretary of Transportation with authority to prescribe noise abatement standards, and it would be limited to aircraft type certificates instead of being applicable to any certificate authorized under title VI of the Act.

The Board stated in a report to your Committee on November 15, 1967, with respect to H.R. 3400 that it was greatly interested in the abatement of aircraft noise and sonic boom, and that it preferred the enactment of such bill to several other bills then pending before your Committee. In these circumstances, the Board defers to the views of the Secretary of Transportation as to the desirability of H.R. 14146, which was subsequently introduced.

The Board has been advised by the Bureau of the Budget that there is no objection to the submission of this report from the standpoint of the adminstration's program.

Sincerely yours,

ROBERT T. MURPHY,
Acting Chairman.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,
Washington, D.C., March 12, 1968.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives,
Washington, D.C.

DEAR MR. CHAIRMAN: This replies further to your request for the comments of the National Aeronautics and Space Administration on the bill H.R. 14146,

"To amend the Federal Aviation Act of 1958 to authorize the establishment of aircraft noise standards and the use of such standards in aircraft type certification, and for other purposes."

The proposed legislation would authorize the Administrator of the Federal Aviation Administration to prescribe and amend reasonable standards for the measurement of aircraft noise and sonic boom and to use such standards in aircraft type certification.

The National Aeronautics and Space Administration endorses the objective of the bill; however, with respect to the specific merits of H.R. 14146, relative to other pending legislation on this subject, we defer to the views of the Department of Transportation."

The Bureau of the Budget has advised that, from the standpoint of the Administration's program, there is no objection to the submission of this report to the Congress.

Sincerely yours,

ROBERT F. ALLNUTT,
Assistant Administrator for Legislative Affairs.

Mr. FRIEDEL. Our first witness will be our honorable colleague, Dante Fascell of Florida.

STATEMENT OF HON. DANTE B. FASCELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. FASCELL. Thank you, Mr. Chairman and members of the committee.

I have a prepared statement, Mr. Chairman, which I request consent to insert in the record and then make a few contemporaneous remarks.

Mr. FRIEDEL. With no objection, the statement will be included.

(Congressman Fascell's prepared statement follows:)

STATEMENT OF HON. DANTE B. FASCELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. Chairman, I appreciate having been extended the opportunity to appear here this morning to testify in behalf of H.R. 13976—which I have introduced—and similar bills which would authorize the Secretary of Transportation to prescribe aircraft noise abatement regulations.

The greater noise generating potential of second, third, and fourth generation jet aircraft—coupled with the ever-increasing number of flights recorded daily at our Nation's airports—make it essential that we now provide the framework within which noise abatement regulations may be implemented.

It is essential that this legislation be enacted at the earliest possible date. We no longer have a "lead-time" of two or three years in which to face up to this problem. Rather, it has arrived and is very much with us today.

The growth of the air industry within the past few years has been nothing short of phenomenal. As jets which require shorter runways have arrived almost overnight, the "jet age" has come to many of our older airports which, coincidentally, are often located in heavily populated areas.

Yet, the problem is not limited to airports serving just the small jets; communities surrounding giant airports such as Miami International, Kennedy, and Los Angeles have been faced with this problem for many years now.

People living near these airports are subjected to the severest emotional and psychological strains to say nothing of the grave economic consequences which result from the loss of property values in such areas. As difficult as the situation now appears to be, the immediate prospects are for things to become a lot worse with jumbo jets on the horizon.

This country has long taken the lead in the rigid safety regulations it imposes on the aircraft industry in the interest of passanger safety. Here, Mr. Chairman, is an opportunity for the United States to take the lead in another area—namely protection of the non-flying public on the ground.

I am certain that after studies by the Secretary of Transportation and his staff, suitable recommendations and regulations can be set forth dealing with the design of aircraft, flight operations, and the use of land around airports so that the problem of "noise pollution" may be drastically reduced.

I urge the Committee to act favorably on the legislation before it today, and provide the Nation with a congressional mandate for action to curb the growing menace of aircraft noise.

In conclusion, Mr. Chairman, at this point I would like to submit for the record a copy of a letter I have received from Mr. Alan C. Stewart, Director of the Dade County Port Authority. Mr. Stewart has long been interested in and concerned with the problem of noise abatement and control.

(The letter referred to follows:)

DADE COUNTY PORT AUTHORITY,
Miami, Fla., November 8, 1967.

Subject: U.S. aircraft noise legislation (S. 707 and H.R. 3400).

Hon. DANTE B. FASCELL,
House Office Building,
Washington, D.C.

DEAR REPRESENTATIVE FASCELL: November 14 and 15 are the dates that the House Transportation Subcommittee is holding limited hearings on H.R. 3400.

This legislation is aimed primarily at providing the Federal Aviation Administration with the authority to establish noise certification standards for new aircraft.

As we read the legislation, we think it also includes the ability on the part of the Federal Aviation Administration to establish noise criteria so that existing aircraft would have to comply.

We urge you to testify in support of this legisation.

Very truly yours,

ALAN C. STEWART, *Director.*

Mr. FASCELL. Mr. Chairman, the committee will take judicial notice of the fact, and has already, that noise caused by aircraft is a major problem. With the advance of the industry and the increase in air travel, the problem will grow increasingly worse unless more emphasis is placed on construction, regulation, standards, and certification procedure for aircraft.

Without this emphasis, we are going to compound a serious problem that already exists. I think that it would be unfair to the manufacturing industry not to give FAA congressional direction. I feel that specific congressional direction is needed for the Secretary in order to promulgate studies on the rules and regulations necessary to deal with this problem.

The industry has spent a tremendous amount of money. They have done a good job considering the needed engine power for safety and the cost involved. Aircraft is being developed at such a rapid rate, however, that in heavily-populated, heavily-transient urban areas, such as Miami, the problem of aircraft noise worsens.

Therefore, governmental direction and emphasis is needed to accelerate noise abatement science and technology.

This problem is not only confined to the cities. It affects the entire Nation. It is a continuing problem, psychologically, legally, and otherwise, and it is time that action be taken toward its elimination.

I am sure that with the help of the industry, of the pilots, and of all those who will testify here, the Congress will be able to come up with a sensible solution.

I realize that the technical people testifying today will be more competent to discuss any shortcomings in the legislation being considered. I am addressing myself only to the major principle. I want to thank you and the members of the committee for giving us who are affected by the ill effects of aircraft noise an opportunity to testify.

Mr. FRIEDEL. I want to thank you for your fine statement and we will read your prepared statement.

Mr. FASCELL. Thank you, Mr. Chairman.

Mr. FRIEDEL. Mr. Kuykendall.

Mr. KUYKENDALL. Let me ask you, Mr. Fascell, to help us, not here or now, but in the future. I don't think there is any doubt that a lot of the things that are going to be required are going to be an expensive proposition. I am not asking for an answer here; but we are seeking a means of long-range financing of capital improvements of the entire airport and airways system. If you have any ideas you can give to this committee on means of financing on a permanent basis similar to the Federal Highways Trust Fund, please do so because we know that in the matter of noise abatement, with short runways, if you start trying to put limits on this without lengthening the runways, you have a safety factor that is very dangerous.

Mr. FASCELL. You are right, of course. You have an entirely integrated problem with respect to aircraft and safety factors. I appreciate that you are advising me and I think all of us need to turn our attention toward this problem.

If I may venture one step further, one of the things that has been of considerable interest to me has been the problem of air safety which we have all been concerned with and on which you have had hearings. This is one of the specific things on which I have introduced legislation. I feel that the Department should be given special direction even though it may now have jurisdiction for supporting research and development of a proximity warning device, a collision warning system, or both.

We know by statistics that the minute you get additional help for the pilot, the accident rate goes down. If we could come up with a congressional mandate for funds for additional research and development to supplement that which industry has already accomplished, we can make a major effort in improving air safety.

Mr. KUYKENDALL. We are working on that in this committee, too.

Mr. FASCELL. I appreciate your observation.

Mr. KUYKENDALL. Thank you very much.

Mr. FASCELL. Thank you.

Mr. FRIEDEL. We have another colleague of ours who has a very important committee meeting at 10:30. I will recognize our very good friend and hard worker, Congressman Tenzer of New York.

STATEMENT OF HON. HERBERT TENZER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. TENZER. Thank you, Mr. Chairman.

I appreciate the opportunity to come here and testify, and also Mr. Chairman, I want to thank you for taking me out of turn. I have a prepared statement which I have filed with the stenographer, and which I will not read in full.

(Congressman Tenzer's prepared statement follows:)

STATEMENT OF HON. HERBERT TENZER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. Chairman, I appreciate this opportunity to appear before the members of this subcommittee in support of H.R. 3400, introduced by the distinguished chairman of the House Committee on Interstate and Foreign Commerce, the Honorable Harley O. Staggers.

I particularly want to thank the chairman of this subcommittee, the Honorable Samuel N. Friedel for scheduling these hearings despite the heavy pending legislative calendar and the vast amount of legislation handled during the first session of the 90th Congress.

Mr. Chairman, more than 20 Members of the House have sponsored legislation identical or similar to H.R. 3400. The legislation when enacted will authorize the Secretary of Transportation to establish aircraft noise standards and to implement them when issuing flight certificates under the Federal Aviation Act of 1958. The Secretary will also be authorized to modify or revoke flight certificates previously issued where the flights do not conform with the standards established.

On January 10, 1967, the opening day of this session of Congress I introduced H.R. 1398. My bill not only provides certification authority but also provides federal funds to finance the modification of aircraft and airport design to reduce jet noise. H.R. 1398 also provides for Federal partcipation to assist local governments to acquire undeveloped land near airports as buffer zones to reduce the annoying effect of jet noise.

While I appear this morning in support of H.R. 3400 as a step in the right direction, I respectfully suggest that the members of this subcommittee take a good hard look at H.R. 1398, because much broader legislation will be needed before a comprehensive noise abatement program is developed.

As you may know, I have addressed myself to this subject on more than 20 occasions in the House during the 89th and 90th Congresses. In the 89th, the direction of my effort was to alert my colleagues to the national scope of the problem and the need for legislative action. As the Representative of the people of the 5th Congressional District and as a private citizen residing within the shadow of Kennedy International Airport, my family and I have experienced the annoying problem of jet noise.

We have personally experienced, since the flight of the first jets at Kennedy International Airport, the interference with our daily lives caused by jet noise.

We have not since that time been able to enjoy the quiet and peaceful environment of our homes. Our lawns, terraces and front porches no longer serve the purposes for restful recreation on evenings and weekends, when indoors our telephone conversations are disturbed and our television programs are interfered with.

Our children's education is disturbed at school. Our church and synagogue worship services and our outdoor community activities are marred by the frequency of low flying aircraft with their accompanying shrieks of jet noise. Who is not aware of the problems of the teacher—the minister—the priest—the rabbi—waiting with bated breath for the jet—with noise in its wake to pass overhead.

The effect of jet noise on property values; the hazard to the nation's health; the increasing volume of litigation by property owners and the disturbance of the peaceful enjoyment of our homes are some of the aspects of this problem which I have spoken about during the past two years.

At this point I take the liberty of citing for reference purposes the chronology of my efforts in behalf of jet noise abatement legislation and statements on the subject:

Jan. 6, 1965: Introduced H.R. 2086 to control aircraft noise and aircraft pollution.

	Congressional Record Page No.
May 6, 1965: Introduce H.R. 7981 to authorize jet noise research.	
May 6, 1965: Introduced H.R. 7982 to regulate aircraft noise.	
May 6, 1965: "Aircraft Noise Abatement"	9363
May 13, 1965: "Jet Noise—Opens the Floodgates of Litigation"	A2377
May 20, 1965: "More on Jet Noise: NASA Conference"	A2533
May 27, 1965: "More on Jet Noise—Part IV: NASA Research Program"	A2718
June 10, 1965: "More on Jet Noise—Part V: FAA Aircraft Noise Symposium"	A3037
July 8, 1965: "Jet Noise—Part VI: Hazard to the Nation's Health"	A3630
Aug. 12, 1965: "More on Jet Noise—Part VII: Report on Noise Forum"	A4520
Aug. 30, 1965: "More on Jet Noise—Part VIII: Novel Test Over Long Island and Correspondence With the President"	A4888
Sept. 15, 1965: "The Latest on Jet Noise—Part IX"	A5205
Mar. 3, 1966: "President Recognizes Jet Noise Problem"	A1141
Mar. 21, 1966: "President Johnson Acts on Congressman Tenzer's Jet Noise Plea"	A1614
May 3, 1966: "Debate on NASA Appropriation"	9223–9229
July 12, 1966: "Jet Noise: A Plea for Bipartisan Support"	A3632
Aug. 8, 1966: "Jet Noise" (delay the supersonic transport)	A4163
Aug. 24, 1966: "Debate on Department of Transportation"	19518
Aug. 30, 1966: "Debate on Office of Noise Control"	20349
Oct. 3, 1966: "Supersonic Transport"	23873
Jan. 10, 1967: Introduced H.R. 1398 to regulate aircraft noise.	
Apr. 13, 1967: "Jet Noise: The Fight Has Just Begun"	A1817
June 7, 1967: "President's Science Advisor Calls for Noise Abatement Legislation"	A2874
July 11, 1967: "Executive Branch Must Act on Aircraft Noise Abatement"	A3467
July 18, 1967: "Debate on Jet Noise and the Supersonic Transport"	H8848
July 27, 1967: "Air Safety and Noise Abatement"	A3818
Aug. 18, 1967: "End Delay on Noise Abatement Legislation"	A4216

Mr. Chairman, I have from the outset of my efforts stated that jet noise is a national problem. True, I am vitally concerned with the problem as it affects my constituents who live near the flight routes to Kennedy Airport. I sounded the alarm in 1965 to my colleagues in the House, urging that jet noise affects the entire nation. I said then and I repeat today "that every city where there is an airport—whether or not the airport is equipped to service jets—they will service them tomorrow"—should be alerted to the menace of jet noise.

Today more than 300 airfields are servicing jet aircraft disrupting the daily lives of ten of millions of Americans. It was for this reason that I called for recognition of this problem at the highest level of government—as being national in scope—calling for Congressional action.

On August 19, 1965 I wrote to the President requesting the appointment of a Presidential Commission to deal with the problem of aircraft noise. On October 29, 1965 in response to my requpest, the first White House Conference on Noise Abatement was held. As a result of that Conference a detailed and important report was issued in March 1966, entitled "Alleviation of Jet Aircraft Noise Near Airports". The report was published by the Office of Science and Technology—Executive Office of the President.

In his Transportation Message to Congress, in March 1966, President Johnson gave recognition to the problem by announcing that he had appointed a special White House Task Force "to frame an action program to attack this problem". The Task Force, headed by Dr. Donald F. Horning, the President's Science Advisor, included the Secretaries of Commerce, Housing and Urban Development, and the Administrators of the Federal Aviation Agency and the National Aeronautics and Space Administration.

The Task Force subsequently endorsed legislation introduced by the distinguished Chairman of the House Interstate and Foreign Commerce Committee, The Honorable Harley O. Staggers (H.R. 3400), which is the subject of these hearings.

There are many aspects to the complex problem of aircraft noise. A comprehensive program to alleviate the suffering from this menace requires an all out effort on a number of fronts. Allow me to suggest only a few:

(1) We urgently need a massive research program to better understand the complexity of the aircraft noise problem and to coordinate research by Govern-

ment and private industry for development of a quieter jet engine to the end that noise may be reduced at its source.

(2) We require a revitalized program of airport management and operations which will add new emphasis to the problem of the reduction of jet noise over densely populated areas. Careful consideration should be given to the diversion of non-commercial passenger flights to general aviation airfields.

(3) We need a study of existing runways and consideration of the feasibility of constructing new runways to redirect takeoffs and landings with the least disturbance to residents in flight paths.

(4) We need programs to encourage local governments to acquire undeveloped land adjacent to existing or planned airports to create buffer zones and to prevent the construction of new housing near airports until we win the war against jet noise.

(5) We must begin with legislation authorizing the Secretary of Transportation to issue noise standards and regulations and to enforce these standards and regulations by revocation of flight certificates.

Mr. Chairman, H.R. 3400 is only a first step in the federal effort to bring some relief to those who live near the Nation's airfields. It is a necessary and basic step forward in the fight against jet noise.

During July and August of this year I had an exchange of correspondence with Secretary of Transportation Alan S. Boyd concerning his authority to establish noise abatement standards. I have attached to my testimony as exhibit A, a copy of this exchange which was included in my August 18th statement in the Congressional Record (page A4216) entitled "End Delay on Noise Abatement Legislation", as a part of the record of these hearings.

Section 307 of the Federal Aviation Act of 1958 provides the authority to limit the use of airspace *"for the protection of persons and property on the ground"*. In response to my letter urging the issuance of administrative regulations incorporating the provisions of H.R. 3400, Secretary Boyd states:

"In the event, however, that Congress does not grant certification authority for noise abatement purposes, the Department of Transportation can establish operating rules under section 307 of the Federal Aviation Act of 1958. Although I feel that such action is a poor substitute for certification authority because it does not include many of the incentives for quiet operation which can be built into certification rules, the Department of Transportation will take whatever action is possible and practicable within existing authority and technology."

Mr. Chairman, today the Secretary of Transportation can only issue noise operating rules under section 307 of the Federal Aviation Act of 1958, while under H.R. 3400 authority is given to certify aircraft for noise abatement purposes. I urge that the Congress grant certification authority to the Secretary of Transportation.

Mr. Chairman, the era of sonic boom has arrived—and we have not yet been able to solve the problem of sub-sonic jet aircraft noise. It is getting late—if not too late already. We must accelerate our efforts at both the administrative and legislative levels if we are to succeed in ridding the atmosphere of the annoying pollutant of jet noise.

The President of the United States has recognized jet aircraft noise as a national problem. I am proud of the part I played in bringing this about. Recently the federal courts held that a noise abatement ordinance of the Town of Hempstead, New York, was unconstitutional. In its decision the court stated that noise abatement was a federal responsibility.

We in the Congress must meet our responsibility. The time for action—is now. This Congress has authorized the establishment of auto safety standards. This Congress must also authorize the establishment of aircraft noise standards.

We have heard much discussion about research by the National Aeronautics and Space Administration and by private industry to develop a "quiet engine." The Secretary of Transportation has taken the position that under present law, even if a "quiet engine" were developed, its use by the airlines would be voluntary. The legislation before this Subcommittee would provide the necessary authority to the Secretary—if in fact a quiet engine is developed—to refuse to certify aircraft not equipped with the new and quieter engine when available. Only in this way can we be certain that our research dollars will have been well spent. Only in that way will we be able to bring relief to our citizens, who are looking to us for help.

Mr. Chairman, a recent incident here in Washington is worthy of being mentioned. Secretary of the Interior Stewart L. Udall, a frequent and outspoken

critic of jet aircraft noise, labeled the problem one of the most serious environmental problems facing the nation today. In referring to "noise pollution" from National Airport, he indicated that the Federal Government will soon launch a war on jet noise.

I urge the members of the subcommittee to provide the authority for launching the war on aircraft noise by approving the certification authority contained in H.R. 3400.

EXHIBIT A

[Extension of remarks of Hon. Herbert Tenzer, of New York, in the House of Representatives, Aug. 16, 1967]

END DELAY ON NOISE ABATEMENT LEGISLATION

Mr. TENZER. Mr. Speaker, since coming to the Congress in January 1965, I have advocated congressional action on aircraft noise abatement. In February 1966, the President recognized the national importance of this problem in his transportation message to Congress, and appointed a White House Task Force on Aircraft Noise Abatement.

During the second session of the 89th Congress the administration sent to the Congress a noise abatement bill, authorizing the Secretary of Transportation to establish maximum aircraft noise levels to be used in certifying aircraft under the Federal Aviation Act. I have sponsored a measure which incorporates this provision and also provides financial assistance for modifications to aircraft and airports to reduce jet noise—H.R. 1398.

On July 11, 1967, I called on the Secretary of Transportation, Alan S. Boyd, to issue administrative regulations implementing the essential provisions of the administration noise abatement bill—Congressional Record, July 11, 1967, A3467.

Under unanimous consent I place the text of my letter to Secretary Boyd in the Record at this point:

"JULY 11, 1967.

"HON. ALAN S. BOYD,
"*Secretary of Transportation,*
"*Washington, D.C.*

"DEAR MR. SECRETARY: Two weeks ago the U.S. District Court for the Eastern District of NY struck down a Hempstead Town noise abatement ordinance as unconstitutional. Federal Judge John F. Dooling held in effect that jet noise was not only a national problem but a federal responsibility. He held that aircraft noise limitations must come from a federal agency.

"On February, 1966 in his Transportation message to Congress, President Johnson recognized jet noise as a national problem. In response to my letter to the President of August 30, 1965, the President appointed a White House Task Force on Aircraft Noise headed by his Science Advisor Dr. Donald F. Hornig 'to frame an action program to attack this problem'. In his letter to me of June 5th, Dr. Hornig stated that passage of the pending noise abatement bill was 'critically important.'

"The Administration noise abatement bill has been co-sponsored by more than 20 Members of the House and while my bill goes much further, I believe the basic provisions authorizing the setting of noise standards can be implemented by administrative regulation. Section 307 of the Federal Aviation Act of 1958 provides this authority to limit the use of navigable airspace 'for the protection of persons and property on the ground.'

"In short, the outlook for passage of the noise abatement bill is bleak and we cannot wait any longer to take the necessary action to alleviate the ever-increasing problem of jet noise. I urge you to take administrative steps now to establish noise standards.

"Sincerely,

"HERBERT TENZER, *Member of Congress.*"

Mr. Speaker, I have today received a response from the Secretary of Transportation which I want to call to the attention of my colleagues and which I include at this point in the RECORD:

"THE SECRETARY OF TRANSPORTATION,
"*Washington, D.C., August 16, 1967.*

"HON. HERBERT TENZER,
"*Member of Congress,*
"*House of Representatives,*
"*Washington, D.C.*

"DEAR MR. TENZER: Thank you for your letter of July 10, 1967, reviewing the current status of the aircraft noise problem and urging the Department to act to control aircraft noise under Section 307 of the Federal Aviation Act of 1958.

"We would, of course, prefer to attack the problem of aircraft noise through rules for the certification of aircraft and aircraft equipment. We have been actively engaged in seeking meaningful international noise standards for aircraft equipment in close cooperation with the British and French Governments.

"In the event, however, that Congress does not grant certification authority for noise abatement purposes, the Department of Transportation can establish operating rules under Section 307 of the Federal Aviation Act of 1958. Although I feel that such action is a poor substitute for certification authority because it does not include many of the incentives for quiet operation which can be built into certification rules, the Department of Transportation will take whatever action is possible and practicable within existing authority and technology.

"Sincerely,

"ALAN S. BOYD."

Mr. Speaker, because of the delay in holding hearings on the pending noise abatement legislation, we are losing valuable time in the battle against the menace of jet noise.

I will continue to urge the Secretary of Transportation to take immediate administrative action to curb aircraft noise by isuing proposed operating rules under section 307(c) of the Federal Aviation Act. But that is not enough. The Secretary is handicapped by the delay in scheduling congressional hearings. Without legislation, the Secretary can only issue operating rules. He cannot enforce those rules with the strong measures proposed by the pending legislation.

I urge my colleagues in the House to review the exchange of correspondence relating to noise abatement regulations and to express their views, to the end that steps may be taken to assure appropriate congressional consideration of the pending legislation.

The era of sonic boom has arrived—but we have not yet been able to find the answer to reducing jet noise. We must accelerate our efforts at both the administrative and legislative levels of government if we are to be successful in ridding the atmosphere of the annoying pollutant of jet noise.

Yesterday in Washington, culture became the latest victim of the jet noise menace. Secretary of the Interior Stuart Udall announced that his Department may be obliged to terminate summer concerts because of interference by jet noise.

Mr. TENZER. I will simply say, Mr. Chairman, that the efforts to bring about some order in the matter of research for noise abatement procedures resulting from jet planes is a problem which is very close to me and I have made it one of my major tasks since I came to Congress in January 1965.

I live right in the flight path of the Kennedy Airport. I happen to have the personal experience of having planes coming in every 35 seconds over my home on particular nights when the wind pattern is compatible to the use of that flight path.

I have said in my statement, Mr. Chairman, and I am not going to repeat it at length that the problem of being deprived of the quiet and peaceful enjoyment of our homes is now no longer a problem confined to the area around Kennedy Airport.

It is a problem that is now existent at every one of the airports in the United States that receive and are able to handle jet planes.

Mr. FRIEDEL. Except Friendship Airport. You can send all the flights you want to send to Friendship and we don't have the problem there.

Mr. TENZER. Mr. Chairman, I want to share your sentiments and tell you that I am very, very pleased to hear about the possibility of developing Friendship Airport and Dulles International Airport which ought to be the Washington International Airport.

There is no reason for people from Washington having to go to New York or people from Virginia or from this entire segment of the United States being required to go to New York City to take a flight overseas when you have airports like Dulles and Friendship available in this area.

We could share some of that noise with you and when we get to the point of sharing the noise with you, maybe many more Members of Congress will become acquainted with the fact that this is not a local problem.

This is a problem for the entire United States. Our educational system is disturbed. I have said right here in my statement that since jets have come to Kennedy, and this is about 9 years—

> We have not been able to enjoy the quiet and peaceful enjoyment of our homes. Our lawns, terraces and front porches no longer serve the purposes for restful recreation on evenings and weekends, and indoors our telephone conversations are disturbed and our television programs are interfered with.
>
> Your children's education is disturbed at school. Our church and synagogue worship services and our outdoor community activities are marred by the frequency of low flying aircraft with their accompanying shrieks of jet noise. Who is not aware of the problems of the teacher—the minister—the priest—the rabbi—waiting with bated breath for the jet—with noise in its wake to pass overhead.

Many times we think that these men are looking up and waiting for the plane to pass overhead.

My good colleague, Congressman Fascell, said that there is a great deal done by other facets of the industry. I am not convinced of that. I do not share the view that either the manufacturers of engines, or the manufacturers of planes, or the airline operators, or the airport operators, or any one has done enough about this situation.

It took a long time to get the President of the United States to recognize this as a national problem. We just had an announcement and pronouncement by the Federal courts that jet noise abatement is a Federal responsibility. Now it is time for Congress to act. We cannot delay any longer.

I think that the bill before this House, H.R. 3400, while it is only an initial step, is an important one. If all of the research is completed and a quieter engine is developed, you will handicap the operations of implementing this if you do not give the Secretary of Transportation the authority in issuing certification certificates to regulate how planes should be equipped and with what kind of an engine they should be equipped.

I am not willing to accept that the United States with all of its technological development and with the prototype already available for a larger transport plane with a quieter engine cannot in this age of miniaturization create a smaller engine that is quieter so that we can avoid this noise problem.

All of this can be done without sacrificing safety and it is up to this committee to act and report out H.R. 3400. At the same time, when you go into executive session, I urge you to take a long, hard look at my bill, H.R. 1398, which goes a little further and I spell this out in my statement. I agree with our colleague, Mr. Kuykendall, that it is important to put all of our heads together.

This is not a political issue. When the noise comes down from the plane, it strikes the rich and the poor, people in all social strata, people of all faiths, and all political parties.

This is a national problem resulting from a national menace and if we don't act, it is going to be too bad. The sonic boom will be upon us before we get started.

Thank you, Mr. Chairman.

Mr. FRIEDEL. Thank you for your very fine contribution.

Mr. TENZER. Thank you.

Mr. FRIEDEL. You will be available tomorrow?

Mr. TENZER. I will be available tomorrow and thank you for taking me out of turn.

Mr. FRIEDEL. Thank you.

Our next witness will be another colleague of ours from New York, Congressman Fino.

Do you have a prepared statement, Mr. Fino?

STATEMENT OF HON. PAUL A. FINO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. FINO. Yes. It is a very short statement. I would like to read it for the record.

Mr. Chairman and members of this distinguished committee, needless to say, I appreciate and welcome this opportunity to testify on H.R. 3400 which will allow the Secretary of Transportation to prescribe aircraft noise abatement regulations. I might point out at this time that I have introduced H.R. 5056, a related bill which would allow the Federal Aviation Administrator to prescribe aircraft noise abatement regulations.

I will not take up the time of this committee with a lengthy statement. I would, however, like to say that I represent one of the many districts in New York where people are plagued by jet aircraft noise. The complaints I have received would fill a bushel basket.

Sometimes they come from people with houses where roof tiles have been shaken loose; sometimes from people whose hearing has been damaged; sometimes from workers with night jobs who can't sleep during the daytime; sometimes from workers with daytime jobs who can't sleep at night. The list is endless.

My congressional district lies squarely in the path of a major approach to New York City's La Guardia Airport. The location of La Guardia Airport is such—and the amount of traffic flowing through it is such—that jet noise is becoming a very severe problem in many residential areas of New York City.

In New York, as in many other cities, there are no additional air routes left by which planes may approach existing airports. Thus, if people are to have relief from jet aircraft noise, I am convinced it must come from noise abatement regulations.

Airplanes are going to have to be required to fly higher in approaching and departing from our major airports. Also, I am sure there are other ways in which noise can be minimized, and that is one of the problems which the Federal Aviation Administration will have to solve.

Also, I am sure that there are other ways in which noise can be minimized. That is one of the problems which the FAA will have to solve. And this committee will have to insist that some proper legislation be enacted and as Mr. Tenzer, who preceded me, indicated, this is definitely a Federal problem.

I am very pleased to see that this subcommittee is taking up this type of legislation. In my opinion, aircraft noise abatement is a pressing problem in the United States that is getting worse every day and we are going to have to come to grips with it.

Naturally, the airlines and aircraft corporations are not wholeheartedly in favor of stricter noise abatement regulations. That is understandable.

I realize that tighter standards are going to increase operating difficulties, but this is a problem which we have got to lick and the public has a right to expect that its peace of mind will be a major consideration. I will go even further than that—there have been situations in my district where the incredible noise of jet aircraft has even endangered the health of many of our elder citizens.

If the Federal aviation experts have a mandate from Congress, I am sure that they can find many ways to reduce aircraft noise by imposing regulations of one sort or another. I hope that this subcommittee will report this bill favorably and that ultimately the full House and Senate will take positive action in this area.

It is an important area, and as I indicated earlier, I am very happy that this subcommittee has taken this type of legislation under consideration.

Mr. FRIEDEL. I want to thank you for your excellent statement. Are there any questions?

Mr. Devine.

Mr. DEVINE. I have just one question.

Mr. Fino, your district is the Bronx primarily?

Mr. FINO. That is right, the northeast Bronx, which is in the direct path of one of the approaches to La Guardia.

Mr. DEVINE. Do you find that your complaints are more taking off than landing noises, or are they equal or separated or not?

Mr. FINO. I would say mostly on landing. They use the approach coming down Long Island Sound and Westchester County and by the time they get to the lower part of my district, they are about 200 feet above the ground.

At one point, we have a beach club, which has about 9,000 people during the summer months and it is not so much the noise but the soot dropped from the aircraft that gives rise to the complaints.

Mr. DEVINE. On taking off, are they higher when they pass over your district?

Mr. FINO. Yes. I think the complaint will come from Congressman Addabbo because I think he is affected on the other side of the East River more than we are.

Mr. DEVINE. Thank you.

Mr. FRIEDEL. Mr. Cunningham.

Mr. CUNNINGHAM. I have no questions.

Mr. FRIEDEL. Mr. Kuykendall.

Mr. KUYKENDALL. Congressman Fino, I know you have given a great deal of attention to this problem for quite some time. Have

you contacted any of the engine manufacturers as to what state of the art we are in, so far as maintaining proper power in these engines to cut noise?

Have you had any contacts with the engine manufacturers?

Mr. FINO. No, I have not. My contact and my complaints have been with the FAA locally and in Washington to complain. What they have done over the period of years has been to divert the incoming and outgoing flights from one side of New York City to the other.

In other words, one week we would get the tremendous noise of jet landings and the following week, Congressman Addabbo and Congressman Tenzer would get it, trying to satisfy every complainant.

Mr. KUYKENDALL. Thank you, Mr. Chairman.

Mr. FRIEDEL. I want to thank you very much.

Mr. FINO. Thank you, sir.

Mr. FRIEDEL. Our next witness will be Congressman Fraser. Do you have a prepared statement, Mr. Fraser?

STATEMENT OF HON. DONALD M. FRASER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

Mr. FRASER. Yes; but I will submit it for the record if I may and summarize my remarks.

Mr. FRIEDEL. So ordered. Your statement will follow your remarks.

Mr. FRASER. I appreciate this chance to appear in support of legislation aimed at reducing the noise problem.

I represent the city of Minneapolis, adjacent to which is the major airport for the Twin Cities.

There are three points that I would like to emphasize to the committee in summarizing my testimony. First, in the last year the growth of complaints from my constituents has been overwhelming. I have served in the Congress now for 5 years, but over this past year, the number of complaints and the degree of concern expressed by my constituents has been far greater than in any prior year.

I am particularly struck by the fact that many of the complaints come from homeowners who live a substantial distance from the airport, but who appear to be in the flight path of the aircraft.

I would only emphasize to the committee what has been already emphasized, that this is not a minor annoyance. It is a major disruptive factor in the lives of people who live in the area over which the aircraft fly.

I hope that this committee will find it possible to act on the bill which has been recommended by the administration and is before the committee. I would only add two things, Mr. Chairman.

In the bill that is recommended by the administration the wording which is found on page 2 is very curious. It says that any order by the Secretary of Transportation may be amended, modified, or reversed if the National Transportation Safety Board finds that safety in air commerce or air transportation and the public interest do not require the affirmation of such order.

That is stated in a very peculiar negative fashion and when the committee comes to a markup session, if hopefully they arrive at that point, I hope that that language will be examined carefully because it leaves a very weak standard and one that I think might downgrade the noise concern unreasonably.

The other point I would make, Mr. Chairman, is that I have co-sponsored a bill originally introduced by Mr. Kupferman of New York which calls for a broader attack on the noise problem, calls for Federal assistance to airports, to the operators of aircraft in modifying their aircraft, in purchasing land, and modifying the airport operation itself.

I think that this further Federal involvement is warranted, and I hope that at some point the committee may get to consideration of this Federal assistance, but for the moment, it would seem to me that the first order of priorities would be to confer on the Secretary of Transportation the authority contained in H.R. 3400.

Thank you very much, Mr. Chairman.

(Mr. Fraser's prepared statement follows:)

STATEMENT OF HON. DONALD M. FRASER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

CONGRESS MUST ACT TO CONTROL JET AIRCRAFT NOISE AND SONIC BOOMS

Mr. Chairman, it has become increasingly clear that federal regulation and control of jet noise and sonic booms are needed. I have been inundated by mail from my constituents in Minneapolis complaining bitterly about the growing noise problem from jet aircraft.

These people are homeowners. Significantly, many of them live a substantial distance from the airport, but apparently in the flight paths.

The depth of their feeling is hard to overstate. This is more than a minor annoyance. It is something that upsets patterns of living in whole areas of the city. The people are demanding that something be done.

And only the federal government has the power and competence to act. With airplane traffic increasing rapidly, this committee must act to avert a potentially unmanageable situation. The administration bill, H.R. 3400, which I've introduced as H.R. 13847, is an important addition to the set of tools that federal agencies can use in tackling this problem.

Of course, many things are already being done but they just aren't enough. The airlines and the FAA and the airport owners at the Minneapolis-St. Paul International Airport serving my district, for example, are very concerned about this problem. The airlines have put into effect takeoff and approach procedures designed to reduce noise nuisance. Eastern Airlines has sent me diagrams of the takeoff procedure used for their B–727's and DC–9's. These conform with the FAA noise abatement criteria.

The Federal Aviation Admin. and the Metropolitan Airports Commission in my area have just announced that the noise control procedures in effect for airlines will now apply to jet planes operated by General Aviation.

But, of course, the frequency of flight of aircraft has increased at a rapid rate and is projected to increase even more rapidly. Just two years ago the National Airport Plan published by the Federal Aviation Administration was predicting about 8 million air carrier operations at tower airports in 1975. This year's National Airport Plan has up-dated those projections in the face of the phenomenal growth of air travel and the purchase of billions of dollars of new equipment by the airlines. It is now expected that airports all over the country will be receiving 16 million landings and takeoffs in 1975. The projection has been doubled. This is very significant, of course, because all the studies show that an occasional noisy airplane flying by will be tolerated by people on the ground, but when the frequency of flights increases substantially the noise becomes a real disruption to normal life.

H.R. 3400 gives to the federal officials the same type of regulatory power over noise that they now have in the field of safety. With their present authority in the case of safety, the federal government has played a vital role in making airline travel safe and reliable. The Federal Aviation Act of 1968 gives the Federal Aviation Administrator power to establish minimum safety standards and to issue air worthiness certificates for aircraft and aircraft engines, air carrier operating certificates, and airmen certificates. The effect of H.R. 3400 would be to include noise control as well as safety as a consideration in issuing or suspending these certificates.

The President and the Secretary of Transportation have asked for this additional authority and I think we are only nibbling at the outside edges of this problem if we don't pass this bill and centralize this authority for noise abatement.

I would have two suggestions, however, on H.R. 3400. When appeals are made to the National Transportation Safety Board, the Board must understand that it cannot ignore noise factors and only consider safety factors. Naturally, we want aircraft and their operations to be both safe and as noise free as possible. I just want to make sure that whatever wording is used in that paragraph clearly provides for both.

The other suggestion I would have would be that representation on the National Transportation Safety Board should include one or more persons who are from the general public who are exposed to the noise problem. I think this would ensure a healthy awareness of the noise aspect during the Board's consideration of these questions.

Federal financial assistance needed too

Besides the regulatory control provided in H.R. 3400, I think it is advisable for us to move now to start programs of federal sharing of the costs of noise control with airports and airlines in order to hasten the noise control program. H.R. 6819, which I have introduced as H.R. 13846 does this.

Of course the federal government is spending substantial sums now on tackling the jet noise problem but additional programs are needed. I have had a long discussion with officials of the National Aeronautics and Space Administration on this question. The NASA has a short-range retrofit program that will incorporate sound absorption techniques into engine nacelles. This could give a six decibel noise reduction. They expect the technology to be ready late in 1968. The NASA long-range retrofit program aims at quieting the engines an additional 9 decibels with technology ready late in 1969. Finally, the "Quiet Engine" program would try to design an entirely new engine that would be 5 decibels quieter still, for a 20 decibel reduction from present noise levels. It has a 1971 and 1972 time goal.

In addition, the Federal Aviation Administration and the Housing and Urban Development Department are making various studies and investigations that will be helpful.

Cities and local airports can take some action such as buying neighboring land and zoning for compatible uses. In Minnesota the State Department of Aeronautics has established land use zoning standards for airports. These restrict certain uses in areas where hazard or noise would be a problem. In addition, land is being bought. The Minneapolis-St. Paul Metropolitan Airports Commission is currently negotiating to buy some land near the airport on which it was feared that a high-rise apartment house might be placed.

All these programs are helpful as far as they go but a great deal more is still needed.

H.R. 13846 would establish an Office of Noise Control in the Office of the Surgeon General. It would be able to give grants to states for providing noise control programs and research into the cause and effects of noise and into new techniques of controlling, preventing and abating noise. In addition, grants would be available for research and demonstration projects by public or non-profit private agencies.

Title II of the bill permits the Federal Aviation Administration to reimburse airlines for up to 30% of the cost of modifying aircraft to conform with federal noise regulations. The same 30% reimbursement would be permitted for airports making necessary changes. 90% reimbursement would be allowed for cities acquiring land near the airport or along flight lines in an effort to reduce the effect of noise.

I believe these would be progressive steps by the federal government in sharing the cost and expediting action on noise abatement near airports.

The justification for the financial responsibility of the federal government for noise control has been analysed in a recent article in the Minnesota Law Review of May 1967 at pages 1104 and 1105. The author raises these points:

1. "The private homeowner who loses up to 55% of his property value is least able to bear the cost."

2. "* * * the American courts have not imposed the burden of damages upon the commercial airlines whose aircraft produce the noise. This approach is clearly justified, since the airlines are not at liberty to select airport sites, approaches, or flight paths: commercial aircraft are certified and controlled in their landing and takeoff maneuvers by the Federal Aviation Agency."

3. "Given the fact that substantial national benefits are derived from the existence and growth of national and international air commerce, assumption by the federal government of the costs of noise damage to private property does not seem inequitable."

4. "Even if the local airport authority is the sole defendant . . . it will have to . . . either attempt to shift (costs) to the airlines and hence to airline customers or seek to affect part of them through solicitation of increased federal and state subsidies."

"Therefore," the author concludes, "if costs should be proportionate to the control possessed and benefits derived, the federal government should be a defendant."

I agree with the logic used by the author of that article. Certainly the country as a whole should share in the attack upon this problem and the costs of immediate action. The federal government has a large responsibility for the safety and promotion of commercial air traffic and should logically share with the noise factors too. The proposed user taxes that are designed to distribute some of this cost to the airlines and aircraft using federal facilities might be one way of recouping part of this expense.

We should not wait for someone else to act. It is up to Congress to face this question now and get moving quickly. Both bills—H.R. 3400, to enlarge standards and regulations, and H.R. 13846, to provide for federal funding—make an important package of new legislation.

Sonic booms

It is important that the legislation take into account the sonic booms soon to be brought to us by supersonic air transports.

In the Minneapolis area the Federal District Court has already broken new ground by finding the federal government negligent for permitting supersonic military flight paths across the Minneapolis-St. Paul area.

An apartment building suffered plaster cracks and broken windows from the sonic boom. The decision issued last January 13, in the case of *Neher vs. the United States*, makes the responsibility clear. Non-military flights could be considered a federal responsibility too.

We must act now to protect the people on the ground and to remove this potential cause of damage to property under the flight path of the supersonic planes.

These bills are some of the most important before this Congress. I urge early action.

Mr. FRIEDEL. I want to thank you and, of course, we are considering the other related bills and any proposed amendments along with H.R. 3400.

Are there any questions?

Mr. KUYKENDALL. I have a question.

Mr. FRIEDEL. Mr. Kuykendall.

Mr. KUYKENDALL. Welcome to the committee, Mr. Fraser. Let me a little bit better understand your question. I won't call it a criticism, but I have a question about the wording on lines 10, 11, and 12 on page 2 of the bill. I hope I didn't read you correctly when you said that you did not think that safety should be an overriding factor here.

Mr. FRASER. No. It is the way that this is worked. It says that the National Transportation Safety Board may, in effect, amend the order.

Mr. KUYKENDALL. You agree that the safety should be the one overriding factor?

Mr. FRASER. Yes, I do, but it says, "It may modify or amend the order if it finds that safety in air commerce does not require the affirmation of such order." That is a peculiar way of putting it.

Mr. KUYKENDALL. It has a double negative there.

Mr. FRASER. If the bill had said, "may amend the order if required by considerations of safety" then it would seem to me very straightforward language.

Mr. KUYKENDALL. Thank you, Mr. Chairman. I thought it important that you not be misunderstood in this testimony. Thank you for clearing that up.

Thank you, Mr. Chairman.

Mr. FRIEDEL. We also have with us this morning, Congressman Byron Rogers, of Colorado. Proceed Mr. Rogers as you wish.

STATEMENT OF HON. BYRON G. ROGERS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF COLORADO

Mr. ROGERS. The President of the United States, in a message to Congress in March of 1966 wherein he proposed the establishment of the Department of Transportation, recognized that "Aircraft noise is a growing source of annoyance and concern to the thousands of citizens who live near many of our large airports." The President also directed several agencies of the Government to pursue an action program aimed at solving the problem of aircraft noise; and there was introduced into the House H.R. 3400 which is, in effect, a noise abatement bill providing that the Federal Aviation Administration shall have the power to certify aircraft for noise as well as for safety.

I come before this committee to urge favorable action on H.R. 3400 because it is my firm conviction that initiative for solving problems of jet aircraft noise can come only from one source—the Federal Government. The reason is obvious because noise abatement comes into conflict with a number of economic interests: engine and aircraft manufacturers, airline operators, and local governments and authorities.

In the congressional district which I represent, the city and county of Denver, Colo., we are fortunate in having an excellent airport close to the heart of the city. There is no problem of reaching Stapleton International Airport from any section of the metropolitan area. We are served by a number of excellent airlines—both trunk and regional—and we continue to grow as one of the major airports in the United States. According to the latest Federal Aviation Administration figures, we are 11th among the 22 large airport hubs in this country in the percentage of enplaned passengers. I am informed that during this year, 1967, we will enplane approximately 2½ million passengers from our Denver airport.

As a result of the tremendous growth in aviation as exemplified by the figures I have just recited, airline flights increase in number—and again to use figures with which I am most familiar, those of our Denver airport—we now have an average of 205 landings and 205 takeoffs every 24 hours of large commercial aircraft. All this adds up to more noise affecting more people. One of the loveliest sections of Denver is known as Park Hill. This is an area of single-unit homes and was well established long before the jet age which came to us in 1959. Many times it is necessary for large aircraft to take off over Park Hill, or to land by overflying this area. The resultant noise is most disturbing and numerous calls are received by airport personnel, as well as the mayor's office, concerning these overflights. I might add that these are not once-in-a-while calls from a few cranks, but literally hundreds of complaints. The same is true about an area immediately south of the airport from residents of a suburban city, Aurora, Colo. As a matter of fact, 27 homeowners in Aurora are suing the city and county of

Denver because of aircraft noise which they contend has damaged their homes and created "a direct and immediate interference with the enjoyment and use of the land."

The aircraft-noise problem is technical, but it is also social: How far and under what conditions can the community impose the consequences of technological progress on individuals? We know how economically important is the aviation industry. Stapleton International Airport in Denver provides employment for more than 6,500 persons at an annual payroll of more than $55 million, yet such an economic argument has no effect or weight on those annoyed by unreasonable nosie. Reasonable discussion and rational evidence produces little, if any, effect.

It is Federal statutes which define air space to be within the public domain and subject to the jurisdiction of the Federal Government in behalf of all citizens of the United States; and it is, therefore, imperative that the Congress of the United States act in this matter of noise abatement.

Let us recognize that the problem—unless vigorously attacked and solved in the immediate future—will become much worse. New and larger jet aircraft will soon be on the scene. I am told that the engines being developed for the 747 supersonic jumbo jet will have three times the thrust or power of present jet engines. If the noise generated is three times greater, heaven help us all! Then there is the commercial supersonic which will be flying in the next several years. Already Denver city and county officials have received numerous protests from citizens about the sonic booms generated by overflights of military experimental planes.

It is imperative that the Congress of the United States enact legislation to—

(1) Establish criteria for levels of aircraft noise acceptable to persons on the ground;

(2) Assure that civil transport aircraft shall meet such standards as a condition to certification to airworthiness;

(3) Authorize establishment of such rules and regulations applicable to aircraft operations as may be necessary to conform to such criteria; and

(4) Financially assist municipalities and other public bodies operating airports in obtaining adequate property interests for the acquisition and expansion of public airports necessary for resolving the aircraft noise problem.

As a first forward step in this direction, I urgently recommend favorable action on H.R. 3400.

Mr. FRIEDEL. Thank you for your fine statement Mr. Rogers. Our next witness is our colleague from Minnesota, Hon. Clark MacGregor.

STATEMENT OF HON. CLARK MacGREGOR, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

Mr. MACGREGOR. Thank you, Mr. Chairman.

I am pleased to have introduced on July 25, H.R. 11736, which is identical to H.R. 3400. I introduced this legislation because of the very critical nature of the aircraft noise pollution problem in my own congressional district and in adjacent areas. We have in the Twin

Cities metropolitan area of Minneapolis and St. Paul one of the 15 largest and busiest airports in the Nation. Its location is convenient to the business districts of both core cities and therefore its flight patterns bring aircraft directly over some heavily populated residential areas.

It is clear to me, after reading the great volume of correspondence on this problem (and through firsthand observation) that the Congress can no longer ignore the critical problems which noise pollution causes in these metropolitan areas.

The legislative device which I have introduced is simple. It empowers the Secretary of Transportation—

> * * * to prescribe and amend standards for the measurement of aircraft noise and sonic boom and to prescribe and amend such rules and regulations as he may find necessary to provide for the control and abatement of aircraft noise and sonic boom, including the application of such standards, rules and regulations in the issuance amendment, modification, suspension, or revocation of any certificate authorized by this title.

I am convinced that such legislation would effectively authorize suitable procedures for the Department of Transportation to develop such rules and regulations and provide the proper enforcement thereof.

Why the increasing concern over aircraft noise? Throughout history advanced technology has also brought with it new problems. The aircraft industry is no exception. The piston planes we used up to about 5 years ago would approach to land at an angle of up to 6 percent. The jets now in use must approach at 2¾ percent. Further, the jet engine itself is or sounds to be noisier than the piston craft and has a most aggravating whine. Further, air travel is becoming increasingly popular and we have today many more takeoffs and landings per airport than ever before in our history.

In the Twin Cities alone nearly 4 million passengers go to and from our International airport in a 12-month period. With ever fewer piston type craft now in operation and with jets getting larger and larger, the problem is obviously going to get worse—not better.

The problem of aircraft noise is not one which can be readily resolved by Federal legislation alone. It is a problem which must be met head-on by all units of Government and by the private sector. The Metropolitan Airports Commission of Minnesota is an outstanding example of what can be done at the local level. The commission is now considering these four antinoise measures:

Rearrangement of airport guidelights used by pilots;

A new section in the pilot procedure manual spelling out the required altitudes at various distances from the airport;

A review by the FAA of departure routes; and

The possibility of installing an instrument landing system allowing a pilot in his cockpit to determine how high his plane should be at various intervals during landing preparations.

In addition, other sections of the country are considering still further measures to alleviate this problem. Among these are: wiser control of land around airports so that residential areas are not developed so close to the airport itself. This of course is not practical in many areas where the airport is already located within a heavy density residential area. But planners are investigating the possibility of building entirely new airports far from residential congestion. We have such a situation here in Washington where National is a heavy contributor

to noise pollution but few of these types of complaints are heard about distant Dulles.

Another method being investigated is the rerouting of aircraft to minimize the noise. This is also being tried in Washington with more planes now being required to fly approach and exit patterns over the Potomac River.

But, the real effort in resolving this problem must come from the type of Federal legislation which is being considered by this committee this week. I am hopeful that you will be able to take fast and favorable action in this regard. At the same time we must issue a warning that no legislation, no improvement in procedures or engines, will totally resolve this problem. We will always have noise associated with aircraft. It seems to me that our task now is to do everything we can to minimize that noise discomfort and disruption.

Questions have been raised as to the safety factors involved if, indeed, we are to take steps to control aircraft noise. I can't conceive of the Federal Aviation Administration, which would implement this legislation, developing any plan which would increase air safety hazards. Indeed, Secretary of Transportation Alan S. Boyd, in testimony before the House Committee on Science and Astronautics on April 4, 1967, said:

> The Department will formulate regulations governing the flight of aircraft based on the principle that noise abatement is second only to safety.

The Secretary also said:

> The Department of Transportation assumes and welcomes the leadership and responsibility in the aircraft noise abatement area.

The St. Paul (Minn.) Dispatch newspaper, in an editorial of support for this legislation on November 8 said:

> Such legislation (as H.R. 11736) would force airlines to adopt available noise suppression techniques. Quieter jet engines have been developed, but they involved added costs which the aviation industry has not been eager to accept. Federal regulations would provide an effective incentive for modernization and greater concern for the public interest.

Of course, the manufacture of a quieter jet engine is feasible, and certainly in this day of advanced technology we can develop a "quiet" engine which would not increase the safety hazards.

The Minneapolis (Minn.) Star also commented on this problem in an editorial on July 14 of this year:

> The problem can be attacked successfully only as a problem in aircraft design. And this means action must be taken at the national level.
>
> To be specific: The piston-driven aircraft now going out of service were designed to land at an angle of 6 percent—and thus remain higher above residential areas. The present jets were designed to land at a 3 percent angle—and thus come screaming down much lower over the rooftops. No local operating regulations can change this without creating a serious problem of safety. So they will not be imposed.
>
> New jets, more than twice as big, are coming soon. How they are designed is all-important. The manufacturers could put a part of their greater engine power into noise suppression, rather than into payload. But business considerations argue for payload. And the federal government currently cannot require noise suppression as it can require minimum standards on safety. Legislation is needed.

As I stated earlier, I am confident that the legislation before you this week can and will provide the impetus for the safe reduction of aircraft

noise. I am hopeful that you will be able to take fast and favorable action in this regard. As the Metropolitan Airports Commission of the Twin Cities said in a resolution adopted in July:

> * * * The problem defies solution at the local governmental level and is properly a problem of national concern by virtue of Federal Statutes defining the airspace to be within the public domain and subject only to the jurisdiction of the Federal Government, and reserving to the Federal Government the establishment of standards for the certification of jet aircraft using such airspace.

And, Mr. Chairman, when your committee completes action on this problem, I would hope you would take up legislation involving the proposal of Congressman Frank Bow and me to provide a method for the private financing of the development of the supersonic transport airplane. This aircraft promises to be the most flagrant violator of peace and quiet in aviation history through the apparently insoluble sonic boom. The Federal Government to be consistent—and assuming the legislation you consider today is approved—must review its position with regard to the SST. For if the Congress passes noise abatement legislation, can it also be the advocate and principal developer of the worst sonic boom craft in history?

Thank you for your consideration.

Mr. FRIEDEL. We have another colleague here with us this morning, Congressman Addabbo.

You may proceed.

STATEMENT OF HON. JOSEPH P. ADDABBO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. ADDABBO. Thank you very much. I appreciate the support of a growing number of my colleagues in this evergrowing problem.

When I first came here in 1961, there were only about a half dozen of us who testified in favor of legislation relative to this continuing problem. It has been asked this morning how will we possibly finance the cure.

Well, one of the ways could be a head tax. The airlines themselves through the years as I have previously stated developed within the cabin the ability to give the passengers quiet motion pictures, a quiet cabin to sleep in, a quiet cabin to listen to stereo, but they have not been able to spend any money toward giving to the people on the ground in their homes the right and the privilege to watch television without the sound being cut out by jet noises or being able to listen on the telephone to a conversation or to listen to their own radios.

It was my privilege to sit as an observer with this committee under its former chairman Oren Harris when the select committee was chosen to look into this problem in 1962.

In December of 1962, we sat here and listened to industry, management and the authorities operating these airports and the major problem at that time in 1962 was what happens if the manufacturer develops the quiet engine; the airlines may not buy it because they haven't depreciated the investment they have put into the existing airplanes.

Then I say to the committee, if this is the problem, if there is available a quiet engine or when the quiet engine is available which I believe can be done with a crash program, then if the airlines feel they need special tax provisions, if they need further subsidization, then

we must supply it because this evergrowing problem has taken away the rights of those living in or near the airport.

There are many critics who say, "Well, the airport was there before the people."

I represent, as I say, Kennedy Airport. Over 90 percent of those people were there before Kennedy Airport and their rights have been taken away, their air rights, their rights of peaceful sleep have been taken away and I congratulate this committee for bringing forth, finally, hearings on legislation which may finally give to the people the right to enjoy their homes as everyone else has that right.

Thank you, Mr. Chairman.

(Mr. Addabbo's prepared statement follows:)

STATEMENT OF HON. JOSEPH P. ADDABBO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. Chairman and members of the Subcommittee, I thank you for this opportunity to testify in support of H.R. 3400 and my bill, H.R. 7266, to authorize the Secretary of Transportation to prescribe aircraft noise abatement regulations.

The metropolitan New York area now has three jet airports, so we are quite aware of the noise problem. The largest of these airports, John F. Kennedy International Airport, is located in my Congressional District. I am confident that I have more "noise harassed" constituents than any other Member of Congress. The old saying "so and so and then it gets worse" certainly applies in the 7th Congressional District of New York.

The Port of New York Authority operates the three airports in the New York City area. They have been trying to find a suitable site for a fourth jetport. Regretfully, they have not found such a site at the present time. Now there is being conducted a "feasibility study" to determine the possibility for construction of two new runways in Jamaica Bay to accommodate the ever-increasing air traffic at Kennedy Airport. Of course, it is envisioned that these runways would serve jetliners as the airlines increase their jet fleets. This must not happen, and I shall do everything within my power to prevent it—we have more than we can tolerate at the present time.

Mr. Chairman, much larger planes than we have today are on order—they will soon be ready for delivery and will be put into service. We must set standards of noise maximums and let the aircraft manufacturers know that a plane will not be certified if it exceeds the set noise level. Only then will there be a real effort to develop a quieter engine.

The huge jetliners, such as Boeing's 747, are scheduled to be operating in the international fleet by 1969 or 1970; and we expect the Supersonic Transport to be in service in the 1970s. We must empower the proper official, the Secretary of Transportation, to set up rules and regulations for the control and abatement of aircraft noise and sonic boom.

Those of us who live in and represent areas where aircraft noise has long been a problem, for years have been calling for legislation to bring relief to our constituents. We have been like "voices in the wilderness," because those who did not have the problem just did not rally to our side. I believe that more and more people are becoming aware and are realizing that the day is not far off when the problem will not be confined to a few large metropolitan areas. As the airlines convert to jets, the problem will spread to every area having airline service.

Mr. Chairman, hearings and surveys date back to the 1950s. The first Presidential recognition of the grave problem was given by President Johnson in his message to Congress in March 1966.

Mr. Chairman, I believe that an age which makes it possible for airline passengers to quietly view motion pictures while in transit should also give to the people on the ground the same right to view television in the home without the sound being blotted out by jet noise. I believe that an age which makes it possible for airline passengers to comfortably recline and listen to great music from a quiet speaker should also allow the citizen in his home the same privilege of listening to his radio or "stereo" or even hear on his telephone. I believe that an age which makes it possible for airline passengers to sleep, if they wish, as

they cross the country should also allow the citizens in their homes to have an uninterrupted night of sleep.

Today, and for many years, my constituents and thousands of others who live near large airports cannot enjoy the peace and quiet to which they are entitled in their own homes. This seems incredible, but it is true.

Mr. Chairman, I cannot stress to strongly the urgency for early action on this legislation. I urge this subcommittee to speedily report a bill so that we may get it enacted into law this session. Time is of the essence!

Mr. FRIEDEL. I want to thank you. I know it is a serious problem, not only in Kennedy, but practically all over, as I said earlier, except for Friendship and Dulles.

I remember flying over Kennedy Airport, then Idlewild, when I was a member of the city council in Baltimore. There was a lot of filled-in land and I saw very, very few homes at the beginning. Very few homes were there when they originally started building Idlewild.

Mr. ADDABBO. Well, many of the runways have been extended since these homes were built. Many of these runways have been extended almost to the backyards of many of these developments and, percentagewise, in the area affected by the noise problem at Kennedy Airport again I say close to 80 or 90 percent was there because, as Congressman Tenzer testified, we have out of Kennedy Airport every 30 or 35 seconds either planes landing or taking off.

They are going over every congested area.

Mr. FRIEDEL. I think there is a serious problem and the flight pattern has to be so large with the jets that it has caused a problem. We are hoping to solve it if we can but, as far as I know and have observed the industry, the manufacturers are trying to achieve a quieter engine.

Mr. ADDABBO. I agree with you, Mr. Chairman.

Mr. FRIEDEL. Mr. Ronan, do you have any questions?

Mr. RONAN. No questions.

Mr. FRIEDEL. Mr. Devine?

Mr. DEVINE. In your opening remarks, you say that you represent the congressional district in which John F. Kennedy International Airport is present situated. Do you intimate that perhaps we might move it away sometime?

Mr. ADDABBO. I hope not, but I have been threatened by some of the officials over at FAA that they might take it away sometime.

Mr. DEVINE. But you are not recommending it at this time?

Mr. ADDABBO. Definitely not. We are recommending the fourth jetport.

Mr. FRIEDEL. Mr. Kuykendall.

Mr. KUYKENDALL. It was mentioned by at least two of our other witnesses that this is a problem for all of us and that a great many of us are involved in trying to settle it. I think it would be remiss on my part if I did not point out that in the informal part of your statement you used the phrase that I hope you didn't intend to use where you said that the aircraft companies were not spending any money. I think you know that they are spending a great deal of money, but in pointing out what a combined problem this is, I think you know as well as I that the problems of safety and noise sometimes conflict with each other because for instance, the reason for the long, low approach of jet airplanes which as you know is one of our main problems is primarily a safety approach, the long, low, heavy power-on approach.

So that 2 months ago, we had legislation that had to do with safety and we were asked to do certain things. Now we are working on legislation that has to do with noise. Many times our desires are in direct conflict to their engineers.

So that I don't think it would be good to leave the impression that the aircraft companies themselves are deliberate in creating this discomfort. I think probably they are almost as concerned about it as some of the people who are living under the flight pattern.

I think it is a problem for all of us. I just don't want to leave the impression that these people are deliberately creating this problem. I think our modern times are creating this problem and we have to have modern ways of solving it.

Thank you.

Mr. ADDABBO. I agree that I don't think it is deliberate, but I think they can do much more.

Mr. KUYKENDALL. I think they can, too. I just don't want to condemn their past.

Mr. FRIEDEL. Congressman, I want to add one word.

I know this has been one of your fights since you have been in Congress. I know your problem is to really fight for your people but unless we solve this problem with the noise, I really believe that the CAB could divert a lot of these flights out of New York because, of course, everybody flying to New York is not just going to New York from overseas.

A lot go to the west coast, some to Florida, and some to Boston. I think more should be diverted to Boston, Philadelphia, Friendship, and Dulles, rather than let them all land in Kennedy. That is one of the things I think we could do immediately to help relieve the noise problem.

Mr. ADDABBO. I would fully agree with you. I have urged the FAA to turn International Airport into an international airport and much of the domestic travel could then be diverted to surrounding airports—we have the customs facilities—or make Kennedy a domestic terminal and divert foreign travel to Baltimore or Boston.

I have also been urging before the authority and the Governors of New Jersey and New York to give us the fourth jetport somewhere. We need that fourth jetport. I agree with you fully.

This can be easily done with diverting which would give us proper landing patterns, proper spacing which would take care of our safety problem because anyone looking at the radar screen at Kennedy would be foolish to fly.

I fly every weekend in and out of Kennedy, but I do so at great risk.

Mr. FRIEDEL. A great many people flying to both Dulles and Friendship are international passengers. They could divert a lot of those passengers.

It is around 30 miles from downtown Washington to Friendship and Dulles. That could be a quick remedy and lessen some of the noise.

Mr. ADDABBO. I agree and am in full support of it. We are willing to share our noise with whoever wants to take it.

Mr. FRIEDEL. I don't want to put you on the spot.

Mr. ADDABBO. We will share our noise with anyone who wants to take it.

Thank you, Mr. Chairman.

Mr. FRIEDEL. We have with us today a member from the full Committee on Interstate and Foreign Commerce, the Honorable Richard Ottinger. We are pleased to have you with us, Mr. Ottinger, and you may proceed as you please.

STATEMENT OF HON. RICHARD L. OTTINGER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. OTTINGER. Mr. Chairman, members of the subcommittee, I am delighted to have this opportunity to appear in support of H.R. 3400 to authorize the Secretary of Transportation to prescribe aircraft noise abatement regulations.

For millions of our citizens living near airports or along landing approach routes, the bloom is off the jet age rose. The convenience and comfort that jets afford travelers is more than offset by the deafening assault upon the general environment from their thundering engines.

Aircraft noise is more than just an annoyance, I believe that any unbiased survey of property values in noise-congested areas would show that reasonable people will not invest substantial sums to subject themselves to the discomforts.

Even more serious, this noise may well be a serious threat to health. In a report in the most recent issue of the Journal of the American Medical Association, Dr. Lee E. Farr warned that just the simple mechanical noises generated in the modern household—by the vacuum cleaner, the air conditioner, and similar amenities—can represent a health hazard. If he is correct, how much greater must be the repeated, deafening din of giant jets taking off and landing.

Everybody expresses concern over this. I recently attended a public meeting where a representative of the FAA and the airlines both acknowledged that the problem existed and said that the industry was working on it.

Now, how is the industry trying to solve the problem?

Whatever they may say, the real story was in the New York Times of October 20 of this year.

The Port of New York Authority set noise standards and put up monitoring devices to see that they are observed. The airline companies hired a service to help them evade the devices. I would like to submit that story for the record.

(The article referred to follows:)

[From the New York Times, Oct. 20, 1967]

HUSH-HUSH AGENT HELPS AIRLINES BEAT NOISE BAN

(By William E. Burrows)

A four-engine jetliner rose from Kennedy International Airport's longest runway shortly after noon one day this week and went into a steep climb as it headed toward Inwood, about three-quarters of a mile away on the other side of Jamaica Bay's eastern-most finger.

Gerald C. Hall Jr., an affable man in his 50's, sat in a small, blue and white truck, at the intersection of Pine Road and Bayswater Boulevard in Inwood and watched the jet as it neared an altitude of 500 feet.

Then he took his pipe from his mouth and brought up a microphone. He spoke at one-second intervals.

"Five, four, three, two, one, mark," Mr. Hall said to the pilot of the plane.

When he said "mark," the airliner almost stopped climbing and settled at about 500 feet for 10 seconds. The pilot, on Mr. Hall's command, had reduced his engines' power and the noise.

During those 10 seconds, the plane passed over Mr. Hall's truck and a noise-measuring box attached to the top of a telephone pole about 40 feet away. The box is one of five placed at the edge of communities around Kennedy by the Port of New York Authority to measure the noise made by planes taking off from the airport. There are two simliar boxes at La Guardia and three at Newark Airports.

"BEATING THE BOX"

The maneuver is officially called Test Able. However, what Mr. Hall and the pilot did is less officially known as "beating the box."

The box was beaten 1,686 times in September. Mr. Hall said, by his giving instructions to crews in planes taking off from Kennedy.

Some of these planes wore the blue and white of Pan American World Airways. So does Mr. Hall's truck, because he has been employed by the line for five years to keep its planes, and those of some other lines, from breaking through the Port Authority's noise barrier.

When the plane that Mr. Hall had been directing passed the vicinity of the box, and had begun flying directly over Inwood, the pilot added power and resumed his climb. Residents of the village might have said the noise was objectionable, but the box did not.

The box is part of the world's first automatic aircraft noise monitoring system. The ones around Kennedy were set up in the winter and spring of 1960 at Inwood, Meadowmere, Laurelton, South Ozone Park and Howard Beach—communities whose residents had voiced strong objections to jet noise from Kennedy.

Airplane noise is measured in Perceived Noise decibels, or PNdbs, which represent the noises people can hear and which are weighted toward the higher frequencies associated with jets.

The Port Authority, which operates Kennedy, La Guardia, Newark and Teterboro Airports, in 1951 set 112 PNdbs, as the maximum allowable noise a plane taking off from Kennedy could make. The boxes will record any noise made by a plane that is greater than 103 PNdb. The impulse is then recorded in a special Noise Room run by the Port Authority under the Kennedy Control Tower.

An authority spokesman said that of 98,443 take-offs from Kennedy during the first eight months of this year, only 690 involved noise violations. No measurements were made from the center of the communities, however.

All planes do not use Test Able, Mr. Hall said. Only the larger, four-engine planes that cannot climb as quickly as the two- and three-engine variety are in the Test Able class, he said, and some of these beat the box in other ways.

COUNT OFF SECONDS

One of the other ways, Mr. Hall said, is the seconds from brake-release method. Here, the pilot counts off the seconds from when he releases his plane's brakes at the beginning of the take-off roll, to when his airborne plane comes close to the box.

There is nothing dangerous in reducing power for the four engines, he said, because even if one of them should fail altogether, the other three could keep the plane in a gradual climb until full power in the three was restored.

Mr. Hall, said he also advised pilots for T.W.A., Delta, Alitalia, El Al, Olympic, Seaboard World, and other airlines how they, too, could beat the box.

Mr. OTTINGER. If the airlines invested half the ingenuity in solving the noise problem that they expend evading the Port of New York's monitoring system, we might have had the problem licked by now.

How is the FAA working on jet noise?

I have been corresponding with them about the problem in metropolitan New York for about 3 years. First, they promised relief from new approaches and new minimum altitudes. Then they promised relief from new runways at LaGuardia.

In the end, what did they accomplish?

Last April 24, they finally notified me, and I quote,

We have about exhausted our capability to minimize the noise nuisance problem through air traffic procedural changes. We must now look to research, development, proper land uses and new operating techniques . . .

Did they propose to undertake this program? They did not. They proposed to rely upon ". . . the program under study by President Johnson's Jet Noise Panel for further relief from this very vexing problem."

Mr. Chairman, this is not good enough.

We are spending billions on new and bigger airports and new and bigger jets. We have embarked on a program to build the biggest aircraft bang in history, the $5 billion supersonic SST. But we don't know how to live with the engines we have today and jet noise remains the poor cousin of the aeronautics industry.

I don't believe that we will accomplish anything until jet noise is elevated out of its current low ranking at FAA and given consideration at the highest level in the Department of Transportation. We won't get anywhere until we put enough teeth in the program to make solving the problem economically desirable for the industry.

Mr. Chairman, I urge favorable action on H.R. 3400 as a good way to reach these goals.

Mr. FRIEDEL. Thank you for your views, Mr. Ottinger.

If there are no questions, we shall proceed to hear from another distinguished colleague from New York, the Honorable Jacob Gilbert. Mr. Gilbert.

STATEMENT OF HON. JACOB H. GILBERT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. GILBERT. Mr. Chairman and members of the subcommittee, I commend you on the thoughtful consideration you are giving to this bill to abate the terrible noises of jet aircraft in the areas of our Nation's major airports. This is farseeing legislation. It falls well within the tradition that has been recently established of giving attention to the environment in which Americans live. We are fighting air pollution to cleanse the air we breathe and water pollution to cleanse the water we drink and in which we swim. Such programs are aimed at restoring the integrity of American life. They are aimed at permitting us to enjoy the benefits of our technological society without paying an intolerable price in human values. I think the aircraft noise abatement bill has the same objective. I believe it stands with water and air pollution legislation as essential correctives for the excesses of modern civilization.

I have been pressing for this legislation for several years, because my own constituents suffer severely from the noise generated by New York's jet air traffic. Last year I received a petition signed by 2,000 residents of the Castle Hill area of my district. I quote from the petition: "The noise caused by low-flying planes makes it impossible for us to sleep, to hear normal conversation, or to enjoy radio and television." Many of my constituents, some ill and elderly, tell me of the strain on their nerves, of the impairment to recovery from illness, of the reduction of their efficiency at work. I would by no means claim that Kennedy and La Guardia Airports are not necessary to New York, Mr. Chairman, but I do not believe that the people who happen to live

near them or within the limit of their flight patterns should have to pay this grievous price.

I live in the area myself, Mr. Chairman, where we are constantly subjected to the noise of jet motors. I can personally testify to the discomfort that this noise creates. We have never computed how many thousands of Americans are affected by this problem. But I'm sure that it runs into the hundreds of thousands. And as we all know, there will not be fewer jets in the future but more, just as there will be more airports to service them.

My bill, which closely resembles the committee bill, authorizes the Secretary of Transportation to prescribe standards for aircraft noise. But this is a complex problem and does not lend itself to an easy solution. Aircraft manufacturers have not yet solved the problem of quieting the jets. So my bill directs the Secretary of Transportation to undertake research in noise suppression devices for aircraft engines and ground baffle systems, as well as to develop procedural techniques for bringing planes in and out of airports more quietly. It authorizes the Secretary to perfect noise measurement methods so that we know whether the rules are being observed. It provides penalties in the amendment, modification, suspension, or revocation of aircraft certificates.

Mr. Chairman, this is a problem with which our local communities cannot deal alone. It is a Federal responsibility. Congress must stand at the head of the attack against aircraft noise. The State and local governments, as well as private industry, will cooperate. But the leadership must come from us. I commend you for taking this leadership by these hearings and I look forward to enactment of jet noise abatement legislation in the very near future.

Mr. FRIEDEL. Thank you for your concise statement Mr. Gilbert. Your views shall certainly be given consideration, as shall all others submitted.

We shall hear next from another colleague, from Minnesota, the Honorable Joseph Karth. Mr. Karth.

STATEMENT OF HON. JOSEPH E. KARTH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

Mr. KARTH. Mr. Chairman, members of the committee, I would like to thank the Subcommittee on Transportation and Aeronautics for their concern with the aircraft noise problem. We all recognize the obvious—with increasing air traffic, the present noise difficulty can only worsen. Therefore, it seems most appropriate that Congress act to lessen the burden of "noise pollution" that threatens the American public.

However, Mr. Chairman, I would specifically like to draw your attention to the research and development efforts of NASA's Office of Advanced Research and Technology in this area. Whereas many of the bills presently before the committee may provide short-term answers to a small portion of the noise problem, the significant long-range advances that must be made can only come from radical R. & D. effort.

Such effort must take into consideration aircraft configuration, engine design, operational techniques, and many other research parameters. I would hope to point out clearly for the record, that these are

in fact the problem areas that NASA is vigorously attacking within the scope of funds provided by Congress.

NASA's responsibility in the Government's interagency aircraft noise abatement program is well defined. The broad objective of NASA is to perform the resarch and development required to reduce engine noise and to provide information upon which judgments can be made for the most effective overall approach to solving this problem.

Specifically, NASA's research is aimed at:

(1) Obtaining a fuller understanding of the physical processes involved in the generation of noise, in a search for some presently unrecognized means of preventing the generation of noise.

(2) Developing means to reduce noise at its source through major changes in jet engine design.

(3) Determining practical methods of suppressing to a maximum extent that noise generated by jet engines.

(4) Investigating new aircraft operational techniques which will reduce the ground noise level without detriment to operational safety.

Results of these studies should be of assistance to those concerned with developing guidelines for the solution of the total noise problem which includes the economics of land use in critical noise areas near airports.

Three important steps have been taken already by NASA with industry assistance toward noise abatement. One is the initiation of the quiet engine program, which has the final objective of combining all of the possible noise control techniques into an engine of about 20,000 pounds thrust which would be 15 to 20 decibels quieter than present engines.

In the initial phases of the program, the entire engine cycle will be studied with a view toward changes in the design and arrangement of various engine components to reduce noise generation. Concurrent with the engine development program, present plans call for contracts with airframe manufacturers to study the problems of integrating the quiet engine into typical commercial jet transport aircraft.

During aircraft take-off and landing the major sources of noise are from the fans and compressors. Thus in another important move, two aircraft companies have been selected by NASA to undertake a 32- to 36-month coordinated research program to examine the extent to which fan and compressor noise generated by current engines can be suppressed through changes in nacelle design.

The contracts call for engineering studies, design analyses, fabrication, ground runup and flight testing to determine the effectiveness and feasibility of modifying front-fan jet engine noise. The flight tests will include the measurement of the ground noise level for the acoustically treated four-engine jet transports used in the studies.

The third important step by NASA is the expansion of its studies of operational techniques for noise abatement through research in pilot displays and new control system techniques by means of simulation and flight testing. The feasibility and potential gains for such systems will be demonstrated.

Mr. Chairman, I would urge the committee to give careful consideration to the efforts NASA has made and has programed for the future. I firmly believe that only through technological advance can we hope for meaningful progress in the long run.

I believe Congress should also be alert in passing noise abatement legislation which, while possibly offering some advantage to local communities, may also be paid for at the price of safety. I would urge my colleagues, in weighing all the legislative possibilities, to capitalize upon NASA's research and development program already well underway. In so doing, I believe we can expect to achieve a balanced program—one which will relieve a vexing public grievance, while at the same time not penalizing the overall safety or efficiency of aviation.

Mr. FRIEDEL. Thank you, Mr. Karth. If there are no questions, we shall move along as quickly as possible. Our next witness is the Honorable Seymour Halpern, our colleague from New York. Please proceed, Mr. Seymour.

STATEMENT OF HON. SEYMOUR HALPERN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. HALPERN. Mr. Chairman, I am deeply appreciative of the opportunity to appear this morning before this distinguished subcommittee to lend my fervent support to effective noise control legislation as provided for in Chairman Staggers' bill, H.R. 3400, and similar bills now being considered by this committee. My interest in noise control and abatement is evidenced not only by my own bill, H.R. 13284, one of those before you, but also by the fact that the district which I represent rests adjacent to two of the busiest airports in the country—New York's La Guardia and Kennedy airports.

Our technological society has produced creature comforts which even our parents would have considered inconceivable. The potentialities in the area of the comfort and well-being of our citizens inherent in this technology are limitless. However, the convenience provided by at least one technological innovation—the jet engine—is in danger of being overshadowed by the hazards it creates to the health and welfare of the public.

I am not suggesting, Mr. Chairman, that these dangers to health and welfare are immutably fixed in any conceivable jet engine, but I am suggesting that as jet-powered aircraft are now operated the impact of aircraft-generated noise upon millions of persons beneath or near the flight path of these aircraft is such that, as I have stated in my bill, it seriously disturbs the peace and quiet of homelife, interferes with public assemblies, and, in general, seriously disrupts community life, all of which the citizens have a right to enjoy.

These citizens should not be forced to subject themselves, as many in my district must, to totally intolerable levels of noise. The noise levels in this area, and in many areas of the country, are far above what both sociological and technical studies indicate to be the limits which a person can be expected to endure for any length of time. The result is impairment of both physical and mental health.

With the advent of the SST age, the time for academic discussion has passed—the time for concrete and meaningful action is upon us.

Specifically, Mr. Chairman, I have introduced H.R. 13284, a bill which, I think, will go a long way to alleviate the problems which now exist. First, my bill provides that the Secretary of Transportation, and the Administrator (of FAA) shall conduct basic research in order to further our knowledge of how aircraft noise affects people, and to in-

dicate possible methods and devices for aircraft noise abatement. While I realize, Mr. Chairman, that the Secretary of Transportation and the FAA have already made some advances in this field, there are areas which need further exploration and understanding, and it is imperative that we commit as many resources as possible to these investigations.

Next, my bill would establish the jurisdiction of the Secretary of Transportation so that he may prescribe and amend rules and regulations necessary to the control and abatement of aircraft noise. In this area, Mr. Chairman, the Secretary of Transportation must have the authority to suspend, or revoke, any certificate involved in a breach of these rules and regulations.

Lastly, when any action to amend, modify, suspend, or revoke a certification might be taken by the Department of Transportation, there shall be a right of appeal to the National Transportation Safety Board.

I might add, Mr. Chairman, that my bill is very similar to that introduced by the able and distinguished chairman of the full committee, Mr. Staggers. His bill, H.R. 3400, is highly commendable. It provides the tools to reach the heart of the abatement problem and I enthusiastically support it. I would, however, recommend its broadening to cover the research aspects which are contained in my bill, but are not covered in H.R. 3400. I believe that this broadening would deepen and improve the bill and I urge the committee to give every consideration to this provision.

But what is most important, Mr. Chairman, is that we get a bill—strong, effective legislation which will provide the machinery for the meaningful control of these noise hazards to health and welfare. The Secretary of Transportation must be given the authority and the power to derive, set, and enforce viable standards relating to aircraft noise. The residents of my district in Queens, N.Y., the residents of other constituencies near large airports and, with the advent of the jumbo-jet era, the residents of broad sections of the country have a vital stake in this legislation.

I am confident, Mr. Chairman, that this distinguished and hard-working subcommittee will evaluate this legislation judiciously, and I trust that it will report the broadest, most workable, most effective bill which will get to the roots of this ever-mounting problem and provide the tools to allow us to come up with the right answers.

I thank the committee for the privilege of appearing before it today.

Mr. FRIEDEL. Thank you for your testimony, Mr. Halpern.

Our next witness is also from New York, the Honorable Ogden Reid. Please proceed, Mr. Reid.

STATEMENT OF HON. OGDEN R. REID, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. REID. Mr. Chairman, I am pleased that your committee is holding hearings on one of the most pressing problems of modern civilization. That the hazards and inconveniences caused by jet noise daily become more serious need not be belabored here in detail. Certainly the area surrounding the busy New York airports and the Metropolitan

Washington area are two sections of the Nation where relief is most urgently required.

At present, the Federal Government has no authority to impose regulations concerning aircraft noise abatement. Certification of the noise level of jet engines, coupled with high-priority research programs, seems to be the most feasible means of reducing jet noise in the near future.

I have introduced two bills which I believe will give the Federal Aviation Agency the authority to prescribe and amend standards for the measurement and control of aircraft noise which General McKee said 2 years ago were "needed to assist us in alleviating a most serious problem."

My first bill, H.R. 92, empowers the Secretary of Transportation and the Administrator of the Federal Aviation Administration, consistent with the primacy of air safety, "to prescribe and amend standards for the measurement of aircraft noise and to prescribe and amend such rules and regulations as he may find necessary for the control and abatement of aircraft noise, including the application of such standards, rules, and regulations in the issuance, amendment, modification, suspension, or revocation of any certificates authorized by this title."

In addition, the second bill, H.R. 91, authorizes the Administrator to reimburse domestic air carriers and the owners and operators of any airport for up to 30 percent of the cost of modifying their equipment to comply with such regulations and to reimburse the States or municipalities for up to 90 percent of the cost of acquiring necessary land and making other adjustments to comply with such regulations.

In my judgment, legislation along these lines would give the Federal Government the authority that Secretary Boyd told this committee earlier in these hearings is necessary if we are to deal effectively with the problem of aircraft noise.

However, the application of regulations will fulfill only a portion of the need. Research to develop and perfect a quieter jet engine is the ultimate answer. Eight different research panels in two different executive agencies have been studying the problems of jet noise and related air travel questions but none has yet arrived at conclusions or presented a coherent proposal for what must be done.

A third bill that I have introduced, while not pending before this committee, would authorize the National Aeronautics and Space Administration to conduct research and investigations, including the investigation of complaints, cooperate with local civic organizations and municipalities, and coordinate and consolidate current research projects with regard to aircraft noise abatement. Among the specific duties that would be assigned to NASA are the measurement of noise as it relates to the distress of people on the ground; the development of quieter aircraft through research in airframe and powerplant designs; and the development of a comprehensive body of knowledge of methods and devices for noise abatement. I would hope that your committee would be able to work with the Committee on Science and Astronautics to expedite research in this area and the related problem of the emission of pollutants from jet engines into the atmosphere.

Further, while this is not specifically a matter before this hearing, there is an urgent need in many parts of the country—particularly the New York area—for additional jetports and improved methods of air traffic control. Whatever progress we make in abating jet noise and dirt will be of diminished effectiveness if the airways are dangerously crowded and the ground facilities inadequate and obsolete.

The Congress can no longer ignore the major inconveniences, discomfort, and hazards to health that result from excessive aircraft noise. It is incumbent upon the 90th Congress to take initial action to combat this problem before technological advances, such as the supersonic transport, compound its effects. I am hopeful that your committee will report this legislation as soon as possible.

Mr. FRIEDEL. Thank you for your views, Mr. Reid.

If there are no questions, our next witness is from the State of California, the Honorable Charles H. Wilson.

STATEMENT OF HON. CHARLES H. WILSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. WILSON. Mr. Chairman, as the Representative of the 31st District of California, an area which encompasses the Los Angeles International Airport, I am particularly interested in the matter before you today, and delighted to have the opportunity to appear before this subcommittee in order to express my constituents' deep concern.

Los Angeles International is one of the busiest airports in the Nation, and along with the benefits which accrue from the facility come a number of serious problems with which we have to deal. The difficulties created by jet noise are paramount for communities in the vicinities of major air terminals. As air traffic increases, the problem is made more acute, and its solution more difficult. For this reason I feel that the time to set uniform noise abatement standards is now, and I find it quite encouraging to see the Committee on Interstate and Foreign Commerce considering such an enlightened piece of legislation.

We are all familiar with the tremendous strides made in the science of aviation. In recent years we have seen the transition from piston engines to turboprops, and on to jets. Just over the horizon, we see the supersonic transport and a myriad of new and complicated problems.

As the size and power of aircraft have increased, travel has quickened. Distances seem to be sharply reduced. In fact, technological progress in aviation has been so rapid, that it has become a truism to say that "planes become obsolete by the time they get into service." But these advances are not without cost. The more obvious costs include new equipment, research, and the purchase of new aircraft. There is, however, another cost which the entire public is asked to bear—that is, the price measured in the threat to our environment.

Today we find our airports increasingly overcrowded and constantly searching for additional land on which to expand. Faster and larger aircraft mean longer runways, and the greater size, speed, and convenience of the modern jets mean a heavier traffic load on existing facilities.

Our airports are faced with the intricacies of high-speed, complex air traffic patterns. Our air has become increasingly polluted, and

those of us who are unfortunate enough to live along various flight paths are not just inconvenienced, but actually menaced by destructive noise.

In my congressional district, in the neighborhoods adjacent to the Los Angeles International Airport, the problem of noise pollution has become so acute that people who have invested their savings in homes have seen their property values fall. Their daily lives are so harassed and disrupted by jet noise that even normal conversation often comes to a halt. The work of many of my constituents is interrupted, and worst of all, thousands of schoolchildren are subjected to educational handicaps due to interruptions and distractions caused by jet noise.

Here I approach the more specific topic of today's inquiry. The need for an intelligent and rational set of noise abatement standards for aircraft has been amply demonstrated.

The chairman of the House Committee on Interstate and Foreign Commerce, the Honorable Harley O. Staggers, a friend and good colleague, has seen fit to introduce a bill which is a first great stride toward the solution of this problem. Chairman Staggers' bill, H.R. 3400, eliminates the guesswork and uncertainty as to who shall set noise pollution standards. It authorizes the Secretary of Transportation to prescribe measures pertinent to the control of aircraft noise in a manner similar to that in which air safety is regulated.

The legislation thus facilitates the institution of reasonable standards. This is probably the single most important prerequisite to the construction of a complete policy for the protection of our cities and suburbs from jet aircraft noise. This approach is so vital that I felt it incumbent upon me to submit a companion measure, H.R. 13372, for the consideration of the House. I think everyone here will recognize the strong leadership of the chairman on this matter, and I know that all of you on the committee and the rest of us in the House all feel deeply indebted to him for his foresight and his grasp of the issue at hand.

But I think we can even go a step or two further in the alleviation of hardship due to jet aircraft noise. In this vein, I submitted not only a companion bill to the measure now being considered (H.R. 13372), but have felt so strongly about the need for effective noise abatement legislation as to have submitted two other noise control measures for the consideration of the House.

H.R. 11073 amends the Federal Airport Act to provide for Federal financial assistance for noise abatement with respect to certain schools located near public airports. The bill would allow local school districts to soundproof present classroom structures and allow for the installation of soundproofing in new school construction. H.R. 8309 is a bill that would, by virtue of its fundamental approach, provide a comprehensive framework within which we could meet the whole "noise pollution" problem. It would create a more complete program of noise control, including the creation of a Federal Office of Noise Control. As the legislation was written, this Office was to have come under the jurisdiction of the Department of Health, Education, and Welfare; but now that we have a new Department of Transportation, I see no reason why we cannot adopt the same measure within that Department. Certainly, this is the direction in which we are moving, and my bill—thus amended—would merely be a more specific extension of the

chairman's own. I repeat that I see no basic conflict here. We share the same concerns.

Gentlemen, it is my belief that all three of these measures—or the approaches drawn in them—ought to be favorably reported by the committee and passed upon in a similar way by the House. The problems created by the din from ever-larger and more powerful jets, and the prospect of evermore shattering rocketlike noise require it. Jet noise abatement is part of the general task of preserving the safety and health of the natural environment in a time of rapid technological change and repeated assaults upon the life-sustaining balance upon which we all depend. I recommend not only a favorable recommendation to H.R. 3400, but also to the approaches embodied in H.R. 11073 and H.R. 8039.

I want to thank the kind chairman of the subcommittee, my dear friend and colleague, the Honorable Sam Friedel, of Maryland, for indulging my concern and allowing me to come before the subcommittee.

Thank you.

Mr. FRIEDEL. Thank you for your consideration and views Mr. Wilson. We appreciate your concern, as this is a national problem and the concern of all.

Time is running short, so we would appreciate brevity inasmuch as possible.

Our next witness is the Honorable Lester Wolff, a colleague from New York.

STATEMENT OF HON. LESTER L. WOLFF, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. WOLFF. Mr. Chairman, I appreciate this opportunity to testify before this committee on the problem of aircraft noise and the pending legislation, H.R. 3400. My distinguished colleagues, Mr. Tenzer and Mr. Wydler, will discuss the local problems of aircraft noise in Nassau County. I shall not take the committee's time to repeat these points.

Since my district is located in close proximity to both La Guardia and Kennedy Airports in New York, the problem created by unreasonable noise, primarily that of jet aircraft, is something of direct concern to my constituency. I have devoted a good deal of time to studying this matter, especially in its necessary relationship to flight safety. Moreover, as a former pilot I believe I am aware of certain of the technical problems involved in aircraft safety and noise abatement.

In consideration of H.R. 3400 I respectfully suggest consideration of the problem that will be created by the purchase of the Concorde aircraft by American companies. This supersonic aircraft differs from the American SST in that the European plane is designed for relatively short-haul flights. Thus its use will create unreasonable, unacceptable sonic booms in an extensive series of flight patterns over the continental United States. I think such flights should be prohibited over land and urge this committee to act to prohibit use of the Concorde within the confines of the continental United States at supersonic speeds. Purchases of the Concorde should be suspended immediately and steps taken to protect the American household from the havoc that could be created by overflights in the United States.

As I indicated above the Concorde is quite different than the SST being built in the United States. The American plane is designed for long-range transoceanic flights and thus will dissipate the sonic boom over water.

H.R. 3400 may well be the appropriate vehicle to halt purchases of the Concorde and thereby protect millions of Americans from the unhealthy intrusion of sonic boom.

In a more general vein, I might note that I supported increases in our Space Committee budget to add research dollars for finding methods of alleviating jet noise. However, without the cooperation of the aircraft industry and the airlines it will be impossible to significantly reduce what is appropriately called noise pollution. The private sector must be drawn into partnership with the Federal Government in a concerted attack upon the noise pollution of jet aircraft. Specifically, the manufacturers and airlines must be called upon to aid in test flights, under normal conditions, of engines and devices designed by advanced technology to decrease offensive jet noise.

There are three additional points I would like to briefly call to your attention:

(1) Recently there was an instance on my congressional district of a plane flying dangerously low over certain residential areas. The noise from this Braniff jet which came down below 500 feet was deafening and there were literally hundreds of calls made to local police and my office by people concerned about the effect of this noise on children and elderly people with heart conditions. I immediately contacted the FAA to request an inquiry. It took 2 weeks for the FAA to identify the plane that made this flight. Had the plane been marked with serial numbers, as used to be the case, immediate identification would have been possible. In fact, an automobile license plate would have been legible at the absurdly low level at which this plane was flying. The point here is that all aircraft should be clearly marked for identification since public exposure might deter such illegal low flights as the one I have reference to here.

(2) Existing noise abatement procedures established by the FAA are in certain cases quite dangerous. I refer specifically to requirements about power reductions on takeoff and landing. Such power reductions are designed to decrease jet noise. Yet, according to airline pilots, existing power limitations create potentially hazardous situations. It would be infinitely wiser to use modern scientific know-how to develop the means of controlling noise, rather than the present system of attacking the problem after the fact. Let us go to the root of the problem.

(3) New attention must be given to airport planning and isolating areas around major airports. Unscrupulous real estate developers have sold undesirable land near major airports and did not advise potential land and home purchasers of the impact of air traffic patterns and the ensuing noise pollution. The magnitude of this problem demands Federal action and guidance in zoning to isolate the areas most exposed to offensive noise.

Finally, I would like to add my voice to those who support the principles contained in H.R. 3400. Aircraft noise can and should be controlled.

Thank you, Mr. Chairman.

Mr. FRIEDEL. Thank you, Mr. Wolff.

Our next witness is the Honorable Frank Brasco. Please proceed, Mr. Brasco.

STATEMENT OF HON. FRANK J. BRASCO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. BRASCO. I appreciate the opportunity to appear before your committee to support the administration's noise abatement bill—H.R. 3400. The aircraft noise problem involves so many Federal- and State-operated airports, so many aircraft operators, so many political jurisdictions, so many agencies and parts of the air transportation industry, and such a wide variety of aircraft types that the Federal Government is the only common denominator to apply for the solution of such a universal problem. Aircraft noise abatement is probably a unique undertaking in which few people will question and most will welcome the lead role of the Government.

The need for a lead role was pointed out very vividly this past summer in New York. A Federal court in Brooklyn decided that, in effect, the town of Hempstead, Long Island, could not enforce a local ordinance setting noise levels for airplanes landing and taking off at nearby Kennedy International Airport. Attorneys for the aviation industry group that challenged Hempstead's 1963 law said the ruling signifies that jurisdiction over the aircraft noise problem rests with the Federal Government instead of with local governments.[1]

The executive branch is conducting dozens of studies, compiling miles of data and undertaking research in almost every area of aircraft noise abatement including improved flight procedures, quiet engine programs, and compatible land use. But the residents around our Nation's jet airports have all the data they need. They know the noise issue all too well, and they want something done now. The passage of H.R. 3400 would place the Congress on record as doing everything they could to aid in solving the aircraft noise problem.

Passage of H.R. 3400 would alert the manufacturers that they will have to intensify their efforts in reducing jet engine noise. If the industry knows that their engines will be certified for noise they will make every effort to meet the standards long before the certification process is in effect. Like airplanes, the engines are not designed, developed and tested overnight. Many years will go into the development of a quieter jet engine; so it is imperative that the aircraft noise certification will be passed now so that the manufacturers will have an impetus for their noise abatement work.

Passage of H.R. 3400 in summary just makes good sense. It will aid the Secretary of Transportation in combating a major problem in our air transportation system. It will show the hundreds of constituents who have written their Congressmen concerning noise abatement that the Congress is firmly behind them. It will further the progress of noise abatement technology. I sincerely recommend that the committee report H.R. 3400 at the earliest possible date.

Mr. FRIEDEL. We have one other witness who will have to be brief because the House goes into session at 11 o'clock today.

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[1] Air/Water Pollution Report, p. 227, July 17, 1967.

It is my great pleasure to call my good friend and colleague, Congressman Rosenthal of New York.

STATEMENT OF HON. BENJAMIN S. ROSENTHAL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. ROSENTHAL. Thank you, Mr. Chairman. I shall follow your admonition to be very brief. I know that you gentlemen have given this matter a good deal of concern.

La Guardia Airport is within my district. The people there have sleepless nights and unhappy children and unhappy inlaws because aircraft noise is an enormous social problem. Sometimes we think of it lightly and Members who come from districts that don't have airports within their districts simply can't appreciate the sensitivity of the people living in these areas.

Most of these people, the vast majority were there before jet aircraft came. During the summer those people, most of whom don't have air conditioning, have to keep their windows open. Planes come into La Guardia and Kennedy airports every minute or minute and a half, and people with heart conditions have very critical problems. Youngsters who are sick have critical problems. This is an enormous social problem and I know that you understand that.

I have been working on this project for 5½ years. I remember testifying in December 1962 before Oren Harris' special committee. My view in watching events in this field for the past 5 years has been that the FAA and the Federal Government, and now the Department of Transportation, simply don't have the level of commitment to solving this problem that they really ought to have.

I felt for a long time that they could and should do more. I think it is only under pressure of Congress that they are willing to go this far in supporting this bill.

I remember going to an aircraft engine factory in Hartford Conn., about the time Chairman Harris held those hearings. Those people told us that the state of the art had not gone far enough and that it would take an enormous amount of money and we would have to take seats out of the planes. I remember a fellow named Frank Kolk from American Airlines testifying before Chairman Harris' committee that a lot could be done if people were willing to apply pressure if, at the same time, the airplane and aircraft engine manufacturers worked together with an interest in noise abatement besides their interest in thrust, power, seats, design, and speed.

If industry took this matter to their bosom as it were, then much could be done. For example, something was done with the 727 which is a quieter plane because they coordinated the efforts of the engine manufacturer and the airframe manufacturer.

Much more can be done. Another example I remember is that American Airlines had converted most or all of their jets to fan jets which gave them much more thrust in getting up quickly which helped alleviate some of the noise problems.

The Federal Government has to help. It can help by giving the FAA and Department of Transportation mandatory responsibility to certify planes. If a plane that is manufactured does not meet this standard, then they certainly should not be allowed to fly into our congested

metropolitan areas where people suffer from the noise pollution problem.

I earnestly urge you, Mr. Chairman, to report out quickly H.R. 3400 which I support and my own bill, a companion measure. For if the Executive hasn't met its sense of responsibility and commitment, I think the least we can do, and it is a delight for me occasionally to say it, is that Congress must take a lead in many of these fields.

I think this is one of those grand opportunities that doesn't come as frequently as I would like.

I thank you, Mr. Chairman, for the opportunity to appear here this morning.

(Congressman Rosenthal's prepared statement follows:)

STATEMENT OF HON. BENJAMIN S. ROSENTHAL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. Chairman, I strongly support H.R. 3400, which I have also introduced, and which would give the Department of Transportation new responsibilities for the abatement of aircraft noise and which specifically would make noise abatement standards part of the certification requirements which the Federal Aviation Agency administers.

My district include LaGuardia airport—one of the nation's busiest. My constituents suffer the consequences of decades of neglect of the noise pollution problem. Most of them have lived in New York City for many years. They live in established communities and not in hurriedly-assembled subdivision tracts. *They were there before the jest arrived.* They used to live in comfortable, convenient neighborhoods which, while noisier perhaps than rural areas, nonetheless struck a reasonable balance between city hustle and bustle and suburban quietness. But today, that balance is gone. Now these people come home from their city jobs and find themselves beneath an intolerable roar as jetliner after jetliner screeches over their roofs.

These city-dwellers have lost, Mr. Chairman, that balance of toleration which once existed in their neighborhoods. They find that their homes offer not less, but more, noise, more distraction and more simple human discomfort than their offices in the heart of the city.

For too many years, I believe, we have passed the aircraft noise problem from one pair of reluctant hands to another.

Ailine pilots say they cannot compromise safety with noise considerations, quickly ignoring the fact that there need be no such compromise but only a willingness to consider noise abatement as an additional responsibility *within accepted safety requirements.*

Local communities fail to respond adequately by using their zoning powers to insure compatible land use near airports. The airlines draw the line when noise abatement starts to cost money.

Aircraft manufacturers look to community solutions and pilot procedures almost exclusively without considering the part that engine and aircraft design must play. And airport operators tend to seek solutions which pacify immediate airport neighbors without showing the leadership which their community roles demand.

Amid this bickering in the aviation community, there has been a lack of responsibility in the federal government. The Federal Aviation Agency, as in its other attempts to lead the industry, has been forced to respond too often to the loudest, or most recent, voice. It has been a poor arbitrator and an even worse leader in noise abatement. But it alone is not responsible for it has not been given clear instructions by either the Congress or the Executive Branch.

The importance of H.R. 3400 cannot, therefore, be exaggerated. This measure will put responsibility on the FAA's parent, the Department of Transportation, in insuring that noise abatement becomes part of the certifications procedures for activity within American aviation. No longer will noise abatement be a tardy afterthought.

I believe that vigorous administration of this legislation can mark the first important, coordinated step which the federal government must take to insure that airports, and their activities, become truly compatible with the rights of and legitimate values of our citizens.

Mr. FRIEDEL. I must assure you that we realize the problem in this situation and are trying to get the proper legislation to correct the noise problem. This committee will not shirk in its duty, I can assure you of that.

Mr. Ronan, any questions?

Mr. RONAN. I have no questions.

Mr. FRIEDEL. Mr. Devine?

Mr. DEVINE. I have no questions.

Mr. FRIEDEL. Mr. Cunningham?

Mr. CUNNINGHAM. I just might say to my distinguished friend that the previous witness has mentioned the possibility of diverting some of this international traffic to other airports and I was wondering—for example, Friendship in Baltimore, I believe is capable of taking a lot of this international traffic.

Would you and your colleagues have any objection to diverting some of this international traffic now at Kennedy to Friendship in Baltimore?

Mr. ROSENTHAL. I imagine the people in New York would be delighted if that happened and I suppose, as representatives of those people, we would be equally delighted.

Mr. CUNNINGHAM. Thank you.

Mr. FRIEDEL. Mr. Kuykendall?

Mr. KUYKENDALL. I want to welcome you to the committee.

Have you done any research into the matter of helicopters and VTOL take-off type craft? I know in New York the helicopter to downtown has been used more than in any other places I know of.

Is there a noise problem?

Mr. ROSENTHAL. There is a noise problem. I have not done any original work. I have observed some of the work that Oscal Bakke and some others did in the agency. In the long run, if they develop an airplane that can go up and down quickly, we will eliminate the problem quite substantially, but I just cannot think that far in advance.

I have great doubts with the proposed planes that they have on the drawing boards now, including the SST, whether VTOL aircraft will supersede conventional jet craft in long-haul distances.

It may be that in-between short-haul distances, New York and Washington and New York and Baltimore, the VTOL aircraft will be a final solution, but I suspect that that is in the distance and I suspect that insofar as international and domestic long-distance travel that this kind of plane will ever supersede that we conceive to be the conventional jet.

Mr. FRIEDEL. I want to thank you very much.

Mr. ROSENTHAL. Thank you very much, Mr. Chairman.

Mr. FRIEDEL. The meeting will now stand adjourned. We will meet tomorrow morning at 10 o'clock.

(Whereupon, at 10:58 a.m., the subcommittee adjourned, to reconvene at 10 a.m., Wednesday, November 15, 1967.)

AIRCRAFT NOISE ABATEMENT

WEDNESDAY, NOVEMBER 15, 1967

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND AERONAUTICS,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice, in room 2123, Rayburn House Office Building, Hon. Samuel N. Friedel (chairman of the subcommittee) presiding.

Mr. FRIEDEL. The meeting will now come to order.

This is a continuation of the hearings on H.R. 3400 and other related bills.

Our first witness will be the Honorable Claude Pepper, Congressman from Florida and one of our dearly beloved friends.

STATEMENT OF HON. CLAUDE PEPPER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. PEPPER. Thank you, Mr. Chairman and members of the committee. I am here today to appear before your distinguished committee in support of the chairman's bill, H.R. 3400, and my companion bill, H.R. 11566, in behalf of the right of the Federal Aviation Agency to authorize aircraft noise abatement regulations.

Aircraft noise is one of the major problems facing the Government and the aerospace industry today. The industry, the Federal Government, and local airport authorities have already expended a great amount of time, energy, and funds in alleviating aircraft noise. The Federel Aviation Administration has at work at our larger airports systems of preferential runways and noise abatement procedures. But the number of noise complaints has been steadily multiplying. In the next few minutes I will discuss why the problem should be considered here and now; some of the grave effects of the problem; and why the Congress should pass H.R. 11566 to help solve the problem.

Airplanes have always produced noise, and by definition noise is sound which is noticeably loud, harsh, or discordant. The noise problem has been with us since the beginning of powered aviation but not at the magnitude or rate of growth that exists today.

There is a strong upward trend in the number of airplanes, the number of operations at our major airports, and the size and power of the transport aircraft. More than 110,000 aircraft are in active service in the United States today. They range from giant eight-jet B–52 bombers weighing 150 tons to one-place sport planes with four-cylinder engines. These airplanes flew 88 billion passenger-miles last year and 3 billion ton-miles of cargo. The air carrier-fleet has changed markedly in the past few years because of the introduction of turbo-

prop and jet airliners. In 1962 the U.S. air carrier fleet consisted of 350 jetliners, 250 turboprop airliners, and 1,300 piston-engine airliners. In 1967 we have 1,000 jet airliners, 370 turboprops, and only 870 piston-engine airliners. The jet engine aircraft in many cases have either a greater noise level or a more intolerable sound than the piston-engine transports. The problem is complicated more by the introduction of new types of aircraft in the system such as the STOL or short-takeoff-and-landing airplane. Even if we are technologically successful in reducing the noise of a particular airplane engine, the growth in types of aircraft, density of air traffic and frequency of flights will continue to bring more noise.

Many people, including the Secretary of Transportation, the Honorable Alan S. Boyd, who is with you today, agree that legislation for aircraft noise control and abatement is needed. Some 25 bills on the subject have been introduced in the 90th Congress. Unless something is done about the problem, very soon the air transportation system in our country will suffer.

FAA Administrator McKee said recently:

> Jet aircraft noise is serving as a barrier to progress. Fear of noise, for example, is helping to delay the construction of a fourth jet airport in the New York metropolitan area.

And throughout the country this fear is repeated.

Aircraft noise may be more than just a nuisance. Dr. Timothy W. Costello, a psychologist, has said:

> Noise is just as much a health hazard as would be a plane accident. It is impossible to assess the effect of continued unpleasant noise on the security that children feel or the ability of a man to do a day's work.

Even if noise was found to be physiologically acceptable, the annoyance factor would be more than a frustrating deafening roar. The economics of aircraft noise is an unwelcome expense to urban communities. For instance, the Fairfax County School Board in nearby Virginia reported last February that the anticipated increase in jet noise at Washington's Dulles Airport would cost the county $87,000 to soundproof a school to be constructed near the airport.

We have this same problem with the schools which surround our Miami International Airport in Florida, one of the busiest airports in the world.

As this honorable committee knows, Miami International is the "Gateway to the Americas"—with passengers and cargo from some 100 different airlines feeding through it to Latin America. Our total aircraft operations at Miami International, which is in my congressional district, rose from 345,292 in 1965 to 424,407 in 1966—an increase of almost 23 percent. And in the first 9 months of 1967—the last period for which we have complete figures—the number of operations was almost equal to the entire year's total 2 years earlier (1965).

Many tens of thousands of families and homes are subjected to the disturbance created by planes at our airport, as they are injured in varying degrees at great airports throughout the country. They have a strong call upon our attention and our Interior Secretary Stewart L. Udall has used a phrase which is very indicative of our times. He calls the noise from jet engines a form of "noise pollution," and has suggested many times that the Federal Government should take a more important role in the abatement of aircraft noise.

I could go on and on and tell more of the effects of noise pollution, as have the many citizens groups which are organizing against the menace of the sonic boom. These groups are matched in feelings by the cities which have passed laws against any form of aircraft noise. But the main point which I would make today is that legislation is needed now to allow the Federal Government to have a measure of control over aircraft noise abatement.

The executive branch is now actively pursuing this matter and a multiagency program is underway. The agencies are examining jet aircraft noise from all sides—flight procedures, compatible land use, the insulation of houses, and quieter engines. The Congress could contribute to this program by empowering the Secreaary of Transportation to prescribe standards for the measurement of noise, to prescribe rules and regulations, to provide for the control and abatement of aircraft noise and sonic boom. I include sonic boom because this form of noise may be more unacceptable when the supersonic transport begins to fly in the seventies than the jet engine noise of today. H.R. 11566 would provide for certificates to be issued to each aircraft with the noise standards to be applied at the time of manufacture, or by retrofit, or by any other way or method the Secretary of Transportation may deem practical. If the standards, rules, or regulations were violated the aircraft certificate would be revoked.

H.R. 11566 would provide for a broad base of control over aircraft noise and at the same time would not inhibit technological innovation and progress in the Nation's air transportation system. I appreciate the consideration shown the bill by the committee and welcome any questions you may have on the bill at this time.

Mr. FRIEDEL. Thank you for your statement, Mr. Pepper. We have no questions at this time.

We shall hear next from the distinguished Senator from Hawaii, the Honorable Daniel Inouye. Please proceed as you wish, Mr. Inouye.

STATEMENT OF HON. DANIEL K. INOUYE, A U.S. SENATOR FROM THE STATE OF HAWAII

Senator INOUYE. Mr. Chairman: We are all too familiar with the difficult noise generation problem posed by supersonic transport aircraft once they become operational. We know that such aircraft may be limited to overwater flights unless there are some major technological breakthroughs in the near future.

Hawaii will be among the first of the 50 States to cope with the SST noise problem as flights of the British-French Concorde jet are expected through Hawaii in 1969.

A master plan for Honolulu International Airport has just been completed. Recommendations include a new jet runway and the extension of an existing runway to reduce the noise level of landings and takeoffs.

The people of Honolulu became noise conscious some years ago when heavily laden jet tankers of the Strategic Air Command lumbered over heavily populated residential areas on takeoff. The noise and vibration was almost unbearable. Fortunately, the Strategic Air Command ordered takeoff flight patterns changed and the problem has been greatly alleviated.

I respectfully urge the members of this subcommittee to support H.R. 3400, because I believe that United States and foreign aircraft noise can be effectively controlled by rules and regulations proscribed by the Secretary of Transportation.

Mr. FRIEDEL. Thank you for your concise statement, Senator. It is our pleasure to have had you before our committee.

Our next witness will be our majority whip, our distinguished colleague from Louisiana, Congressman Hale Boggs.

STATEMENT OF HON. HALE BOGGS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA

Mr. BOGGS. Thank you very much, Mr. Chairman and members of the committee.

I shall only take a minute of your time. I appreciate the opportunity of testifying. I would like to make my full statement a part of the record if I may. I am certain that someone may incorporate in the record the story which appeared in the New York Times this morning which mentioned our distinguished colleagues, including yourself, Mr. Chairman, interested in the bill.

Let me say that some years ago I became very much interested in this problem. The international airport in my area is located about 15 miles outside of New Orleans in the city of Kenner. At the time the airport was built just about the beginning of World War II, this area around the airport was largely uninhabited. This, of course, was not unique. This was true of airports constructed all over the United States.

I need not catalog the tremendous development of air transportation in this country, both passenger and freight and, of course, we have had just as much of an impact as you have had in Baltimore and elsewhere in the country.

Since the construction of the airport, we have had a tremendous residential development all over the country. Back 4 or 5 years ago, and I have forgotten exactly when it was but have it in my prepared statement, the FHA was about to issue a directive prohibiting the construction of houses in the vicinity of any of these airports.

Well, of course, that was the solution to the noise problem but it was also for practical purposes the expropriation of the property because it said that without compensation to the people who own the property that this property shall not be used for residential or, for that matter, commercial purposes. and the effect, had the order been issued, would have been to take the property certainly without due process.

At the time I communicated with the large aircraft manufacturers, Boeing and Douglas and the others—it was at the inception of the jet air age—and also the FHA did as much and the Federal Aviation Agency and even at that time they produced much evidence about the ability to suppress some of these noises.

Now, the FHA didn't issue that directive. Had the FHA issued the directive, promptly, all over the United States, every city in the United States and every metropolitan area would have been adversely affected. Whereas at that time they were talking about a limit of 1 or 2 miles, today the noise factor has grown to such a point that, if that

be the test for residential or commercial construction insured by a Government agency, then it is spread out now maybe to 5 miles.

I don't know what the distance is. In any event, it certainly is within the technology of our industries working with the appropriate Government agencies to develop and perfect noise suppressors.

As you well know in this area they complain about the noise not just around National Airport, but in Georgetown and all over. So that this is a bill that seeks, No. 1, to help the aircraft industry because if this continues we are going to have this kind of complaints increasing everywhere and those of us who have the responsibility of representing these groups are naturally going to be required to take some action on it.

As I see it, the bill before this committee is a constructive approach which gives the appropriate agencies the necessary authority to make the necessary technological improvements to effectively deal with this problem.

Mr. Chairman, I commend you and the other members of the committee and the other Members of Congress who are present here this morning who have taken the time to interest themselves in a very serious problem.

(Mr. Boggs' prepared statement follows:)

STATEMENT OF HON. HALE BOGGS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA

Mr. Chairman and members of this distinguished subcommitte, it is a pleasure to appear before you today. You are considering a very crucial problem; that is, the increasing noise from air traffic around our nation's large airports and the ways and means to alleviate this noise.

I have long been concerned about this problem, which most assuredly is growing in intensity. Located in my district, in the city of Kenner and only 15 miles from the center of New Orleans, is the New Orleans International Airport. The Federal Aviation Administration has rated it as one of the large hub airports of the United States. It is actually located in the city of Kenner, in Jefferson Parish, which is adjacent to New Orleans. This fine airport serves as the gateway for a large volume of freight and passenger traffic to Mexico and other Latin American nations, and also serves as a major center for traffic to cities in the heartland of America (the Midwest) and in the East.

When the site for this airport was chosen in 1943, it was in an area which was really almost rural—it was some 15 to 20 miles from the center of New Orleans and the city of Kenner and the surrounding area at that time was not developed by residential or business construction to any extent.

Needless to say, the noise of the aircraft of that day had little adverse effect on the sparsely populated surrounding community. But then coincidentally with the introduction of jet aircraft in 1960, a tremendous expansion of population growth took place in Kenner and the surrounding area of East Jefferson Parish. Today New Orleans International Airport is surrounded on three sides by a thickly populated, well-developed residential and business community.

Several years ago—in 1961, to be specific—officials of Jefferson Parish, the city of Kenner and of the New Orleans Aviation Board (which directs the operations of the New Orleans International Airport), and I could foresee the problems which were developing in the surrounding area, and all over the Nation, as a result of the increasing aircraft noise. In fact, we worked together to halt the enforcement of a directive by the Federal Housing Administration which would have ceased to provide new homeowners within a certain proximity of that airport, and those throughout the country, with the proper FHA financing. Had this directive been applied and sustained, the result would have been that many homeowners in Kenner and the east bank of Jefferson Parish—as well as homeowners around the Nation who lived near large airports—would have been forced to sell their homes at lower prices. Furthermore, such a directive would have halted new residential construction in my district, as well as through-

out the country. The basis of the FHA directive was to be that new homes within a certain proximity of the airport were considered as poor risks for FHA financing. New construction near large airports was to be considered a poor risk because of the potential damage to these properties from low-flying aircraft; that is, damage which could be caused, in time, to the foundations, or immediately to windows, and other features of homes from the jet noise vibrations.

Working with the officials of Kenner, Jefferson Parish and the New Orleans Aviation Board, I was able to get the FHA to reverse this decision so that residential and business development could continue in Kenner and its immediate environs on the east bank of Jefferson Parish. The fact is that this suburban land west of New Orleans was vitally needed for home and business construction in order to meet the population growth in the metropolitan New Orleans area.

But the point is, I and these other officials were aware of the problems of aircraft noise for the people who would settle in the vicinity of the airport. We anticipated that this problem would grow, and that sooner or later, something specific in the way of regulations would have to be required in order to alleviate the noise for citizens living near large airports throughout the Nation.

With the larger jet aircraft being built and employed to handle the ever-growing passenger traffic, there are no hours in the day when the citizens of nearby communities such as Kenner in my district may find relief from the noise.

And now that these jetplanes are being constructed in larger sizes, with more powerful engines, there is no doubt that the noise will increase to intolerable levels unless the allowable volume produced by the aircraft is regulated and controlled.

I believe that this bill, which will give to the Federal Aviation Administration the authority to regulate noise at its source—that is, noise emanating from the aircraft itself—will, if properly administered, provide a measure of the relief necessary for my area, as well as for all the other communities of the Nation located near large airports. It will compel manufacturers of aircraft and aircraft engines to employ inventiveness and expertise, which I am sure they possess, to produce engines more tolerable in the noise levels they emit. This legislation, at the least, will compel aircraft engine manufacturers to make every effort to build engines which will generate less noise.

Mr. Chairman, if this situation were only a matter of local concern, it might be dealt with in a less comprehensive manner. But as you and members of this subcommittee know, this matter is a national one, and the concern of people living near large airports throughout the Nation is great indeed.

Local measures will not suffice for national problems, such as this one, only the imposition of adequate regulations and safeguards to provide relief to all of our citizens will suffice. This legislation provides the first concrete step toward accomplishing this relief from aircraft noise. I hope that this subcommittee and the full committee will act favorably on this important bill.

Mr. FRIEDEL. I want to thank you for your contribution. It is a serious problem and we all are aware of it.

Briefly, I would like to say that when they built Friendship Airport they provided the zoning laws, and the FHA did not make any loans for private homes.

Mr. BOGGS. You have a great big manufacturing plant right next to it.

Mr. FRIEDEL. As far as my home is concerned, we are not too much worried about noise at Friendship.

Mr. BOGGS. I might say that one reason is that that land is utilized. What is the name of the plant next to it? You make me go out there to catch a plane to go to New Orleans.

Mr. FRIEDEL. Dulles Airport is zoned well right now. If they start building homes near it, in 2 or 3 or 5 years from now, we are going to have the same complaints unless the industry can find a way of combating the noise of the airplanes. I want to thank you very much.

Mr. BOGGS. Thank you very much, Mr. Chairman.

Mr. FRIEDEL. Are there any questions?

Thank you very much.

Our next witness is Congressman Wydler, of New York, and he has also shown much interest in this problem.

STATEMENT OF HON. JOHN W. WYDLER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. WYDLER. Thank you, Mr. Chairman and members of the committee.

Mr. Chairman, I would like to ask unanimous consent, if I could, to put in some prior statements I have made on this subject that I would like included in the record, but I don't want to take the time today to read them to the committee.

Mr. FRIEDEL. Thank you very much. The items submitted will be included in the record at the conclusion of your testimony.

Mr. WYDLER. My comments today, Mr. Chairman, are simply to urge very strongly that this committee do more than hold these hearings concerning this bill, but that this committee in effect and in fact get this bill onto the floor of the House of Representatives as quickly as possible so that the Congress can vote on it and pass it. It is needed and it is needed desperately.

I have been fighting for the last 5 years in Congress trying to get some action by the Federal Government in the jet noise field. I think it is important. The most disturbing fact that most Congressmen don't appreciate is that when we talk about jet noise it is not just as some annoyance but actually a noise of an intensity that just destroys normal living. I am testifying in that sense and I have received complaints from my district from churches that they cannot conduct their religious services because of it. I have received complaints from schools in my district that they cannot hold their classes because of it.

I have had testimony from doctors in my district that it is actually destructive of the mental and physical health of the people living in my district.

So that I think the first thing to get a proper perspective of what we are talking about is not just some airplane passing thousands of feet overhead which may cause some little noise or disturbance, but something that dominates the lives of those who have to live with it to the point where it actually destroys the way in which they are living.

There was a story recently in a Washington newspaper and repeated in a New York newspaper about the President attending a ceremony at the Lincoln Memorial not long ago where the ceremony in which he was participating was interrupted constantly by the jet noise of the planes coming down the Potomac River to land at National Airport. The story went on to explain how the President called over an aide and shortly after that the planes stopped coming over and the program proceeded.

The only trouble with that story is that the people who are affected by this day after day in my district can't call over anybody and tell them to stop the planes. They keep right on coming.

I think that we in the Congress, to truly try to appreciate this problem, would have to be subjected to this kind of noise. What I would like to suggest to you, Mr. Chairman, and to the members of the committee, is that if you have a further hearing of this committee, and I wish you would, I would like to arrange to demonstrate to the committee through recordings the actual intensity of the noise that the people are subjected to that live in my congressional district and, of

course, that is only typical of many such districts throughout this country.

If you were to listen to those recordings you would find that you couldn't conduct this hearing with that noise going on. You would have to stop. The hearing would have to come to an end just as normal life for the people living in the district as to stop when this noise is being encountered.

I wish that you and the members of the committee would give me a chance to make this demonstration. I have made it previously. It is conducted by a Federal agency, the National Aeronautics and Space Administration, and I have held it for members on the Science and Astronautics Committee. I think if you once listened to that demonstration you will realize just what a serious problem it is that we are talking about.

Now, of course, I am in favor of this legislation, Mr. Chairman. I was the first one to introduce such legislation in the Congress. The fact is that I introduced it about a year and a half ago. So that this type of legislation has been pending before the Congress for a year and a half now without any action.

I think that is a problem that this committee should correct at the earliest possible date. We need the legislation. We need it yesterday. We should have had it last year, but it is better late than never and I wish the committee would get onto it and I urge its immediate passage.

Mr. Chairman, one of the most important factors about this problem and one that doesn't seem to be appreciated by many people is that this is specifically and uniquely a Federal problem. At a time when the Federal Government seems to be interesting itself in all types of problems in the country, many of which were traditionally State problems and local problems, this particular problem of jet noise is avoided by the Federal Government, although it is the only branch of the Government that has any control over the problem at all.

Back in my district, Supervisor Ralph Caso, of the town of Hempstead, tried to do something on a local level on this problem. He had a local ordinance passed to set jet noise standards that could be tolerated in the local area. It was immediately taken to court and the Federal courts held that this was a problem that the local units of government could do nothing about and that only the Federal Government could do something about it.

So I would say to this committee that if you don't intend to do anything about it and if the Congress doesn't intend to do anything about it, then the least it should do would be empower the local governments to be able to do something about it so that at least they could protect the people that are being affected by it.

Mr. FRIEDEL. I wish to assure you that all these things that you are bringing out were brought out by your other colleagues.

Mr. WYDLER. I am glad to hear that.

Mr. FRIEDEL. I want to call your attention to the fact that around 4 or 5 years ago or maybe 7 years ago this committee went to New York to Idlewild. We have been faced with this problem for a long time. We got a tremendous turnout of people complaining. I made one little suggestion that we could relieve the problem immediately by just diverting all the flights out of Idlewild to Friendship and they all hollered, "No." They didn't want to lose the fights, but they didn't want the noise.

We have our Secretary of Transportation here today. He might have some solution. This is something that we have been living with and we are hoping to find the solution in the very immediate future.

Mr. WYDLER. Of course, I appreciate that, Mr. Chairman. I understand your point. As you, yourself, have stated, 5 years ago you went to Idlewild Airport, now Kennedy Airport, and heard the complaints. We are now here 5 years later still trying to get some action.

It is true that your committee held a 1-day hearing last year. You are holding at least 2 days of hearings this year. I hope that this all results in some action because the people want the legislation. The hearings are good and I thank you for them and the people thank you for them, but they would like to see these hearings result in the passage of a bill and the reporting out of a bill that the Congress could vote on in the near future.

I certainly urge you and hope that this hearing will result in that type of action.

Mr. FRIEDEL. Thank you very much.

Are there any questions?

Mr. DEVINE. I just want to comment that our colleague from New York did have, I believe, a number of months ago, a demonstration which I attended where you did make these recordings of jet noises available to us. It comes as no great surprise to those of us who do a great deal of flying.

I might say that as a member of the subcommittee for many years I have often gone out to the FAA park at the end of the runway at National. If you want a demonstration of any two- or three-engine jet takeoffs or landings, you can go there any evening between 7 and 9 o'clock and get plenty of noise.

We recognize the problem and I don't think we need further demonstrations of that nature, but we need a solution.

Mr. FRIEDEL. Mr. Kuykendall?

Mr. KUYKENDALL. Welcome to the committee. We are glad to see you. I live just off the edge of the National traffic pattern up close to Georgetown. I just purchased property out in Maryland and we were sitting under the beautiful trees there the other day and discovered we are in the Dulles pattern. I said, "Here we go again." I think there has been progress made when you compare the 727 noise with the old 707 noise, but it looks as if we are having to run pretty fast to break even right now.

I just wonder if, with your new mayor in New York advertising Fun City, he is not encouraging more and more jet noise coming into your own airports in New York and we have a fight between progress with our people's health and progress with our economics.

I think of all the pieces of legislation that I, in my first year in Congress, have faced that this is the most confusing, because you go in one direction and start talking about safety and then you have these long low approaches of the jet airplane with a lot of power and then you start talking about noise and want them coming straight down so that you won't have the long low approaches.

We need the help of everybody in this Congress to tell us what the answers are instead of telling us to tell the Secretary of Transportation to get answers which we will do, too; but we need help from you to tell us what the answers are.

Mr. WYDLER. I appreciate the gentleman's comments and I can only assure the gentleman that I have studied this fairly closely for the last 5 years and the basic problem is a problem of money. It is economics that is involved in this whole problem. The problem can be solved. The question is now much is the cost? Who is going to bear the cost? But we have within our present powers today, within our present state of the art, solutions to the problem. It is a costly solution and the key is, are we willing to bear it and if so who is going to pay it?

I assure the gentleman that there are many things that could be done, even now, in this problem if the parties involved were willing to bear the cost of doing it.

Mr. FRIEDEL. Thank you very much.

Mr. WYDLER. Thank you.

(The documents referred to by Congressman Wydler follow:)

[From the Congressional Record, Sept. 30, 1966]

REMARKS OF HON. JOHN W. WYDLER OF NEW YORK IN THE HOUSE OF REPRESENTATIVES

Mr. WYDLER. Mr. Speaker, the horrible damage of unabated and unrelenting jet aircraft noise cannot be fully understood by those citizens living outside the "jet alleys" of our Nation. To these people not oppressed by the harsh and shrill reality of aircraft noise, the problem seems purely academic or a mere annoyance. For this reason, it has been difficult to secure support for Federal programs specifically designed to alleviate the problem. Only recently has the administration acknowledged its responsibility. It has given lipservice at last, but so far has avoided action which is necessary.

Last fall, I held hearings on the aircraft noise problem at the Elmont Road School in Elmont, N.Y. At that time, I told the people in the western half of the Fabulous Fourth Congressional District that I would prepare and send to them a report on this hearing, and subsequent findings, and a summary of what I believe to be workable solutions. The situation in Washington relative to this problem has been fluid and constantly changing. The congressional session is about to end. Mr. Speaker, the body of my address today constitutes that report.

The hearings in Elmont brought forth many things we already knew, and exposed a few things we had only suspected. It was established that the chief source of aircraft noise was jet landings on runway 22L; that takeoff noise levels were measured and regulated by the New York Port Authority, but landing noise was not considered under the jurisdiction of the authority; and, that everybody is concerned about the problem, but—with few exceptions—looks to find a solution in the area of future technological advancement. Mr. Speaker, I emphatically disagree that relief must depend on more sophisticated technology and will explain in a few moments how it can be achieved under present conditions.

One of the new problems which is perhaps the most frightening was the revelation by Dr. Oscar Bakke, eastern regional director of the Federal Aviation Agency—FAA—that development of the C5A—our supergiant jet transport—is proceeding without any consideration of noise abatement and without any thought of satisfying the aircraft noise restrictions at Kennedy Airport.

It is inevitable that the monster aircraft of this prototype will use Kennedy Airport, yet planning continues in full knowledge that the first landing of this behemoth will greatly increased the aircraft noise generated. By refusing to act responsibly to correct this fearsome gap in the C5A program, the administration has been derelict in its duty. The lipservice it has paid to the cause of aircraft noise abatement in the past was merely covering up a cynical disregard for a problem which just could not command national publicity.

Mr. Speaker, if the administration is not challenged in its present policy, life will become a hell on earth beneath the roaring engines of these giant aircraft in my district's "jet alley." It is almost unbearable with conventional jet planes; too many people suffer already.

Education, health, and religious worship have been shattered in "jet alley." Those low-flying jets on landing approach to runway 22L at Kennedy Airport

pass over the roofs of more than 40 schools, thousands of homes, and scores of houses of worship. It has been estimated that $874,824 in man-hours were lost in the schools along "jet alley" last year.

The injury to health caused by jet noise is the most convincing argument for immediate and drastic action. When a man is in good health, the noise of low-flying aircraft stops the normal activities of living. But when a sick man is involved, aircraft noise can impede recovery and cause aggravation of the problem.

Since taking up the cudgels for those in the path of runway 22L, I have received many unsolicited letters from well-respected physicians telling of the physical injury inflicted by the scream of jet aircraft. Dr. Benjamin Esterman, former president of the medical board at St. Joseph's Hospital in Far Rockaway and director of eye surgery, wrote to me soon after the Elmont hearings last fall. He complained:

"The effect of the jet noise on patients has at times been almost beyond belief and needs to be experienced to be appreciated . . . Sick patients are terribly disturbed, convalescence and recovery are impeded by the frequent roar and screech of the motors and by the impossibility of getting uninterrupted sleep . . . In the pediatric department, small children wake up screaming from the sudden light and fearful noise."

In 1963, St. Joseph's Hospital was visited by representatives of the airline industry, who responded to the staff's complaints by expressing skepticism that the conditions could be as bad as were described, particularly since no records were kept of specific disturbances. For a short time afterward, records were kept of the patients' complaints. Within few days, there were 81 complaints.

Commerce and normal communication are constantly disrupted by aircraft noise. According to studies by the Stanford Research Institute, during takeoff flight operations for a 707–120 jet aircraft, indoor conversation would be interrupted to the extent that 37.5 words would be masked—all along the path of the plane. Landing operations, when the engines are gunned and the aircraft swoops in low for a long gradual descent, would presumably cause even greater disruption.

In France last summer, a laborer began legal proceedings against the French Army for physical injuries caused by aircraft noise. Emile Vecereau is still awaiting satisfaction, his health shattered. This is not atypical, Mr. Speaker, and serves to illustrate the scope of the problem.

It is not confined to isolated far-flung examples, either. On Tuesday, September 28, 1965, a roadworker was crushed to death by a 16-ton steamroller at a construction site at Kennedy Airport. Quintas Prudencio was spreading stone on the bed of a road which had just been oiled when he walked backward into the roller. The report to the Workmen's Compensation Board noted that "jet noise was intense at the time." The workman could not hear the machine coming at him because of the deafening screech of aircraft. The same problem exists for children playing in the street who cannot hear approaching automobiles.

Such is the problem, in an abbreviated form. The tragedy of the aircraft noise melodrama is, however, the buckpassing which seems to be part and parcel of running a Federal agency.

The New York Port Authority maintains it has a right to regulate aircraft noise on takeoff procedures because the plane is on port authority property—that is, the airport. However, the port authority says once the plane is airborne jurisdiction passes to the Federal Aviation Agency which has control over the aircraft until it sets down at another airport, at which time another local regulatory unit takes over control. For this reason, the port authority refuses to prescribe noise restrictions for landing operations. The FAA declines to set engine noise levels for landings, vaguely referring to the jurisdiction of the port authority, the difficulty in obtaining accurate measurements, emergency margins of safety, preferential runways, and structural limitations of aircraft.

Obviously, somebody is mistaken.

I have introduced legislation requiring the FAA to establish restrictions on aircraft noise during landing operations, and hope it will be speedily enacted by Congress. In my opinion, the port authority would be within its rights to impose noise limits on landings as well as takeoffs at Kennedy Airport. To clarify this impasse, I will request opinions from Louis J. Lefkowitz, New York State attorney general, and the U.S. Attorney General. The Port of New York Authority is an interstate compact, which was approved and chartered by the Congress upon the request of New York and New Jersey. These two opinions are, therefore, relevant to the question of the authority's jurisdiction.

As I mentioned earlier, Mr. Speaker, there is an opportunity for a swift end to this blight in the Fabulous Fourth. It is a solution which has the cautious endorsement of many leaders in the aircraft industry, and one which holds out the most encouraging promise of immediate relief. It is simply this: increase the angle of approach used in landing procedures. By making a steeper approach, the engine noise is kept farther from the ground for a longer period of time, in addition to less noise from the engines on account of power cutbacks to reduce speed.

This procedure requires a pilot of consummate skill, in addition to several new navigational devices not presently found in all commercial aircraft. Landing is the most critical phase of flight, and the time when the pilot is under the most pressure. However, automated control systems integrating the operation of the steering and navigational equipment would provide the assistance needed by the pilot. This precision is necessary for continued aircraft safety.

Marcus Aurelius, last of the great Roman Emperors, once said of world peace "It is always almost within our grasp." Mr. Speaker, the same is true of the aircraft noise crisis: a solution is always almost within our grasp. With this idea of a steeper approach angle, we come closer to being free from the roar of the jets than we have ever been. It is a temporary cure, eliminating only the symptoms and not the cause of our affliction. But it is positive relief, and we must try to achieve it until technology catches up with our needs.

An emphatic endorsement of the steep approach concept was offered by Mr. Franklin W. Kolk, assistant vice president of American Airlines for engineering and development, in a paper submitted to the Jet Aircraft Noise Panel, sponsored by the President's Office of Science and Technology. Mr. Kolk noted that the steeper approach could "considerably reduce" noise problems, and that a switch-over would require "vastly more investment in navigational facilities, but this idea or some similar concept is potentially of great value." Mr. Kolk concluded by saying:

"A coordinated program for the development and implementation of steep fair-weather approaches is certainly a fruitful idea."

Advanced training for pilots and speedy development of the additional navigational equipment required for the steep approach seem indicated at this time. Private industry would seem in the best position to undertake this developmental program, with the assistance of the National Aeronautics and Space Administration—NASA.

For the purpose of spurring this concept on to realization, I am proposing to the President that he arrange an Aircraft Noise Technology Conference, to which can be invited representatives of the aircraft industry, the airline carriers, the Aviation Development Council, the Air Line Pilots Association, the Aerospace Industries Association, the Federal Aviation Agency and NASA. Out of this conference, I hope to get a practical plan of action for industry and Government to work toward immediate use of the steep approach concept.

Mr. Speaker, this will clear up some of the symptoms, but the core of the disease has yet to be attacked. A crash program of noise suppression should be undertaken at once by NASA in order to provide permanent relief to the residents of our Nation's "jet alleys." I attempted to start such a crash program in the spring by offering an amendment to the NASA authorization bill, which would have set aside the necessary funds. My efforts were unsuccessful because the administration opposed it and had the votes. We would have had a good development program underway if I had succeeded. I will try again next year when I am sure I can obtain more votes from a new Congress.

Such a crash program has a chance of success not even suspected by most of those who voted against the Wydler amendment. The recent announcement by NASA of a study looking toward the development of a significantly quieter engine proves what I proposed was practical. The imminent appearance of giant jet aircraft, of which the commercial version of the C5A will be the forerunner, makes this program imperative and absolutely necessary. And yet, the administration takes no notice of this monster on the threshold, content with sophistical statements and half measures.

One solution to the problem which was contained in a report on the subject from the President's Office of Science and Technology was to condemn all private property surrounding land-bound air terminals to create "buffer zones" so that there would be a minimal number of complaints. I will resist the impulse to brand this a "cruel and unusual punishment," as is prohibited by the eighth amendment, but am compelled to mark it as a brutal negation of property rights and an ineffective "solution" to a problem which begins when the aircraft is flying at an altitude of 500 feet, 2 miles from touchdown.

The airlines can afford cooperative private development programs if the Government will take the lead and encourage—if need be, require—noise suppression. A crash development program by NASA is needed to coordinate and give a definite direction to the efforts of private industry.

The problem is nationwide and growing worse. Since the hearings at Elmont last fall, the situation has deteriorated through the increase in air traffic and the impending introduction of larger aircraft. I shall pursue the avenues of relief I have already described, Mr. Speaker, until either I convince the administration that they are wrong, or they persuade me that I am wrong. And, Mr. Speaker, it may be a flaw in my character, but I know that I am not wrong.

My district has suffered enough, and the people are tired. They are even tired of crying out for relief, concerned that no one is listening. I hope and pray, Mr. Speaker, that they will not have to wait much longer for the relief to which they are entitled.

[Press release, Nov. 15, 1967]

Congressman John W. Wydler (R–Garden City, N.Y.) charged today that the federal government has failed in its responsibility to protect the public from inhuman instrusion on their lives and privacy by jet aircraft noise. "The people are made to suffer so the airlines may profit," Wydler said, "and although the federal government is extending itself into areas that have traditionally been State and local problems, it is reluctant to act in an area in which it has exclusive jurisdiction—the control of the nation's airspace."

In his statement to the Subcommittee on Transportation Wydler said the problem was not the mere annoyance of noise but noise of an intensity that destroys normal living and interferes with educational instruction, religious worship and mental and physical health. "To allow it to continue would be inhuman", Wydler said, "and a gross failure by Congress to meet its responsibilities."

The Subcommittee is considering legislation to allow the Secretary of Transportation to set jet noise levels for aircraft. Wydler introduced the first such legislation on June 22, 1966. A one-day hearing in October of 1966 resulted in no action.

Wydler offered to provide a jet noise demonstration for the committee of the actual sound of jet noise as heard in his District. "If such a recording were played in this room, this hearing would have to stop." Wydler went on, "That is what happens to the normal life of the people in my District."

Wydler warned the Committee that the failure of the Committee to act would be a failure to take action in an area that is exclusively within federal control. "If these hearings do not result in the passage of the legislation they will have served merely to add to the noise that is disturbing the public."

"If the Congress does not wish to act, then the least it can do is to empower the local governments to take the necessary action to protect the people. Supervisor Ralph G. Caso has had a good noise ordinance passed by the Town of Hempstead only to have the Federal courts rule that this is an exclusively federal area of control. Supervisor Caso should be commended for fighting for the people and the least we can do would be to empower him to continue that fight.

"If the purpose of the hearings is to fool the people into thinking action is about to be taken and none is taken, I will remind the people of that failure," Wydler concluded, "the people will not be fooled. In the war against jet noise there is no substitute for action."

Mr. FRIEDEL. Our next witness is our colleague from Georgia, the Honorable John Flynt. Please proceed Mr. Flynt.

STATEMENT OF HON. JOHN J. FLYNT, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF GEORGIA

Mr. FLYNT. Mr. Chairman and members of the subcommittee, this statement is submitted in support of H.R. 3400, a bill to amend the Federal Aviation Act of 1958 to authorize aircraft noise abatement regulation.

The bill would authorize the Secretary of Transportation to prescribe and amend standards for the measurement of aircraft noise and sonic boom and to prescribe and amend such rules and regulations as he may find necessary to provide for the control and abatement of aircraft noise and sonic boom.

While the provisions of this bill are applicable to private aircraft and to small charter services, the class of aviation most effected will be the large commercial carrier.

The growth and expansion of commercial aviation since the early 1950's has been remarkable. Today, the major commercial airlines operate large jet fleets which make long-distance travel more economical more convenient, and much faster. Very soon, commercial carriers will be operating supersonic aircraft on transoceanic and coast-to-coast flights.

The development of technology in the field of noise control and abatement, however, has not kept pace with this expanding industry. There is a definite need to develop comprehensive information and reasonable standards on this subject in the public interest just as there is a need for existing standards in other fields of aviation such as pilot licensing and aircraft maintenance.

Let me urge that a practical approach be taken to this problem. Any legislation enacted should spell out with certainty that it is meant to be prospective rather than retroactive in its application. Noise abatement equipment which will be effective is the type incorporated at the time the engines are built and installed on the airframe.

This same equipment can be both ineffective and dangerous if added as modifications to jet engines in aircraft already in operation. While I recognize the problem of noise, I do not want to abate that noise if aircraft loaded with passengers become nonairworthy in the process.

In setting standards for commercial airline equipment, air safety must be accorded first priority and all other considerations should be secondary to the maximum safety of passenger-carrying aircraft.

It should be made eminently clear that the Federal statute imposing legislative or administrative requirements on jet engines used by commercial airlines be preemptive in that no State or subdivision thereof can add to or take from the basic Federal requirements. My strong feelings on this subject are also based on the premise that the safety factor on passenger-carrying aircraft should override all other considerations.

The principle involved in H.R. 3400 is commendable and I support it conditioned upon a full recognition that safety is accorded first priority.

Remedial action must be based upon sound research and reasonable standards rather than upon emotional factors. It would be most unfortunate for the Federal Government to rush in and prescribe unreasonable and ill-considered standards which could not only endanger the safety of airline passengers but could also have a detrimental effect on the future development of commercial aviation.

If this were to happen, I suggest that there would be many more people endangered than are now inconvenienced by present jet aircraft noise.

Subsection (b) of the bill provides a carrier with the right to appeal standards which it feels are unreasonable, to an independent board

and should insure that noise control standards, rules, or regulations prescribed by the Secretary of Transportation will be safe, reasonable, and equitable, both to the commercial carrier and to the general public.

In summary, Mr. Chairman, I hope that if H.R. 3400 or similar legislation is enacted into law, the Department of Transportation, working with representatives of private and commercial aviation, will develop aircraft noise control and abatement standards and procedures which will keep pace with an expanding industry and provide relief to the segment of our general public which is inconvenienced by present conditions.

Mr. FRIEDEL. Thank you, Mr. Flynt.

If there are no questions we shall hear next from our colleague from New York, Congressman Delaney.

STATEMENT OF HON. JAMES J. DELANEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. DELANEY. Mr. Chairman, members of the committee, I greatly appreciate this opportunity to come before you and express my views in support of H.R. 3400, to authorize aircraft noise abatement regulations and certification. Judging from the remarks on the floor of the House over the past few years and during previous hearings on this problem from 1959 through 1966, this legislation is long overdue.

The fight against jet noise has been in evidence in this country since the introduction of the jet airplane by the military. The number of complaints was small at first, but the opposition by the public to aircraft noise has kept an almost even pace with the use of jet engine transport by the airline industry. In 1962 the airlines were flying 350 jet transports. Today they are flying over 1,000 aircraft of this type. An outstanding example of the reaction of the public toward jet noise was demonstrated when jets began to fly into and out of Washington National Airport in April of last year. Before introduction of jets the airport had received an average of five complaints a month concerning aircraft noise, but within the first month of jet operation complaints soared to 1,100.

It seems that only those who have spent some time near major airports, such as Washington National or La Guardia, in my own district, can really understand the physical discomfort that accompanies the repeated ear-shattering whine of jets. The residents near these major airports are greatly disturbed by this noise invasion which shatters the peace in their homes.

To make the noise problem worse, the demand for aviation is increasing at a faster rate than in past years. During the 15-year period 1950–65, the number of aircraft operations at the large hub airports more than double. The Federal Aviation Administration forecast in August 1967, that the aircraft operations at the large hub airports are expected to increase from 20 million in 1965 to 75 million in 1980. In other words, within the next 13 years we can expect aircraft operations to almost quadruple.

Further, the noise problem will be aggravated even more by the supersonic transport when it begins to fly in this country in the early 1970's. Along with engine noise, the SST will bring the sonic boom.

While officials of the FAA have said that despite its hugeness the SST engines will be no louder than those engines in the jet transports today, I would hasten to point out that it is the jet engines of today which gave the impetus for this hearing.

The sonic boom is a totally different type of noise which may be more unwelcome than that of the jet engine. Studies have shown that up to 25 percent of the people subjected to the sonic boom found it unbearable and could not learn to accept it as a continuous part of their everyday life. The seriousness of this problem is apparent when we realize that an estimated 100 million people will hear the boom each day when the SST reaches its peak growth and flies sonically over land.

In my view, the most important part of H.R. 3400 is the provision for certification of aircraft for engine noise and for sonic boom. We are now at a point where noise abatement is second only to air safety, and certification is needed for noise and sonic boom as it is for air safety.

Certification of aircraft for noise, for instance, will give the Federal Aviation Administration the power to control noise at its source—the engine. Future aircraft engines would be designed with the lowest noise level consistent with the standards established. And, similarly, future supersonic transports would be designed for the lowest level of sonic boom.

The passage of this legislation would allow the FAA to treat the problem rather than its symptoms. While certification will not solve every aspect of the aircraft noise and sonic boom problem, it will enable the Federal Government to have more control over the problem and provide alternative solutions from which to choose.

Mr. Chairman, our residents on the ground rightly demand in their homes a semblance of the lounging comfort which the airlines so widely advertise to be available to airline passengers flying over their houses.

Thank you.

Mr. FRIEDEL. Thank you, Mr. Delaney.

We shall try to move along quickly and hear as many as possible this morning, but our time is growing short. Our next witness is our colleague from Hawaii, Congresswoman Patsy Mink. Please proceed as you wish, Mrs. Mink.

STATEMENT OF HON. PATSY T. MINK, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF HAWAII

Mrs. MINK. Mr. Chairman, I appreciate having the opportunity to appear before your subcommittee to testify on H.R. 3400, not only because of the interest of my State of Hawaii in its provisions but also because I am convinced that this legislation is necessary to give immediate direction to a coordinated Federal effort to develop solutions to the problems of excessive jet noise which will soon be of consequence to communities throughout America. The particular concern of Hawaii's State government has been focused on the imminent use of Concorde supersonic transports and similar American-produced aircraft, and I request permission to submit for the record the statement of Dr. Fujio Matsuda, director of the Hawaii Department of Transportation.

Mr. FRIEDEL. With no objection, it will be received for the record at this point.

(The document referred to follows:)

STATEMENT BY FUJIO MATSUDA, DIRECTOR OF THE HAWAII DEPARTMENT OF TRANSPORTATION

Honolulu has had a long history of aircraft noise problems dating back to the arrival of the first jet transports in 1959.

Information available to us now indicates that the Concorde Supersonic Transport, which is expected to be operational through Hawaii in 1969, will be somewhat noisier in the vicinity of airports than any aircraft with which we are now familiar. A conceptual master plan for Honolulu International Airport has just been completed and is in the final stages of refinement within our department. The recommendations include a new jet runway and the extension of the existing runway to reduce community noise levels during take-offs, and landings. This effort will be negated, however, if the noise level created by aircraft is permitted to increase appreciably.

We feel that aircraft noise can be effectively controlled by the Secretary of Transportation through rules and regulations and that this must be accomplished at the Federal level to assure acceptable noise levels by not only U.S. manufactured airplanes but also by foreign manufactured aircraft such as the Concorde SST. If prompt Federal control is not exercised over aircraft noise, we must then look forward to increased pressure by local groups for banning flight operations during specified hours of the day or at specified noise levels with the attendant problems to the tourist industry which this pressure will create. There may as well be increased litigation by property owners over alleged damage to their property values by aircraft noise and increased capital requirements for expansion of airports to cope with aircraft noise.

We feel that H.R. 3400 is of great importance to the people of Hawaii in particular and to the general public as a whole. We urge its passage.

Mrs. MINK. The possibility that such supersonic planes will be operational in our airways by 1969 indicates the urgency of a concentrated study by the Federal Government now on the effects that this jet noise will have on both human beings and on physical property, and what can be done to eliminate disturbances that go beyond the tolerance level. The jet aircraft in use today have already posed substantial problems in regard to disturbance of peaceful occupancy of homes located near airports, and litigation to recover damages because of the subsequent devaluation of such property is not uncommon. Since airport facilities are under the jurisdiction of municipalities, counties, and State agencies, lawsuits stemming from the approach and takeoff of the new supersonic craft could easily pose a significant problem.

There is no doubt that Federal action is called for. We may observe, in fact, that NASA, the Federal Aviation Administration, the Bureau of Standards, and the military services have recognized this responsibility by conducting separate research on sound and suppression devices and on the effects of sound on human beings. Secretary of the Interior Udall has underscored the necessity of a Federal approach by his recent formation of a blue-ribbon panel of scientists to investigate all environmental implications of the anticipated supersonic jets. It would appear desirable from the standpoint of efficiency and economic savings to move all of the research under one roof by directing the Secretary of Transportation to coordinate the formulation of standards for the control and abatement of jet noise as provided for in H.R. 3400.

There are several areas of solutions that have been brought forward by researchers to date. One is to reduce the noise at its source by such devices as sound suppressors in engines or by fuselage modification. An alterantive is to remove the source of the noise from people by relocating airports or at the very least by changing runway patterns to direct incoming and outgoing flights away from populated areas.

An interesting possibility is the creation of buffer zones around airports which would necessitate the acquisition of adjacent lands in the planning of new airports or modification of existing facilities. Such modifications would, of course, entail considerable expense, and here again the participation of the Federal Government is indicated because of the financial burdens that would be placed on local governments.

It also appears clear that the task of prescribing standards must be delegated to a source which does not have economic interests in the final promulgation of rules and regulations, and since the Federal Government has the overall responsibility for development of the Nation's air transportation system through the Federal Airport Act of 1946 and the Federal Aviation Act of 1958, it seems only appropriate that the anticipated research and development programs involving jet noise be also centered in Washington. The Federal Government already regulates most aspects of air carrier operations such as certification of aircraft, air traffic rules, operational flight procedures near airports, and also through FAA development of standards for airport construction and financing of same. The very initiation of development of American supersonic transports has been undertaken by Federal action, underscoring the responsibilities we must assume for such human factors as air safety and jet noise.

I am convinced that action should be taken immediately and full recomemndations presented to the Congress before the supersonic planes become operational, lest we find ourselves with a massive problem on our hands that could necessitate costly modifications of aircraft and airports after the fact. The concern has been expressed by those agencies already researching in this field and has been given recognition by the creation of the National Aircraft Noise Abatement Council in 1960. The Port Authority of New York has set a precedent by establishing regulations limiting the level of noise of any plane using airports during takeoffs, but rather than waiting for a proliferation of local and State legislation on this subject, we may well take the initiative now by Federal action, the more or since foreign aircraft will be focal in the potential problems for people caused by excessive jet noise. I sincerely hope that this subcommittee will see its way clear to act favorably on H.R. 3400 in the public interest and that with congressional backing, the Secretary of Transportation will move expeditiously to insure the physiological well-being of all of our citizens who will be exposed to the supersonic booms and to the high levels of noise near airport facilities.

Mr. FRIEDEL. Thank you for your views, Mrs. Mink. It is always a pleasure to have you before this committee.

Our next witness is our colleague from New York City, the Honorable Theodore R. Kupferman. I would like to just say briefly that the House goes into session at 11 and we have the Secretary of the Department of Transportation and the general counsel for the Airport Association and others. We want to get as much as we can so that we can ask questions of the experts.

Can you put your statement in the record and briefly summarize it?

STATEMENT OF HON. THEODORE R. KUPFERMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. KUPFERMAN. I am here, of course, in support of Mr. Staggers' bill H.R. 3400 and my similar bill H.R. 2820. I ask unanimous consent to receive my statement in the record. I would also like to call attention to a telegram from Neil Anderson, chairman of Mayor Lindsay's task force on noise in New York, also in support of this legislation.
(See p. 191.)

Mr. FRIEDEL. With no objections, it may be included in the record.

(Mr. Kupferman's statement follows:)

STATEMENT OF HON. THEODORE R. KUPFERMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. Chairman, members of the Subcommittee on Transportation and Aeronautics of the House Committee on Interstate and Foreign Commerce, I am pleased to have the opportunity to appear before my distinguished colleagues on this Committee today to speak in support of Mr. Staggers' bill, H.R. 3400, and my similar bill, H.R. 2820, to amend the Federal Aviation Act of 1958 to authorize aircraft noise abatement regulation.

If there is one lesson that we should have learned from the current crisis of air pollution it is that if proper educational and remedial steps in that area had been taken 10 years ago, the problem of air pollution might not have reached the critical proportions it has today. We are now at the same relative point with respect to the environmental problem of noise pollution. We must act sensibly and take precautionary steps now so that in the future we will not be faced with a costly dilemma that will cause us an undeterminable amount of bodily harm. This is why I myself introduced H.R. 2820, legislation which is similar to Mr. Staggers' bill, H.R. 3400.

While I fully support legislation that would authorize aircraft noise abatement regulations, it is my firm belief that the work now being carried on by various Federal agencies in the overall area of noise regulation and abatement should be centralized to ensure greater efficiency and better results for noise abatement.

My concern for the very serious problem of "noise pollution" led me to introduce in the second session of the 89th Congress, H.R. 14602, to establish an Office of Noise Control within the Office of the Surgeon General. On January 18, 1967, I reintroduced this legislation as H.R. 2819 in this first session of the 90th Congress.

The Office of Noise Control, under my bill, would cooperate fully with existing Federal agencies and others presently working in the specific field of aircraft noise abatement, as well as conduct research and prepare, publish and disseminate educational material dealing with the control, prevention, and abatement of noise from other sources.

The Office, headed by a Director and assisted by a noise control Advisory Council, would provide grants to States and local governments to research ways and means of control, prevention and abatement of noise. My bill, H.R. 2819, does not provide the Office of Noise Control within the Office of the Surgeon General with any regulatory powers, nor does it suggest a national regulatory code. Thus, my bill would in no way conflict with Mr. Staggers' bill, H.R. 3400, to authorize aircraft noise abatement regulation.

The primary function of the Office of Noise Control would be to act as a national clearing house for general and specific noise information, and could, upon request, disseminate the wealth of its accumulated knowledge to the States and local governments to help them control noise at its point of origin.

My statement made upon the introduction of my bill (H.R. 2819) in this session of the 90th Congress, along with related studies and articles appear in the *Congressional Record* of January 18, 1967, at pages H. 340–362. Other relevant articles and studies of the overall problem of "noise pollution" appear in the *Congressional Record* of April 21, 1966, pages 8339 through 8363, and thereafter in the 89th Congress in the *Congressional Record* of May 2, pages 9024 to 9030; May 3, page 9223; May 16, pages A2629 and A2630; June 2, pages 11603 through 11618; August 1, pages A4048 and A4049; August 4, pages 17430 through 17454;

August 24, page 19521; October 19, pages 26767 through 26787; October 21, pages A5494 and A5495. In the 90th Congress, in addition to my statement of January 18, 1967, further material may be found commencing at page H669 of the *Congressional Record* of January 26; pages H1004 through H1011, February 6; pages H2976 and 2977, March 20; page H3571, April 5; pages H4603 through H4605, April 25; pages H11528 through H11549, August 31; and pages H14550 through H14563, November 3, 1967.

The idea that noise is a necessary price of industrial and economic progress is as antiquated as the belief that contaminated waters and a polluted atmosphere must accompany civilization's advances. Noise pollution, however, unlike water and air pollution, is only now beginning to receive a proper share of public attention. I applaud the Subcommittee on Transportation and Aeronautics' foresight in considering Mr. Staggers' bill on aircraft noise abatement regulations. I believe the passage of H.R. 3400 will indicate a sensitivity on the part of Congress to the serious problem of noise that confronts us today. However, I strongly urge that H.R. 3400 be treated as only the first step to consideration of the overall problem of "noise pollution." This country, and the entire world for that matter, can no longer afford to turn a "deaf ear" to the 20th century problems of noise.

Mr. KUPFERMAN. I would like to take one moment, aside from telling you that I think there is a typographical error in Mr. Staggers' bill and I think roman numeral V in section 2 ought to be roman VI. I would like to say that I am really here in support of H.R. 2819, my own comprehensive noise bill, because I do not believe that the committee bill, which I support, is the last answer on the question of noise. I think that the question is much more comprehensive than that and my own bill is to set up an Office of Noise Control in the Office of the Surgeon General of the United States.

There are many other aspects that can be taken care of in terms of the problem. In other words, it just isn't jet engine noise itself, but if you had better acoustical materials and proper zoning you could do a great deal toward keeping down the noise problem.

For example, throughout many areas of this country we are building the noise slums of the future because so many of the materials being used are not properly treated from an acoustical point of view. These are the things in the short time I have that I want to bring to your attention so that in the event you do enact H.R. 3400 you will go beyond that and consider something like my bill, H.R. 2820.

Mr. FRIEDEL. I can assure you that your bill will be gone over along with similar bills, and Mr. Staggers' bill.

Mr. Pickle.

Mr. PICKLE. Mr. Chairman, I have no questions but I want to welcome my colleague before the committee. He has appeared before us on other occasions. I have talked with him individually about the subject and I know of his keen interest and overall knowledge about the subject. I know that his bill is one to be considered and will be helpful to us.

Mr. KUPFERMAN. I appreciate that, Mr. Pickle, and as I have always said, Mr. Pickle always adds spice to any occasion.

Mr. FRIEDEL. Our next witness will be Mr. Alan S. Boyd, Secretary of Transportation.

STATEMENT OF HON. ALAN S. BOYD, SECRETARY, DEPARTMENT OF TRANSPORTATION; ACCOMPANIED BY JOHN E. ROBSON, GENERAL COUNSEL; AND CHARLES R. FOSTER, CHIEF, OFFICE OF NOISE ABATEMENT

Secretary BOYD. Good morning, Mr. Chairman and members of the committee.

I am accompanied today by Mr. John Robson, who is General Counsel of the Department of Transportation and Charles Foster, who is head of the Office of Noise Abatement in the Department of Transportation.

Before I make my prepared statement, Mr. Chairman, I would like to say that it seems to me it would be well to keep this whole business in some perspective. We have air pollution, which is generated largely in this country by the motor vehicle. The air pollution is a liability and needs to be dealt with. It does not, however, represent a feeling that the motor vehicle is not a major benefit to the people of the United States.

The fact that we have air pollution doesn't mean that we should eliminate automobiles. We also have aircraft noise pollution which is related in this set of hearings largely to the airplane. I think that that is an undesirable side effect, but it does not mean that we should eliminate aircraft in the United States.

I would like to express the hope that the committee retains this sense of perspective about what we are trying to do here.

Mr. FRIEDEL. I can assure you that we are keeping this in focus.

Secretary BOYD. Thank you.

Mr. Chairman and members of the committee, I am Alan S. Boyd, Secretary of Transportation. It is a pleasure to appear before your subcommittee to describe the function of the Department of Transportation in alleviating the problem of aircraft noise.

A description of the aircraft noise abatement function that the Department of Transportation is undertaking begins with some recent and relevant history. Twenty months ago, the President, in his message to Congress proposing the establishment of the Department of Transportation, recognized that "aircraft noise is a growing source of annoyance and concern to the thousands of citizens who live near many of our large airports." The President directed us to "embark now on a concerted effort to alleviate the problems of aircraft noise." In order to alleviate the problems of aircraft noise, the President directed his science adviser, Dr. Hornig, to work with other Federal agencies and departments to frame an action program to attack this problem.

Dr. Hornig undertook this task and during the past months Federal and local government representatives, as well as representatives from industry, studied the development of noise standards and the compatible uses of land near airports and recommended legislative and administrative actions needed to move ahead in this area. The administration sponsored noise abatement bill—H.R. 3400 and S. 707—which I strongly support and which I will comment on in detail later on, represents one of the recommendations which Dr. Hornig's group has made.

As of September 1 the responsibilities previously held by Dr. Hornig and his advisers and colleagues were transferred to the Depart-

ment of Transportation. In the future we will be the focal point for Government-wide activity in the field of aircraft noise abatement. Later in my testimony I will comment on how we have organized the implementation of these new responsibilities within the Department of Transportation.

There are few subjects within the responsibilities of the Department of Transportation of greater importance than noise abatement.

Our effort to find solutions to the problems of noise abatement is part of a total departmental effort to insure that transportation activities do not adversely affect our natural environment.

Sections 2(b)(2) and 4(f) of the Department of Transportation Act case upon me, as Secretary of Transportation, a major responsibility to insure that we preserve, to the maximum extent possible, the values of our society and the rich natural assets which we enjoy.

We intend to conserve our great natural resources. We intend to not only protect but hopefully enhance our great historical sites. We are determined to do the same for the great sites of natural or man-made beauty which abound in this Nation. Most of the problems we have faced in reaching those goals in the past have been related to our highway construction effort. But we can be sure they will be found in airport construction and other activities in the future.

There is no question that one of the goals we must have is to maintain an environment in which noise levels do not impair or indeed destroy the normal process of life.

For those who must live surrounded by the din of normal city life, the whine of an increasing number of jet aircraft can make life almost intolerable for many who live below or near the path of flight. I am not here to tell you that there are easy solutions for the problem. But I am here to tell you that the Department of Transportation is devoting every possible resource to finding solutions.

Let me begin by saying that I do not believe there will ever be such a thing as a quiet airplane. Despite our far longer experience with the problems of truck noise and railroad noise, we have not been able to produce quiet vehicles in those modes of transportation. But I am convinced that we will be able, by technological and regulatory means, to reduce the impact of aircraft noise exposure for the majority of Americans who are now, or will potentially be, subject to excessive aircraft noise exposure.

One of the major difficulties in determining what is a tolerable level of noise exposure is the great diversity of human response and reaction to noise. That phenomenon is made even more complex by the various types of construction of buildings in which Americans live or work.

At Kennedy Airport there is a motel, sitting practically on the airport grounds, which is exposed to a noise level that must be one of the highest magnitudes in the country on a sustained basis. Yet conversation and sleep are no problem in that building for most occupants, because of its construction and insulation.

Two miles off the runway at JFK there is a large residential community in which neighbors experience different effects from low-flying jet aircraft. While their backyards and patios are quite vulnerable, families living in air-conditioned, brick homes with all windows closed experience much less annoyance from jet noise than the family living next door in a framehouse with windows open for ventilation and cool air who may find conversation, radio and television listening,

and sleep quite difficult for substantial periods of the day and evening.

What do we believe we can do about noise abatement?

We are looking at the total aircraft noise problem from engine start to shutdown. We include both subsonic and supersonic aircraft and consider the sonic boom to be another noise generated by aircraft.

Federal and local government representatives as well as representatives from the aviation and scientific communities have been and will continue to be solicited for their recommendations and support of this program.

We are establishing study panels in eight major areas in which investigations will be conducted to identify the noise reduction potential within each of these areas. They are aircraft noise research, aircraft operations, sonic boom research, airport and land use, natural environment, legal, structures, and human response. NASA, HUD, DOD, DOI, FAA, and DOT will provide chairmanships for the panels and support for studies in these areas.

Although we have made improvements in some of these areas and research has been underway for some time, we must push far more vigorously for action programs to provide more positive results. We have a substantial base today upon which to initiate action and this we are going to within the limits of the statutory authority we now have. As mentioned earlier, we have requested passage of an aircraft noise abatement bill which will give us the authority to certify aircraft for noise as we now do for safety. This bill will provide the mechanism by which we can assure future aircraft are substantially quieter than our present generation.

But let me make it very clear that the present technology we have to produce a quieter engine, and that which we believe will be available within the short-range future, will not solve the complete aircraft noise problem. We believe that the eventual range of noise reduction may be between 10 to 20 perceived noise decibels (PNdB's).

Even a reduction of 10 PNdB provides a far greater relief from noise annoyance than the numbers themselves might indicate. While a reduction, for example, from 110 to 100 is slightly less than 10 percent by number, the annoyance reduction will be significantly larger.

Several other steps have been taken in the field of aircraft operation and air traffic control. It has been possible to significantly reduce the impact of jet aircraft noise by better takeoff and landing patterns and procedures. With respect to these operating procedures for existing aircraft, as Administrator McKee told the Congress when he transmitted the administration's pending noise legislation, the FAA has used its authority to regulate the flight procedures of aircraft to protect persons and property on the ground from aricraft noise wherever possible. Prior to the formal creation of the Department, the FAA, with assistance from NASA, had also tested and developed climb-out profiles which not only significantly reduced aircraft noise but also were acceptable to industry as consistent with the safe and reasonable operation of the aircraft. This so-called two segment noise abatement climb profile consists of a maximum takeoff climb to a specific altitude followed by a reduction in power and lower rate of climb to an altitude where the generation of noise is not annoying and thereafter a resumption in the normal climb procedure.

In addition, research is now underway to provide a noise abatement approach profile. This procedure is presently in the experimental stage but we propose to continue until we have achieved success with the approach problem keeping in mind the overriding problem that there is, as yet, a safety hazard in increasing the rate of descent with today's aircraft instrumentation and performance. We are hopeful that this hazard can be overcome.

We also intend to continue our efforts to ensure that Federal funds will not be expended for airports which have not provided for adjacent land utilization compatible with future noise exposure. This approach perhaps offers more hope for noise abatement for future airports than any other, but at the moment we still face the major problem of proliferated zoning authority in the areas surrounding the airport.

Let me make it clear that I am not just talking about so-called clear zone techniques. There is no type of structure that I know of that cannot be placed near the end of a much-used jet runway provided that it is constructed with all of the available techniques to reduce aircraft noise. Buildings can be made virtually soundproof by the use of the right structural materials and proper insulation around windows and doors.

In the field of compatible land use, the Department is developing a computerized method of predicting aircraft noise exposure at airports. The methodology has been applied to three principal airports, JFK, O'Hare, and Los Angeles International, and plans are underway to apply it to 29 additional airports. This, in turn, will now enable HUD to inventory the land use at those airports. This noise exposure forecast land-use inventory will then be applied to or be applicable by the balance of the airports. As a result, we shall for the first time have a precise grasp of the actual magnitude of the problem of compatible land use projected through 1975. It will be on the basis of this understanding that any necessary legislation will be drafted and submitted enabling the Federal Government to assist, at long last, local communities in making the environment of the airport neighborhood one in which noise from aircraft does not generate noise from an outraged citizenry.

My point is, gentlemen, that this problem is complex, no single solution will fit all conditions as they apply at all airports. Therefore, we are conducting a comprehensive examination of the most critical conditions to ascertain the best plan.

To put what I have said into an organization focus, the Assistant Secretary of Transportation for Research and Technology, Mr. Frank W. Lehan, will be in charge of aircraft noise abatement. He will have reporting directly to him an Office of Noise Abatement which is headed by Mr. Foster as I mentioned earlier. It will be his responsibility to provide the leadership and direction for our noise abatement efforts.

The direction and coordination of all Federal efforts will be through an interagency aircraft noise abatement program which is being established by the Department of Transportation which will continue and expand the programs recommended by Dr. Hornig.

Let me conclude with a plea that you give speedy and effective consideration to the bill which is before you. As I have previously stated, it will not solve all the problems that face us in aircraft noise abatement, but it will be an essential instrument in finding solutions.

I think it is fair to state, gentlemen, that we agree with a number of the statements which have been made here this morning and earlier that this is probably not the ultimate word in legislation on noise abatement. But it is a building block and it seems to us that H.R. 3400 is the kind of block we ought to put in place to see where we go next. There is just no point in trying to legislate for something that we truly don't understand completely at this stage of the game.

I would urge its immediate approval by this distinguished subcommittee so that it may be acted on by the full committee and the House of Representatives.

Thank you, Mr. Chairman.

Mr. FRIEDEL. Thank you, Mr. Secretary.

If the committee were to adopt H.R. 3400, can you tell us how much it would cost the Department of Transportation to administer?

Secretary BOYD. I will have to provide that for the record. We don't have definite figures, but I can prepare you, I think, a fairly educated judgment on what it would cost on an annual basis, which is what I presume you would want.

Mr. FRIEDEL. We would appreciate it.

Secretary BOYD. Yes, sir. We will do that for the record.

(The information requested follows:)

DEPARTMENT OF TRANSPORTATION STATEMENT ON ESTIMATED COST OF ADMINISTERING AIRCRAFT NOISE CERTIFICATION PROGRAM UNDER H.R. 3400

Under the proposed certification concept, the cost would be very low since the only activity required would be an assessment of the safety of operational procedures recommended by aircraft manufacturers (which is done anyway) and a review of noise data submitted by the manufacturer. We estimate that approximately 120 man-hours per aircraft (approximately $2,000) would be involved is assuring compliance with noise certification rules for any new aircraft so certificated. This one-time noise certification cost is only a very small fraction of the cost of alternative approaches, such as establishing noise limits through operating rules, since this approach would involve continuously operated noise monitoring systems at jet airports throughout the country.

Mr. FRIEDEL. Would you or your counsel comment on whether the Federal Government will be exposed to liability arising from noise abatements?

Secretary BOYD. I would like to ask Mr. Robson, our General Counsel, to comment on that. I wouldn't want him to come up here without having a chance to speak.

Mr. ROBSON. Our feeling is, Mr. Chairman, that the passage of this bill would not expose the Federal Government to liability for noise takings such as some of the local communities have been responsible for. There were some Supreme Court cases.

Mr. FRIEDEL. Are you making any progress on the sonic boom that you know of?

Secretary BOYD. At the moment I would say that we have made no progress since the final specifications on the prototype of the SST were developed. There is a considerable amount of work going on and we are hopeful that it may be possible through changes in power, changes in design, to shift the sonic boom effects to some extent, but at the moment I can't give you anything that is concrete.

Mr. FRIEDEL. But it is a problem which you are faced with and are working on?

Secretary BOYD. Yes, sir. We sure are.

Mr. FRIEDEL. Mr. Pickle.

Mr. PICKLE. Mr. Chairman, I would like to reserve my time.

Mr. FRIEDEL. All right.

Mr. Devine.

Mr. DEVINE. I would just like to welcome the Secretary here and say that he has taken a very objective approach in his statement. Welcome.

Secretary BOYD. Thank you, sir. It is a pleasure to be with you.

Mr. FRIEDEL. Mr. Adams.

Mr. ADAMS. Mr. Boyd, following up briefly on the question of sonic boom research progress, actually sonic boom is a separate problem from that of airport noise; is it not?

Secretary BOYD. Yes. The sonic boom will not be a problem at the airport where the SST lands and takes off. The aircraft will go into what is called the transsonic regime probably 100-odd miles away from the airport of its departure and it will reduce speed to subsonic speeds 100 or so miles before its airport of arrival, so that in that sense it is a different problem in a geographic sense.

Now, generically, we include sonic boom as a part of the total problem of noise abatement, however.

Mr. ADAMS. I want to follow up on Mr. Friedel's question regarding possible liability for noise. In the program that you are suggesting I don't believe you defined clear areas, but if the Federal Government applies regulations on noise to these areas, does your counsel anticipate any liability if the Federal Government operates in this field? Specifically have there been any cases decided requiring the airports themselves to obtain aviation noise easements for areas where there is a continuing flyover? Would you comment on that?

Mr. ROBSON. Well, our judgment, while we can't predict what any court might do in the future, Mr. Adams, is that the activities that would be carried on under the authority of H.R. 3400 would not change these legal responsibilities from that of local airports to the Federal Government.

Mr. ADAMS. Is that on the basis that we would be simply supplying money to the operating agency, whatever it might be, and not liable. Therefore, owners would continue with their own form of possible liability. And the Federal Government not being in some type of partnership with the owner would not possibly be liable. Is that your position?

Mr. ROBSON. Well, as to the program of airport support by the Federal Government. I don't think we have a specific change in that in mind that would result in a shift of the responsibility.

Secretary BOYD. I don't want to get into a debate between learned counsel, but it seems to me that on this business of easements that what we are talking about in terms of Federal grant programs, for example, is really a condition precedent and that in order to qaulify as there are now a number of conditions precedent, this would be one additional condition which the Federal Government would require before the airport could qualify for assistance.

Mr. ADAMS. One thing we want to make certain of, Mr. Boyd, is that at the present time my understanding of the clear areas or the areas of protection around airports is that they are limited to and tied directly to safety standards.

Secretary BOYD. That is correct.

Mr. ADAMS. Basically buffer zones not over the end of the runway. I am trying to be certain and I want you to give us some assurance that in what we are drafting now we are not changing the concepts of liability. In safety regulations there is no liability, but for navigation easements there has been and for noise there might be.

Secretary BOYD. It is our opinion that the liability would not be changed as the result of this legislation being enacted.

Mr. ADAMS. Thank you very much.

Thank you, Mr. Chairman.

Mr. FRIEDEL. Congressman Kuykendall.

Mr. KUYKENDALL. Welcome to the committee, Mr. Secretary. I want to say that I think your report to us was very comprehensive. You got into one of the areas here that I have been wanting to get someone to discuss in pointing out that we have been able to make considerable progress with our rapid climb and then a level off and then another climb. Of course, the rapid climb takes place within the area of the old airport concept. Those people knew the problems when they built close and I guess they expect it. But you stated that you are going to get into and have not yet made any progress in the area of the problem created by the long low approach. Of course we all know, particularly here in Washington, because those of us who live either up or down the Potomac know that this long low approach is our biggest problem.

Could you tell me if within the present state of the art there is any real safety problem by increasing the angle of the glide path coming into where we can have the shorter approach and affect this particular problem somewhat. What is the state of the art in the particular problem of increasing the glide angle and approach?

Secretary BOYD. In the laboratory NASA has been able to develop the state of the art to an extent whereby a much steeper glide angle——

Mr. KUYKENDALL. Could you give us an angle of comparison, tell us what it is now and what it might be in degrees?

Secretary BOYD. Let me ask Mr. Foster.

Mr. KUYKENDALL. How much improvement we might expect here.

Mr. FOSTER. Now we are using two and a half as a standard with maximum of 3°.

Secretary BOYD. Two and a half up to 6°.

Mr. KUYKENDALL. What altitude difference would that be at 2 miles, let us say?

Secretary BOYD. Oh, boy.

Mr. KUYKENDALL. Can you guess? I can't either, but I thought maybe some technician back here might guess because this is one of our major problems; is it not?

Mr. FOSTER. Approximately 1,100 feet for 6° versus 550 feet for a 3° glide slope.

Mr. KUYKENDALL. Which is considerably different when they are flying in your open window; right?

Secretary BOYD. I want to make it clear, though, that while I say this is in the state of the art and it is a concept which I understand is called direct lift control, it can't be done with conventional aircraft as they are now. There would have to be very major redesign of the

airfoils and there is a question, a rather grave question at the moment, as to whether or not this could be done economically.

But above and beyond that, it is my understanding that we are not far enough along in this program to say that this is the answer or an answer.

Mr. KUYKENDALL. Mr. Secretary, are we correct at least theoretically in our assumptions here that the long low approach is a heavy power-on approach? You have a lot of power on the longer your approach?

Secretary BOYD. There is no question about that.

Mr. KUYKENDALL. All right. And that the presence of power in a jet airplane is a safety factor; is this correct?

Secretary BOYD. Yes, sir. Without that it is through flying.

Mr. KUYKENDALL. More so than in an old type propeller aircraft?

Secretary BOYD. Yes. I think that is true. You have a higher wing loading for one thing.

Mr. KUYKENDALL. And also you have a greater lag in recovery of power, is that correct?

Secretary BOYD. That is correct. The jet engine is less responsive.

Mr. KUYKENDALL. Let me get into another question here. Are you studying the probability in new construction, and I know we have the problem of the airports that already exist, but in the new construction building these airports quite a considerable distance out and using some form of vertical aircraft in coming into the congested area. Is there some danger here in this effort?

Secretary BOYD. No; there isn't. As a matter of fact, a vertical lift device would enable us to get far greater utilization out of the existing space because it could operate in a completely different traffic pattern without conflict with fixed-wing aircraft. Here, however, with the vertical lift we have two major difficulties. One is economics. There is nothing in production today that can operate anywhere near economically, based on any representative assessment of charges. The other is that the existing vertical lift devices are just as noisy as all get out.

Mr. KUYKENDALL. I am certainly aware of this.

Thank you, Mr. Chairman.

Mr. FRIEDEL. Congressman Pickle.

Mr. PICKLE. Thank you, Mr. Chairman.

Mr. Secretary, I am glad to see you and I liked your statement and am always glad to have you before this committee.

I would like to first of all make one observation. I certainly agree that we have to start as soon as possible to try to find a reasonable solution on the noise abatement problem. I think, though, that it is highly important that we keep in mind equally as a part of it the fact that in future construction we have to think in terms of the airports, major air centers being further out from the city.

This involves a lot of complications for us, but perhaps it would be a central or a series of central downtown collection stations going out to these airports. We don't have the problem, for instance, in Dulles and I think that is a compliment to the planners who helped provide for the creation of Dulles where it is.

Surely we must tie this in with better helicopters, VTOL, better roads, high-speed trains, and so forth. I do have one or two questions about this bill as presented to us. One, it seems to me that we are going

to be facing the problem of who is going to set the standards. The question is whether FAA or DOT actually set the standards.

Secretary BOYD. The Department of Transportation is proposed.

Mr. PICKLE. It is proposed under this measure?

Secretary BOYD. Yes, air.

Mr. PICKLE. My question is, is there a difference of opinion as between your agency and the FAA as to who should establish these standards?

Secretary BOYD. Not to my knowledge. I have had numerous conversations with General McKee on this and other subjects and this question has never arisen. I can't give you a categorical answer because it has never been raised.

Mr. PICKLE. Then I believe that answers my question. There is no contest of jurisdiction between your agency and the FAA as to the establishment of these standards?

Secretary BOYD. No, sir.

Mr. FRIEDEL. Will the gentleman yield?

Secretary BOYD. The only thing that is involved in the noise business between us and the FAA, as I understand it, is that General McKee felt some disappointment that we didn't take over the operation of Washington National so that we could get him off that hook.

Mr. PICKLE. I yield to the chairman.

Mr. FRIEDEL. Mr. Secretary, trying to keep to this point, the FAA just recently issued a ruling or suggested a ruling that the speed of the planes be limited to slow them down to 250 knots below 10,000 feet.

Secretary BOYD. Yes, sir.

Mr. FRIEDEL. I understand they did that because of safety. What effect will that have on the noise? Will that have an effect on the noise for the people on the ground?

Secretary BOYD. I don't believe it will have any effect, Mr. Chairman, because the real problem is in the takeoff and landing patterns and the flight of the plane, say, above 3,000 or 4,000 feet, whether it is flying at 350, 450, or 250, is not going to make much difference to the people on the ground. It is generally when the airplane gets into the airport traffic pattern that you would have this concern over the noise, when it is down, I would say, 2,000 feet or below.

Mr. FRIEDEL. In other words, it won't have much material effect on it?

Secretary BOYD. I don't think so, not in terms of significent noise abatement.

Mr. FRIEDEL. All right. Thank you.

Mr. PICKLE. Mr. Chairman, if I may continue, a question was asked earlier with respect to cost to your agency in the administering of this kind of a program. I would like to ask you more specifically with relation to cost to an airline or an individual aircraft. Is there any estimate you can give us as to what it would cost if you put some kind of an instrument on a plane that would help control this noise abatement if this is the decision as an approach?

Secretary BOYD. I don't have any figures, but one of the things I am sure we would propose is, assuming this research program on the direct lift control is proved out, we would require that on new aircraft built in the future. This would be an additional element in

the capital cost of the aircraft and I will try to obtain a figure for you as to what we guess that would be as an incremental cost.

(The information requested follows:)

DEPARTMENT OF TRANSPORTATION STATEMENT ON ESTIMATED COST OF INSTRUMENTATION TO ACHIEVE QUIETER AIRPORT APPROACHES

The Federal Aviation Administration is developing instrumentation to permit quieter approaches beyond three miles from the airport. If the results of current evaluations show that two-segment approaches meet adequate levels of safety, then the installation costs for airborne instrumentation necessary to achieve the resulting two-segment approach noise benefits would be approximately $2,000 per aircraft. In addition, at those airports not presently equipped with terminal DME installations, a $50,000 ground facility provided by the Federal Aviation Administration would be required.

Other than instrumentation to permit steeper, lower thrust approaches, we know of no airborne instrumentation now being developed which could contribute to a solution of the noise problem.

The concept of noise certification involves the fundamental noise characteristics of an aircraft, and other than the initial capital and annual operating costs of the vehicle, there would be no costs borne by an aircraft purchaser to achieve the quietest practical operations.

Mr. PICKLE. Then your cost would be on the basis of an individual aircraft, not with respect to whether it was owned by an individual or by an airline?

Secretary BOYD. That is right, although the problem of noise is really related primarily to larger aircraft.

Mr. PICKLE. Do you anticipate different standards?

Secretary BOYD. I think that is entirely possible. I have not thought this one through, but I would venture to say that where you are dealing with a range of aircraft designs from the weekend pleasure flying up through supersonic transports that the chances are good we would have different regulations based on design classifications.

Mr. PICKLE. That is all, Mr. Chairman.

Mr. FRIEDEL. Are there any other questions?

I want to thank you, Mr. Secretary.

Secretary BOYD. Thank you, Mr. Chairman and members of the committee.

Mr. FRIEDEL. It is 2 minutes to 11. The House will go in at 11 o'clock on very important legislation. We have two other witnesses, the Air Transportation Association and also the Airport Operators Council. If they wish to submit statements they may do so, but we will have to adjourn the meeting subject to the call of the Chair. We might meet again next week.

Mr. KUYKENDALL. Mr. Chairman.

Mr. FRIEDEL. Mr. Kuykendall.

Mr. KUYKENDALL. I don't know what the positions are of the gentlemen that are here to testify, but, if possible, particularly the Air Transportation Association, I would hope that they could have full testimony before this committee. I don't know what your convenience is. I don't know what their convenience is, but with this particular group, I would like to have an extensive opportunity to question these people and I am sure several members of the committee feel the same way. I wanted to pass that on as my own feeling on it.

Mr. FRIEDEL. I wish to assure the gentleman that we intend to have other hearings. When they will be scheduled I don't know, but I just

wanted to know if they want to submit their statements for the record subject to the call of the Chair.

Mr. KUYKENDALL. This was my point. Submit the statement certainly, but I don't feel that with this important group that that is ample testimony.

Mr. PICKLE. Mr. Chairman, I would like to ask one of the witnesses whom I see in the audience, Mr. John Stephen of the ATA, if he would like to submit his statement now or await the time when we resume the hearings.

Mr. JOHN E. STEPHEN (general counsel, Air Transport Association). Mr. Chairman, we have a statement we can submit. We are here at the pleasure of the committee. I would prefer to hold the statement until we have the opportunity to answer questions.

Mr. FRIEDEL. Is Mr. Burnard here?

Mr. E. THOMAS BURNARD (executive vice president, Airport Operators Council). Mr. Chairman, I would like to do the same thing, if I may, please.

Mr. FRIEDEL. All right.

The meeting is adjourned subject to the call of the Chair.

(Whereupon, at 11 a.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.)

AIRCRAFT NOISE ABATEMENT

TUESDAY, NOVEMBER 21, 1967

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND AERONAUTICS,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 9 a.m., pursuant to notice, in room 2123, Rayburn House Office Building, Hon. Samuel N. Friedel (chairman of the subcommittee) presiding.

Mr. FRIEDEL. The meeting will now come to order.

This is a continuation of hearings on H.R. 3400, and related bills, which would authorize the Secretary of Transportation to prescribe aircraft noise abatement regulations. The first witness will be Mr. John E. Stephen, general counsel for the Air Transport Association. Mr. Stephen.

STATEMENT OF JOHN E. STEPHEN, GENERAL COUNSEL, AIR TRANSPORT ASSOCIATION OF AMERICA; ACCOMPANIED BY WILLIAM BECKER, ASSISTANT VICE PRESIDENT, OPERATIONS

Mr. STEPHEN. Thank you, Mr. Chairman. We have a written statement which has been submitted for the record, together with some appendixes. The statement itself is of some length, so I will not attempt to read it into the record but will try to summarize it.

Mr. FRIEDEL. Your full statement will be included in the record, following your summarization.

Mr. STEPHEN. Thank you, Mr. Chairman. My name is John Stephen. I am general counsel of the Air Transport Association of America, which is made up of the scheduled airlines of the United States.

We appreciate this opportunity to comment on H.R. 3400. The airlines position expressed by the Air Transport Association is to promote noise reduction and therefore we do favor Federal certification of aircraft for this purpose.

However, we qualify that, Mr. Chairman and members of the committee, by making clear that we are speaking of certification of the aircraft type under the present act and not, as proposed by H.R. 3400, certification of airmen, airports, air carriers, and air agencies.

Likewise, we do not support the somewhat vague provision of H.R. 3400 referring to "regulatory" authority over noise and sonic boom under title VI, which is the safety certification provision of the act. We feel that the present regulatory authority over noise contained in title III, specifically section 307(c), is adequate for any regulatory noise requirements of the Administrator of the Federal Government.

For these reasons we have given the committee a draft bill (see p. 103) which we respectfully commend as a substitute for H.R. 3400, and we will refer to some of the specific differences between H.R. 3400 and the substitute bill.

First, a word about the background of the present bill. In the last session there was a corresponding bill, H.R. 16171, essentially like H.R. 3400, except that H.R. 3400 has now added sonic boom and has also transferred the powers from the Administrator to the Secretary of Transportation. Both of these bills, however, would empower, first of all, the prescription of a standard for the measurement of noise and, secondly, the application of those standards in the certification now provided under title VI of the act.

The bill was described in forwarding letters from the Administrator as being a part of the Federal Aviation Agency's legislative program for noise. It was also stated that the President's interagency task group on aircraft noise likewise supports the bill as necessary to the alleviation of noise in this country.

Now, as for the objectives, three objectives were stated. First of all, the Federal Government has in mind reducing aircraft noise "at the source," viz., the airplane, the engine; secondly, developing noise abatement flight techniques—methods of takeoff, angles of attack, and so forth—and, lastly, fostering the compatible use of land adjacent to airports.

H.R. 3400 is essentially concerned with only the first of these three objectives of the Federal program, that is to say, noise at the source. I think it should be understood, particularly after some of the testimony from Congressmen who appeared before the committee, that the aviation community, including the airlines, fully support the Federal noise objectives as defined in the noise alleviation program of the Administration.

However, we would point out, first of all, that a great many of the accomplishments to date in connection with these objectives, particularly the first objective, reduction of noise at source, has been a direct result of initiative exercised by the aviation community itself.

Long before jets came in, the airlines had worked out special landing and takeoff procedures for piston aircraft. These procedures were costly because they were unnatural and they introduced delays into the air transport system.

Nevertheless, they were introduced in the interest of noise abatement and they worked. When jets came into service in 1959 the airlines, in cooperation with FAA, the manufacturers, pilots, and airport operators, developed special landing and takeoff procedures, noise abatement procedures, for jet aircraft.

Those procedures are still in use and they have produced significant limitations of noise levels and particularly of the extent of exposure areas.

Currently, the airlines and the pilots, working with FAA, are perfecting a so-called noise-abatement takeoff profile, which is essentially a three-stage takeoff procedure. It is hoped that this will significantly reduce even further the extent of noise-exposure area from present jet operations and that hopefully it will be adopted throughout the United States.

The efforts of the industry in this regard have been spread over a great many fronts.

Mr. FRIEDEL. Pardon me. Was it your statement the procedures they are experimenting with now are on takeoff?

Mr. STEPHEN. This is a takeoff procedure; yes, sir. Within a year after the introduction of jets the aviation community, made up of the manufacturers, the airlines, the pilots, and the airport operators, had formed an organization known as the National Aircraft Noise Abatement Council. That organization is a voluntary organization which takes in all of the manufacturers, some 15,000 licensed pilots, the 36 scheduled airlines of the United States, and the airports making up the Airport Operators Council International. They are the members who contribute to the activity of that organization.

NANAC has been responsible for performing extensive research on aircraft noise, particularly aircraft noise at the source, the development of flight procedures for noise reduction, and improvements in the ground environment. It was a pioneer in bringing about volunteer and cooperative noise abatement programs throughout the United States, programs participated in by FAA, pilots, airlines, and airport operators alike.

In wide use at the airports today are refined takeoff procedures developed by NANAC to produce the smallest amount of noise compatible with safety requirements and to confine that noise to the smallest possible area adjacent to the airport.

Among the many contributions of NANAC is the development of an operations research model to give a system solution to the total aircraft-airport environment. This output will be an optimum combination of aircraft modifications, flight procedures, and compatible land-use measures to produce the maximum noise abatement for the expenditures made.

A $200,000 contract for the performance of phase I of this systems project has just been let by AIA on behalf of the manufacturers and ATA on behalf of the U.S. airlines. Phase I is expected to be completed within 6 to 8 months and if successful will then be carried out in phase II of the project at a further cost of approximately a million dollars.

I think it is evident that even in the substantial absence of any legal regulation by Federal or local government, the aviation community in the United States has exercised responsible initiative and has made substantial gains in alleviating aircraft noise.

The aircraft noise problem in its present posture is essentially connected with the advent of jets in late 1958.

Mr. Burnard's statement I think will point that out. You had some noise problems with piston aircraft, but not of as great consequence. However, it is significant that, since 1958 when the initial jets were introduced, each successive jet aircraft which has been introduced has been a little quieter on takeoff than the jets before it, and generally this is expected to continue.

Even the SST, as I am sure this committee is aware, has specifications in the contract which would call for it to be quieter than present jet aircraft.

The airlines in particular, at substantial cost, have devoted their energies to this objective. As noted in the Harris report of the parent

committee, the U.S. airlines in the beginning delayed introducing jets into service in the United States because of noise abatement factors. Even before the introduction of the turbofan engine the industry spent more than $50 million trying to develop in-flight noise suppressors for the first jet aircraft. From the very beginning noise suppressors were installed on commercial jet engines, in contrast to military jet aircraft which were operated without suppressors and even used afterburners which intensified their noise emission.

By 1962 the airlines had installed noise suppressors on 325 jet aircraft at a cost of a quarter of a million dollars per aircraft, a total of $73 million for the industry. By 1965 the airlines invested nearly $150 million in the installation of noise suppressors.

In addition to this original cost of installation, it has cost the airlines approximately $10,000 per aircraft per month to operate the noise suppressors because of the increased weight and drag, causing reduced speed, a total of $36 million per year in cost of operation of suppressors.

When the subsequent fanjet engine was developed as a replacement for the turbojet engine, it was for the very purpose of reducing noise output, and it did significantly reduce the jet noise output from operations from five to ten so-called "PNdB's" (perceived noise decibels). Five to 10 PNdB's might not sound like a large figure. But when you bear in mind that a reduction of six perceived noise decibels is equal to a 50-percent reduction in the quantity of noise, five to 10 PNdB's was a significant reduction in the amount of noise output.

One airline even replaced all of its existing turbojet engines in its entire fleet at a cost of a million dollars per aircraft. The industry thereafter at further expense redesigned the fan engine itself with "hush kits" to further reduce that noise output.

Apart from these industry measures to reduce aircraft noise at the source, the airlines have borne the burden of the cost of reducing noise on the ground by airport measures.

For example, the airlines serving New York-Kennedy Airport have agreed to pick up the bill for $11 million at that airport alone for runway extensions carried out, not for any operational reasons, but solely for noise abatement.

Finally, the aviation community itself has provided significant leadership to both industry and Government efforts to alleviate aircraft noise. I refer, for example, to the work of the Society of Automotive Engineers, which has included numerous aviation industry representatives, and which have pioneered in the technical study of aircraft noise standards and abatement procedures and development of refined noise measurement criteria.

In fact, the SAE studies have been adopted by the Federal Government as the basis for the present FAA proposals to establish maximum aircraft noise levels for certification. I might add that there is also underway at the present time a study by the private professional sector, the American Bar Association, which has a project now being carried out at Stanford Law School to develop a rational legal solution, on a Federal basis preferably, for the aircraft noise and sonic boom problems in the United States.

The study is supposed to be completed and submitted to the American Bar Association in December.

Mr. FRIEDEL. Of this year?

Mr. STEPHEN. Of this year; yes, sir. The FAA has funded the study at a cost of $75,000, and it is anticipated that it will lay out essentially a systems approach to the regulation of aircraft noise on a rational basis nationally.

While significant accomplishments in aircraft noise alleviation have thus already been attained without any legal regulation, the airlines industry nevertheless is concerned with the continuing problem and we do accept and we do support the principle of Federal regulation designed to bring about more effective noise alleviation in all fields, and particularly aircraft noise, and alleviation of sonic boom as well.

In this connection, incidentally, Mr. Chairman and members of the committee, the Administrator's forwarding letter states that the view of the Administration is that the term "noise" includes sonic boom in any event. We think that is a highly dubious proposition, both as a matter of law and as a matter of physics.

However, we would agree that, even though sonic boom regulation of civil aircraft at the present time is purely hypothetical, because there are no civil aircraft that create sonic boom, we nevertheless would favor presently giving the Administrator that authority.

We think it is important that Congress, the airport operators, the public, and local governments be aware that a bill such as H.R. 3400 deals with only a very small piece of the aircraft noise problem. It deals, moreover, in a way that cannot possibly afford what has been referred to as a "solution" to the noise problem.

In the first place, the bill deals with only one element of the three elements of the problem, that is to say, reduction of aircraft noise at the source. It has nothing to do with controlling environment on the ground, which is an essential feature of any true solution to the aircraft noise problem.

This has been recognized by the White House Jet Noise Panel in its report; it has been recognized by Secretary Boyd himself in his testimony before this committee last week; it has been recognized to date by the American Bar Association study to which I referred.

You cannot have any true solution to the aircraft noise problem that does not deal with environmental control of land use on the ground as well as noise at the source.

A further limitation of H.R. 3400 is inherent in the legislative approach which it uses. It proposes to amend title VI of the act. Title VI deals with civil aircraft only. Therefore, it does not cover "public" aircraft, including the more than 100 aircraft operated by the FAA itself.

There are many public aircraft, including jet aircraft, which contribute to the noise problem and which are not dealt with by this bill. Among the public aircraft not covered by H.R. 3400 are military aircraft. Military jets are the noisiest of all aircraft and they are substantial contributors to the aircraft noise problem.

We are not suggesting, in fact no one would suggest, that military jets ought to be impaired in any way in carrying out their defense function or as to their defense capability. But it is important to understand that when we do not deal with military aircraft as a prime source of noise we are dealing with only a part of the noise problem in this country.

For instance, most of the aircraft noise litigation in the United States is not over civil aircraft noise, but military aircraft noise.

This limitation of H.R. 3400 becomes even more significant when you talk about sonic boom because, anomalously, the bill covers only civil aircraft which do not create sonic boom, but it does not cover military aircraft which create the only sonic boom that we have today.

To the extent that the SST, down the road, will create sonic boom, that can be dealt with through contractual provisions on the part of the Administrator as the contractor for the design of the aircraft.

In all events, certification for noise cannot afford any magic results. Certification can yield no more than technology can produce. At best, certification holds out the promise of quieter aircraft when and as technology makes them available and economics can sustain them.

This result would probably follow even without any legislation. But there ought to be no illusions about the promises of technology. I think Secretary Boyd made this point the other day. NASA, for example, is attempting at a cost of $50 million to develop a so-called quiet engine.

Now, this is for research purposes only—not an economically viable engine. It isn't even hoped to have such an engine before 1972, and even if it is successful, it is anticipated that that engine would have a service life of 50 hours.

To develop an acceptable quiet engine for actual production would require an engine service life at least roughly comparable to that of current jets, which ranges up to 12,000 hours. So that, however substantial a degree of reduction might be achieved as to noise at the source, it is questionable whether the so-called aircraft noise "problem" can ever be expected to really be solved.

The oft-used term "aircraft noise problem" is very seldom defined, but what it really means is complaints. If anything has been learned from the exhaustive studies which have been made of noise complaints in this country and abroad, it is that no matter how much you reduce the noise level there always remains an ineradicable hard core of complainants.

Both British studies and American studies have demonstrated, for example, that, even if you reduce the amount of noise below the ambient noise level, you are still left with about 30 percent of the population around airports registering complaints.

In this sense you will never solve the noise "problem." Oklahoma City testing for sonic boom by FAA was a good example. I am sure you gentlemen heard that, during the course of those tests, on given days they would not fly any sonic boom flights just to see what would happen.

What happened was that FAA got nearly as many complaints on the days when they weren't flying, as on the days when they were.

Even the achievement of an economical quiet engine would not mark the end of complaints against airport operations, because complaints against airport operations are not confined only to noise. They cover a wide spectrum of other types of disturbance created by aircraft operating at the airport.

This is why the reduction of noise alone is only a piece of the problem, and why ultimately you must deal with the land use around the airport if you really expect to solve airport complaints.

Apart from these conceptual shortcomings of certification, there is a built-in limitation on the degree of noise reduction which could be attained through this means. This limitation arises from the nature of the air transport system itself under which any given type of aircraft has to be designed to fly into all of the airports in the system.

Transport aircraft cannot be produced in different models for different airports. They must be standardized at an optimum design for all airports. This means that any certification noise limit for a given type of future transport aircraft would have to be set at a single specific level of noise output, expressed in some measurable and widely accepted unit. Moreover, from the viewpoint of safety alone, that unit would have to be compatible on a national basis with all other requirements, so that to the maximum extent possible it would be a uniform requirement.

In determining what single noise value to prescribe, the Administrator or the Secretary would have to select an optimum noise level, one which would be acceptable to airport neighborhoods at most airports or the "average" airport. He could not adopt as the noise value one which would satisfy the complaints at the most noise-sensitive airports.

To require all aircraft of a given type to be designed solely to satisfy a few noise-critical localities would be to put the cart before the horse. In short, freezing the design of a new aircraft type on the basis of only the most noise-sensitive airports would impose inequitable and unjustified penalties on the total air transport system. Yet the dilemma is that it is the noise-sensitive airports—which are comparatively few in number—which constitute the nub of the aircraft noise problem in the United States.

Since an optimum noise level would not satisfy the noise complaints of the sensitive airports, it is apparent that, in a very fundamental sense, the so-called noise problem cannot be resolved through mere certification for noise. The limitation is inherent in the system.

At the same time, the adoption of an optimum noise limit would impose a penalty on every aircraft operating at every airport regardless of whether there is a serious noise problem at a given airport. Normally this would be a wasteful approach to noise abatement since most airports do not have a serious noise problem.

Moreover, the penalties imposed on the aircraft by these design limitations might ultimately be reflected in degraded air transport service or a higher cost of air transportation to the public or both. The question then becomes whether noise certification is really justifiable as a matter of policy if it penalizes the entire airport and air transport system while not satisfying the communities with the most serious noise problem. This is a very difficult question of regulatory policy.

Added to this difficulty is the fact that U.S.-manufactured aircraft are not designed for the U.S. market alone. They are sold worldwide for air transport operations into more than 100 countries. Just as it is impractical to produce one transport aircraft type for operation into noise-sensitive airports and another one for nonsensitive communities, it is also not feasible to produce one version of an aircraft for U.S. operations and a different one for operations worldwide.

In these circumstances, for the United States to freeze the design of U.S.-made aircraft in the interest of noise reduction would either

ignore the prerogative of foreign governments to regulate noise, or it would risk the loss of U.S. markets abroad for both our aircraft manufacturers and air transport services.

For example, suppose the United States were to certify an aircraft at 120 decibels and then some foreign government imposed a 100-decibel limit. You couldn't operate the U.S. aircraft into that country and the foreign buyers wouldn't buy the U.S. aircraft.

Finally, certification authority is essentially a tool for future application. Whatever benefits it will provide are down the road, as the FAA witnesses themselves in the 1966 hearings before this committee testified. They said that any regulation which FAA might put out under the bill would be prospective and of no effect on aircraft "on the drawing boards now." So since it appears that certification authority under H.R. 3400 is not actually in terms limited to future aircraft, however, a basic question is presented whether this function of certifying aircraft for noise does not raise economic issues which properly belong within the cognizance of the Civil Aeronautics Board rather than the Department of Transportation of the FAA Administrator. This economic implication is a very crucial issue in anything that is done under certification.

In all events, it would be reasonable to expect that noise certification would be utilized at the outset at least only for newly designed aircraft. Considering the well-known timelag between design and production, this means that we are looking down the road for any real results from noise certification, so that no one should think that noise certification is a panacea for noise reduction.

Nevertheless, it is a desirable tool to promote noise abatement and the airlines industry do support such authority, provided, first of all, that it is made mandatory, not just permissive or discretionary; secondly, that it is limited to type certification of the integral aircraft as an operating entity, not a laboratory thing worked out on the test stands; and lastly, that the Federal Government make use of its existing authority to complement this process with appropriate flight rules, so as to preclude any conflicting State and local attempts to regulate aircraft noise. Again we particularly stress the importance of land use control around airports.

I would just like to examine briefly some of the specific provisions of H.R. 3400.

First of all, the bill substitutes the Secretary of Transportation for the Administrator in the former bill. Presumably this is to reflect the passage of the Department of Transportation Act. However, in the first place, it is a more rational legislative scheme to keep certification for noise where certification for safety is. You don't want the issuance of two separate certificates, one for safety, one for noise, which is what H.R. 3400 apparently contemplates.

It should be a single certificate and it should be kept where it belongs, in the one person where it more logically fits. The Administrator ought to be the one to administer the certification provision. You already have some ambiguity in the bill by reason of the fact that it purports to amend title VI but it does not amend the heading of title VI, which is "Safety Regulation of Civil Aeronautics." The bill does not amend it, for instance, to say "Safety and Noise Certification." It leaves

safety certification as the heading of the title, so therefore you throw it open to the courts at the outset to possibly find a new ground for noise litigation, namely, that certification for noise has some kind of safety implication, which I don't think was intended by the drafters of the bill.

An even more fundamental ambiguity exists because the bill refers to "rules and regulations." Rules and regulations can be promulgated by the Administrator now under title III as he testified before this committee last year, so that you don't need to complicate or confuse this issue by putting another reference to rules and regulations in the present bill.

Our substitute bill would avoid this by limiting the authority to type certification only. When a given aircraft type has been given a certificate as meeting the prescribed sonic boom or noise standard, it should not thereafter normally be necessary to have to meet an additional flight rule imposing a more stringent standard than the certification standard. But, in the event that did become necessary, title III has adequate provisions to enable it.

Now, let's look at some of the specific provisions. First of all, the scope of the certification authority. The bill would authorize certification authority over airmen, airports, aircraft, air carriers, and air agencies, without limit.

As we have stated, it is not clear, first of all, how you would apply it to airports. It certainly isn't clear why you should apply it to airmen, air carriers, and air agencies. If any authority were required to exercise direct noise regulation of airmen, pilots, and air carriers as air carriers, it could be done very simply under title III of the act. It is beyond the requirements of the objective of noise abatement to put a condition in the certificate of an airman under which he would violate his certificate if he merely exceeded, on a given landing or takeoff, some prescribed flight rule for noise.

Secondly, the bill empowers the Secretary to do these things but it doesn't require him to do so. Even where he finds that a certification standard is necessary in the interest of noise abatement, the bill does not require that he adopt the noise certification standard.

We think that the Administrator should be required to adopt a noise certification standard if it is necessary for noise abatement. This would operate also, perhaps, to enhance Federal preemption, so as to prevent any conflicting local regulations of the kind that you have, for instance, with the Port of New York Authority's well-known 112-PNdB regulation.

The cost of complying with that local regulation, for instance, has been estimated, in the case of one airline alone at Kennedy International Airport, at over $4 million a year.

Another airline estimates that its cost of complying with the Kennedy 112-PNdB regulation amounts to 5 percent of its annual gross operating revenue for each affected aircraft at that airport.

Until now, the New York port regulation has been upheld by the courts largely because of omission by the Federal Government to exercise Federal authority.

Finally, although H.R. 3400 would, according to the 1966 testimony of FAA, be only prospective, applied to future aircraft designs, as we

read the bill there is nothing in the bill which limits it to future aircraft designs. If that result is not what is intended, there should be no objection to clarification of the kind that our substitute bill provides, which makes it clear that any existing airworthiness certificate shall not be recalled and made subject to a more stringent noise standard than one already imposed.

Procedurally, on amendment, suspension, and revocation, under the act for safety purposes, you now have the opportunity to answer the charges of the Administrator and to be heard. H.R. 3400 for some strange reason does not give that right.

If you have that right even for safety certification which involves human life, then there certainly is no reason to withhold it for mere noise annoyance. It is even more puzzling why, in addition to denial of hearing before the Administrator, H.R. 3400 would even deny hearing on appeal. We think that those provisions ought to be corrected, and the substitute bill would do so.

Finally, in the provision for appeal to the Safety Board, H.R. 3400 has some curious anomalies. For instance, the only way in which the Safety Board can reverse a noise certification standard would be by first finding, and this is stated more or less in a double negative, that safety does not require affimation. This somewhat inverted statement has the effect, first of all, of providing only a hypothetical remedy. As we see it the only time this could ever happen would be if the Administrator first prescribed a certificated noise level, the aircraft was manufactured and operated, and it was then discovered that it could not attain that noise level safely in actual operations.

If the Administrator sought to cure that situation by raising the prescribed noise level, then the Board would be obliged to find that safety requires affirmation of the order. But this is a purely hypothetical case, because if this were to happen, there wouldn't be any appeal. As we see it, this provision of H.R. 3400 is essentially meaningless or, at least, hypothetical. We think that the appeals standard ought to be related to the actual intention of the bill, which is to provide for reversal on considerations of noise factors. The substitute bill would cure this problem.

Finally, there is no provision for judicial review, which we think there ought to be. There is no reason why there shouldn't be judicial review of an order of the Board here, just as there is for present safety certification procedures.

One additional comment—there is an apparently erroneous referrence in the bill to "Title V, Safety Regulation of Civil Aeronautics," which obviously should be title VI.

The conclusion is, gentlemen, that we think appropriate noise and sonic boom conditions ought to be included in the certification of aircraft. We think reduction of aircraft noise at the source will be promoted by having noise certification authority in the Federal Government. We think that such certification ought to be applied whereever it is technically feasible and economically justifiable, and that it can contribute to the alleviation of the noise problem.

We therefore believe that Congress should amend the act so as to authorize and require the Administrator to promulgate reasonable standards for noise and sonic boom where necessary and appropriate

to encourage progress in noise abatement and to issue aircraft type certificates under the act only where an aircraft meets those noise and sonic boom standards.

Thank you.

(Mr. Stephen's prepared statement follows:)

STATEMENT OF JOHN E. STEPHEN, GENERAL COUNSEL, AIR TRANSPORT ASSOCIATION OF AMERICA

My name is John E. Stephen. I am General Counsel of the Air Transport Association of America, which is made up of the scheduled airlines of the United States. We appreciate the opportunity to state our views on H.R. 3400, which would amend the Federal Aviation Act to authorize "aircraft noise abatement regulation."

AIRLINES POSITION

The Air Transport Association, speaking for the U.S. scheduled airlines, supports the proposal to promote noise reduction through *type* certification of aircraft. However, we do not support the bill's proposed authority for the noise-certification of airmen, airports, air carriers and air agencies. Nor do we support the vague grant of "regulatory" authority over noise and sonic boom under Title VI of the Federal Aviation Act, which is the certification part of the Act. We believe that the authority to issue *flight* rules and regulations for noise purposes under existing Title III of the Act is sufficient.

On the other hand, we believe that H.R. 3400 is deficient in not *compelling* the type-certification of aircraft where appropriate and necessary for noise reduction. For these reasons, we have forwarded to the Committee a draft bill which we respectfully commend as a substitute for H.R. 3400. We shall compare the essential provisions of each of the two bills. First, let us look at the purpose of the legislation.

BACKGROUND OF THE BILL

In the 89th Congress, H.R. 16171 was the predecessor of the current bill, H.R. 3400. Under H.R. 16171, the Administrator of the Federal Aviation Agency would have been empowered to prescribe and amend: (1) standards for the measurement of and (2) necessary rules and regulations for the control and abatement of, aircraft noise. The Administrator would have been authorized to apply such standards, rules and regulations in any action on any certificate presently authorized in Title VI of the Federal Aviation Act (which is now limited to safety).

The certificates now provided for by Title VI of the Act are: aircraft (and engine and propeller) type and production certificates; aircraft airworthiness certificates; airmen's certificates; air carrier operating certificates; air navigation facility certificates; and "air agency" certificates (e.g., civilian flying schools, and aircraft and engine repair stations). A limited hearing on the 1966 bill was held last October. Only Congressmen and FAA witnesses were heard.

The current bill, H.R. 3400, was introduced by Mr. Staggers in January of 1967. It is substantially the same as the 1966 bill, except that it has been expanded to include *sonic boom* as well as aircraft noise, and (in light of the intervening establishment of the Department of Transportation) the Secretary of Transportation has been substituted for the Administrator, FAA in the bill.

The bill was described in a forwarding letter of January 11, 1967 by General William F. McKee, Administrator of the (then) Federal Aviation Agency, as "part of the Federal Aviation Agency's legislation program." It was also stated that the bill's early enactment had been recommended by the President's inter-agency task group on aircraft noise, as being necessary for the alleviation of such noise.

OBJECTIVES OF THE LEGISLATION

The Administrator has stated that, "the proposed bill is a part of the Federal Government's overall program to alleviate the problems of aircraft noise by (1) reducing aircraft noise at the source, (2) developing noise abatement flight techniques, and (3) fostering the compatible use of land adjacent to airports." H.R. 3400 is essentially concerned with only the first of these objectives: viz., reduction of aircraft noise *at the source:* i.e., the aircraft.

All three of the goals of the Federal aircraft noise alleviation program have received the fullest support of the scheduled airlines industry. Alleviation of air-

craft noise in the United States has been the joint concern of the Federal Government, airport operators, aircraft manufacturers, air carriers and airline pilots. Indeed, substantial gains have already been made in the alleviation of aircraft noise. Airframe manufacturers, air carriers and powerplant manufacturers have conducted extensive research and development on aircraft noise suppression and have devoted vast facilities and manpower to reducing the level of aircraft noise.

Long before jets, the airlines recognized the disturbance that aircraft noise created for many airport neighbors. As early as 1952, the carriers and the pilots established a task group to develop special takeoff and landing procedures for noise abatement purposes. Special procedures were promulgated for such piston aircraft as the DC–6, the Constellation, the DC–7, and others. These procedures were highly costly, since they introduced unnatural flight methods and delays, but they were successful—within the technological and physical limitations under which they had to be employed. And they resulted in definite and significant reductions in noise under takeoff paths at the airports from which those aircraft operated.

When jets came into service in 1959, the airlines, in cooperation with the FAA, manufacturers, pilots and airport operators, developed new and different takeoff and landing noise-abatement procedures for the jet aircraft. These procedures are still in wide use today, and have produced significant limitations of noise levels and exposure areas.[1]

Currently, the airlines and their pilots, in close collaboration with FAA, are perfecting an even more efficient noise-abatement procedure for jets, referred to as the "noise-abatement takeoff profile". The operation is essentially a three-stage procedure which substantially reduces noise exposure in terms of flyover time. It holds the promise of even more significant reductions in noise-exposure under takeoff paths. Hopefully, the new three-stage profile will ultimately be adopted uniformly throughout the United States for all jet transport takeoffs.

The efforts of the industry have been directed along many fronts. Within less than a year after the introduction of jets, the aviation community formed a nonprofit organization to coordinate nationwide planning and procedures for the reduction of carrier aircraft noise. Known as the National Aircraft Noise Abatement Council, or "NANAC", it is composed of the Aerospace Industries Association (consisting of the principal airframe and engine manufacturers), the Air Line Pilots Association (comprising 15,000 licensed commercial airlines pilots), and the Air Transport Association of America (made up of the 36 scheduled certificated-route carriers of the United States). Subsequently the organization was expanded by the participation of the Airport Operators Council (now the Airport Operators Council International, made up of 107 member organizations, representing more than 600 public airports in the 50 states of the United States, and 10 foreign states), and the American Association of Airport Executives (the managers and directors of more than 400 airports throughout the United States).

NANAC has been responsible for the performance of extensive research in connection with the reduction of aircraft noise at source (i.e., aircraft engine and frame design), flight procedures for noise reduction, and improvements in ground environment. NANAC was a pioneer and the leading force in bringing about widespread cooperative noise abatement programs throughout the United States, and participated in by the Federal Aviation Agency, airport operators, pilots and airlines, including the establishment of preferential runways and other noise-limiting flight procedures at many major airports, the initiation of widespread community joint noise-abatement standing committees, and the esablishment of an organized noise complaint and advisory center.

In wide use at airports of the United States are refined take-off procedures, developed and tailored by NANAC to produce the smallest amount of noise commensurate with safety requirements and to confine noise to the smallest possible area adjacent to the airport. NANAC has also developed and secured wide acceptance and application of the increased 3° visual glide-slope and of uniform carrier maintenance planning, under which the number and duration of high-power maintenance ground run-ups during nighttime hours are rigidly restricted.

Among the many contributions of NANAC to aircraft noise abatement is an Operations Research Model for a systems solution of the total aircraft airport-environment complex. The output of the project will be the optimum combination

[1] These operational procedures are reported in detail in the Report of the President's *Jet Aircraft Noise Panel*, dated March, 1966.

of aircraft configuration, flight procedures and compatible land-use measures, to produce maximum noise abatement for expenditures made.

A $200,000 contract for the performance of Phase I of the systems project has just been let by the Aerospace Industries Association, on behalf of aircraft manufacturers, and the Air Transport Association on behalf of the U.S. scheduled airlines. Completion of Phase I of this systems analysis is anticipated within the next six to eight months. If Phase I establishes a feasible computer model, Phase II of the project will be carried out at a further cost to the industry of approximately $1-million.

It is evident that, even in the substantial absence of legal regulation of aircraft noise, the aviation community in the United States has exercised responsible and effective initiative, and has made substantial gains, in the alleviation of aircraft noise.

The airlines, in particular, and at tremendous costs, have devoted their energies and resources to this objective. As noted in the Harris Report,[2] the U.S. airlines in the beginning delayed introduction of jets for more than two years in consideration of noise abatement factors.

Predating the industry's ultimate introduction of the turbo*fan* engine, more than $50-million was spent on research and development to perfect in-flight noise suppressors, for the first jet engines. From the beginning, noise suppressors were installed on commercial jet engines, in contrast to military jet aircraft which were operated without suppressors and even with after-burners which intensified noise emission. By 1962, the airlines had installed noise suppressors on 325 jet aircraft at a cost of a quarter-million dollars per aircraft a—total of $73-million for the industry. By 1965, the airlines had invested nearly $150-million in the installation of noise suppressors. In addition to this original cost, it cost the airlines approximately $10,000 per aircraft per month to operate the suppressors, because of increased weight and drag and reduced speed—a total for the industry of $36-million per year.

The subsequent fanjet engine as a replacement for the turbojet engine was designed and developed for the very purpose of reducing noise, and did in fact significantly reduce noise levels from jet operations. The quieter fanjets were substituted for turbojet engines in the aircraft orders of all U.S. airlines. One airline even replaced all turbojet engines in its existing aircraft at a cost of $1-million per aircraft. The industry thereafter at huge expense redesigned and refitted the fanjet engine itself to further reduce its noise output.

Apart from these industry measures to alleviate noise at the source, the burden of extensive airport improvements throughout the United States in the interest of noise abatement has been borne by the airlines. For example, the airlines serving New York's Kennedy Airport have agreed to pay more than $11-million at that airport alone for runway extensions required, not for operational reasons, but solely for noise abatement.

Finally, the aviation community has provided significant leadership to both industry and government efforts to alleviate aircraft noise. Industry acoustical and noise research personnel are recognized as "the most active" in the field. The Society of Automotive Engineers, which includes numerous aviation industry representatives, has pioneered the technical study of aircraft noise standards and abatement procedures and the development of refined noise measurement criteria. SAE studies, in fact, have been adopted by the Federal Government as the basis for present FAA proposals for establishing maximum aircraft noise levels for certification. Industry acousticians, engineers, operations officers and legal counsel have also served as expert noise advisors to the White House Jet Aircraft Noise Panel, in its comprehensive government-industry noise alleviation program.

While significant accomplishments in aircraft noise alleviation thus have been attained without legal regulation, the airlines industry is nevertheless concerned with the continuing problem of aircraft noise. We accept and support the principle of Federal regulations designed to bring about more effective noise alleviation in all fields, and also alleviation of sonic boom.[3]

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[2] House Report No. 36, 88th Congress, 1st Sess. 24 (1963), "Investigation and Study of the Aircraft Noise Problem."

[3] The Administrator's explanatory letter says, ". . . we believe that noise does include sonic boom." This is a highly questionable proposition—in either physics or law. However, the airlines would agree that the authority of the Administrator should be extended to sonic boom now even though the power would be hypothetical for the present.

LIMITED EFFECT OF CERTIFICATION LEGISLATION

It is important that the Congress, airport operators, local governments and the public understand that legislation such as H.R. 3400 deals with only a small piece of the so-called "aircraft noise problem," and that H.R. 3400, although helpful, will not be the "solution" to that problem.

First, the bill primarily deals with one *one* of the three elements of the Federal noise alleviation program: viz., reduction of aircraft noise *at the source* (i.e., the airplane). Most importantly, the bill is of little consequence in the attack upon the problem of *compatible land-use* adjacent to airports, which many noise abatement experts believe to be the most critical factor, and potentially the most promising approach, in any solution of the noise problem. It is not too much to state that *no* ultimate alleviation of the airport noise problem will ever be accomplished by measures which fail to control the use of land adjacent to airports.

A further limitation of H.R. 3400 is inherent in its legislative approach. By definition, the bill is confined to noise regulation of only *civil* aircraft (since it amends Title VI of the Federal Aviation Act, which is limited to civil aircraft). This would exclude "public aircraft" as defined in the Act: viz., all aircraft used in the service of any government entity, or political subdivision, including the many jet aircraft operated by the Federal Aviation Administration itself. Public aircraft are significant contributors to the aircraft "noise problem" and there is no valid reason why at least non-military public aircraft should be immune from noise abatement measures.

Among the public aircraft not covered by H.R. 3400 are military aircraft. Military jets are probably the noisiest of all aircraft, and they are substantial contributors to the aircraft noise problem. In fact much, if not most, of the noise litigation in the United States is over military rather than civil jet noise. While no one would contend that military jets should be paired in their defense capability, it should at least be fully understood that noise legislation confined to civil aircraft cannot possibly afford any long-range solution to the aircraft noise problem, which consists in large part of the noise of military jet aircraft.[4]

This limitation of H.R. 3400 is even more pronounced in the case of sonic boom. Anomalously, the bill covers only civil aircraft, which do not create sonic boom, but excludes military aircraft, which do.[5]

In all events, certification for noise will afford no magic results. Certification can yield no more than technology can produce. At best, certification for noise holds out the promise of quieter aircraft, when and as technology makes them available and their economics can sustain them. This result would probably follow without legislation.

But there should be no illusions as to the promises of technology. NASA is attempting, at a cost of $50 million, to develop a so-called "quiet engine"—for research purposes only and without regard to economic viability. It is not even hoped to have such an engine before 1972. Even if NASA is successful, it is anticipated that the engine would have a service life of only *fifty hours*. To develop an acceptable "quiet engine" for actual production would require an engine service-life at least roughly comparable to that of current jet engines in use, which ranges up to 12,000 hours.

However substantial the degree of reduction achieved in "noise at the source," it is questionable whether the aircraft noise problem can be expected to be "solved." The oft-used term "aircraft noise problem" is seldom defined. But essentially it refers to *complaints*. If anything has been learned from the exhaustive studies made of noise complaints, it is that—no matter how much the noise level is reduced—there will remain an ineradicable hard-core of complainants. Both British and American studies indicate that this constant hard-core group of complainants constitutes about 30% of the population near airports. In this sense, the aircraft "noise problem" will probably never be solved.

Even achievement of an economical "quiet-engine" would not mark the end of complaints against airport operations. Noise as such is only one aspect of the spectrum of public complaint against airport operations. Complaints against

[4] Similarly, it is assumed that *foreign* aircraft would be exempted from the requirements of any such noise certification standard, rule or regulation under Title VI, as they presently are from the safety provisions of Title VI, pursuant to section 610(b). Foreign aircraft are also substantial contributors to the aircraft noise problem in the United States.

[5] Any prospective sonic boom from the SST is susceptible of contractual design-control by the Administrator as with present SST noise specifications.

operations are directed at a broad range of disturbances other than noise. This is why reduction of noise alone is only a part of the "problem", and why—ultimately—only those measures which control and limit *land-use* near airports can afford a solution to the problem of complaints against airport operations.

Apart from these conceptual shortcomings of certification as a device for noise abatement, there is a built-in limitation on the degree of noise reduction which could be attained. This limitation arises from the nature of our nation-wide air transport system, under which a given type of aircraft must be designed for flying into *all* of the airports in the system. Transport aircraft cannot be produced in different models for different airports. They must be standardized at an optimum design for all airports. This means that any certification noise-limit for a given type of future transport aircraft would have to be fixed at a *single specific level* of noise output, expressed in some measurable and widely-accepted unit.

From the viewpoint of safety alone, moreover, that criterion must be made standard on a national basis, to preclude varying and conflicting local regulations. To the maximum extent feasible, those criteria and procedures should be uniform for all airports.

In determining what single noise value to prescribe for a new aircraft type, the Administrator (Secretary) would have to select an *optimum* noise-level—one which would be acceptable to airport neighbors at *most* airports, or the "average" airport. He could not adopt as the single such noise-value one calculated to satisfy the complaints at the most *noise-sensitive* airports. To require all aircraft of a given type to be designed solely to satisfy a few noise-critical localities would be to put the cart before the horse. In short, freezing the entire design and production of a new aircraft type on the basis of the most noise-sensitive airports, would be to impose inequitable and unjustified penalties on the total air transport system.

Yet, it is the noise-sensitive airports—comparatively few in number—which constitute the nub of the aircraft "noise problem" in the United States. Since an *optimum* noise level would not satisfy the specific noise complaints at the noise-sensitive airports, it is apparent that—in a very fundamental sense—"the noise problem" would not be resolved through mere certification for noise. This limitation is inherent in the problem.

At the same time, the adoption of even an optimum noise limit in the design of an entire family of aircraft would impose operating and economic penalties on each such aircraft *at every airport* in the total air transport system—regardless of whether there is a serious noise problem at a particular airport. Normally, this would be a wasteful approach to noise abatement, since most airports do not have a serious noise problem.

Moreover, the penalties imposed on the aircraft by such design limitations might ultimately be reflected in degraded air transport service or higher costs of air transportation to the public, or both. The question then becomes one whether noise certification is justifiable if it penalizes the entire air transport system while still not satisfying *the communities with the more serious noise problem.* This is a very difficult question of regulatory policy.

Added to this difficulty is the fact that U.S.-manufactured aircraft are not designed for the United States market alone. They are sold world-wide for air transport operations into more than 100 countries. Just as it is impractical to produce one version of a transport aircraft type for operation into noise-sensitive U.S. communities and a different version for nonsensitive communities, it is not feasible to produce one version of an aircraft for U.S. operations and a different one for operations into other countries.

In these circumstances, for the United States to freeze the design of U.S.-made aircraft in the interest of noise reduction would either ignore the sovereign prerogative of foreign governments to regulate, or risk the loss of U.S. markets abroad for both our aircraft manufacturers and our air transport services. How would it avail our long-term U.S. aviation objectives to fix a design noise-limit of 120-decibels for a future American aircraft, if foreign governments were to impose a legal operating limit on the aircraft of only 100-decibels? The U.S. aircraft in such case could not be operated by U.S.-flag airlines into those countries, nor would a U.S. aircraft built to such specifications be purchased from the U.S. manufacturer by foreign airlines operating into those countries.

Finally, certification authority is essentially a tool for *future application.* Its benefits, such as they are, would not be expected to be felt for a relatively long

period. This was recognized by the FAA witnesses in the 1966 hearings on the (predecessor) bill, when it was testified that FAA normally needs about five years to implement a regulation, and that any regulation under the bill would be prospective, and of no effect on aircraft "on the drawing boards now".

Since it appears that the certification authority of H.R. 3400 is not in terms confined to future aircraft, it would present a question of the most serious *economic policy* to authorize the Secretary of Transportation (or the FAA Administrator)—as opposed to the Civil Aeronautics Board—to require the retrofitting for noise abatement of existing air transport fleets. This question we shall discuss in more detail.

In all events, it would be reasonable to expect that any noise certification authority would be utilized at the outset only as to newly-designed aircraft. Considering the well-known time lag between drawing board and production, it is apparent that the effect of the initial noise certification would not be felt for a significant period of time.

All of these considerations make plain that noise certification of civil aircraft will not be a panacea. Nor should anyone fancy that it will be. Nevertheless, aircraft noise certification appears to be a desirable and useful tool in promoting noise abatement, and the airlines industry supports such authority in the Federal Government, provided that it is made mandatory, that it is limited to *type* certification of the integral aircraft as an operating entity, and that the Federal Government makes use of its existing authority to complement the certification process with appropriate flight rules, so as to preclude conflicting state and local attempts to regulate aircraft noise.[6]

In particular, we would stress again the crucial importance of the correlative objective of controlling the use of land around airports. The extent of noise reduction through technological improvement of aircraft and engines is definitely limited under the present state of knowledge. But virtually no effort has been made by either Federal or local authorities to stem the continued encroachment of residential developments upon public airports in which taxpayers have invested literally billions of dollars.[7]

Let us now look at the specific provisions of H.R. 3400.

LEGISLATIVE THEORY OF THE BILL

The Administrator's forwarding letter states that the intent of H.R. 3400 is to expand the present authority under Title VI of the Federal Aviation Act, which is limited to *safety* considerations only, so as to empower the *Secretary of Transportation* to establish and enforce noise standards on the same basis that the Administrator enforces safety standards under Title VI.

It is notable that the predecessor bill, H.R. 16171, would have vested the expanded noise regulatory authority in the *Administrator*, rather than the Secretary of Transportation. Presumably, the change in H.R. 3400 was intended to reflect the intervening passage of the Department of Transportation Act, under which the Secretary of Transportation is charged with responsibility for research and development relating to transportation, including noise abatement generally and aircraft noise particularly. (section 4(a), P.L. 89–760).

However, although transferring the Federal Aviation Agency to the Department of Transportation, P.L. 89–760 reinstated in the Administrator all of his former duties relating to certification for safety and the regulation of air traffic and flight of aircraft. Since H.R. 3400 is intended to add Noise Certification authority to the existing safety certification authority contained in Title VI of the Aviation Act, which is exercised by the Administrator, it would be a more rational legislative scheme to vest the new certification authority also in the Administrator. Otherwise, two certificates apparently would have to be issued under Title VI for each aircraft type: one from the Administrator based on *safety* considerations, and one from the Secretary based on *noise* considerations, and with no express provision in the statute as to procedures or principles by

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[6] More detailed consideration of Federal vs. local jurisdiction is given in Appendix A, *Regulation by Law of Aircraft Noise Levels From the Viewpoint of the United States Airlines*, a paper presented by John E. Stephen, General Counsel of the Air Transport Association, before the International Conference on the Reduction of Noise and Disturbance Caused by Civil Aircraft.

[7] The several aspects of airport-compatible land use are fully considered in Appendix B. *Legal, and Related, Aspects of Airport Land Use Planning*, a companion paper presented by Lyman M. Tondel, Jr., of New York City on behalf of the Air Transport Association before the U.K. Noise Conference.

which these separate actions would be coordinated. Particularly since the issuance of a single aircraft type-certificate is to be preferred, in our view, to the issuance of separate type-certificates for noise and for safety, the vesting of any Noise Certification authority under Title VI should be in the Administrator. It is all the more important that the Administrator be the sole certificating authority, to ensure against safety considerations being compromised in any way by noise abatement objectives having a distinct and separate purpose. This is a matter of great concern to the airlines industry in the light of past public statements by local and other officials that carriers "should not be allowed to escape prescription of noise rules on claims of threats to safety." Safety should never be subservient to noise.

Some ambiguity in this respect has already been introduced by H.R. 3400. The explanation of the bill states that it is intended to *expand* Title VI of the Aviation Act. Title VI of the Act is captioned, "SAFETY REGULATION OF CIVIL AERONAUTICS." But the bill does not propose to amend this caption of Title VI (e.g., "Safety *and Noise Regulation* of Civil Aeronautics"). It might thus be contended that Congress is manifesting an intention to constitute noise considerations as an *element* of safety (e.g., of persons and property on the ground, as in Title III of the Act). The legislation might thereby afford a new basis for litigation of noise claims, unless the ellipsis were satisfactorily explained in the debates and reports.

An even more fundamental ambiguity has been introduced by the bill's inclusion of authority, "to prescribe and amend such *rules and regulations*" as are found necessary for the control and abatement of aircraft noise and sonic boom. The Administrator's explanatory letter, dated January 11, 1967, recites that the bill is aimed at "*certification authority*" on the basis of noise *standards*, such as that now provided under safety standards in Title VI. The letter leaves the inference that the authority requested to promulgate "rules and regulations" is solely that required to "*govern*" the noise certification procedure.

But an examination of H.R. 3400 discloses nothing in the proposed new section 611 which would limit the rules or regulations to those *implementing* the new noise certification authority. On the contrary, subsection (a) would authorize the Secretary to,

" . . . prescribe and amend such rules and regulations as he may find necessary to provide for the control and abatement of aircraft noise and sonic boom, *including the* application of such standards, rules and regulations in the issuance, amendment, modification, suspension, or revocation of any certificate authorized by this title." (Italic supplied.)

The underlined words strongly imply that the requested authority to promulgate noise rules and regulations is *not* limited to regulations implementing or "governing" certification for noise.

If not so limited, the requested authority to promulgate noise rules and regulations is either superfluous or redundant. For the Administrator himself has stated in his explanatory letter that he already has authority to act "in the aircraft noise area" by prescribing "rules and regulations" under Title III of the Act, section 307(c). In fact, the purported grant of such authority by Congress at this time could only cast a cloud over powers already successfully claimed by the Administrator in litigation conflicting local ordinances.[8]

To remove these ambiguities and doubts, our substitute bill has recast the purpose, caption and language of H.R. 3400 to make clear that the Administrator is being empowered and directed only (1) to prescribe and amend reasonable standards for the measurement of aircraft noise and sonic boom, if he finds such action necessary and appropriate to encourage progress in aircraft noise abatement, and (2) to find, before issuing any aircraft type certificate under existing section 603(a)(2) of the Act, that the aircraft involved meets such standards.

When a given aircraft type has been issued a certificate as meeting the prescribed noise (or sonic boom) standard, it should not thereafter normally be necessary to have to meet additional *flight* rules or regulations purporting to establish a different, or more stringent, maximum noise level (or sonic boom standard). However, in an extraordinary situation, should flight rules and regulations for noise (or sonic boom) abatement be required as a supplement to noise certification, the Administrator now possesses such authority under section 307(c) of the Act.

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[8] *American Airlines, et al.* v. *Town of Hempstead, et al.*, E.D.N.Y. (1967), 272 F. Supp. 226.

1. Scope of certification authority

H.R. 3400 would authorize the application of rules and regulations for the control and abatement of aircraft noise and sonic boom as well as standards of measurement of aircraft noise and sonic boom to "*any* certificate" authorized under Title VI. This is a wide departure from the draft legislation originally proposed by FAA, which would have been limited to *aircraft type certificates* under Section 603 of the Act.

The Administrator's explanatory letter confirms that the authority now being requested extends to certification authority over "airmen, aircraft, air carriers, airports and air agencies," without limit.

It is not clear how the requested authority would apply to airports. Nor is it clear why noise standards and rules should be included in the *certificates* of airmen, air carriers and air agencies. No such authority is required to enable the Administrator to enforce appropriate noise rules and regulations against all of these entities. If it became appropriate and reasonable to place the onus of a noise requirement directly on pilots or carriers, the Administrator has adequate authority to do so under the Act, through the prescription of flight rules and regulations. Under Sections IX and X of the Act, the Administrator can order compliance with any such rules and regulations established pursuant to the Act, and can assess civil penalties for violations.

But to authorize the insertion of noise terms and conditions in the *certificates* of airmen and carriers, on penalty of revocation for non-compliance, would not only be unnecessary and disproportionate to the objective of noise abatement, but susceptible of multiple jeopardy. For example, under H.R. 3400 the Secretary could condition an air carrier's *operating* certificate on its complying—on each take-off and landing—with whatever maximum noise level each local airport might establish. A similar condition could be placed in every airman's certificate, requiring pilots to comply with diverse locally-imposed noise limits on individual flights, on penalty of suspension or loss of their certificates.

Such authority is neither necessary nor appropriate to the end sought. Our bill accordingly would limit the application of the noise measurement standards to *aircraft type certificates.*

2. Mandatory vs. permissive authority

H.R. 3400 *empowers* the Secretary to promulgate and apply standards for noise certification, but it does not require him to do so, even where found necessary for the abatement of aircraft noise.

This is a significant weakness of the bill which should be cured. The substitute bill would *require* the Administrator to prescribe noise and sonic boom standards, once he has found such action necessary and appropriate "to encourage progress in aircraft noise abatement". The quoted language is intended to ensure against arbitrary or unreasonable standards, and against prescription of standards which are not technologically or economically feasible or justfiable.

Under the substitute bill, the Administrator would not only be required to prescribe noise and sonic boom standards, but would be precluded from issuing an aircraft type-certificate under Section 603(a)(2) until he first had found that the applicant aircraft has met such standards. If it were not so provided, those aircraft-type operators who had already had a noise standard applied against their aircraft's certification would have no assurance that competitive aircraft types would be subject to the same penalty, and that the noise standards would be nondiscriminatory in their application.[9]

The compelling reason, however, for making the application of noise standards mandatory is to strengthen the role of the Federal Government in *preempting the field of aircraft noise regulation.* It is essential to the continued development of our national air transport system that conflicting local regulations for noise purposes not be permitted to impede that growth. If there is to be legal regulation of aircraft noise, it is imperative that it be by a single authority, and that the authority be the Federal Government. Unless multifarious local attempts to regulate aircraft noise will be precluded by any new Federal legislation, there is little point in additional Federal legislation.

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[9] This concern, of course, might not be met in the case of an aircraft of foreign manufacture, which could be exempted from any such certification compliance under Section 610(b) of the Act. The present practice of the Administrator is to exempt foreign aircraft from compliance with the type-certification requirements under the Act.

To date, local attempts to regulate aircraft noise have been limited. Those which have rested on an asserted exercise of the police power have been uniformly held invalid, as an undue and unreasonable burden on interstate commerce or as invading an area uniquely committed to Federal care.[10]

However, the principal problem in attempted local regulation has not been by way of noise ordinances adopted under the police power, but purported "lease conditions" imposed by the airport operator as landlord. For example, the Port of New York Authority's well-known "112-PNdb" rule is enforced against carriers operating at the New York airports, under the alleged right of the Port as operator of the airport to control the conditions of its use.

The costs of complying with the New York noise-limit have been estimated by one airline alone at Kennedy International Airport at over $4-million a year. Another carrier estimates that its economic penalty in complying with the regulation as equal to 5% of the annual gross operating revenue of each of its affected aircraft operated at Kennedy International.

Until now, the New York airport regulation has been upheld by the courts as not in conflict with any existing Federal certification or regulation.[11] This appears to be as much the result of omission by FAA to exercise Federal authority as anything else. On the other hand, while it is by no means certain that Federal "noise certification" authority in and of itself would preempt the alleged power of airport landlords to impose such "lease conditions" (or even of municipalities to impose different noise limits than the Federal certification limit), it is apparent that if *mandatory* noise certification were to be added to existing noise regulatory authority o fthe FAA, it would at least move much closer toward complete preemption of the regulation of aircraft noise.

3. Retroactivity of certification authority

Despite FAA's testimony that noise certification under the bill would be only *prospective*, and would not be applicable to aircraft already certificated, there is nothing in H.R. 3400 imposing any such limitation. Thus, by inference at least, the Administrator would have the power to amend, modify, suspend or revoke an aircraft airworthiness certificate for purposes of adding a noise (or sonic boom) standard to such certificate.

Perhaps this result is not intended, and as the FAA's witnesses stated in the 1966 hearings, certification for noise is contemplated as being prospective only. If so, there should be no objection to clarification of this point by an appropriate provision in the bill. We have accordingly provided, in subsection (c) of the substitute bill, that the Administrator's power to amend, modify, suspend or revoke an outstanding certificate for noise purposes shall not extend to aircraft *airworthiness* certificates already in existence.

It is appreciated by the airlines that the FAA might need authority to extend its noise standards to undelivered aircraft which have been type-certificated, but have not yet received airworthiness certificates. Indeed, we concur in the concept that not only *future* aircraft designs, but the later production runs of existing aircraft types, might be required to incorporate appropriate and necessary new noise standards. But the economic implications of recalling existing airworthiness certificates to superimpose a new noise standard, transcend certification procedures and raise basic issues of both *economic regulatory jurisdiction* and of balancing the various segments of the public interest involved.

In this respect, H.R. 3400 would empower far more than mere noise alleviation, and should be amended, as proposed by the substitute, so as to limit its applicability to aircraft *type* certificates.

4. Procedural safeguards for amendment, suspension and revocation

Under the existing safety-certification provisions of Title VI, a certificate cannot be amended, modified, suspended or revoked without giving the certificate

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[10] *All America Airways* v. *Village of Cedarhurst*, E.D.N.Y. (1952), 106 F. Supp. 521, aff'd 2d Cir. 1953, 201 F. 2d 273; after final judgment aff'd sub. nom. *Allegheny Airlines* v. *Village of Cedarhurst*, 2d Cir. 1956, 238 F. 2d 812. Cf. *City of Newark* v. *Eastern Air Lines*, D.N.J. 1958, 159 F. Supp. 750 and the recently decided case voiding the Hempstead, N.Y., "antinoise ordinance," *American Airlines, et al.* v. *Town of Hempstead, et al.*, E.D.N.Y. (June 30, 1967), 272 F. Supp. 226.

[11] *Port of New York Authority* v. *Eastern Air Lines, et al.*, E.D.N.Y. (1966), 259 F. Supp. 745. Cf. *American Airlines, et al.* v. *Town of Hempstead, supra*, note 5, where the Court said of the Port's rules (at pp. 233–234):

". . . its rules are expressly subordinate to the FAA rules and do not profess to authorize or direct anything not authorized under the FAA rules, regulations and Tower bulletin."

holder an opportunity to *answer* the charges or reasons relied upon by the Administrator and to *be heard* in opposition.

For reasons which are not apparent, under the noise-certification procedures proposed by H.R. 3400, the certificate holder would not be afforded the right to answer the Administrator and receive a hearing. If the rights to answer and to be heard are acknowledged even in the case of safety issues affecting human life, it is difficult to perceive any justification for denying such basic procedural rights in the context of simple noise annoyance.

It is even more puzzling why, for noise-certification, H.R. 3400 would withhold the rights to notice and hearing *on appeal*, which are now provided in the Act for appeals from amendment, suspension and revocation of safety-certification.

In each of these situations—administrative review by the Administrator and appeal to the National Transportation Safety Board—the substitute bill would retain, for noise certification procedures, the same procedural guarantees now provided in section 609 of the Act with respect to amendment, suspension and revocation of safety certification. The substitute bill is to be preferred in this respect to H.R. 3400.

Even such minimal procedural safeguards as H.R. 3400 does provide are inexplicably restricted to those "actions"[12] of the Administrator "in which *violation* of aircraft noise or sonic boom standards, rules or regulations is at issue". (Subsection (b), underlining supplied.) No reason appears why the guaranty of basic procedural rights should be thus tied merely to "violations" of the noise standards and rules. The unfortunate inference is that the Administrator would use the new noise certification procedures primarily for punishment, and not for the promotion of improved noise reduction through positive measures calling for modification of outstanding noise certifications. Such a negative approach to promotion of noise alleviation is not warranted. But in any event, a certificate holder's right to appeal from arbitrary or unjust amendments or suspension or revocation of his certificate should not be confined to only those cases where violation of noise standards or rules is at issue, particularly when nothing in the bill would restrict such amendatory or revocation action to violation cases.

The substitute bill assures the customary procedural safeguards of notice, right to answer and hearing as to *all* orders amending, modifying, suspending or revoking an aircraft tye-certificate as necessary and appropriate to encourage progress in aircraft noise (or sonic boom) abatement.

5. Modification and reversal by the Safety Board

Under H.R. 3400, on appeal from actions to amend, modify, suspend or revoke a certificate embodying noise standards, the National Transporation Safety Board is empowered to reverse the Secretary "if it finds that safety in air commerce or air transporation and the public interest do not require affirmation of the order."

This is a curious—and apparently inverted—statement of an intended condition-precedent to Board review on appeal. While its ostensible concession to the primacy of safety over noise is commendable, it is illusory. This is because the envisaged situation in which the Board must defer to safety would virtually never occur. The only occasion when the Board would have to affirm an order modifying a noise-certificate, would be where *safety* requires it. Such a situation on appeal is difficult to imagine.

An apparent situation might occur where a certificated noise-level were subsequently found to be unattainable safely in actual operations. If the Administrator (Secretary) were thereupon to modify the certificate by *raising* the prescribed noise level, the Board would be obliged to find that safety required affirmation of the order. But in such a case, it is unlikely that there would be any appeal, so the situation remains a hypothetical one.

Any ostensible restraint on the Board in the name of safety under this provision thus appears to be largely theoretical. At the same time, there is inexplicably absent from the appeal provisions any condition-precedent to appeal which is compatible with the noise-abatement purpose of the bill.

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[12] Under the safety certification provisions of the Act, the Administrator must issue an "order" to amend, modify, suspend or revoke a certificate (section 609). The requirement of H.R. 3400 is not only looser, but is inconsistent with the bill's subsequent language regarding appeals to the Board, which refers to the *"order"* of the Secretary.

This failure of the appeal provisions to mesh with the first part of the bill has probably resulted from a literal borrowing of the existing language of section 609 of the Act, applying to appeals from safety certification. That language fits the subject of the statute, which is the appeal of safety certification. It does not fit the subject of H.R. 3400, which is the appeal of noise certification.

The substitute bill would conform the language to the situation being dealt with, so as to authorize the Board to reverse an order modifying a noise or sonic-boom certification only if it finds that "the encouragement of progress in noise abatement or sonic boom abatement do not require affirmation of the Administrator's order." In parallel fashion, the substitute bill would require the same preliminary determination by the Administrator before he would be authorized to issue such an order to amend, modify, suspend or revoke a noise (or sonic boom) certification. This is a more rational statutory standard for both amendment and appeal of noise-certification than the confusing safety test of H.R. 3400.

6. Judicial review of Board action

Existing provisions of the Act guarantee that a person substantially affected by an order of the Board on appeal of amendment of a safety certification is entitled to judicial review of the said order under Section 1006 of the Act, and that the Administrator shall be made a party to such proceedings.

But for reasons which are not clear, under the noise-certification procedures proposed by H.R. 3400, persons affected by the Board's order on appeal are not assured of a right to judicial review and statutory joinder of the Administrator as a party.

No justification appears for denying judicial review to persons adversely affected by such action of the Board on appeal. The substitute bill would extend the existing judicial review provisions of the Act to these noise and sonic boom certification procedures on appeal.

7. Erroneous citation

In Section 2 of H.R. 3400 reference is made to "TITLE V—SAFETY REGULATION OF CIVIL AERONAUTICS". The reference is apparently a typographical error. The correct center heading should apparently read: "TITLE VI—SAFETY REGULATION OF CIVIL AERONAUTICS".

CONCLUSION

The airlines agree that appropriate noise and sonic boom conditions should be included in the certification of new aircraft. Reduction of aircraft noise at the source, if technically feasible and economically justifiable, could contribute to alleviation of the aircraft noise problem.

We therefore believe that Congress should amend the Federal Aviation Act so as to authorize and require the FAA Administrator to promulgate and amend reasonable standards for the measurement of aircraft noise and sonic boom, where necessary and appropriate to encourage progress in aircraft noise abatement, and to issue aircraft type-certificates under the Act only upon a determination that an aircraft meets such noise or sonic boom standards.

PROPOSED LANGUAGE FOR BILL ON AIRCRAFT NOISE STANDARDS, SUBMITTED BY THE AIR TRANSPORT ASSOCIATION OF AMERICA

A BILL To amend the Federal Aviation Act of 1958 to authorize the establishment of aircraft noise standards and the use of such standards in aircraft type certification, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Federal Aviation Act of 1958, as amended, is further amended by adding a new section 611 as follows:

"AIRCRAFT NOISE STANDARDS

"SEC. 611. (a) The Administrator is empowered and directed to prescribe and amend reasonable standards for the measurement of aircraft noise and sonic boom if he finds such action necessary and appropriate to encourage progress in aircraft noise abatement. Prior to issuing an aircraft type certificate under section 603(a)(2), the Administrator shall find that the aircraft for which such certificate is sought meets such noise standards.

"AMENDMENT, MODIFICATION, SUSPENSION, AND REVOCATION

"(b) The Administrator may issue an order amending, modifying, suspending, or revoking an aircraft-type certificate if he determines that such action is necessary and appropriate to encourage progress in aircraft noise or sonic boom abatement and that the public interest requires such action. Prior to taking such action the Administrator shall advise the person or persons whose aircraft type certificate would be affected as to the reasons relied on by the Administrator, and shall provide such persons an opportunity to answer and to be heard as to why such certificate shall not be amended, modified, suspended, or revoked. Any person whose aircraft-type certificate is affected by such an order of the Administrator may appeal the Administrator's order to the National Transportation Safety Board, and the Board may, after notice and hearing, amend, modify, or reverse the Administrator's order if it finds that the encouragement of progress in aircraft noise abatement or sonic boom abatement and the public interest do not require affirmation of the Administrator's order. In the conduct of its hearings the Board shall not be bound by findings of fact of the Administrator. The filing of an appeal with the Board shall stay the effectiveness of the Administration's order. Any persons substantially affected by the Board's order may obtain judicial review of such order under the provisions of section 1006, and the Administrator shall be made a party to such proceedings.

"(c) Nothing contained in subsections (a) and (b) of this section shall be deemed to empower the Administrator to amend, modify, suspend, or revoke any airworthiness certificate for purposes of aircraft noise or sonic boom abatement, nor shall the Administrator be empowered to take any action not consistent with the primacy of safety."

Mr. FRIEDEL. I want to thank you, Mr. Stephen. It is a comprehensive statement and I can assure you that the committee when we go into executive session will consider your substitute bill and the proposed amendments. They will all be considered.

Mr. STEPHEN. Thank you. I would like to say, Mr. Chairman, that I am accompanied here by Mr. William Becker, who is assistant vice president-operations, for the Air Transport Association who can answer any operations questions which anyone might have.

Mr. FRIEDEL. Mr. Devine, any questions?

Mr. DEVINE No. Mr. Stephen, I, too, think this is a very comprehensive statement and certainly spells out how the certificated carriers have spent a great deal of time and money and effort to alleviate this noise problem and I think you recognize what this problem is and we are all seeking a solution to it.

Mr. STEPHEN. Thank you, sir.

Mr. FRIEDEL. Mr. Kuykendall.

Mr. KUYKENDALL. Are you of the opinion that the problem or future problem of sonic boom—let's assume of course that with commercial aircraft this will be a future problem—should be taken up in this same legislation as the normal noise problem?

Is not that an entirely different problem geographically and otherwise?

Mr. STEPHEN. I agree, Mr. Kuykendall. As a matter of fact, I did refer to the fact that in the airlines' view sonic boom is a distinct problem from aircraft noise. In the first place aircraft noise is a localized problem. It is identified with airports, the immediate environs of an airport. This is not true of sonic boom.

In fact, as Secretary Boyd stated the other day, there will be no sonic boom problem identified with the airport. It wouldn't be permitted. It couldn't be used even on an operational basis if the law did allow it because no one could run that risk of liability. The

supersonic aircraft would take off at subsonic levels and there would be no sonic boom until, as Secretary Boyd says, you are roughly 100 miles from the airport. Sonic boom is thus an en route problem as distinguished from an airport environs problem. This distinguishes it not only for legal treatment, but also for administration and regulation.

As a matter of physics, too, sonic boom is a quite different phenomenon than noise. True, as one of the courts in Oregon said of noise, "E equals MC^2." If you accept the basic laws of physics, you accept the fact that you may have an invasion of air space above property by noise or sonic boom. But it is nevertheless a different phenomenon as a matter of physical effect, in being a shock wave, rather than a sound wave.

For this reason it does seem somewhat strange to mix the two in a single bill. However, as I stated, we don't object to handing the Administrator authority over sonic boom as well at the present time, and doing it under this bill if it is desired.

Mr. KUYKENDALL. Now, are we to understand that general aviation jet airplanes would not come under the bill the way it is now written?

Mr. STEPHEN. Many general aviation aircraft would. Unquestionably, and second-guessing what the Administrator or the Secretary might adopt as a certification level, many existing business jet aircraft would have to comply with any certification level the Administration would probably lay down.

I referred mainly to "public" aircraft as defined in the act, meaning aircraft owned or operated by governmental entities. Those are the aircraft which would not come under this bill, and there are several thousand such aircraft.

Mr. KUYKENDALL. Are you not of the opinion that any nonmilitary jet aircraft should be treated just like any other?

Mr. STEPHEN. Yes, any public nonmilitary jet aircraft ought to be treated the same as any civil jet aircraft.

Mr. KUYKENDALL. One last question. Getting back to sonic boom and the matter of general noise we talk about decibels, but in the matter of sonic boom isn't it in the present state of the art a matter of yes or no? You either do or you don't have it?

Mr. STEPHEN. In a sense that is so.

Mr. KUYKENDALL. In the present state of the art.

Mr. STEPHEN. Let me put it this way, Mr. Kuykendall. That is a good question. The answer is yes. You either have it or you don't have it. But objectionable sonic boom occurs when the shock wave is of sufficient force, measured in pounds per square inch of pressure, called over pressure, to create injury or damage to structures.

Mr. KUYKENDALL. You are talking about altitude there?

Mr. STEPHEN. That is right. It is a function of altitude. It is also a function of number of engines and power, of course.

Mr. FRIEDEL. Mr. Stephen, will this bill cover the noise of foreign aircraft?

Mr. STEPHEN. Actually that point is covered in the prepared statement. I skipped over it in the interest of time, Mr. Chairman. It could. But if the Administrator or the Secretary were to follow the practice now followed with regard to safety certification, then the answer is, it would not be.

In other words, the act permits the Administrator as a matter of discretion to exempt foreign aircraft, and as a matter of practice he does exempt foreign aircraft, so that foreign aircraft coming into the United States do not have to satisfy the same safety certification requirements that a U.S. aircraft does.

If noise certification were to be applied the same way, your suggestion is correct—foreign aircraft would presumably also be exempted.

Mr. FRIEDEL. Why should they be?

Mr. STEPHEN. We don't know why they should be exempt. We think they ought to be required, since they contribute to the noise problem, to conform to the same noise certification standards.

Mr. KUYKENDALL. Will the chairman yield there?

Mr. FRIEDEL. Just one more question. I note that the Russian jet plane is being observed at Dulles Airport because it was felt to be too noisy to land at New York City. Do you have any comment on that?

Mr. STEPHEN. That is a matter of information only to us also. That is our understanding, that it cannot comply with the existing New York noise regulations. Therefore, New York has, to this time at least, refused it permission to operate. It could land there. The New York regulation doesn't cover landings; it covers only takeoffs. But the aircraft couldn't take off once it landed, so this is the reason for testing it outside of New York. You are correct.

There is a problem, of course, with noise regulation of foreign aircraft. If the United States were to propose or apply a noise limit on foreign aircraft, then we open the door to foreign governments taking reciprocal action to impose some kind of noise limit on U.S. aircraft. And when I say "reciprocal" I don't mean that the conditions are always identical or equal.

Many foreign governments are known to apply more stringent general standards to U.S. aircraft coming into those countries than they apply to their own aircraft. They don't always play the sporting game the way we do. The United States does not ask foreign aircraft to do anything that we don't ask U.S. aircraft to do. But foreign governments don't always play it that way. If we started regulating foreign aircraft for noise, we might find their home-flag countries regulating our aircraft for noise on a more stringent basis.

Mr. FRIEDEL. Mr. Kuykendall.

Mr. KUYKENDALL. You got into my question, but let me carry that just a little bit further. Are we to understand from your statement that we are now doing business with foreign countries that require stricter noise levels for our aircraft than their own?

Mr. STEPHEN. At the moment that is not true to my knowledge, Mr. Kuykendall. But it was true when our jets first went into operation. For a considerable period we were not allowed to fly our jet aircraft into London, Paris, or Rome because of alleged noise considerations.

Mr. KUYKENDALL. We are not on the short end of things in any of these reciprocal deals right now.

Mr. STEPHEN. Not at the moment that I am aware of.

Mr. FRIEDEL. Mr. Pickle.

Mr. PICKLE. Mr. Chairman, do we have other witnesses?

Mr. FRIEDEL. Yes; one other witness.

Mr. PICKLE. Let me ask you one question. I rgret that I have not been able to be here earlier and I have not read Mr. Stephen's testimony. I certainly will do so because I know he is one of the authorities in America on this very subject. He happens to come, Mr. Chairman, from the great institution which is my alma mater, and we are great long-time friends. I welcome him to the committee.

Now, Mr. Stephen, though I may repeat and I hope I don't, I want to say with respect to the noise abatement it seems to me the real problem is who is going to set up these standards and/or issue these certificates. The bill calls for the Secretary of Transportation.

I asked the question last wek, is there a contest between FAA and DOT, and the Secretary of Transportation, Mr. Boyd, said no, there was no vying for positions between the two agencies and as far as he was concerned the bill as written was satisfactory to DOT and the FAA.

Now is your testimony this morning with respect to choosing one side or the other?

Mr. STEPHEN. Yes, sir.

Mr. PICKLE. Would you tell me which?

Mr. STEPHEN. As the statement indicated, we feel that this provision of the bill was essentially just to recognize the passage of the Department of Transportation Act. However, nothing about the Department of Transportation Act would require, merely because the Secretary is charged with research and development for noise, that in certification of aircraft under title VI you should substitute the Secretary for the Administrator.

As I testified, since the Administrator will continue to issue certificates for safety purposes, the certificate for noise ought to go along with it. In fact, it ought to be a single certificate, and the Administrator ought to be the one to issue it.

Mr. PICKLE. But is it not true, as I see it, that the technical work, the research, the scientific evaluation of what is the best approach and in the best interest, actually will be done by the FAA and they in turn will make their report and recommend to the Secretary who will issue the standards?

Mr. STEPHEN. In all likelihood.

Mr. PICKLE. It seems to me it would have to be a joint matter, and if these two agencies are in general agreement, then this ought to be the proper approach. Do you agree, in general, with that?

Mr. STEPHEN. I certainly do, in general, Mr. Pickle. I don't know whether the Secretary would concede that there are two agencies. But he did not say in his testimony that because it must be a cooperative venture, and the Secretary in the ultimate analysis will have to lean on FAA for this function anyhow, the Secretary ought to be the one to issue the certificate.

Mr. KUYKENDALL. Will the gentleman from Austin, Tex., yield for just a moment?

Mr. PICKLE. I would be happy to yield.

Mr. KUYKENDALL. Was that Texas A. & M. you are speaking of?

Mr. FRIEDEL. Mr. Stephen and Mr. Burnard, we are going to try to get permission to sit this afternoon while the House is in session, so we will try to finish it up today if we can.

But I have a letter, which was addressed to Congressman Fraser, from the commissioner of finance of St. Paul, Minn. He asked a question and I want to know if you can supply an answer for the record. He said:

I would particularly suggest that the airlines be questioned along these lines: What amount of money have they spent researching this problem—

You mentioned quite a few figures—

compared to their gross profits? What part of the budget of these suppliers, and engine, and aircraft manufacturers is being used to abate noise? Also, what percent of gross profits before taxes and what is the comparison between the total amount of money spent on noise abatement as compared to the total advertising budget.

I don't know if you can supply that.

Mr. STEPHEN. I will try to take those in reverse order. I have given some figures, of course. However, I don't know that we have such figures, expressed as a comparison of expenditures for research and development for noise abatement as against general advertising budget. I would say, first of all, that so far as the official profit and loss statements and financial statements filed by the airlines with the Civil Aeronautics Board are concerned, there is no breakdown as to research and development for noise abatement as such.

There may be figures for research and development expenditures overall. These would not necessarily reflect a breakdown for noise abatement. Therefore, you couldn't make the direct comparison asked for by the third question or, for that matter, the first question; that is, what percentage of gross operating profits is earmarked for noise research and development by the airlines.

Now, in the case of the manufacturers I would suppose that such a figure is available. I don't want to speak for them, and wouldn't try to. I know of personal knowledge that one manufacturer last year budgeted more than $2 million for noise-abatement research alone on engines. I can't say if that was the total or if it was a figure in excess of that. It was not less than that.

In all events, the expenditures of the airlines for noise abatement have not been confined to "research and development." That is only part of the full cost. As I explained in the statement, first of all, you have an actual investment in hardware for noise abatement. That is not research and development cost. That is an actual investment in hardware, which at the present time is estimated to be in the order of $150 million on noise suppression devices on actual present aircraft, more than 1,000 present jets equipped with noise suppression devices which have a cost of over $150 million.

Now, in addition to that you incur an operating cost penalty, if you will——

Mr. FRIEDEL. You mentioned that in your statement.

Mr. STEPHEN. Yes, of $36 million a year. Finally, the airlines also incur leasehold costs at airports around the country attributable to noise abatement. I might mention the $38 million commitment by airlines at Los Angeles, as tenants of the airport, as users of the airport, to pay for the cost of land acquisition essentially for noise purposes. That doesn't show up anywhere in any "research and development" cost because it isn't research and development. It would show up under

lease expenditures at airports, but it wouldn't be recognized necessarily as connected with noise abatement, unless you knew the facts, as having been actually expended for noise control. I don't believe there is any single figure that I could give you, but if I were guessing at how much the airlines have spent to date on noise abatement and noise regulation, directly or indirectly, it would approach $500 million.

Mr. FRIEDEL. Thank you very much. Any other questions?

Mr. KUYKENDALL. May I ask one thing here?

Mr. FRIEDEL. Yes.

Mr. KUYKENDALL. This question in this letter about a comparison of the amount of money spent there for research and development, and the noise abatement, and so forth as compared to gross profit I think this is a little bit unfair because this figure should be compared to net profit, should it not, because the figure is totally deductible.

Mr. STEPHEN. Except that, Mr. Kuykendall, anytime somebody wants to demonstrate how little you are doing they always like to take your gross profit.

Mr. KUYKENDALL. That is the point I am making, so they would have half as large a percentage as compared to gross and net. I think we should not pass that by. This is not a net profit figure. It is a gross profit figure.

Mr. STEPHEN. You are quite correct. I would acknowledge, on the other hand, that we do not, to my knowledge, budget a figure identified as research and development for noise. Noise costs are a part of the expenditures of the airlines in a great many areas of accounts, and you would have to comb through those accounts to pull out those figures. This hasn't been done, but a fair approximation could be made of what the actual expenditures and costs are.

For instance, at one airport alone, London Airport, the airlines were given a bill of $1,300,000 for spreading dirt around the edge of the airport to keep noise within the confines of the airport. That wasn't paid for by the taxpayers or anyone else. It was paid for by the airlines. That wouldn't be reflected in any figures on research and development.

Mr. FRIEDEL. I want to thank you, Mr. Stephen. Could you come back this afternoon in case the members want to ask you any questions?

Mr. STEPHEN. Yes, sir.

Mr. FRIEDEL. This is subject to our getting approval to sit while the House is in session. Let me say we will try to get permission. I want to thank you very much.

The meeting stands in recess until 2 this afternoon.

(Whereupon at 10:57 a.m. the subcommittee recessed to reconvene at 2 p.m. the same day.)

AFTER RECESS

(The subcommittee reconvened at 2 p.m., Hon. Samuel N. Friedel presiding.)

Mr. FRIEDEL. The Subcommittee on Transportation and Aeronautics will be in order. Our first witness this afternoon will be Mr. E. Thomas Burnard, executive vice president of the Airport Operators Council International. I might ask that Mr. Stephen stay around in case members might want to ask some questions.

All right, Mr. Burnard, you may proceed.

STATEMENT OF E. THOMAS BURNARD, EXECUTIVE VICE PRESIDENT, AIRPORT OPERATORS COUNCIL INTERNATIONAL

Mr. BURNARD. Thank you very much, Mr. Chairman. I have a relatively brief statement and with your permission I would like to read it and perhaps insert as a couple of points some material which relates to some of the things that the Secretary has said and some of the other witness have said so it will be slightly varied from the printed version.

Mr. FRIEDEL. All right, sir.

Mr. BURNARD. Mr. Chairman and members of the subcommittee, I am E. T. Burnard, executive vice president of the Airport Operators Council International. AOCI is a voluntary, nonprofit association of more than 120 organizations and public agencies. They own or operate more than 500 public airports in the 50 States and in other countries around the world.

Our testimony today represents the collective views of the city, county, and State AOCI members in the United States and on their behalf we wish to thank you, Mr. Chairman, and members of this subcommittee for the opportunity to express our support for H.R. 3400, the administration bill, introduced by Congressman Staggers, chairman of the full committee.

In scheduling these hearings, this subcommittee has focused urgently needed attention on a forgotten front of today's war on the pollution of America's physical environment.

Nationwide attacks are being mounted against water and air pollutants. Yet inadequate attention has been given to the equally serious national problem of pollution of our environment by excessive aircraft noise.

We believe it is of prime importance and of great urgency for this Congress to authorize and direct a Federal program of aircraft noise control and abatement. Enactment of H.R. 3400 would be the first major step to be taken in this direction.

THE AIRCRAFT NOISE PROBLEM

The reason that an aircraft noise problem exists today is simply this: No control exists over the amount of noise aircraft can make.

Until the introduction of jet aircraft, civil airports had generally existed in harmony with their neighbors. When the commercial aircraft operators began, in 1958, to substitute the larger jet transports for propellel-driven aircraft, the noise problem began to grow. This airline reequipment program forced upon the Federal Government and upon local communities which own and operate public airports, the problem of expanding airport dimensions to accommodate the new takeoff and landing needs of the jet aircraft. This resulted in wiping out previous "buffer zones" by pushing airport boundaries about a half-mile closer to neighboring residential populations. It also created a new, more annoying, and somewhat frightening sound.

Then, in 1962, the U.S. Supreme Court, in a Pittsburgh case, held that neither the airlines, which fly the airplanes, nor the Federal Government, which has exclusive control over the use of the navigable airspace, was required to pay a propertyowner for the taking of his property resulting from excessive aircraft noise.

In that case, the Court said that the airport operator should have acquired more land off the end of the runway. The net effect of the decision was to place liability for aircraft noise on the one element of aviation least able to control it—the airport.

Faced with the knowledge of expanding commercial jet operations, and with the prospect of trying to acquire more land or face more lawsuits, airport management sought answers to this vexing problem. They continued to lengthen their runways, push out their airport boundary lines, buy "clear zones," revise airport master plans, change runway layouts, close some runways, and seek other local solutions. They sought the cooperation of the airlines and FAA in preferential runway and noise abatement programs.

Additional details have been furnished to Chairman Staggers in a letter we sent him on October 6, 1967. I have a copy here, Mr. Chairman, for the record if you would like to insert it at this point.

Mr. FRIEDEL. This will be inserted in the record at this point.

(The information referred to follows:)

AIRPORT OPERATORS COUNCIL INTERNATIONAL, INC.,
Washington, D.C., October 6, 1967.

The Honorable HARLEY O. STAGGERS,
Chairman, Interstate and Foreign Commerce Committee,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: Thank you for your letter of July 10 requesting information on what the membership of the Airport Operators Council International has done and plans to do in the field of aircraft noise abatement, and for such suggestions and recommendations that would be useful in this field.

CURRENT AIRPORT PROGRAMS FOR ATTACKING THE AIRCRAFT NOISE PROBLEM

In the enclosed memo, attachment A, we have described actions taken by many airports to help attack the problem of aircraft noise at the local level. These actions can be divided into two broad categories:

1. On-Airport
2. Off-Airport

The principal "On-Airport" actions relate to:

a. Changes in runway/taxiway layout,
b. Changes in, and control of, maintenance runup areas, and
c. Requirements for use of preferential runways, restrictions on night operations and establishment of noise limits.

The principal "Off-Airport" actions available relate to:

a. Zoning
b. Acquisition of fee title and other interests in land.

These and other methods have been tried at airports throughout this country and abroad with varying degrees of success.

FUTURE AIRCRAFT NOISE PROGRAMS

Future plans indicate stepped-up action, to the extent feasible, by airport management in the action areas noted above. Further, airport management jointly through AOCI at the national level and individually at the local level, are pursuing a program of full discussion and cooperation with all segments of the aviation industry and the Federal Government to develop more realistic approaches to resolving the aircraft noise problem.

THE AIRCRAFT NOISE PROBLEM CANNOT BE SOLVED AT THE LOCAL LEVEL

The past nine years of airport experience in the noise area has verified one basic conclusion. This conclusion is that aircraft noise is, in the final analysis, a national—and an international—problem which must be resolved at our national level if we are to foster the continued development of a national air transportation system. The action programs undertaken by airport management are

inherent stop-gap measures with little hope of engendering any long-run solutions. These can come only from national solutions. Realistic solutions to the aircraft noise problem must be at once uniform and compatible with differing operations at scores of airports throughout the country. Local operators and local authorities simply cannot solve the problem from the local level because . . .

First, it is financially impossible. The majority of public-owned airports are already locally and Federally subsidized and face stiff competition for more needed dollars from all forms of present and emerging local and Federal social and national defense programs. The current airport development programs alone require on-airport improvements—for other than noise purposes—of some $3 billion by 1971 and at least $6 billion by 1975.

Second, extensive real property acquisitions or zoning which would move people away from the noise are fraught with legal, financial, social and political obstacles. To solve aircraft noise through purchase of noise sensitive land areas would mean buying up whole neighborhoods . . . and as new and noisier aircraft are introduced, buying up additional entire neighborhoods. The cost and social disruption is prohibitive even if it were legally and politically possible.

Third, there are unresolvable technical problems. Prevailing winds and Federal safety considerations require predominant use of certain runways which brings the aircraft noise straight to the airport neighbor. It would be a great economic waste to build expensive new runways which could be used only a minimal amount of time when winds are "just right", or to build new airports "further out" when the airlines refuse to use them, e.g., such as Dulles International Airport. Solutions must be found in the aircraft and its method of operations.

Fourth, there are difficult or insurmountable legal problems. Not all public airport owners and operators have "land use" zoning authority of their own, nor is it legally possible to force surrounding political jurisdictions to enact such zoning. Again, Dulles International Airport, is a prime example of one governmental entity failing to achieve zoning cooperation from other governmental entities. Further, zoning, when enacted, has frequently resulted in court rulings that the ordinance is unconstitutional and the airport agency is liable for the cost of "taking" the property involved.

Notwithstanding the severe limitations pertaining at the local level, reasonable and equitable approaches to resolving the noise problem exist, but must be exercised at the national level.

Recommendations for resolving the aircraft noise problem

1. *Certification of aircraft for maximum noise levels.*—Public interest requires that aircraft be made compatible with the communities they serve. By 1975, some 500 U.S. communities will be receiving scheduled jet aircraft service. It does not seem reasonable, nor in the public interest, to permit an aircraft carrying 50 people—or even as many as 500 people—to make life unbearable for many thousands of local residents each time that aircraft lands or takes off. It is imperative that the Federal government establish responsible aircraft noise limits through aircraft type and operating certifications. Time is of the essence. It is important that authorizing legislation (H.R. 3400, S. 707) be enacted immediately. Because of Congressional delay in action on such bills last session and so far in this session of Congress, it is probably that FAA may certificate such new noise-makers as the Concorde, stretch-jets, and the 747 without any consideration to their noise. Congressional action is needed now.

2. *Accelerated technological research.*—In order to assist the industry in designing, building, and operating aircraft as nearly compatible with their operational environments as possible, the Federal government must encourage and conduct aircraft technological research. The aircraft manufacturers, NASA and FAA, have attempted to step out in the right direction in initial research efforts, they show evidence of significant possible breakthroughs, but now need Congressional encouragement, a program of financial assistance and—particularly for private industry—incentives.

3. *User-tax to finance solutions to the residual noise at the local level.*—An Airport Trust Fund, to be solely supported by the users of aviation, should be established to provide adequate funds to support a program of 90% Federal participation/10% local participation to make possible airport development which is primarily related to aircraft movement and operation but would have

additional benefits to noise abatement. This would include the acquisition of land or land interests needed to resolve any residual noise problem remaining after all possible aircraft technological improvements were made. Such a fund should be created out of one or more of the following sources: taxes on aircraft and fuel, cargo, or an additional ticket tax. The Administration of such an Airport Trust Fund should be in the Federal Aviation Administration, and distribution of such funds would be on the present area/population, discretionary basis of the Federal Airport Act.

We hope this brief review of the aircraft noise problem will assist you in understanding its scope, the sincere interest of the AOCI Membership in helping to resolve the problem, and the need for prompt Federal participation to stimulate and ensure necessary action.

We appreciate this opportunity of presenting our views to you. If we may be of further assistance or if you have specific questions we may assist with, do not hesitate to contact us.

Sincerely,

E. THOS. BURNARD,
Executive Vice President.

[Attachment A]

1. Changes in runaway/taxiway layout

The most often used method of noise abatement through runway/taxiway layout changes is an extension of a runway. This has been done at a number of places where the terrain and the costs have made it feasible. By the use of such extensions, the aircraft can start their take-off farther from the noise-sensitive areas and thus attain greater altitude immediately upwind of the airport. Under some circumstances we have used displaced thresholds for landing and thus alleviated approach noise.

Other actions taken by airport operators have included the construction of new runways essentially to accommodate increased traffic but planned as to alignment with airport neighbors in mind. We have abandoned runways, we have abandoned plans to build certain runways, and we have alternate runway layouts.

Within limits, these measures have produced useful results. They are costly measures, however, and only a part of these costs are financed by the Federal Aid to Airports programs.

2. Designated areas for engine maintenance runups

A very common practice among airport operators is the designation of specific areas on the airport where engine maintenance runups may take place. These generally take the form of shielded or remote areas for runups which may vary for day or night operations. The latter usually requires the use of noise supressors.

3. Preferential runways

Another common practice of airport operators is participation with the Federal Aviation Agency and the airlines in the development of a preferential runway system. Implementation is usually through an Operation's Letter by the FAA which designates the runways by order of preference under certain wind conditions. Exceptions are always made when in the judgment of the pilot the use of the preferred runway will jeopardize safety, or when in the opinion of the Tower Supervisor, a hazard could be created.

Related to the general subject of preferential runways are agreements worked out among the airports, the FAA and the airlines regarding preferred flight paths over industrial or noninhabited areas after take-off or prior to approach to land.

Visual markers, such as beacons, have also developed, and additional visual guidance to the runways is provided to help keep the pilots on appropriate courses and approach paths.

All of these measures rely, to a high degree, on the human factor—the pilots and the controllers. And being human, the effectiveness of these measures is only as good as the willingness and ability of those involved to follow them.

4. Maximum noise limits

In the United States, only in the New York areas has a maximum noise limit on present aircraft at a given point off the airport been established and enforced by an airport operator. Among the reasons for this anomaly are the high degree of

technical skill and the elaborate facilities necessary for the development of such criteria, the tedious chore of measuring the noise characteristic of each aircraft operation, and the difficulty of enforcing the procedure.

Obviously, it would be better if some central agency, such as the FAA, were to develop aircraft noise standards and enforce maximum noise limits.

5. Restrictions on night operations

In the United States, limitations of some kind on night operations exist at perhaps 18 to 20 airports.

The most common restriction is the prohibition of training flights at night by either civil or military aircraft.

Jet departures are limited to certain runways, certain weather conditions, or certain hours at perhaps half a dozen airports in the United States and at additional airports abroad.

Maintenance runups are also prohibited or limited at other airports.

Night restrictions like maximum noise limits, if set by airport operators can, if sufficiently widespread, cause severe limitations on the air transport system. These are measures that airport operators take reluctantly therefore, but will take when necessary.

6. Fences, deflectors, signs, etc.

Among the many ideas tried by airport operators to reduce aircraft noise annoyance are:

Screening aircraft noise from nearby communities by block-walls, blast fences, and even the use of stands of pine trees;
Lighted signs reminding pilots of noise abatement procedures;
Reversed direction of instrument approach to runway;
Increased visual glide slope angle;
Sought from FAA increase on non-visual glide slope angles.

All these are limited, but under certain circumstances, useful measures.

7. Zoning

Height restriction zoning is in effect at many airports throughout the U.S. and is being sought at many others. Height restriction zoning, in general, has survived a number of court tests as to constitutionality; but there still remains doubt in some jurisdictions. Height restriction zoning, however, is seldom a solution to the noise problem. Its basic intent is to protect the flight of aircraft from hazards in the approach zone.

Land-use zoning is quite another matter. Although the State laws and the court tests make it possible in some jurisdictions to achieve the control of land-use through zoning, the vast majority of such decisions, particularly at the highest state court levels, have held land use zoning to be a constitutional taking. Further, land-use zoning can be of little use in built-up metropolitan areas. Even the Federal Government found that land-use zoning for a new airport in farming areas—Dulles International Airport—cannot be readily achieved.

Even assuming there were no legal obstacles to land-use zoning, however, airport planners have no guide as to how much land should be zoned because there are no limits on the amount of noise today's aircraft can make; and even worse, no limits on future aircraft.

8. Purchase of land interests

Purchase of fee title, and in some cases of avigation easements, is also a method which airport operators have explored carefully as a possible way to alleviate aircraft noise.

For years, before the jets were introduced in 1958, airport operators had diligently sought additional land off the ends of runways for future airport expansion and for navigation aids which, incidentally, serve to prevent development of close-in residential areas.

Based upon Federal standards, 8,400 foot-long runways were the maximum to be required. Over night, however, the Federal Aviation Agency (through its predecessor the Civil Aeronautics Administration) certificated aircraft which required 10,500 feet and more of runway. This brought the end of the runway nearly one-half mile closer to the community and imposed great additional costs for land acquisition upon the airport operators.

Today, there is still no assurance that the Federal Government will not certifi-

cate stretched-out DC–8s and Boeing 707s which may *well* require longer and stronger runways, and from all preliminary indications, produce more noise on take-off as well as landing.

Airport operators are acquiring land interests every day for predictable normal airport development. However, until the FAA places certification and operating limits on both the runway requirements and noise characteristics of aircraft, airport operators will not have suitable information on which to base an economic evaluation of the steps necessary to accommodate future aircraft such as the stretch-outs, the SST and the C5As.

Mr. BURNARD. Thank you. Finally, finding all of these tools inadequate to decrease the noise from an ever-increasing number of aircraft, they turned to the executive branch and to the Congress for a national solution to a national problem.

WHY AIRCRAFT NOISE IS A NATIONAL PROBLEM

It is clear that the greatest potential ability to control noise rests with the Federal Government. Airlines, manufacturers, pilots, and airport operators have all tried. Notwithstanding the time, money, and effort these groups have spent, the problem grows steadily worse. The solution does not lie in local communities brankrupting themselves trying to buy out—by court order or otherwise—all airport neighbors who allege annoyance or damage by the ever-increasing aircraft noise.

What happens when the next family of noisier jets comes along? Must millions of property owners sell their property or be restricted in its use, or should restrictions be placed on the amount of noise aircraft can make? We believe it is in the public interest that reasonable restrictions be placed on the aircraft—both today's and tomorrow's.

Today's aircraft are causing today's problems. They must be improved and so must all future aircraft.

Aircraft noise is a national, and an international problem because it is produced by the aircraft which operate in the air transportation system. Only national governments can effectively control aircraft for noise purposes both at the time of certification for construction and in operational rules and certificates.

The executive branch has recognized that aircraft noise is a national problem and that it requires a national solution.

In President Johnson's 1966 transportation message to Congress, he noted that aircraft noise is a "growing source of annoyance and concern" which will continue to grow. He said:

> It is clear that we must embark now on a concerted effort to alleviate the problems of aircraft noise.

He then appointed his Science Advisor, Dr. Donald F. Hornig, to head up a Federal interagency group to develop an action program including "legislative or administration actions needed to move ahead in this area."

Dr. Hornig's White House group recommended that the first legislative step necessary to solve this problem is to give the Department of Transportation and the Federal Aviation Administration the necessary authority to control noise at its source. H.R. 3400 is the embodiment of the administraton's views on this subject.

Dr. Hornig said in a letter in June of this year to a Member of Congress:

> Concerning noise standards, I regard the passage of legislation authorizing the Secretary of Transportation to set aircraft noise standards to be critically important. In the long run it is the only way I can see to protect the public interest in this respect . . . . (Congressional Record, June 7, 1967, p. A2874.)

In addition to the support Department of Transportation Secretary Alan S. Boyd gave this legislation last week, he advised the Senate Aviation Subcommittee on August 28, 1967, that the Congress should "enact legislation which will permit us to set maximum noise standards and to enforce those standards through regulation. We also need," he said, "the legal authority to include noise consideration in the Government certification of aircraft."

He pointed out also that, although this legislation is not the complete solution it will, however "permit us to provide assurance to communities suffering from the noise impact that noise emissions will at least not get worse, and will assure that as technology can accomplish it, noise levels will be lowered."

Last week Secretary Boyd, in urging passage of legislation before this committee, referred to the matter of compatible land use near airports. In order to round out the record I would like to quote further from the Secretary's statements before the Senate subcommittee on August 28 in regard to this point.

He said then that:

> The legislation will permit us to set maximum noise levels at various distances out from the airport so that the communities can develop land use plans and zoning standards around known noise levels. Without enforcible noise limits local communities have no assurance that plans that they develop and implement looking to compatibility of land use with the airport will in fact be compatible with the new generation of aircraft.

In testimony before the House Interstate and Foreign Commerce Committee earlier this year (Mar. 8, 1967), FAA Administrator McKee emphasized the importance of this legislation. He said:

> We regard enactment of the bill (H.R. 3400) as a most important step in our efforts to alleviate the noise problem. Perhaps of greatest significance is the authority it provides for the application of noise standards in the certification of aircraft. We believe this authority is essential to the achievement of any real progress in the reduction of aircraft noise at its source.

THE URGENT NEED FOR LEGISLATIVE ACTION

As these Federal officials have explained, enactment of legislation like H.R. 3400 is essential to controlling noise at the source. The urgency of the need for such control increases with each day—and for a variety of reasons.

First, aviation is America's fastest growing industry. This means that jet service is moving into more and more airports. There were only 16 airports served by jets in 1960. This year more than 150 airports have jet service. At 35 or more of these 150 airports aircraft noise litigation is currently pending. Nearly 350 airports are predicted to have jet service by 1970, and more than 500 by 1975. This is no longer just a "big city" problem. It is rapidly becoming a common problem throughout the world.

Next, growth also means more jet aircraft and more jet flights. In 1960 there were 224 turbojet airline aircraft. In that year, there was a total of 26 million aircraft movements in United States at airports with FAA control towers; 7.3 million of these were air carrier movements.

By 1966, the number of airline jet aircraft had quadrupled and one in every three takeoffs at U.S. airports was a jet. Total aircraft movements had nearly doubled (to 47.8 million).

It is predicted by 1973 there will be two and a half times as many airline jets as there are today, and by 1977 the number of air carrier flight movements will have doubled over today's (total aircraft movements will double by 1974 over 1966.)

General aviation, in the meantime, will have grown even faster in numbers of aircraft and aircraft movements, so that the total aircraft movements will double in 1974 over those of 1966.

Thus, if nothing is done to significantly improve the noise characteristics of aircraft, increased volume of operations alone will expose more people to more noise.

Noise complaints from these people will be just as real as those we hear today.

Next, future aircraft. The jumbo jets, air buses and supersonic transports—all bigger and more powerful than any of today's aircraft—are expected to be introduced into service in the next 3 to 5 years. Are these aircraft to be built to strict safety standards—but not to noise standards?

Aviation history has shown that with each new technological advance in aircraft, the manufacturers and their customers wring every ounce of economic productivity out of them.

The principal forces which move private enterprise are profits and regulations.

There are no profits in reducing noise and there are no regulations to control it.

If the benefits of technology are to truly enhance the public interest, then reasonable restraints are necessary to assure that aviation development stays in balance with the development of communities. It is unrealistic to require that community development continually adjust to aviation development.

Many broad-based organizations representing the communities and the public share our concern and desire for prompt legislative action. These include the National League of Cities, the United States Conference of Mayors, the National Association of Counties, and the National Association of State Aviation Officials.

We were also pleased to hear the Air Transport Association this morning support the concept of Federal legislation to control noise.

In addition, the widespread interest in Congress is evidenced by the 29 bills pending in the House, all seeking to solve the aircraft noise problem.

Finally, congressional action is urgently needed to help solve the aircraft noise problem in the international field as well as domestically.

In just a few more months, the Anglo-French supersonic transport—the Concorde—will make its maiden prototype flight. It will need U.S. airworthiness certification for its U.S. airline purchasers who must decide on the exercise of their purchase options in mid-1968.

Under existing laws and regulations, the Concorde won't have to meet any U.S. Federal noise criteria. And until the U.S. Government has the authority to set its domestic noise standards, no meaningful international noise standards will be possible.

In that connection there is an international conference of ICAO, the International Civil Aviation Organization, going on right now in Montreal, and aircraft noise is one of the items on the agenda.

The U.S. Government officially sought to remove the item from the agenda because the United States doesn't have noise standards developed here. They were unsuccessful in having it removed. The item will be discussed in a couple of weeks before the meeting there in Montreal adjourns.

All advance information about the Concorde clearly indicates that it probably will be noisier near airports than the proposed U.S. SST, and possibly noisier than any current aircraft. Should this prove to be the case, and should it not be required to meet U.S. Federal noise standards, then how could the United States justify imposing meaningful noise standards at a later date on U.S. built aircraft?

Gentlemen, the hour is late. As early as October 1960, the House Committee on Science and Astronautics after comprehensive hearings concluded, among other things, that:

> There is no impartial highly qualified Government group specifically charged with the responsibility for formulating noise criteria, and even if a set of noise criteria was established satisfactory to industry, the public, and the Government, it is questionable if the FAA has under the present law the regulatory authority to enforce it. (House Report No. 2229, 86th Cong., second sess., Oct. 13, 1960, p. 50.)

In 1963, this House Interstate and Foreign Commerce Committee recommended, among other things, that:

> Should the authority of the Federal Aviation Administrator to promulgate air traffic rules which seek to alleviate the impact of aircraft noise on persons and property on the ground be found by him to be inadequate, he should report this fact to the Congress and seek whatever additional authority is necessary to achieve that end. (House Report No. 36, 88th Cong., first sess., Feb. 27, 1963, p. 28.)

Mr. Chairman, the Department of Transportation and the FAA have found their authority questionable in this field. They have reported this to the Congress and they do seek such additional authority as they consider necessary to solve the problem.

For these reasons we respectfully urge the prompt enactment of this legislation. We believe it is essential to the progress of aviation as well as to the progress of community development.

Failure to exercise prompt control over aircraft noise can result in, among other things: Increased social disorders in communities near airports; increased inability to find suitable new airport sites and expand old ones to accommodate the burgeoning growth of air travel; increased pressure by local groups for banning flight operations during specified hours of the day on particular runways, at specified noise levels, and, perhaps, at particular airports with the consequent chaotic effect on the air transportation system; increased inability of airport planners to accurately predict the future land requirements for airport expansion and new airport developments; increased capital requirements for expansion of airports to cope with aircraft noise; increased

litigation by property owners over the alleged damage to their property values, and last, but not least, increased pollution of the environment in which man must live.

Mr. Chairman, we believe these hearings have demonstrated conclusively both the need for aircraft noise control legislation and the absence of any opposition to its concept or goals. We respectfully urge the subcommittee and the full Interstate and Foreign Commerce Committee to report effective legislation to the House as soon as possible.

Thank you, Mr. Chairman, for this opportunity to be heard, and since certain technical points have been raised about the language of the bill I would like to offer our services and comments to those who will be working on the bill in detail.

Thank you.

Mr. FRIEDEL. I want to thank you, Mr. Burnard, for your very fine statement. I know you put a lot of work into it. Let me ask you this.

You specifically mention H.R. 3400 all the way through and you are in favor of it, and you heard Mr. Stephen testify this morning and he suggested some amendments. Have you seen his proposed substitute bill?

Mr. BURNARD. I saw it only briefly this morning, Mr. Chairman. I have had no time to study it. I got the impression from his testimony though that he would seek to have the scope of the authority to the FAA and DOT somewhat limited. I can't speak in any detail about whether his suggested limitations are appropriate or not.

That is why I suggested at the last part of my statement that we would like to offer our services to work with you and the staff to see what these details mean.

(For further comments by AOCI on H.R. 14146, see letter dated March 20, 1968, p. 197.)

Mr. FRIEDEL. Thank you. Mr. Devine, any questions?

Mr. DEVINE. Just one question on your organization, Mr. Burnard. You represent over 500 public airports?

Mr. BURNARD. Yes, sir. Our membership consists of the public agencies that own and operate airports.

Mr. DEVINE. City and county operated?

Mr. BURNARD. Yes; for instance, in Columbus, Ohio, it is Port Columbus. It is the city of Columbus. That is actually the member, and we deal of course with Jack Bolton at the airport as the official representative of the city for dealing with the Airport Operators Council International.

Mr. DEVINE. And others situated across the country.

Mr. BURNARD. That is correct. Our members include not only municipalities, but they also include bicounty organizations, two-city organizations, such as the Minneapolis-St. Paul Metropolitan Airports Commission, the Public Utilities Commission of San Francisco, the Port of Seattle, Port of San Diego, that sort of membership.

Mr. DEVINE. Thank you.

Mr. FRIEDEL. Mr. Watson?

Mr. WATSON. Thank you, Mr. Chairman. Just one or two questions. Mr. Burnard, you state on the second page of your prepared testimony that—

This resulted in wiping out previous "buffer zones" by pushing airport boundaries about a half mile closer to neighboring residential populations.

On the other hand, haven't residential areas moved toward the airports?

Mr. BURNARD. Both are happening, Mr. Watson. In connection with what we have said, behind that statement is the fact that until about September of 1958 an 8,400-foot runway was the maximum considered necessary for the longest range flights and it was the maximum length runway which the FAA would help finance under the Federal aid to airports program so it wasn't necessary for airport operators to build more than 8,400 feet of runway unless they wanted to at their own expense and for their own reasons.

Mr. WATSON. But as a practical matter do you not locate airports in sparsely populated areas? I mean with the cost factors and other factors involved as a general rule is that not true?

Mr. BURNARD. That is true, and I will get to that in a moment. In connection with my last statement, when subsonic jets were introduced in scheduled service in October of 1958 they needed 10,500 feet of runway to operate both safely and efficiently and it was at that time that the Federal criteria were changed. This wiped out buffer zones.

Now, in connection with the population moving toward an airport, it is true. A good case in point of course is right here locally. Dulles was selected partly because of its location in relation to the airspace situation as well as the availability of a suitable site geographically and with respect to terrain.

In that particular case the Federal Government had enough money to be able to buy a mile and a half off the end of each runway at the time they were constructing the airport. This is a luxury that not many local communities have found possible to have. But notwithstanding the fact that Dulles was able to buy more land before they even built the airport than most places can, they found it extremely difficult—as a matter of fact, impossible—to get zoning beyond that mile and a half. So, there is not complete protection for any distance beyond the mile and a half, and one of the problems there, which is true in most other parts of the country, is the multijurisdictional problem.

The airport is frequently owned and operated by one political jurisdiction. The land surrounding it is under the jurisdiction of another political body, and there is no real incentive on the part of the second political body (such as Fairfax and Loudoun Counties out here) to do what in this case the Federal Government wanted them to do, so they just didn't do it.

Mr. WATSON. But I think it would be fair to say that there has been as much encroachment by residential and business endeavors upon the airport as there has been encroachment on the part of the air traveler and the commercial airlines on the surrounding neighborhood.

That would be a fair statement, would it not?

Mr. BURNARD. Yes; and in a growing urban nation such as we have this is going to continue.

Mr. WATSON. And when you have that growth you encounter problems.

Mr. BURNARD. All kinds of problems.

Mr. WATSON. And one of the problems that the traveling public will encounter with the increased power and so forth of planes is the additional noise factor, isn't it?

Mr. BURNARD. Yes; unless some reasonable restraints are put on the amount of noise these vehicles can make. We have said in our statement that we think a reasonable balance must be found in the public interest between aviation's development and normal community development.

Mr. WATSON. But I am sure that the airport operators, be they private or Government, are more interested in safety than they are in noise, aren't they?

Mr. BURNARD. Obviously the first consideration is safety.

Mr. WATSON. Is safety, and when you suppress the noise factor it seems rather axiomatic that you would have a resultant loss in power, would you not? You are in the business.

Mr. BURNARD. That is not necessarily so, Mr. Watson. The technicians in the aircraft and engine manufacturing business claim, as well as NASA officials, and FAA, that there are things that can be done to the engine and to the airframe, which will not have any adverse effect on safety whatsoever but will in fact reduce the level of the noise created by the aircraft.

Now, these things cost money, but technologically they are well within the state of the art.

Mr. WATSON. You say that they are now in the process or soon will be of having an international conference and one of the items to be discussed is the matter of noise abatement, and apparently you allege that the United States wanted to have it removed from the agenda inasmuch as we had no Federal noise standards.

What other countries have noise standards?

Mr. BURNARD. There are no national noise standards in any country that I am aware of at the moment. The British are seeking noise standards. The Board of Trade recently announced that they are planning to introduce noise standards in the very near future. One of the difficulties is that the British, the French, and the Americans, because we three countries are supersonic transport builders, have certain international relations which none of the countries want to jeopardize and they apparently are all seeking to find a reasonable solution to the noise criteria and noise standards and it is those three countries that primarily sought to keep the item off the agenda for this international meeting.

Mr. WATSON. You say three countries.

Mr. BURNARD. Primarily three, yes.

Mr. WATSON. I notice apparently you indict the United States only, but there were others involved.

Mr. BURNARD. I didn't mean to indict the United States only. That was by way of illustration that we need noise standards in the United States because this is one of the ramifications—our lack of standards, or authority to develop the standards, in the United States.

Mr. WATSON. You say the Concorde will not have to meet any, and I quote, "U.S. Federal noise criteria." So the record might be completely accurate, it won't have to meet any noise criteria of any other country as of this time.

Mr. BURNARD. As of the moment, that is correct, sir.

Mr. WATSON. But again we understand, and I think we agree on this, if the noise abatement procedures would result in minimizing

the safety factor, we would rather side with the safety, those who are advocating safety, than the noise abatement people.

Mr. BURNARD. We agree, Mr. Watson. I don't think there are any of us in the business that don't put safety first.

Mr. WATSON. Because I have talked with the pilots out here and some of them have been disturbed about these noise abatement procedures that they have applied right out here at National, cutting down on the power when hardly off the ground, and these just don't glide around here. I have talked to the pilots and they are concerned about it because we are trying to satisfy the not necessarily idiosyncrasies—I am concerned with noise myself—but some of the problems of parties we might be having out at Georgetown.

However, we are having a lot of plane crashes around here, had one yesterday, and we are all disturbed about it. If it comes to a matter of appealing to the noise abaters or those who advocate safety, I tell you it is not a difficult decision for me to make, and I applaud the effort that apparently everybody is trying to look into this thing, but I believe we should make haste slowly, especially if it is going to impair the safety of the air-traveling public.

You can't have your cake and eat it too. You ask for the speed and you can ask for all the additional power. I think it naturally follows that you are going to have some inconveniences of noise in this factor. We do appreciate the help of your testimony that you have given us.

Mr. BURNARD. Thank you, sir.

Mr. FRIEDEL. Thank you, Mr. Watson. Mr. Kuykendall.

Mr. KUYKENDALL. Which is the noisier airplane? The 727 or the 717?

Mr. BURNARD. It depends to some extent on how it is operated.

Mr. KUYKENDALL. Well, normally.

Mr. BURNARD. The 727 has some noise abatement characteristics built into it which——

Mr. KUYKENDALL. Is it not true, sir, that each group or each branch of this new family of jet aircraft has been quieter than the one before?

Mr. BURNARD. No, I don't think that necessarily follows.

Mr. KUYKENDALL. You are, of course, frequently contradicting the gentleman this morning. You are aware of this.

Mr. BURNARD. I think he said that there has been improvement.

Mr. KUYKENDALL. He said each one of them is quieter than the one before. I don't believe there is any misunderstanding in his testimony.

Mr. BURNARD. Well, let's just speak of various types of airplanes for a moment.

Mr. KUYKENDALL. I believe he even quoted the reduction in decibels, from 5 to 10 quieter.

Mr. BURNARD. And which airplanes was he speaking of?

Mr. KUYKENDALL. The whole family of aircraft that has come out has been quieter with the advent of the fanjet.

Mr. BURNARD. With the fanjet?

Mr. KUYKENDALL. Yes, sir.

Mr. BURNARD. The fanjet did reduce takeoff noise; that is correct.

Mr. KUYKENDALL. Aren't practically all of the new family of aircraft equipped with fanjets?

Mr. BURNARD. A great many of them are. It has much more efficient operational characteristics than the straight jet.

Mr. KUYKENDALL. Sir, would you mind answering my question. Are they generally quieter or are they not generally quieter?

Mr. BURNARD. The turbofans are generally quieter on take off; that is correct.

Mr. KUYKENDALL. Well, isn't that takeoff and landing? Isn't that our concern?

Mr. BURNARD. On landing the noise is increased with the turbofan engine and the greatest problem in several communities today is the result of the landing noise from the turbofan-equipped airplanes.

Mr. KUYKENDALL. We have been told in this committee that the SST, both the Boeing and the Concorde, are actually quieter than the present family of jet airplanes. Now, again we are running into some contradictory testimony here.

With your statement that they are going to be noiser, I would like to know who knows what they are talking about here.

Mr. BURNARD. Well, I will be glad to explain the situation as we know it. The U.S. SST is the only airplane that has ever been designed in the United States with noise criteria as one of the design objectives. This is being done as a result of the fact that the U.S. Government is subsidizing the construction of the prototypes.

Mr. KUYKENDALL. You don't think it would have been done if this good old American free enterprise wasn't here?

Mr. BURNARD. It hasn't been done as a matter of history in the building of other aircraft.

Mr. KUYKENDALL. Did you hear the gentleman's testimony this morning?

Mr. BURNARD. Yes, sir. Mr. Stephen?

Mr. KUYKENDALL. How about a phrase like this.

From the beginning, noise suppressors were installed on commercial jet engines—

This is no forcing by Uncle Sam—

In contrast to military jet aircraft which were operated without suppressors. By 1962, the airlines had installed noise suppressors on 325 jet aircraft—

Voluntary, not a forced thing—

At a cost of a quarter of a million dollars per aircraft a total of $73 million for the industry.

By 1965, the industry invested $150 million. Now, my friend to my left spoke of indictment, and I am a little bit unhappy about the fact that you felt it was necessary to go back and make indictments.

Now, we have a case for quieter airplanes and it is a good enough case without going back and making accusations against American free enterprise which did whatever they did voluntarily, and you come up here and blame this on them. You have a good case without going back and making statements that they haven't done anything.

Mr. BURNARD. Congressman, I have no intention of making indictments and I don't think I said that they haven't done anything. I said that we have all done a great deal—the airlines, the manufacturers, the pilots, the airport operators.

Mr. KUYKENDALL. No, sir; you haven't said that.

Mr. BURNARD. With your permission I would like to refer you to page 3 of my statement.

Mr. KUYKENDALL. Look at page 6 where it says:

Aviation history has shown that with each new technological advance in aircraft, the manufacturers and their customers wring every ounce of economic productivity out of them.

The principal forces which move private enterprise are profits and regulations. (But) there are no profits in reducing noise.

Now, by every implication you could leave here you say that these people are not interested in reducing noise. All I want to do is have everybody come in here and be fair with each other and say we have a terrific problem in the future without implying that the money-hungry, money-grabbing, free enterprise system that keeps you in business and keeps me up here is not interested in solving this problem just as much as you are.

One last point I would like to make. You are worried about a bankrupt local government. I wish somebody would start worrying about a bankrupt National Government. Thank you, Mr. Chairman.

Mr. BURNARD. Mr. Chairman, may I just say in that connection that I want to make the record very clear and I want to make it clear to you, Congressman, that there is no question in our minds that everybody in the business has done a great deal to try to solve this problem, but we simply haven't got it solved yet.

Mr. KUYKENDALL. Let's not leave a question here in this committee.

Mr. BURNARD. We need help.

Mr. FRIEDEL. Mr. Burnard, we understand you. We all need to help, and this is a very, very great problem and we are trying to solve it the best way we know how as of today. Maybe one of these days we can avoid all this noise we are worried about. We might be able to even cure the SST boom. We don't know, but we want to try to find out.

Mr. BURNARD. We do, Mr. Chairman.

Mr. WATSON. Mr. Chairman, may I ask the gentleman a question? I can see your concern. As representing the airport operators especially you felt the wrath of the judicial arm of government of this *Griggs* v. *Allegheny County* case.

Mr. BURNARD. Yes, sir.

Mr. WATSON. So, naturally, you are concerned and you want somebody else to assume responsibility or get into the act to try to help things out a bit. I am trying to understand.

Does Allegheny County have an enabling statute which permits an individual to sue them for damages in this regard? Usually governmental entities do not have such permissive legislation and I was wondering how anyone ever was able to recover against Allegheny County.

Mr. BURNARD. Well, the case went up to the Pennsylvania Supreme Court at least twice and maybe three times before it got to the U.S. Supreme Court. I can't answer your specific question categorically, but it must have been resolved somewhere along that litigation line and it was found that Allegheny County could be sued because the final decision was adverse to them.

Mr. WATSON. Was it a private operator of this airport, or was it the government?

Mr. BURNARD. It is a government operator—Allegheny County.

Mr. WATSON. Thank you, sir.

Mr. FRIEDEL. Mr. Burnard, I have a couple of questions here. Do

you consider that local communities have done all that they should do or are capable of doing to prevent residential encroachment upon existing airports?

Mr. BURNARD. Mr. Chairman, the local airport operators have done all of the things that they have found feasible to do so far.

Mr. FRIEDEL. Local communities I am talking about, not the airport operators. Do you consider that local communities have done all that they should do as far as zoning and other things?

Mr. BURNARD. Well the community is sometimes the airport operator and sometimes it isn't, so the community, when you use the term generally, I would say that they have sought suitable solutions locally wherever the local solution seemed to be feasible. With respect to zoning, there are many political and legal problems in connection with zoning.

One of the misunderstandings about zoning is that some people think that it is possible for a political jurisdiction to tell property-owners: "You can no longer live in that area because we are going to zone you out of it."

Zoning laws in general are protective for the user of the property. Where it has been feasible it has been done. It is most feasible of course near the airports that are in the least developed areas. In the highly built up areas, in the metropolitan communities, it is very difficult to achieve the kind of zoning which would tell people that they couldn't live in their homes where they now have them.

Mr. FRIEDEL. I can tell you one instance I am very familiar with and that is Friendship National Airport.

Mr. BURNARD. That is correct.

Mr. FRIEDEL. And there they provide zoning and no residential homes could be built within a designated radius of the airport. I know that they tried to get homes built in Anne Arundel County. They couldn't get an FHA loan because of the zoning laws. We don't have the problem to the degree of other airports because of the foresight the mayor and the city council of Baltimore City had when they authorized the building of the Friendship Airport.

Mr. BURNARD. That is true. Friendship is very fortunate in that respect. I might say that practically all airports and communities near airports have height restrictions zoning which is for safety purposes, but land use zoning is a far more difficult and questionable area.

It is not even permitted under the constitution of many States and it has been declared illegal where it has been tried in some instances.

Mr. FRIEDEL. Well, the area around the Friendship Airport is zoned commercial. They have height restrictions there.

Mr. BURNARD. Yes, sir.

Mr. FRIEDEL. And a lot of new industry and commercial warehouses and things are being built there.

You have dealt with the solution to the aircraft noise problem as being a "choice" between restricting the use of property near airports or restricting the noise generated by the aircraft. But does this not oversimplify the situation? Is it not more likely (and in contemplation more desirable) to restrict both land use near airports and the aircraft?

Mr. BURNARD. I think both are inevitable.

Mr. FRIEDEL. You speak of restriction. I am trying to find out are you trying to restrict both.

Mr. BURNARD. Yes, Mr. Chairman, both, we think, are inevitable to the solution of the problem. A certain amount of control over land use must be exercised.

As I said in my earlier statement, though, it has been difficult or impossible to know how much land to control. Secretary Boyd testified that this legislation would make it possible for the first time for airport planners and communities to know what amount of land use planning they were to seek.

In other words, we don' know where the amount of noise will begin or end and until we have a better fix on that it is very difficult to know how much land use planning to do.

Mr. FRIEDEL. You will admit that Dulles doesn't have the problem as far as noise right now?

Mr. BURNARD. At the moment it doesn't, not a serious problem, but it has a potential problem.

Mr. FRIEDEL. Well, as of the present it doesn't, but I do know there have been requests for building houses near the Dulles Airport.

Mr. BURNARD. That is right.

Mr. FRIEDEL. And unless they start now in zoning for commercial and low building around the airport, I am fearful, while it is not overcrowded yet—they are not up to capacity—one of these days it will be overcrowded and there will be a lot of noise. And without zoning, people will move right next to the airport.

It is already an established practice, and they will be the ones complaining about noise. It has happened all over the United States that way—where the airport was there first and people move in and then they complain about the noise.

Mr. BURNARD. Mr. Chairman, as you know, the Dulles International is owned and operated by the Federal Government and the Federal Government has sought from the local counties out there appropriate zoning to prevent this kind of problem. The local authorities haven't agreed with the Federal Government on it, however, and so the problem is potential.

Mr. FRIEDEL. I know that. I am fearful what may happen in the future. Mr. Watson.

Mr. WATSON. If we may pursue it, Mr. Chairman—I didn't mean to interrupt you—I think the point the chairman is trying to make, and it is the earlier one that I alluded to, is who is responsible. It is a fact that people are moving in toward Dulles Airport.

Now, is it the responsibility of those people to assume the risk of the noise problem, or are we to hold everything in abeyance and let the interest of the public be denied or suppressed in order to satisfy the residential developers and the individual property owners?

Is that the position you take?

Mr. BURNARD. Sir, our position is that we think a reasonable balance between the aviation development and community development should be sought and that is what we are trying to find. Insofar as we can control the land use we are trying to control it. We would like to see some controls put on the aircraft noise so that that part of the picture is balanced out also.

Mr. WATSON. All right, sir.

Mr. BURNARD. As Mr. Stephen said this morning, there is actually a three-part program in which we are all participating, Government and industry, trying to control the noise at the source, control noise in

the operation of the aircraft, and in the land use, and no one of the solutions by itself will solve the whole problem and it is a matter of doing the three simultaneously as far as possible.

Mr. WATSON. Yes, sir. The chairman has handed me a question and perhaps we can get it right down to the final point here.

Do you believe that the courts or any governmental agency should be subject to claims by property owners for noise problems who have moved into or adjacent to the airport facility after substantial jet noise already exists over the airspace in which this resident has moved?

Do you understand my question?

Mr. BURNARD. Yes, sir. Congressman, that is a legal question that the courts have decided both ways. In some cases, the least number of cases, they have decided that the property owner who moved in after the airport was there had no cause of action.

Mr. WATSON. Had no cause of action if he moved in after the airport itself?

Mr. BURNARD. But there are also cases which go the other way.

Mr. WATSON. Well, I am not familiar with the facts in the *Griggs* or *Allegheny County* case. What are the facts? Was a resident in there subsequent to or at the time the airport was established?

Mr. BURNARD. I think the plaintiff was there at the time the airport was constructed.

Mr. WATSON. I can see a little more validity in that argument, a little more substance, if the airport moved into where he was, but where is the case that has been decided that the property owner has a cause of action where he moved into the airport vicinity after the airport was established?

Mr. BURNARD. A number of plaintiffs have recovered in the Seattle, Wash., area and I don't think there was any distinction made. Just let me check a moment. There was no distinction made by the court as to who moved in before or after.

Mr. WATSON. What was that case? Do you recall it or does counsel recall it?

Mr. BURNARD. Yes. It is the *Martin* case.

Mr. WATSON. What is it?

Mr. BURNARD. *Martin* versus *Port of Seattle*. We can get a citation on that. [1964, 64 Wash. 2d 309, 391 Pac. 2d 540; cert. den., 1965, 379 U.S. 989, 85 S. Ct. 701.]

Mr. WATSON. If you could I think it would be helpful to try to find out the reasoning of the court. I agree with the chairman here. I think we have to move forward in both areas, noise abatement within the limitations of safety, and, secondly, control by way of zoning to keep these people from voluntarily moving in.

As a basic proposition the law has an assumption of risk and I believe when you move in next to an airport you assume the risk of the noise problem. One final question here that comes to mind.

I had a little notion about getting heliports rather than every city going out there and joining in the mad rush for jet airports and such as that. We would have regional jet ports to take care of the supersonic transport and then have these accelerated helicopters to serve the metropolitan area and highly urbanized areas and feed into one way out in the middle of the country where we won't even bother the cows and horses.

I know this is a real problem. I heard a lawyer one time say the supersonic boom even affected the laying habits of his chickens and tried to bring a suit against the Federal Government. A military aircraft was involved.

Does that idea appeal to you a little bit as an airport operator?

Mr. BURNARD. Well, like so many things, there are some pros and cons to it. One of the principal difficulties with the concept is that the manufacturers of the type of vehicle you are talking about haven't come up with one yet which the operator of the vehicle think is suitably economic; and there are some pretty strong pessimists in the field as to how soon it can be done. I read something recently by—I think it was a NASA man—to the effect that he thought nothing less than 10 years would be required to produce a suitable vehicle for this purpose.

Until that part of the problem is solved then probably consideration of the rest of the problem won't receive as much attention as it otherwise would.

Mr. WATSON. Recently here the House had on the recommendation of this committee the rapid surface transportation. Would that perhaps contribute to an alleviation of this problem, feeding into an isolated supersonic airport facility some ways out?

Mr. BURNARD. It might. Again it would depend probably on local circumstances, rights-of-way, where the area was built up, et cetera. Taking a completely theoretical situation, then it looks as though it has some possibilities. But one of the factors that militates against it is that there is a great deal of money that is now invested, both by the Federal Government and local governments, in airport facilities that now exist, and that has to be taken into account in the planning.

If we are talking about something 10 to 20 years away, then it is one of the things that could be done.

Mr. WATSON. Yes, but do you not agree we better start thinking now or the situation is going to be aggravated because more cities are getting into the mad race to have a jet airport believing that all you need is modern facilities and a runway adequate to bring in jets, bring in industrial expansion, and all of that?

We have a lot of it down home and frankly some areas have built these big areas for $15, $18 million and they have fewer flights coming in now than they had before. If we can look at this overall problem I think we would be wiser than wait later on and have it crushed down in front of us.

Mr. BURNARD. I couldn't agree more. One of the things we have urged the Department of Transportation and the Civil Aeronautics Board to do is to do a more intensive job of systems planning on all of the facilities in the system.

Mr. WATSON. You are the people to help us out. You are operating them. Thank you very much.

Mr. FRIEDEL. Thank you.

Mr. BURNARD. Thank you.

Mr. FRIEDEL. Thank you, Mr. Burnard. Thank you, Mr. Stephen, for waiting around.

The meeting now stands adjourned subject to the call of the Chair.

(Whereupon, at 3:12 p.m., the subcommittee adjourned subject to the call of the Chair.)

AIRCRAFT NOISE ABATEMENT

TUESDAY, DECEMBER 5, 1967

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND AERONAUTICS,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice, in room 2322, Rayburn House Office Building, Hon. Brock Adams presiding (Hon. Samuel N. Friedel, chairman).

Mr. ADAMS. The subcommittee will come to order.

This is a continuation of the hearings regarding aircraft noise abatement regulations and related bills.

Our first witness this morning is our colleague from Illinois, the Honorable Roman Pucinski. Congressman Pucinski.

STATEMENT OF HON. ROMAN C. PUCINSKI, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. PUCINSKI. Mr. Chairman, I welcome this opportunity to testify on legislation which is so vital to millions and millions of Americans. I speak on behalf, not only of those millions who live in the vicinity of major airports, but of those unsuspecting Americans who do not, as yet, know what is in store for them when the gigantic supersonic transports begin breaking the sound barrier with terrible regularity over the length and breadth of this land.

As you know, my congressional district borders Chicago's O'Hare International Airport—the busiest airport in the world. O'Hare routinely handles more than 2,100 flight operations daily. On an average day, O'Hare copes with a minimum of 1,000 jet operations. During peak travel hours, this means a jet into or out of O'Hare at a rate of one every 40 seconds.

To the 23,500,000 passengers who use the facilities at O'Hare each year this usually means prompt and efficient service. To the hundreds of thousands of persons clustered in homes, hospitals, and apartment buildings within a 15-mile radius of the airport, it means far more. It means noise—unrelenting, unremitting, intolerable noise.

Students have their classroom discussions shattered. Telephone conversations cease. Television viewing is impossible. Countless thouands of my constituents spend endless nights unable to obtain a moment's respite from the unbearable noise. Patients in hospitals must endure the constant roar and scream of jet engines. Elderly people in nursing homes have nowhere to flee the boom and whine of tidal waves of sound.

I want to commend this committee for investigating this most serious problem of jet noise. With profound respect for the chairman of this

important committee and to my colleagues who have devoted such long hours in studying the serious ramifications of this national problem, permit me to add my personal, though emphatic, judgment that the Nation has been awakened to the problem itself.

I beseech you now to turn your attention to solving it at the source—with those companies that are entrusted with the responsibility of developing and building safe, reliable aircraft engines.

Mr. Chairman, I wish to emphasize that I am not advocating inattention to air safety. As a veteran of 48 bombing missions in World War II, and as a weekly commuter to Chicago by air, I am first to praise the skill and engineering craftmanship that have made American aviation superior to, and safer than, any in the world.

I believe it is equally important, however, that we give—at this critical juncture in aviation development—equal time to those Americans who have never flown in an airplane. It is estimated they constitute 70 percent of our population. To them, planes are merely instruments of perpetual noise preying upon their nerves.

Many of my constituents of Illinois' 11th District could have told the Congress years ago what the President told us in his transportation message last March:

> Aircraft noise is a growing source of annoyance and concern to the thousands of citizens who live near many of our large airports. As more of our airports begin to accommodate jets and as the volume of all air travel expands the problem will take on added dimensions * * *. It is clear that we must embark now on a concerted effort to alleviate the problem of aircraft noise.

Mr. Chairman, last fall in London I attended an International Conference on the Reduction of Noise and Disturbance Caused by Civil Aircraft. The conference was convened by the United Kingdom and representatives of 26 nations and 11 international organizations were present. The papers and research prepared for the conference indicated that the world could have quieter aircraft and that operating characteristics could be improved so as to achieve landings and takeoffs with reduced noise disturbance for the long-suffering people on the ground.

Mr. Chairman, as an invited observer to this conference, I was impressed with the manifold skill, intelligence, and expertise devoted to this critical problem by scientists, engineers, physicians, aviators, and technical craftsmen from around the world. I am sure this distinguished committee has had ample access to the material published by this conference, as well.

While it is encouraging to note the concern being expressed by experts in the field, I believe we now most urgently must turn our attention to establishing specified standards of aircraft noise limitation and alerting the aircraft companies to a deadline in hardware design.

This is surely not an unreasonable expectation or request.

With a burgeoning world population and a need for greater access to world markets, we must devise methods whereby our technology will not prohibit our existence on the surface of this planet.

Yet, we are doing precisely that, as witness our recent alarm over air and water pollution.

The pollution of noise, too much noise, on human and animal life is an inescapable fact which cannot be ignored. Scientists in laboratories, under controlled experiments, are able to pinpoint the precise moment when an animal becomes permanently deafened,

partially crazed, or physiologically incapable of coping with his environment owing to specific applications of varying exposures to noise.

Human beings are no less indifferent to the unusual and often cruel aspects of their environment.

The international conference in London in late 1966 called for compulsory limits to aircraft noise. An aircraft would be granted permission to fly only if the noise generated by that aircraft was within specified limitations.

I am, therefore, pleased to testify on behalf of Mr. Staggers' bill, H.R. 3400, and H.R. 10523, which I have introduced. These measures reflect the opinion of the most outstanding experts on aircraft noise in the world. When enacted, they will provide a vital step forward in our battle against noise pollution.

It is extremely regrettable, Mr. Chairman, that before we have even begun to solve the problem of jet noise, our Government has committed billions and billions of dollars on a supersonic aircraft which will make sonic booms a daily personal experience for millions and millions of Americans. I am not opposed to progress. Yet, must we blindly engage in our own mass destruction under the guise of progress?

When this generation of jets was designed, no consideration was given a noise control. The only factors were payload, thrust, and speed. And now the same mistake is being made in the development of the supersonic aircraft. But at what cost in the erosion and disruption of life?

We must enact legislation which will establish guidelines requiring the development of a design which will reduce sonic booms to an acceptable tolerance.

I am mindful that jet noise was not considered a particularly pressing problem by officials here in Washington until National Airport was opened to jets. The louder the noise at National, the greater has been the alarm over jet noise disturbances.

In light of this, I recently wrote the Secretary of the Air Force requesting that the supersonic test flights which have been flown over many U.S. cities, including Chicago, be flown over the Nation's Capital, as well, so that all of us could experience what life will be like in the 1970's.

However, it appears Washington won't be experiencing any of these booms which extend in a pattern of noise 50 miles on either side of the aircraft. As Secretary Brown responded, Washington "possesses neither the geographical nor physical characteristics which would allow the mission equipment aboard the SR–71 to be properly evaluated." I can understand the Secretary's reluctance to having all of official Washington complaining about the noise, even if I find it difficult to accept his premise that this Capital has not strategic importance.

Mr. Chairman, members of this committee, I am grateful for your time this morning. In all candor, I agree with you that the problem is acute and the time for action was yesterday.

Mr. ADAMS. Thank you for your statement, Mr. Pucinski.

If there are no questions, our next witness is also a colleague, the Honorable James Corman. Please proceed as you wish, Mr. Corman.

STATEMENT OF HON. JAMES C. CORMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. CORMAN. Mr. Chairman, members of the subcommittee, I appear today in behalf of my bill, H.R. 11647, to amend the Federal Aviation Act of 1958 to authorize aircraft noise abatement regulation. This bill is identical to H.R. 3400, now under consideration by the committee.

This legislation, which would certificate the assembly of commercial aircraft on the basis of noise as well as the prime requirement of safety, is an essential step toward making the harmful byproducts of our modern age compatible with the public welfare. We have already taken other steps in this direction. Recently, we enacted legislation to combat air pollution—a byproduct of the automobile. We can, and must do the same with the byproduct of our jet aircraft, for just as there is definite evidence of injury to health as a result of air pollution, so is there evidence of health deterioration to those who are constantly subjected to the objectionable sounds made by commercial jetliners.

I share the opinion of Los Angeles International Airport Manager Francis T. Fox who points out that a nation with the scientific talent and know-how to place a manned vehicle in orbit; take pictures of the moon and relay them to earth; build a supersonic transport; and carry out many other aerospace missions of great and complex magnitude can—someday—develop a turbojet engine and an airframe that will be compatible with the public welfare.

H.R. 11647 is a start in the proper direction and I urge the committee to favorably report this needed legislation. Enactment of this measure would be in the deserved interest of the Nation's long-suffering airport neighbors.

Mr. ADAMS. Thank you for your concise statement, Mr. Corman.

The next witness this morning, representing the Air Line Pilots Association, is Captain Brunelle. Is Captain Brunelle here this morning? Captain, do you want to come up to the witness stand?

Mr. BRUNELLE. Thank you.

Mr. ADAMS. Do you want to read your statement, Captain, or do you want to file that for the record and speak extemporaneously? However, you would like to proceed, please feel free to do so.

STATEMENT OF VERNON C. BRUNELLE, CHAIRMAN, COMMITTEE ON NOISE ABATEMENT, AIR LINE PILOTS ASSOCIATION

Mr. BRUNELLE. Thank you, Mr. Chairman. I have a brief statement, which I shall read, if I may.

I want to thank you and the members of the subcommittee for the privilege of appearing before you this morning to briefly state the position of the Air Line Pilots Association in support of H.R. 3400. I am presently a line pilot for one of the Nation's certificated air carriers and have long been interested and active in the association's various air safety endeavors. Presently, I am chairman of our association's standing committee on noise abatement. My work as chairman of this committee has caused me to meet during this past year with various industry and governmental groups, including the President's Program on Evaluation and Development Committee.

Our organization, composed of more than 23,000 airline flight deck crew members, has been deeply involved in aircraft noise abatement during the past 20 years. Unfortunately, we have frequently been the recipient of complaints, the mark of politically motivated groups and the target of poorly informed regulators.

The airplane, like other modes of transportation, is inherently a source of noise. In addition, it is usually heard while overhead, which lends something of a fear element to human beings on the ground who have to listen to the noise. Nevertheless, those of us who live closely with air transportation are aware of the importance which is today attached to aviation as the world continues to progress through advances in communication and the need for material and cultural exchanges. Future generations will likely be better adjusted to aircraft noise. Only four generations ago, our forefathers resisted the steam locomotive, and a bit later the automobile, as an unnecessary noise adjunct to the transportation system.

Aviation is not in and of itself inherently dangerous, but like the sea, it is terribly unforgiving of mistakes, and for this reason we, the pilots, will continue to resist the application of operational noise abatement techniques which inhibit the safety margins we find to be necessary.

We do not have to go very far to find a concrete example. Washington National Airport is no doubt the most convenient downtown airport of any major capital in the world, yet the ridiculous noise abatement procedures which were adopted for use at Washington National—such as following the narrow Potomac River in its snake track course northwestward—not only was it operationally unfeasible, but additionally provided more noise for the persons living in the immediate vicinity of the river.

You gentlemen have already heard the Honorable Alan Boyd, Secretary of Transportation, enunciate the view that there never would be a quiet airplane. We endorse that statement. We have also noted the tremendous growth and requirements for scheduled air transportation, and I am cognizant of the fact that we must provide some acceptable compromise to fullfil air transportation requirements and yet not be unduly noisy.

While we are of the opinion that the Federal Aviation Administration was granted by the Congress in its wisdom the necessary authority to place a maximum noise emanation requirement on aircraft prior to granting an operational certificate for said aircraft, we are also cognizant of the position put before the gentlemen of the Congress by the Administrator. The adoption of a noise maximum for airworthiness certificates, however, is not in and of itself the total answer.

We are aware that land use adjacent to airports is likely to be the most successful area of compromise and deplore our constant observations of new home construction in airport vicinities. We assume that many of the new constructions are under Federal grant-type mortgages and this is an area where Health, Education, and Welfare, the Department of Transportation, Veterans Administration, and those other Government bureaus having fiscal responsibilities need to organize their efforts in a single direction.

Up to the present time, since the advent of the heavier four-engine transports following World War II, operational techniques by pilots

have been the singular contribution toward noise abatement. I assure you, gentlemen, that this fountain has run dry and no further compromise with safety can be tolerated in the public interest.

We have said before we think the Administrator of FAA now has the authority to move as required in the matter of certification for noise. Cooperation of the agencies handling mortgages, zoning, and so forth could bring about long-term relief. I would be less than candid if I did not say to you that I see no short-term or instantaneous areas of substantial important; on the contrary, at most locations aircraft noise nuisance will become somewhat worse before it starts to improve.

I thank you for hearing me, and I reiterate our association's endorsement of H.R. 3400. Should you have any questions, we would be pleased to answer same.

Mr. ADAMS. Thank you, Captain.

Mr. Devine?

Mr. DEVINE. Captain, what carrier do you fly for?

Mr. BRUNELLE. I am with Piedmont.

Mr. DEVINE. Piedmont?

Mr. BRUNELLE. Yes.

Mr. DEVINE. Let's go through your statement very briefly.

On your first page, your middle paragraph in which you say that the people in your organization are subject or the recipient of complaints, you say, "the mark of politically motivated groups and the target of poorly informed regulators."

Do you think those are the only people complaining of this noise?

Mr. BRUNELLE. I think not, but I think they might be in the foreground.

Mr. DEVINE. What do you mean by "politically motivated groups"? Is it politically motivated to want to quiet down noise overhead?

Mr. BRUNELLE. No; I don't think this is politically moved motivation.

Mr. DEVINE. I just want to clarify your statement, not argue with you.

Mr. BRUNELLE. Yes. I think that "politically" perhaps is divorced from the national political picture. Perhaps local groups is more what I have in mind. I am thinking of the Committee to Close National.

Mr. DEVINE. Are you talking about real estate developers in that concept?

Mr. BRUNELLE. That and other concepts, yes.

Mr. DEVINE. Would you care to enlarge on that?

I think we recognize the problem and are seeking solutions and maybe you can be helpful to us.

Mr. BRUNELLE. I appreciate that. I guess that I will take another tack on it. I think we feel that aircraft noise is politically a nuisance and that perhaps some people are getting more mileage out of being against aircraft noise. They are after political acceptance rather than alleviating the problem. Their names appear in print. They are crusading.

We feel that some of these people don't really have the best interests of quieting the airplanes at heart.

Mr. DEVINE. I am merely seeking information to clarify the statement, as I say.

Mr. BRUNELLE. Yes.

Mr. DEVINE. On page 2 you mentioned the fact about the "ridiculous noise abatement procedures" at Washington National, and you speak in the past tense. You say, "Not only was it operationally unfeasible, but additionally provided more noise for the persons in the immediate vicinity," with which I would agree.

Have they changed the procedures out of Washington National? Don't you still, when you are flying northbound, have to fly up the Potomac?

Mr. BRUNELLE. Yes, we do; but the procedures change seasonally at Washington National.

Mr. DEVINE. You mean when the windows are closed?

Mr. BRUNELLE. No; I am being somewhat facetious. Every time someone decides they have nothing better to do, they change the procedures at National. We have had I don't know how many changes since the so-called noise abatement procedures went into effect at National, some of them minor and some of them considerable changes.

Mr. DEVINE. Are these adopted by the FAA?

Mr. BRUNELLE. Yes. It is a federally operated airport.

Mr. KUYKENDALL. Would you yield on this particular point?

I want to follow it, too. Let me press something here. You mentioned its "snake track course." Are you saying now that you go up or down, depending on whether you are landing or taking off, along the general direction of the Potomac, but do not follow its exact course?

Mr. BRUNELLE. Yes; I am saying we have to; yes.

Mr. KUYKENDALL. You still follow the snake track?

Mr. BRUNELLE. Yes; and this in itself is one of the problems with the procedures. The river is quite narrow as we proceed westbound, and it requires quite a bit of attention to stay over this narrow river when we have cockpit duties right after takeoff and are looking for traffic.

Mr. DEVINE. At Washington you are limiting it to 727's and DC–9's. We are not talking about four-engine jets.

Mr. BRUNELLE. Yes.

Mr. DEVINE. I think the most important thing in your testimony appears on page 3, in which you say, "No further compromise with safety can be tolerated in the public interest."

I certainly agree with you. Do you feel that you have reached the maximum of noise abatement or suppressors, or whatever it is, to hold down noise, that if you go a step further, that it will indeed endanger the lives of passengers and people on the ground?

Mr. BRUNELLE. Well, I think there are two questions there. I think there will be more technological advance in suppressing. It might not be in that type of design.

Mr. DEVINE. It might not necessarily be a safety hazard?

Mr. BRUNELLE. No. The suppressors, even though they do absorb power thrust, as long as there is enough available we are happy with suppression if that is the way the engine designers would like to go.

Now, no further compromise with safety: Safety is a rather nebulous thing in many areas. It is neither black nor white. There are many gray areas. We cannot say that the next procedure will be unsafe and that we have the last safe procedure now.

It could very well be that we are approaching the unsafe in some areas now. We don't think we are. Of course, we as airline pilots

would not agree to fly the procedure but we feel that we have gone just as far as we can.

The noise abatement now is requiring so much of our time at a very busy part of the flight which is the cleanup phase right after takeoff. This is when we are getting the airplane clean, the flaps and the gear, and we are getting our departure instructions and looking for traffic and we are doing many things that later on the tempo of work slows down considerably.

Mr. DEVINE. One final question in this vein, and let's refer back again to Washington National. Do you as a pilot particularly of jet equipment think that you could climb up at a much more rapid rate and get out of the area more quickly if you don't follow the procedures that are currently applying to Washington National?

I mean instead of following the circuitous route of the Potomac when you take off on 36.

Mr. BRUNELLE. 36 or 33.

Mr. DEVINE. Do you think that with the capability of the airplane you could climb out faster and get out of the area quicker and have less noise complaints on the ground?

Mr. BRUNELLE. Yes. We have a procedure which FAA and ATA and ALPA have agreed upon. This was in mid-August I think. It was based primarily on the NASA studies conducted at Wallops Island where they flew airplanes with different configurations and came up with some real refined data and based on this data which of course had substations at various distances from the runway, we took this and said, "How would we like to fly this airplane, what is the most optimum way, the safest way to fly it?"

And with them we developed what has now been the accepted standard noise abatement climb profile. We were hoping to run our test in New York at Kennedy because of a mix of traffic, the large jets and the intermediates and also because the port did have some form of noise measurement.

It is rather antiquated we think, the single point measurement system. It doesn't give total noise at all, but just gives noise at one particular spot. So if we could get this new procedure which does have the FAA's blessing, I think——

Mr. DEVINE. Blessed, so to speak, in August, but has not been put into effect.

Of course our concept is much broader than Washington National. We have to consider the whole country.

Mr. BRUNELLE. This concept, of course, is designed for use at any airport where there is a noise problem.

Mr. DEVINE. At O'Hare, Kennedy, Atlanta, all of them.

Mr. BRUNELLE. Yes; but we wanted to test, and, like anything, the procedure looks awfully good on paper. It is the next best way that we would like to fly the airplanes, of course the best way being the optimum. This does restrict us somewhat, but it has pilot acceptance and this is the only way the procedure will work, and that is if the pilots will accept it. If they cheat on it, you haven't accomplished a whole lot.

Mr. DEVINE. You say they haven't had the test?

Mr. BRUNELLE. No.

Mr. DEVINE. I think my time has expired, Mr. Chairman. Thank you.

Mr. ADAMS. Mr. Kuykendall.

Mr. KUYKENDALL. Thank you, Mr. Chairman.

To pursue the new high-angle takeoff questions of Mr. Devine, could you give me an idea on the profile what the altitude difference at, say, 1 mile off the end of the runway might be on the new testing that you are talking about as compared to the presently used procedures?

Mr. BRUNELLE. One mile would be approximately 3 miles in brake release, and I would say there wouldn't be any additional height or any less noise.

Mr. KUYKENDALL. How about 2 miles?

Mr. BRUNELLE. This is when you start paying off. From 2 miles out you start cleaning the airplane up, and the thrust that you have been carrying to support all its drag from your flaps is gradually being reduced so that you are getting this thrust as being transformed into climb angle and altitude.

Mr. KUYKENDALL. Here is something that I want to pursue, and that is the matter of the approach. You have been discussing takeoff. Would you not agree that we have made more progress in the takeoff than in the approach?

Mr. BRUNELLE. Very definitely.

Mr. KUYKENDALL. It seems from my flying days as a pilot in World War II with prop airplanes, that a lot of our concepts of safety have absolutely reversed as far as power is concerned.

You remember that in flying an old propeller airplane the high-angle approach is safer than a low power-on approach, and the high-angle takeoff is much more dangerous than leveling off and getting your speed. Those two things seem almost to be totally reversed.

We were severely criticized for dragging an airplane in for 2 miles, but that is what we do now. What do you think about the idea of a higher-angle approach?

Mr. BRUNELLE. With existing equipment?

Mr. KUYKENDALL. Let's assume that we may change existing equipment.

Mr. BRUNELLE. Then with increased technology, I think it is perhaps within the state of the art to come in higher, but not——

Mr. KUYKENDALL. You are talking about an ILS glide path change, right?

Mr. BRUNELLE. No; not necessarily. In some of the NASA tests they are using high-lift devices and this sort of thing that are generators giving us the capability of higher sink rates and then spilling your sink rates.

Mr. KUYKENDALL. Does this thought of the high-angle approach bother you personally?

Mr. BRUNELLE. It would with existing equipment. Of course, we have made several statements on this. We are not opposed to it. We would like to experiment with them a little and be sure that it is feasible before we start scheduled operations.

Mr. KUYKENDALL. Do you have any idea whether NASA-tested equipment would be available as additional equipment on existing aircraft or would it be usable only on new aircraft?

Mr. BRUNELLE. I am of the opinion that they are not looking toward retrofitting now on existing equipment. I could be wrong on that. I am

sure that the testing that they are doing now is some sort of a retrofit on what they have, but as to whether or not it would be applicable to existing airplanes——

Mr. KUYKENDALL. If we are not speaking of retrofitting and with the life of the jet airplane which seems to be anticipated as a long life, we are talking about a long way off, aren't we?

Mr. BRUNELLE. Yes, we are.

This was brought out in a PEDC meeting where we were talking about retrofitting the aircraft for more quiet engines and several airline officials said, "We are planning on phasing out 707's so we would not care to spend more money on 707's," but then, of course, we look around and see DC–6's in the inventory.

Mr. DEVINE. Did you say that some airlines are planning on phasing out the Boeing 707?

Mr. BRUNELLE. Yes.

Mr. DEVINE. That is interesting.

Mr. KUYKENDALL. It is. So what we are saying here is this, I think you will agree. I live out now just north of Georgetown, so we are under at least the edge of the noise area. I thought I was getting away from it and now I am moving out in the Dulles area. I notice that on landing we get pretty heavy noise past Georgetown, but on takeoff I would say that at Memorial Bridge you are high enough that the noise problem isn't there at all.

Of course, the ILS glide path is a permanent thing, is it not? It is set at a certain angle and that is it?

Mr. BRUNELLE. It can be adjusted.

Mr. KUYKENDALL. If we are talking about something that is going to take as long as, let's say, being sure that all the automobiles in the country have pollution abatement on them, is it possible that we would have more than one glide path angle at a given airport?

Mr. BRUNELLE. This is possible.

Mr. KUYKENDALL. Would it not be necessary if we start, say, on new aircraft with the potential of a higher approach path, when with the old ones we don't have it?

Mr. BRUNELLE. Yes, it would. This is one area that we have talked very little of and that is the ground equipment. The ILS is capable of projecting the beam at any angle you want.

Mr. KUYKENDALL. Isn't the ILS discussion essential in any discussion?

Mr. BRUNELLE. Yes, sir. We as airline pilots have advocated for years that we would like a complete ILS on any runway that we take a transport aircraft.

Mr. KUYKENDALL. When we talk about retrofitting aircraft on this committee we are talking about expense of both the manufacturers and operators, but when we talk about glide path, that is the expense of the Government, so that this is something I thought we definitely should take up.

Mr. Chairman, I have no other questions.

Mr. ADAMS. Mr. Springer.

Mr. SPRINGER. Thank you, Mr. Chairman. I have just a couple of questions.

At the bottom of page 3, you use the words—

I would be less than candid if I did not say to you that I see no short-term instantaneous areas of substantial improvement; on the contrary, at most locations aircraft noise nuisance will become somewhat worse before it starts to improve.

Could you expand on that?

Mr. BRUNELLE. Yes. I think it is in my opinion a fair statement. We are approaching noise abatement in three areas now in our opinion. Land, of course, compatible land use adjacent to the airport we think is long-term and perhaps the one that will give us the most relief. We then go to design technological changes and we have stated that in the operational changes we cannot give any more relief operationally.

So that, we are looking at the other two for relief, and we know that compatible land use is a long, long thing, and it will take years and years to reach fruition. We see no technological advances or substantial ones before the seventies.

Mr. SPRINGER. What do you see in the seventies?

Mr. BRUNELLE. Somewhat quieter engines in the neighborhood of six to seven PNdB's noise rating. Six or seven. This will be due to a higher bypass ratio engine, nacelle designs that will help somewhat, but this is well downstream.

Mr. SPRINGER. Now, you can remember back when we had hearings several years ago in which we told FAA on any future airports that community construction had to be taken into consideration. You are familiar with that?

Mr. BRUNELLE. Yes.

Mr. SPRINGER. They are following that now. The only trouble is that you have had big airports already there, before we made that statement. I mean that there will be no more airports, and I checked on this, in areas built up; but that doesn't do us any good with reference to O'Hare which was already here or to Kennedy which was already here.

I am somewhat more concerned about the supersonic which you will be operating probably in 10 years at least. We had a feature which I understand is built into Boeing's contract on noise. But we don't have anything on sonic boom.

This committee completely misunderstood General McKee, I think, because I didn't at all separate noise from sonic boom in my questioning of him at the time with reference to whether or not in the contract was a built-in clause that noise had to be taken into consideration.

Now, I understand over at Transportation that the contract doesn't do anything about sonic boom at all. I wish I had known that because I didn't in my life dream that you were going to separate sonic boom from aircraft noise and that sonic boom was not a part of noise.

This has disturbed me a great deal to know that we are proceeding here with an airplane which is going to have all this wrapped up in it and nothing in what the committee I am sure understood to a man included all noise, not just the question of aircraft landing and takeoff noise, but all noise. Here we are at this point. I can assure you that nothing like this will ever happen again, but we are at this point in history now where I am wondering what the future supersonic is going to be under these circumstances.

I believe that is all, Mr. Chairman. Thank you.

(The following letter and attachments were received by the committee:)

DEPARTMENT OF TRANSPORTATION,
FEDERAL AVIATION ADMINISTRATION,
Washington, D.C., December 8, 1967.

Hon. WILLIAM R. SPRINGER,
House of Representatives, Washington, D.C.

DEAR MR. SPRINGER: During the Hearings before the Committee on Interstate and Foreign Commerce on December 5, 1967, you expressed concern regarding the contractual provisions for the SST program as they relate to sonic boom and aircraft noise. My purpose is to explain those contractual requirements.

It is convenient to treat "aircraft noise" separately from "sonic boom." "Aircraft noise" is the noise generated by jet engines and occurs in the general vicinity of the airport during ground operations and when the aircraft is taking off or landing or flying relatively low over the community. On the other hand, the "sonic boom" occurs when the aircraft is at supersonic speeds. This is at distances of about 100 miles away from the airport after takeoff and prior to landing. For the remainder of this letter I will discuss noise and sonic boom separately.

We know a great deal about human tolerability to aircraft noise as the result of the operations in our major airports, such as O'Hare in Chicago, Kennedy and La Guardia in New York, and Los Angeles International. We have techniques for measuring noise which we are able to correlate with public reaction and predict probable public response to various levels of noise intensity. Thus, general acceptability levels have been established. We are able to incorporate accurately defined limiting noise levels in contractual language. Furthermore, there has been a considerable amount of research accomplished that promises further diminishment of aircraft engine noise. Our objective, of course, is to be certain that this knowledge is incorporated in the U.S. supersonic transport. Thus, we have a sound foundation for prescribing definitive limits for noise, and we have done so. Attachment A lists the criteria that is contained in the Phase III contract.

In the case of sonic boom there is an entirely different state of affairs. We do not have a proven measure of human tolerability as related to sonic boom intensity. In the past we have included in the SST contracts objectives for limitation of sonic boom overpressures. However, since we are unable to establish tolerability levels, these were arbitrary. Even if we achieve such arbitrarily defined limits it would not assure that the aircraft would have sonic boom characteristics that would permit supersonic operations over populated areas. Lacking such criteria we have made all our program and design decisions on the assumption that the SST may be restricted from supersonic operations over populated areas.

The sonic boom characteristics of a specific airplane design can be predicted with a considerable degree of precision. The sonic boom characteristics of the competitive SST models were evaluated by NASA last fall. The results were a factor in the SST source decision. The Boeing design had the more favorable characteristics. The present SST design incorporates all the knowhow that presently exists to assure that it has the most favorable sonic boom characteristics possible for an airplane of its size and weight. The impact, if any, on the sonic boom characteristics is a decision factor in all decision changes.

Thus, we are confident that we know the sonic boom characteristics of the SST design. Since we do not know what levels of sonic boom intensity may be tolerable and all present knowledge has been incorporated, inclusion of a more restrictive criteria for sonic boom in the contract, than the aircraft is presently predicted to have would not, in our opinion, serve a useful purpose. Such limits might, however, be interpreted to imply acceptability and possibly permission to operate over populated areas if the specified levels were achieved. The contract does require a best effort on the part of the manufacturer to reduce the sonic boom intensities. I have enclosed a copy of the specific contract language relating to sonic boom as Attachment B.

As you know the Government has a large research and test program on sonic boom which began several years ago. This program is aimed in two general directions—one, to determine what intensities of sonic boom would be acceptable for

commercial supersonic flight over populated land areas, and two, to determine ways and means of eliminating or modifying the sonic boom characteristics to make them more acceptable.

Since we have incorporated all present knowledge and means of minimizing sonic boom in the present aircraft design, the Sonic Boom Committee of the National Academy of Sciences, under the chairmanship of Dr. John Dunning, Dean of Engineering, Columbia University, has formulated a program of basic research on the generation and propagation of sonic boom with the objective of creating new fundamental knowledge that may result in the ability to further reduce sonic boom intensities. This program is being sponsored by NASA. A brief description of the program is enclosed as Attachment C.

I hope this will answer the questions you have relative to this problem. I would be happy to provide any further information or answer any question you might have.

Sincerely,

WILLIAM F. MCKEE, *Administrator.*

[ATTACHMENT A]

D. AIRPLANE PERFORMANCE CRITERIA

(6) *Airport Noise*

The perceived noise level at the start of takeoff ground roll shall not exceed 116 PNdb measured at any point on a line 1,500 feet from and parallel to the runway centerline, at any certificated gross weight.

(7) *Community Noise*

Compliance with the following noise objectives should not require undue maneuvering or critical speed-limiting maneuvers. The perceived noise levels should progressively decrease as the outward distance from takeoff and approach points increases.

(a) *Takeoff Noise.*—The perceived noise level, following thrust reduction to maintain a 500-foot-per-minute rate of climb, shall not exceed 93 PNdb measured at a point on the ground directly beneath the airplane and three statute miles from the start of takeoff roll, at any certificated gross weight.

(b) *Approach Noise.*—With engine thrust required for the certificated landing configuration consistent with the landing runway requirement of paragraph D.3.c(5) on a glideslope approach path of three degrees which crosses the approach end of the runway at a 50 foot height, and at a gross weight of 430,000 pounds, the perceived noise level shall not exceed 109 PNdb measured at a point on the ground directly beneath the airplane and one statute mile from the approach end of the runway.

[ATTACHMENT B]

3.0 *Sonic Boom*

3.1 Develop, implement, and maintain programs for improving the technology for the calculation of sonic boom characteristics, which improved technology will be employed in calculating the sonic boom characteristics of the prototype aircraft and the production aircraft design. If sonic boom operational limits are established by any governmental agency and if, as a result, it is mutually agreed that additional tests are necessary to determine whether the prototype airplane and the production airplane design meet such limits, this contract shall be equitably adjusted to recognize such increased testing requirements.

3.2 Maintain a current, best estimate of the sonic boom characteristics of the airplane, and in any design change, consideration will be given to the impact on the sonic boom characteristics. The impact will be calculated and considered before incorporating the change into the design.

3.3 Determine ground overpressures under the following conditions:

3.3.1 Transonic acceleration.

3.3.2 Supersonic climb.

3.3.3 Cruise.

3.3.4 Descent.

3.4 Develop airplane design to reduce sonic boom effect.

3.5 Coordinate with NASA and other research activities to appropriately utilize sonic boom data from such activities.

[ATTACHMENT C]

LIST OF CURRENT AND FUTURE SONIC BOOM EFFORT

ACTIVE GOVERNMENT IN-HOUSE PROJECTS

A. Sonic Boom Generation:
   1. Continuing refinement of boom prediction analytical procedures. NASA/Langley.
   2. B–70 analytical, wind tunnel, and flight correlation. NASA/Langley.
      a. Refinement of B–70 configuration analysis.
      b. Wind tunnel boom near-field tests.
      c. Wind tunnel calibration of flight probes.
      d. Correlation of B–70 flight near-field surveys.
   3. Extension and modification of Whitham theory to hypersonic speeds (M=6). NASA/Ames.
   4. Study of boom signature characteristics at flight speeds only slightly supersonic. NASA/Langley.
   5. Experimental/analytical study of the flow fields of a systematic series of bodies of revolution at M=5, NASA/Langley.
   6. Application of near field analytical procedures to provide close-in flow characteristics. NASA/Ames.
   7. Analyis and correlation of high-altitude X–15 sonic boom flights (M=3 to 5.3). NASA/Ames/FRC.
   8. Analytical determination of body shapes to minimize auditory response. NASA/Lewis.
   9. Determination of SR–71 sonic boom generation characteristics and correlation with EAFB flight experiments. NASA/Langley.

B. Wave Propagation and Reflection:
   1. Analyses of EAFB B–70, B–58, F–104, and SR–71 flight programs to establish atmospheric propagation effects. NASA/Langley/ESSA.
   2. Conduct and analyses of Phase I and II of SR–71 Sonic Boom Research Program. OST, FAA, USAF, NASA, ESSA.
   3. Analysis of boom signature trace through a non-uniform atmosphere via characteristic system. NASA/Langley.
   4. Experimental study in a ballistic range of shock propagation through an atmosphere non-uniform in temperature and velocity. NASA/Langley.
   5. Investigation of atmospheric inversion waves in relation to observed long wave length periodicity in maximum overpressure (Phase I and II EAFB). ESSA.
   6. Investigation of the effects of turbulent eddies in the planetary boundary layer relative to the short distance variation in boom intensity. ESSA.
   7. Study of atmospheric effects on overpressures by comparison of computer program estimates for a quiescent atmosphere. ESSA.
   8. Statistical study of the effects of the atmosphere on overpressure variability. ESSA.

C. Sonic Boom Minimization:
   1. Fundamental analysis of aerodynamic concepts for minimizing or eliminating the sonic boom and the application to complete configuration concepts. NASA/Langley/Ames.
   2. Application of existing sonic boom and aircraft design technology to the development of a low boom domestic SST. NASA/Langley.

GOVERNMENT SPONSORED OR CONTRACT RESEARCH

The area of government sponsored research is currently in a state of flux with most of the contracts in various stages of proposal, contract review, or negotiation. The most likely candidate for government support are included here to provide an indication of the scope of the proposed contractual effort. There is a question as to whether the proposed research listed herein should be included in the appropriate Industry or University listing rather than under Government cognizance.

A. Sonic Boom Generation:
1. Analysis of exotic configurations designed to reduce the sonic boom (Dr. Ferri of N.Y.U.). Status: To be funded. NASA.
2. Study of non-linear effects in sonic boom analysis plus experimental program (Dr. Landahl of FFA Sweden). Status: To be funded. NASA.
3. Study of multipole effects (Dr. Buseman of U. of Colorado). Status: To be funded. NASA.
4. Study of boom characteristics of hypersonic cruise vehicles (General Dynamics). Status: Part of contract already in effect. NASA.
5. General study of sonic boom generation and propagation (Drs. Seebass and George of Cornell). Status: To be funded. NASA.
6. Analysis of inlet-exit stream tube areas on sonic boom generation. Status: Contract in effect. (Dr. Ferri—N.Y.U.). NASA.

B. Wave Propagation and Reflection:
1. Analysis of focusing of supersonic disturbances (Dr. Friedman of Columbia). Status: To be funded. NASA.
2. Analysis of signature distortion through non-uniform atmosphere (Dr. Hayes of Princeton). Status: Consultation contract with ERC. NASA.
3. Experimental study in ballistic range of topography effects as well as propagation through non-uniform atmosphere (Naval Ord. Lab.) Status: Proposal under review. NASA.
4. A study of improved prediction of sonic boom propagation. (Lockheed-California). Status: Recommended for contract by Langley. NASA.
5. Analysis of approach to far field and effects of high M. (Drs. Moore and Resler of Cornell). Status: To be funded. NASA.
6. Experimental studies of atmospheric disturbances on sonic boom propagation via ballistic range (SRI of Stanford). Status: Proposal under review. NASA.
7. Study of topographical effects on shock reflections by means of shock tube simulator. (GASEL). Status: Informal proposal stage. (NASA), (FAA).

C. Sonic Boom Minimization:
1. Analysis and experimental study of an air-breathing configuration concept for reducing boom intensity (Vehicle Research Corp. Dr. Rethorst. Status: Contract in effect. Tunnel tests scheduled in Sept. at AEDC, USAF (Flt Dyn. Lab.)
2. Analysis of a proposed low-boom configuration (Dr. Fejer of Illinois Inst. of Tech.) Status: Contract scheduled for initiation in July. NASA (Aeronautics).
3. A feasibility study for a new design approach for a low-boom SST. (Lockheed-California). Status: Proposal under review at Langley. NASA.

Mr. ADAMS. Thank you, Mr. Springer.

I have a question on your statement. You state that at the present time there is a changed procedure on leaving Washington National. What is the procedure that you are operating on now that is different than what you were operating on whenever you made this comparison in your statement?

Mr. BRUNELLE. Well, the evolution of leaving Washington National has just about run the gamut. At first they wanted flaps to remain extended for 1,500 feet or so, a fairly high altitude. We argued that all we were doing literally was dragging this airplane through the air, that we would rather have the flaps up for many reasons notwithstanding the airplane is stronger with the flaps up, it can stand more gust load, is easier to maneuver, we climb better; and we have gone from there to a procedure now that is somewhat closer to what we would like to have, and we, of course, are still debating as to what

thrust setting we will make at first thrust reduction, and we haven't arrived at that one yet.

I don't know whether I have answered your question or not. I think I have skated around it.

Mr. ADAMS. You just indicated in your statement and with the questioning of Mr. Devine that you had apparently an evolving situation and that you weren't satisfied with what was happening out of Washington National, and I wanted to know how you were flying out of Washington National today and how you are suggesting that you should be able to fly.

Mr. BRUNELLE. The procedure today is closer to what we would like. If we used a rather broad interpretation, we could perhaps almost fit it into the existing language that they now have, but this has been a fairly recent change.

Mr. ADAMS. Are you talking about jet or piston or both?

Mr. BRUNELLE. Well, the piston we have very little trouble with. I mean it's a noisy airplane, but there is just so much that you can do with that. It is a matter of getting if off. I don't think we have the complaints, certainly not from the approach on piston that we would from jet.

Mr. ADAMS. I am sorry Mr. Springer left because I was going to indicate that I didn't agree with his statement that we didn't know about sonic boom as opposed to noise. As I remember, we spent the better part of a morning trying to define the two, and as I understand it, and you can correct me if I am wrong, we have no technological ability to change the effect of sonic boom at the present time as opposed to supression of engine noises or noise at airports, isn't that correct?

Mr. BRUNELLE. I think that is a correct statement; yes.

Mr. ADAMS. I understand that the reason why it wasn't put into the contract was that nobody wanted to contract on a presently impossible situation at least at a development stage.

Now I would like also to ask you one final thing. You indicated there were three ways of trying to approach noise abatement: (1) the compatible land use, (2) design and technological changes, and (3) operational changes.

What is your feeling as to the practicality of not just compatible land use but the establishment of corridors, approach and landing corridors, to the major airports? With the increase in power and the type of equipment we have now is this feasible?

I just would mention that in my opinion the problem in the past has been the requirement of taking off into the wind which changes from time to time so a number of variable runways are required for taking off. Therefore the building of corridors practically meant that you had to have a compatible land use in a circle around an airport.

I am asking you, with the changes in power and so on, is it feasible to have limited corridors that we might possibly be able to purchase around the major airports?

Mr. BRUNELLE. Well, I think we are utilizing corridors at National using the Potomac River. I think this would be an example. It hasn't proved too effective at National.

If the corridor perhaps were wider, it might, but I think there you are getting into more land acquisition than you would normally ex-

pect to have around an airport. We feel that using, getting the property adjacent to the airport and then perhaps with the technological advances that might come with the higher descent rates, it might perhaps be a better long-range answer to the problem, but at the present time, I think perhaps we will have to resort to corridors.

Mr. ADAMS. You see what our problem is, in a breakthrough, to try to determine. If, for example, the Congress is to provide matching funds to the local communities for the obtaining of land and that is the proposal that is presently being discussed to buy land for noise abatement as opposed to buffer zones for safety. These corridors could be used for such things as noise abatement and so on.

I think we all will agree that most of the major airports were built or at least many of them were were built at a time when there was not a buildup around them.

I know, for example, when JFK was built it was way outside of the populated area. The same, I know, is true of the airports in the district that I represent. People have moved in around them. I don't have a great deal of sympathy for people who have participated in this type of movement, and now complain of the noise.

We have now had the first set of cases on condemnation in effect or the payment required by local airports for annoyance caused by flights over land and the courts have held that if you moved into it, your rights were less than, of course, if it moved in on you.

Therefore, there is an area where we can do a considerable amount of purchasing at the present time at a price that will be less now than it will be 15 or 20 years in the future. That is what I am asking you.

Is this a direction that we should be considering moving? For example, 50 percent matching funds on a corridor 3 miles out from the end of certain established runways would then qualify for Federal funds. I am not advocating it. I am asking you.

Mr. BRUNELLE. I think that would be an excellent move for long term alleviation of the noise problem.

Mr. ADAMS. Gentlemen, do you have any further questions?

Mr. DEVINE. I had just one.

I am aware, of course, of the regulations adopted by FAA on, say, Washington National. Now, does either approach control or departure control tell you what to do when you are coming in or taking off as far as elevation and glide path and angle of descent and angle of climb-out or is this pretty much up to you as the captain of the ship?

Mr. BRUNELLE. Well, they do advise us on initial contact when we get our clearance, ATC clearance, that we are to proceed via noise abatement procedures and as to the mechanics of the procedure, it is then up to us to abide by it.

Mr. DEVINE. Within the limitations——

Mr. BRUNELLE (continuing). Of the airplane and perhaps the turbulence or something that might require a little more airspeed than the procedure might call for. We are given this latitude.

Mr. DEVINE. You could determine whether to drag it in, dump it in, or flair out?

Mr. BRUNELLE. No, I didn't mean to go quite that far. We have latitude within reason. We can't, for instance, come down the Potomac River Valley at 300 feet from the Chain Bridge. Certainly the FAA

would not get us for violating a noise abatement procedure, but I think rather a careless and reckless operation which, indeed, it would be.

Mr. DEVINE. I mean within the bounds of safety because you are interested in your own safety as well as that of the passengers in your ship.

Mr. BRUNELLE. We try. I think this noise problem has been one of continuing education for our pilot groups. I think at first, when the airport first came out with maximum PNdB, the fellows tended to revolt. I think any change is this way. I think from constant education and reading the paper, they have found that people on the ground do have a problem, and it is a genuine and real one.

We are greatly interested in it now. We spend a great deal of time going to meetings and trying to develop new techniques. We are giving people everything they can possibly get in Washington. People are coming in just as high as they think is feasible and safe. We would like to have higher if we could, but it just isn't within the state of the art.

Mr. DEVINE. Well, I think that you, in your statement, demonstated that the ALPA has an abiding interest because you say here, "The chairman of the Standing Committee on Noise Abatement." They wouldn't have a committee like that in the ALPA unless they were concerned about it.

Mr. BRUNELLE. Yes, sir. Yesterday I was in New York with Congressman Wolff, and on December 11 through 13, I will be in Montreal on an international noise problem; so that indeed we are working.

Mr. DEVINE. Thank you, Mr. Chairman.

Mr. KUYKENDALL. I have a couple of questions having to do with the sonic boom. The chairman in his close proximity to Boeing may want to get an opinion here on these things. The sonic boom problem, of course, is a different geographical problem from noise abatement because it happens out on the airways and the noise abatement is an airport vicinity problem. I think it is entirely different in this respect.

I have found a little personal laboratory, Mr. Chairman, on this matter of the sonic boom. Our family owns a ranch out in west central Texas, and the military use this area for air maneuvers constantly. When you are sitting out on a deer stand you get a very good study on sonic booms. You first see the contrail and wait for the boom. It is very interesting, and I notice that the lower the aircraft, the boom was much much heavier.

Is this true, that very high altitudes don't give a very severe boom? Do either of you know?

Mr. ADAMS. Well, the factor, Mr. Kuykendall, is a very simple one. The sonic boom as opposed to airport noise is produced by a contraction in the air. As you know, the air piles up and then it snaps back. This produces a vibration. As you are lower, the vibration is heavier, but the area covered is narrower. It is like a cone that comes out from the point. As you go higher, as long as you are still within the air cover, the vibration will continue down the whole cone, but will be of less intensity.

Mr. KUYKENDALL. Is it considerably less?

Mr. ADAMS. No. This was the question I asked General McKee when he was here. Once the vibration occurs, if you are in the atmosphere

enough to cause it then it will go clear to the ground level, it will be less, but the difference in intensity is not enough to make it a worthwhile thing to say, "Well, you can fly high enough and therefore it won't have any effect on the ground."

Mr. KUYKENDALL. Captain, do you have any comment to make on it?

Mr. BRUNELLE. No. I think that is a very good description.

Mr. KUYKENDALL. The reason I asked this is that Saturday I was watching a very, very high contrail. You could hardly see it, and the boom came back more or less as a distant thunder instead of knocking me almost out of the tree.

Mr. BRUNELLE. The atmospheric conditions will play a part.

Mr. KUYKENDALL. I was wondering. The SST will have an altitude capability, won't it?

Mr. BRUNELLE. I think 70,000 feet.

Mr. KUYKENDALL. I was just wondering what possibility there was in being able to alleviate the intensity of the boom by altitude, but you say you have already discussed it.

Mr. ADAMS. That is one of the problems. Until the flyaway airplane is actually operating, we are pretty much speculating.

Mr. KUYKENDALL. Of course we do have the military airplanes that are capable of testing this, haven't we?

Mr. BRUNELLE. Tests are being conducted and have been for some time, but the aircraft are different, the size.

Mr. KUYKENDALL. Is there a relationship to size?

Mr. ADAMS. It's like pushing a boat through the water. The bigger the boat, the bigger the wave.

Mr. BRUNELLE. We are in the experimental stage, but we feel that size will have a bearing.

Mr. KUYKENDALL. The difference in size of airplanes is not like the difference in size of boats. Boats vary more than airplanes.

Mr. BRUNELLE. We say size; some people say the geometry of the surfaces, but I think there will be a relationship between the size, and, generally speaking, the larger the mass, the greater the whip.

Mr. KUYKENDALL. Every time we have discussed sonic boom in the committee, gentlemen, we have found we don't know anything.

Mr. BRUNELLE. I don't think anybody knows anything very much about it.

Mr. KUYKENDALL. Thank you, Mr. Chairman.

Mr. ADAMS. Thank you, Captain. You have given us an excellent statement. We appreciate having the position of the Air Line Pilots Association on noise.

Mr. BRUNELLE. Thank you.

Mr. ADAMS. There being no further witnesses this morning, the subcommittee is adjourned subject to call.

(Whereupon, at 10:50 a.m, the subcommittee adjourned, subject to call.)

AIRCRAFT NOISE ABATEMENT

WEDNESDAY, DECEMBER 6, 1967

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND AERONAUTICS,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice in room 2322, Rayburn House Office Building, Hon. Samuel N. Friedel (chairman of the subcommittee) presiding.

Mr. FRIEDEL. The Subcommittee on Transportation and Aeronautics meeting will come to order.

We are continuing hearings on H.R. 3400 introduced by our Honorable Chairman, Mr. Staggers, to authorize the Secretary of Transportation to prescribe aircraft noise abatement regulations, and other related bills.

We have the privilege this morning to hear first from our colleague from Hawaii, the Honorable Spark Matsunaga. Please proceed as you see fit, Mr. Matsunaga.

STATEMENT OF HON. SPARK M. MATSUNAGA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF HAWAII

Mr. MATSUNAGA. Mr. Chairman and members of the subcommittee, I thank you for this opportunity to testify in support of the bill, H.R. 3400, introduced by the distinguished chairman of the House Committee on Interstate and Foreign Commerce, Mr. Staggers, which would authorize the Secretary of Transportation to prescribe aircraft noise abatement regulations.

I introduced an aircraft noise abatement bill in the 89th Congress, and continue to support legislation which would afford our cities some measure of relief from the noise which the jet age has brought. Hawaii is the hub of Pacific international air travel. Along with the benefits which accompany such status, its citizens presently bear the extreme discomfort resulting from the noise of arriving and departing jets. This concern over aircraft noise was eloquently expressed in a recent radiogram that I received from Dr. Fujio Matsuda, director of transportation, State of Hawaii. He stated emphatically that aircraft noise can be effectively controlled by rules and regulations promulgated by the Secretary of Transportation. He projects our State government's concern into 1969, when British-French SST flights through Hawaii are expected, and points out that we have no present assurance that supersonic aircraft will have noise levels less than existing subsonic jets.

Air traffic through the city of Honolulu is greater than in many mainland cities. Honolulu International Airport ranked 16th among the Nation's major airports in aircraft traffic in 1966. The noise problem may be one of degree, but it is found today in every city which handles flights of jet aircraft. A quick look at some relevant statistics will indicate the prevalence of the problem.

More than 100,000 aircraft are in active service in the United States. U.S. aircraft are divided into three classes: air carrier, which amounts to about 2,000 passenger and cargo airlines; general aviation, which accounts for over 75,000 private and business airplanes; and military, which has over 25,000 planes. Private and business airplanes are many times more numerous than airliners, but the airliners fly oftener, faster, and with more payload. The airliners, especially the jets, are bigger and more powerful (and thus noisier) than business and private aircraft, and are generally more active in populated areas than military aircraft are, thus our concern in regard to noise will be mainly with jet aircraft.

The major airports tend not only to get more traffic but also the larger airplanes. This is because the larger aircraft, the jet airliners, travel between major population centers of the world, while the smaller aircraft serve feeder routes and smaller cities. Every major city in the United States now has an airport with facilities to handle jet aircraft. In 1962, more than 60 of the airports in the United States had regular civil jet airliner traffic. Jet service will spread to many more communities as the new generation of high-performance jet airliners designed for shorter range trips and shorter runways come into service.

And it is precisely these jet aircraft which have made the high noise level an acute urban problem. Up until the development of these jets, most of us considered the noise level generated at airports by propeller planes a tolerable nuisance. But jetliners have caused serious complaints from residents and businesses below the flight lanes in every affected city.

Jet noise comes from two main sources: hot gases of combustion roaring out of the engine tailpipe, and the high-pitched whine emanating from whirling compressor blades that suck air into the engine. The aviation industry has devised suppressors that tend to cut down the roar of the exhaust, which is loudest during takeoff. But this success has been at a price: a fleet of some 50 planes equipped with suppressors would cost an airline about $7.8 million over a 10-year period in reduced operating efficiency. At any rate, engineers generally agree the economic and mechanical limits of the suppressors have just about been reached.

Controlling the whine of the front-end blades, which is loudest when a jet is coming in for a landing, has been much less successful. Although the use of special materials and design characteristics on some of the newer jets have helped to diminish the whine, bigger jets continue to emit the irritating noise. This is an area that requires specific attention because noise from landing aircraft draw more complaints, by a ratio of about 5 to 1, than noise from planes taking off. An incidental factor here is that a landing plane is both decelerating and descending and, consequently, spends more time over a given area than a departing plane.

Health, safety, and welfare have been traditional functions of democratic government and I feel it is necessary to implement this legislation which would preserve the continued enjoyment of the natural environment and contribute toward an improvement in the quality of life for all mankind.

Mr. Chairman, I regard the proposed bill as a proper and necessary step the Federal Government ought to take. I therefore urge that this distinguished subcommittee consider favorably this worthwhile and much-needed legislation.

Thank you.

Mr. FRIEDEL. Thank you, Mr. Matsunaga. It is always a pleasure to have you appear before this committee and to hear your views.

Our next witness this morning will be Mr. John P. Woods, the executive assistant to the National Business Aircraft Association.

You may proceed, Mr. Woods.

STATEMENT OF JOHN P. WOODS, EXECUTIVE ASSISTANT, NATIONAL BUSINESS AIRCRAFT ASSOCIATION

Mr. WOODS. Mr. Chairman and distinguished members of the committee, my name is John Woods and I am a staff specialist on aircraft noise abatement for the National Business Aircraft Association (NBAA). NBAA is composed of nearly 800 U.S. corporations which own and operate aircraft for their private transportation purposes.

We, therefore, represent a segment of the aviation industry that is commonly described as business aviation. Business aviation presently operates approximately 500 turbojet aircraft. This number is growing quite rapidly.

We have long been concerned about aircraft noise. We have long accepted our responsibility to do all we can to act as good neighbors at the airports we use. For these reasons we developed and published the comprehensive NBAA noise abatement program, which we distributed to the members of this committee on the first day of these hearings, November 14, 1967.

We are the first governmental, or nongovernmental organization to publish such a program. We list in it four essential component parts of an effective noise abatement program.

They are (1) flight procedures, (2) air traffic control procedures, (3) jet engine design, and (4) land use.

H.R. 3400 addresses itself to one and only one of the four components of the whole problem. As such, it would give needed authority to appropriate Federal agencies so that effective action may be taken to reduce jet engine noise within the limits of the state of the art. H.R. 3400, therefore, has our wholehearted support, and we urge its adoption.

Two of the other four components, flight procedures and air traffic control procedures, seem to be receiving appropriate attention and slow progress is being made. We do not believe that legislative action is required in these areas at this time.

Concerning the fourth area, land use planning in the vicinity of airports, almost no progress is being made, of which we are aware.

We commend this subject to your careful and detailed attention.

Unless land use planning in the vicinity of airports is completed and effected, all other noise abatement efforts will fail to produce the desired results.

We would appreciate an opportunity to present our view on this complex subject at the appropriate time under your direction.

Mr. Chairman, we have brought additional copies of our noise abatement program and, if you should so desire, they could, at your direction, be made a part of the record.

Mr. FRIEDEL. Your printed matter will be included in the record, but your designs we will keep in our files.

Mr. WOODS. Thank you, Mr. Chairman.

(The document referred to follows:)

NATIONAL BUSINESS AIRCRAFT ASSOCIATION NOISE ABATEMENT PROGRAM

NBAA's requirements and recommendations for a nationwide program directed toward reducing aircraft noise over populated areas are listed herein as they apply to:

A. NBAA Members

1. NBAA Members will accept responsibility for operating their aircraft so as to reduce noise to the lowest practicable level. Noise abatement procedures designed to achieve this result must be safe, standardized, and not unduly restrictive to the flow of air traffic.

B. Local Communities and Airports

1. NBAA Members will make every effort to participate in their local airport affairs, particularly as they concern jet aircraft and noise abatement procedures.

2. NBAA strongly urges completion of research that will enable specific noise contours to be presented to communities having airports frequented by business jet aircraft. These contours should be based on optimum noise abatement flight procedures as described in paragraph G, below.

3. NBAA strongly believes that communities must be given factual data to the effect that airport noise levels below those achievable through the procedures described below cannot be realistically anticipated. They should be informed concerning the many significant noise reduction efforts being made by the aviation community.

4. The noise abatement procedures contained herein are recommended as a nationwide standard for business jet aircraft that may be applied to any noise sensitive airport. Procedures adopted by any locality must conform to the nationwide standard to ensure pilot understanding, acceptance, *and use.*

5. Airport approach and take-off paths should be designated on all zoning maps. This should be done for all airports, existent or proposed, in order that real estate activity may be made fully aware of the confines of such areas. Similarly, the land use permitted in these areas should be specified in zoning regulations and building codes in order to protect inhabitants.

6. Airport managements should develop run-up areas for jet aircraft located so that engine noise will not unduly disturb nearby community or airport tenants. Blast fences should be provided where necessary.

C. Airframe and Engine Manufacturers

1. The lowest jet engine noise levels that can be achieved by engine and airframe manufacturers without imposition of excessive operational penalty should be determined. Newly designed aircraft should be required to remain within these noise limitations. Any noise reduction achieved at the manufacturing level results in some operational penalty. Therefore, any initial regulatory noise limitation on manufacturers should be confined to that which can be achieved within the existing state of the art. Any regulatory action should have sufficient flexibility to permit further noise level reductions as they are developed.

2. NBAA will determine from the business jet engine and airframe manufacturers the specific power settings that will achieve the flight profile specified below in paragraph G (Flight Procedures).

These power settings may be charted, if necessary, to allow for aircraft gross weight, air temperature and airport altitude variations. This chart should be

based on maximum gross take-off weight as specified in the Flight Manual. These suggestions are based on the opinion that business jet aircraft have limited gross weight flexibility without incurring unrealistic operatonal penalty. Therefore weight reduction as a means of achieving noise abatement is not practical for business jets.

The resultant power setting, expressed in EPR or RPM, will provide:

a) Sufficient engine spool RPM to permit spool-up of the good engine in the event of engine failure.

b) Sufficient engine RPM to operate anti-icing equipment.

c) Sufficient engine RPM to operate component equipment.

d) Sufficient engine thrust to provide a sustained rate of climb of 1000 fpm.

D. Flight Data (NOTE: Minor modifications to the specifics of this data, as may be indicated by new research, will be considered.)

1. Specific data should be developed for any airport where it is needed and made available to the pilot through publication in flight manuals. This data should include:

a) Approach and departure routes over least noise-sensitive areas.

b) Preferential runway usages.

c) Distance in feet from point of brake release to nearest noise-sensitive area.

E. Pilot Training

Pilot training should include basic noise abatement procedures in all type ratings and ATR flight checks for business jet aircraft.

A pilot education program should be provided to inform pilots as to need for, and procedures associated with, noise abatement and good community relations. NBAA will initiate such a program as soon as agreement concerning its specifics (proposed herein) is reached between NBAA and other affected agencies.

F. Air Traffic Control Procedures

1. Preferential runway use systems that are safe and do not unnecessarily restrict the flow of air traffic should be established at all airports having a need for them. Excessive emphasis on preferential runway use by other than jet aircraft should be avoided.

2. Control Tower operators should be permitted to give any needed special attention to jet aircraft that may, for noise abatement, be required to land or take-off using a different runway than the one in use by smaller aircraft.

3. Air Traffic Control procedures should keep aircraft more than 3000 feet above field level when over noise sensitive areas to the extent that can be accomplished without excessive derogation of air traffic flow.

G. Flight Procedures

The prime requirement for an acceptable noise abatement procedure is that it will ensure operational safety. Secondly, it will produce the lowest sound level over noise sensitive areas that can be achieved by each aircraft type within its safe operating limits.

Listed below is a recommended standard noise abatement procedure to be applied to all noise sensitive airports. It has been developed to cover:

a) Take-offs "Standard"—(for communities more than 10,000 feet from brake release point); and "Close-in"—(for communities less than 10,000 feet from brake release point).

b) Approach & Landing—VFR

c) Approach & Landing—IFR

1. Take Off

a. Standard Procedure

1) Maintain maximum power and take-off flap setting to 1,500′ AFL for a maximum rate-of-climb subject to items in paragraph 2 following.

2) Maintain V_2+25 IAS with a maximum deck angle of 15°.

(NOTE: Where a 15° deck angle is specified here and in subsequent paragraphs note that NBAA will consider specifying a slightly steeper angle if significant noise reduction results and in sufficient separation from other traffic is provided to compensate for lack of pilot visibility over the nose of the aircraft.)

If deck angle exceeds 15°, optionally reduce power to continue climb-out at V_2+25 K IAS at a 15° deck angle.

3) Flight path outbound from take-off should not require any turn below 300′ AFL, and not more than a 15° bank.

4) At or before 1,500′ AFL, retract flaps (if possible) and set power at a specified SPR or RPM so as to climb to 3,000′ AFL, not exceeding 200 K IAS and 1000 fpm sustained rate of climb. If ATC requires a level-off prior to reaching 3,000′ AFL, no power change is required.

5) Above 3,000′ AFL, normal climb schedule.

b. Close-in procedure*

1) Accelerate at V_2+25 K IAS.

2) After crossing airport boundary and after reaching 300′ AFL reduce to a specified EPR or RPM that will maintain V_2+25 K IAS and a sustained 1,000 fpm rate-of-climb at a maximum deck angle of 15°.

3) Flight path outbound from take-off shall not require any turn below 300′ AFL and not more than a 15° bank.

4) At or before 1,500′ AFL, retract flaps (if possible), and set power at a specified EPR or RPM so as to climb to 3,000′ AFL not exceeding 200 K IAS and 1,000 fpm rate-of-climb. If ATC requires a level-off prior to reaching 3,000′ AFL, no power change is required and IAS may be allowed to increase.

5) Above 3,000′ AFL, normal climb schedule.

2. Approach and Landing Procedures

a. VFR

1) Inbound flight path will not require more than a 20° bank to follow noise abatement track.

2) Initial inbound altitude for noise abatement areas will be a descending path from 3,000′ AFL (reference: Paragraph F, 3, above).

3) IAS will be reduced to a maximum of 200 K at 1,500′ AFL.

4) Downwind and base leg, or straight-in approach, shall be at a maximum IAS of 160 K, with not more than take-off flap (or approach flap, if applicable).

5) A 6° Glideslope is recommended for use to within 2 miles of the runway threshold, and a 3° Glideslope from the 2 mile point to the threshold.

6) After passing one mile mark inbound from threshold, full flap may be used.

b. IFR

1) Inbound flight path will not require more than a 20° bank to follow noise abatement track.

2) IAS and altitudes as directed by Approach Control, but not to exceed 250 K IAS or less than $V_{1.4}$ at take-off (or approach, if applicable) flap.

3) Maximum of take-off (or approach, if applicable) flap to the outer marker with landing flap delayed until required.

4) Further development of a 6° Glideslope to within three miles of the runway threshold, followed by a 3° Glideslope for the final three miles is encouraged.

Mr. FRIEDEL. Mr. Woods, you mentioned four points, one being flight procedures. Can you elaborate a little bit on what you mean by flight procedures or how they could be of benefit in abatement of noise?

Mr. WOODS. Yes, sir; we feel that the research done by FAA with some airline assistance, I think largely at Wallops Island, developing the two segment departure procedures very appropriate in many areas.

We have developed an additional procedure because we use many airports that are close in which calls for a power reduction sooner than the Wallops Island procedure which is now in effect at Washington National Airport. We believe that this kind of a departure procedure can bring a certain amount of noise reduction.

In the arrival we feel that this is a little more complex and many of the benefits await breakthroughs in the state of the art such as a two segment or steeper profile relatively close to the airport.

We believe that these are things that particularly the larger aircraft cannot do. We are hopeful that this may later be possible. We feel that we have achieved, with the Federal Aviation Agency, certain new concepts in traffic control procedures, particularly the radar vectoring program in the vicinity of airports that hold aircraft to a higher altitude for a longer period of time than was true in the past.

*For communities less than 10,000′ from brake release point.

I think the benefits of such a procedure are fairly obvious. The higher you are, the less noise you make and we would like to the extent that is possible to try to work toward a procedure that has aircraft sequenced into their final approach on a continuing gradual descent.

We feel that one thing that contributes greatly to noise not on the final approach, but on the base leg and on the downwind leg is a low-speed dragged-in approach where the aircraft has to put itself in what we of aviation call dirty configuration with gear, with flaps, spoilers, and other things and compensate with power which means noise and drag at low altitude.

We feel that much can be done in that area even before we have this breakthrough in the steeper approach in the final approach segment.

Mr. FRIEDEL. And this will not be at the expense of safety in any way?

Mr. WOODS. In our opinion; no, sir. This is not at the expense of safety.

Mr. FRIEDEL. I am going to call a recess for about 10 minutes.

(A short recess was taken.)

Mr. FRIEDEL. Will you also elaborate on No. 2, air traffic control procedures, what is being done there?

Mr. WOODS. Sir; I did to a certain degree in the discussion of the approach profit. We feel that this is more under the heading of air traffic control procedures. One thing we believe that has contributed to primarily approach noise in some of the areas is the procedure whereby the controllers accept aircraft really before they are ready to sequence them into the final approach.

This causes a thing that we in aviation have called the daisy chain which is a string of aircraft following each other at relatively low altitude, and this is a rather significant contributor to noise, we believe.

We feel that if they can take off of their delay-absorbing fixes a smaller number of aircraft at any one time, only the ones that they are able to sequence, bring these in in a descending arc, that this will have an effect on the reduction of the approach profile noise.

We don't see theoretically that the approach profile should be as noisy as the departure profile. The departure profile is basically full power while you are climbing for altitude.

Mr. FRIEDEL. Have you noticed any great reforms in the design of the jet engine as far as noise is concerned? Has there been any reduction in noise, in the jet engine?

Mr. WOODS. Well, sir; we have been privileged to sit in as members of the PEDC committee and listen to the manufacturers on that subject and I believe, sir; we have probably had access to approximately the same material that this committee has, sir; and all we know is that what they tell us is most encouraging.

We know that of six little so-called business jet aircraft, one of them has a fan engine. This is the French one, the Falcon, the fan jet Falcon, and it is really significantly quieter. I don't know whether all of their benefits will come through this process.

The manufacturers talked in terms of a possible 18 PNdB reduction. Now they seem to be backing off from it a little bit, but they still seem to think something in the order of 10 is quite possible without unbearable operational penalty.

This sounds almost like magic. This as I see it, sir; would be what you would be enabling by means of this bill that you are considering. Therefore, we feel it is immensely important and the benefit would be significant from what the manufacturers tell us.

Mr. FRIEDEL. You are speaking of H.R. 3400, Mr. Staggers' bill?

Mr. WOODS. Yes, sir.

Mr. FRIEDEL. Now, as to land use, what about the airport where we have congestion of homes around the airports? What could we do about what is already here? Are you speaking of the future on land use?

Mr. WOODS. Well, sir, this is a very deep and difficult thing. I would suggest that we should start with the pragmatic approach and our initial steps should stay within the art of what is possible, that at many airports and many of the most acute airports, there are presently housing developments being constructed now even closer to the airport than existing housing.

Stopping it from getting worse would be one step. I don't think that it would be possible to plan the ideal situation and then legislate it into existence at all airports; but, if we can establish standards and establish criteria, we can at least make some steps forward and we can achieve one benefit which I think is an important part of the public complaint—and that is, if we can tell them the truth and tell them what they can expect, what we in aviation can do to reduce noise, what the residual noise will be, we think that the public reaction and reception will be ever so much better than it has been.

I think some of the public reaction has been because we haven't been able to tell them what the truth is. All they can see is that the situation is going to get worse and worse and worse almost ad infinitum.

We haven't been able to give them finite information. Through land-use planning and through engine certification, these two things together, we believe for the first time this will become possible.

Mr. FRIEDEL. Thank you.

Mr. Pickle, do you have any questions?

Mr. PICKLE. Mr. Woods, this may have been asked, but I would like for you to tell me a little bit more about how your particular association is involved in the noise abatement problem. I know it to be a subject that you are strongly interested in but with reference to your own association, the type of planes that your groups fly, why is this a particular problem to your group?

Mr. WOODS. Well, sir, I don't want to say it too loud but our little jets really are quite noisy. We operate into many, many airports that the larger jets do not use. We have been subjected to many "ban the jet" movements at smaller airports, I think particularly in the State of California where there is a very heavy business aviation activity, so that we have a problem in common with the larger jets at the larger airports and we also have our own exclusive problem at many of the smaller airports that we alone go into.

We have, as I have indicated here, something in the approximate order of 500 of these aircraft now flying and it is these factors that made us feel that we really should stand up and be counted before we were actually forced to be, and that we should try and make what effort we could to show a little bit of leadership and responsibility.

Mr. PICKLE. You list that there are four factors primarily involved with respect to an effective noise abatement control system: flight procedures, air traffic control precedures, jet engine design, and land use.

As I get your testimony, you say that in this bill before us, about all we are doing is attacking the jet engine design. Now, which one of these three procedures, except for the design do you think is most important as far as the abatement of noise?

Mr. WOODS. Sir, aside from the jet engine?

Mr. PICKLE. Yes.

Mr. WOODS. Land-use planning, I would say.

Mr. PICKLE. Land-use planning?

Mr. WOODS. I would believe, sir, that this is the primary lacking ingredient at the moment.

Mr. PICKLE. Thank you very much.

Mr. FRIEDEL. Thank you.

Mr. Devine?

Mr. DEVINE. Mr. Woods, why do you think so many pilots land in a dirty configuration with flaps and spoilers and drag it in?

Mr. WOODS. Sir, I believe it is largely a function of speed. If one gets low and slow, then there is an increasing requirement for power, for engine spool up in case of emergency of some kind.

Also as the speed gets slower, it is necessary on these aircraft to change the configuration of the wings so that they will fly that way. This creates drag and those are the primary factors that cause it, sir.

Mr. DEVINE. Why do they use it rather than a low power glide type of approach?

Mr. WOODS. Sir, they are under control. I don't believe they have much discretion.

Mr. DEVINE. That is right and that runs right into the safety factor; does it not?

Mr. WOODS. Not, I don't think, to a major degree, sir; no. Yes, a low dragged-in, slow approach is perhaps less safe than what I would consider a more normal kind, but I wouldn't try to attach the unsafe label to it, sir.

Mr. DEVINE. Didn't you say that there is more control in that configuration where you are dragging in?

Mr. WOODS. No, sir. I am sorry. I didn't make myself clear. They are under the control of the air traffic control system.

Mr. DEVINE. I mean of the captain's control of the aircraft. Does he have more control in a dragging-in than he would on just a drift-in, low power, flare-out type of landing?

Mr. WOODS. Sir, normally, no. He would have less control in the dragged approach.

Mr. DEVINE. Which gets me to my prime question, why do so many of them use it?

Mr. WOODS. Well, sir, my answer to you wasn't totally truthful. The larger aircraft and particularly the T-tailed aircraft do have a problem of braking a steep glid angle, of changing the inertia so to speak, so that with that exception the dragged-in approach is perhaps slightly less safe than the more normal approach.

I would say, sir, this is almost entirely air traffic control procedures and I think that the Federal Aviation Administration several months ago started rather strenuous steps to change this and correct it.

Mr. KUYKENDALL. Will the gentleman yield at this point?

Mr. DEVINE. Yes.

Mr. KUYKENDALL. Mr. Chairman, may we take that line of thought on for just a couple of minutes because it is the same line of thought that Mr. Devine and I have both been on this particular point with practically every witness.

That is the matter of the long, low approach which actually seems to be the one area of noise abatement that has not only not improved, but has gotten worse.

There seems to be great improvement in the takeoff procedures and the fan jet has lowered the noise on takeoff. This is the one area, Mr. Chairman, where there has been no improvement and, in fact, it has gotten worse and everybody agrees.

But there is an area of great disagreement here. You are the first witness who has said that this was nothing but a traffic or approach problem, but the other technical people who have been here say that the present air form configuration without retro changes will not allow a rather different increase in the glide angle which would mean higher altitudes, say, at 4 miles out or 3 miles or 2 miles out.

We have been told very specifically that it is not within the state of the art to raise this glide angle without retro fitting or new design. Do you agree with this?

Mr. WOODS. Yes, sir; and it is my fault. I didn't make myself clear.

Mr. KUYKENDALL. So that it is not a traffic problem. It is a design problem; is this correct?

Mr. WOODS. No, sir. We are talking two different segments. If this page is the airport and the final approach is coming in, here we are talking about a design problem and the inability to change the glide angle in the larger aircraft is that part here.

I am talking about the approach out here where they drag them in on the downwind leg and on the base leg at altitudes sometimes below 2,500 feet.

Mr. KUYKENDALL. I misunderstood you and I think Mr. Devine did, too.

Mr. DEVINE. I am only talking about the final approach.

Mr. WOODS. No, sir. I touched on that briefly and didn't make myself clear enough. I apologize. In that area is where we felt that there was the possibility of a technological breakthrough and that we were hopeful that something could be achieved.

It is not yet possible to our knowledge with the larger aircraft. We in our smaller aircraft have more flexibility than the larger aircraft and can do some things really due to our lesser mass and inertia that the large ones can't, but across the board for all jet aircraft, we do not believe that a step or two segment approach under instrument conditions is feasible at the moment.

Mr. DEVINE. That is all, Mr. Chairman.

Mr. FRIEDEL. Mr. Adams?

Mr. ADAMS. I am interested in the differing factors that cause noise and I find that most witnesses tend to lump them all together in the

effect on the public and you are from the small jet people and, therefore, can perhaps break some of these out for us.

Isn't there a difference in noise effect between what we refer to as the noise around the airport, the immediate landing and taking off which can be handled by land use techniques, and the noise that causes the greatest amount of trouble in a city area which is the approach of the aircraft or this thing you referred to as going into the daisy chain of the aircraft under "a lot of power at a low altitude for long segments over the city."

Doesn't that have to be controlled not by land use techniques, but by air traffic control techniques?

Mr. Woods. Yes, sir. I think everything you say is very true in my opinion. I think sometimes it is hard to say that we accomplish this phase of the program via flight procedure and that phase of the program via land use and draw a hard line between them.

Mr. Adams. What I wanted to know is this: I happen to favor the land use technique for the end of the runways and for a limited area there, but you can't with land use concepts attack the problem of over city traffic that is basically the problem for example at Washington National where you have jets flying over the city at low altitudes with flaps down, gear down often and under almost full thrust before making their approach.

That has to be handled by a traffic control technique; is that correct?

Mr. Woods. Yes, sir. This would be traffic control technique; to a small degree we think flight procedures; and also to a very large degree H.R. 3400 and the benefits that it would bring to us.

Mr. Adams. If we pass H.R. 3400, what is going to happen if the FAA decides that, in order to avoids a daisy chain operation at the places where we have the most trouble such as LaGuardia, O'Hara, Los Angeles International, and Washington National, that we not land any jets that don't have compatible equipment at those close-in airports and jam the commercial jets which produces a daisy chain operation.

Mr. Friedel. You mentioned LaGuardia. Did you mean Kennedy Airport?

Mr. Adams. Well, Kennedy, yes, but a little different problem. I am using LaGuardia as an example because I have been informed that it is 80 percent general aviation at the present time.

I want to know whether or not it is going to be possible as these jam up to allow all equipment in. I think your equipment will probably fit. What I am talking about is the sort of thing that has been done in Paris at Le Bourget where you require compatible electronic equipment and two pilots in order to land at these airports.

Mr. Woods. Sir; it is a very complicated question.

Mr. Adams. It is very difficult for you, I know.

Mr. Woods. Could I take a couple of pieces of it and would you be good enough to give me again the points that I missed?

Mr. Adams. All right.

Mr. Woods. Yes, sir. We think that there is certainly some merit to the idea of compatible equipment particularly in the very densely congested airport. We feel and have stated in our airport policy that we think this is reasonable and that this is rational.

We don't envision it as having too much significance in connection

with the noise abatement program, but mainly for the safety and the orderly flow of traffic.

Mr. ADAMS. Right at that point, didn't you indicate and I think it is true, and it is the first time I have heard it really defined, that what is causing the noise over a city like Washington, D.C., and is creating the problem with most of the people is not the noise at the end of the runways and the immediate taking off and landing. Most of the people in those areas have moved into the airport area and, as far as many of us are concerned, take a lot of their own chances.

If they move in next to the airport the fact that the noise rises is a problem that they should have anticipated. What causes the problem in most cases is that jet either circling or taking off and he is coming in with his gear down, under almost full power at under 2,500 feet and is either flying the river or is being required to circle the city and this is caused by a congestion problem, air flow into the particular airport.

That air congestion is caused by the fact, isn't it, that you have too many planes in the pattern and you are putting the big noise producer up there and holding him in the air rather than getting him in and out quickly.

Mr. WOODS. Sir, I would think that this need not be.

They have delay-absorbing fixes also called holding patterns and they can hold aircraft when there is a delay situation at an airport at altitude.

The problem is that they are now sequencing on the final approach a large number of aircraft and have to string them out rather than sequencing just a few. I don't think that a situation where the airport was operating below its maximum acceptance rate versus an airport that had a traffic requirement that exceeded its acceptance rate would in my opinion have a great effect on noise.

Mr. KUYKENDALL. Will the gentleman yield at this point?

Mr. ADAMS. Yes, I do.

Mr. KUYKENDALL. I like your line of questioning and I would like to get some language in the record for the sake of the nonflying members who may want to read this record.

When you have slow general aircraft in the pattern, of course, the total pattern has to seek the lowest common denominator, obviously. In other words, you can't have your 600-mile-an-hour jets overtaking your twin Bonanza in a traffic pattern so he has to come down to a very low speed.

The high-speed aircraft only stays in the air at low speed with power, and flaps. In other words, lift and power are what keeps a high-speed aircraft in the air at very low speeds. We know this and this makes a heck of a lot of noise, does it not?

Mr. WOODS. They do not make the jet follow the smaller aircraft because they really can't slow down that much. They operate now, subject to being corrected, at about three speeds.

Mr. KUYKENDALL. They do follow the smaller aircraft because I have been in many of them that do.

Mr. WOODS. Only in the final approach, sir.

Mr. KUYKENDALL. In the general area, have we not just recently had a ruling to slow all aircraft down to 200 knots?

Mr. WOODS. 250; yes.

Mr. KUYKENDALL. This is only a step down, but any high-speed aircraft when reduced to much lower speed makes more noise, does it not, because it has to have more power to stay in the air?

Mr. WOODS. When it gets to the point, sir, where it has to maintain level altitude in this dirty configuration at slow speed; yes, sir.

Mr. KUYKENDALL. This is what we are speaking of; is it not?

Mr. WOODS. Yes, sir.

Mr. KUYKENDALL. This is what I want to get in the record in line with what Mr. Adams was discussing. Mr. Adams was putting it on a pretty technical plane and I wanted to get it on a layman's plane and that is the fact that slow aircraft is in the final approach by necessity and makes the whole approach pattern slower than it would if there were no one there but high-speed commercial and general aviation.

Mr. WOODS. In our opinion; no, sir. I would say that with respect to the existing situation, sir.

Mr. KUYKENDALL. Let me interrupt here. I don't think we are getting through. Are you telling me that a 707, a DC–8, or 727 having to pull up in a high angle of attack with flaps to slow himself down for a traffic pattern isn't noisier than he would be if he were going faster?

Mr. WOODS. No, sir. I was not saying that. I agree with your statement.

Mr. KUYKENDALL. This is a true statement?

Mr. WOODS. Yes, sir.

Mr. KUYKENDALL. This is the point I wanted to get in the record.

Mr. FRIEDEL. Yes; but they are at a different altitude and higher up before they get into this drag.

Mr. KUYKENDALL. Not on that final thing that you are talking about.

In other words, we are talking about immediately prior to the final approach there is a mix there and this cannot be avoided; is that correct?

Mr. WOODS. Sir, with your permission, I was trying to say that it is possible to run a mix of smaller and larger, slower and faster aircraft into an airport without a derogation particularly.

Mr. KUYKENDALL. Is that being done?

Mr. WOODS. Especially if the runways can be used. It is not being done nearly as effectively as it should be, sir.

Mr. KUYKENDALL. We realize there is a possibility of doing it but I wanted to state that the present condition and one of the things causing noise is the fact that it is not being done and it is causing noise.

Mr. WOODS. Under good weather in Washington Airport, it is being done quite well. They will use three runways. Under instrument conditions, it is not being done and they do not have the state of the art.

Mr. KUYKENDALL. Thank you, Mr. Adams. This is the point I thought should be in the record.

Mr. ADAMS. If you were to take the four airports I have mentioned and require compatible electronic gear and certain power requirements, would you not then be able to loosen your pattern, do away with the requirement of using flaps down and the so-called dirty approach over the city for a long period of time and bring your aircraft in and out of these close-in limited airports where we have the major

problem quickly and more efficiently and have general aircraft using another facility where they also use it in a more compatible fashion with the same type and speed pattern.

I want to know where we are going to go with this. In other words, you mentioned air traffic control and I think I agree with you that that is probably the only way other than advance the state of the art.

How are we going to attack the problem of the low-flying aircraft with power on at a low level over major portions of the city?

Mr. Woods. Sir, there are two very important questions here and if I can try to keep them clear in my mind, I do not think that the mix of traffic is directly contributing to the noise thing.

I don't think that the factor is created by the mix of traffic. For instance at Kennedy Airport, we have approximately 90 percent airline use and we have quite a noise problem. We also have a rather severe daisy chain problem.

We don't find the situation at Washington National Airport with about a 40-percent general aviation use roughly or La Guardia with, I believe, at peak hours a little over 40 percent general aviation.

Mr. Adams. My understanding was about 80 percent general aviation use at La Guardia. This was testified by one witness here.

Mr. Woods. Our director was given, figures by Mr. John Wiley at the Port of New York Authority a few days ago.

Mr. Adams. Would you submit to the committee whatever figures you have?

Mr. Friedel. Yes, we would like to have that.

Mr. Woods. It is my memory that Mr. Wiley, the director of aviation for the Port of New York Authority, indicated at a meeting in New York the day before yesterday that, if I can remember his figures, the peak hour general aviation use of La Guardia Airport was, give or take a few points, just under 50 percent whereas the general aviation use of La Guardia at other hours was in the approximate area of 40 percent.

That is my memory of Mr. Wiley's statement to us. But anyway that is our source of the information and we have the records there and we could easily clear up errors.

Mr. Friedel. Would you clear that up and submit it for our record?

Mr. Woods. Yes, I would be glad to.

(The information requested follows:)

National Business Aircraft Association, Inc.,
Washington, D.C., December 8, 1967.

Hon. Samuel N. Friedel,
Chairman, Subcommittee on Transportation and Aeronautics, Committee on Interstate and Foreign Commerce, Rayburn House Office Building, Washington, D.C.

Dear Congressman Friedel: The tabulation breaking down use of Kennedy (KIA), LaGuardia (LGA), and Newark (NWK) airports by different civil aviation segments is attached. This tabulation was copied directly from a chart presented by Mr. John R. Wiley, Director of Aviation, Port of New York Authority. Mr. Wiley used the chart in a presentation to aviation industry representatives on November 22, 1967. I am relieved to note that my responses to Congressman Adams' questions were accurate with 1%. Total general aviation, including scheduled commercial third level airline, use of LaGuardia reaches to 51% of total use during peak hours, but average out at 41%.

We were alarmed to learn from Congressman Adams that previous witnesses had reported general aviation use of LaGuardia at 80%. We are aware

of a concerted campaign to convince Members of Congress that major public airports should be reserved for the exclusive use of commercial airlines, but we hope that the arguments will be presented to you within a factual framework.

If it is appropriate to summarize our argument at this time, we would report that there are innumerable small, but modern and aggressive communities that are not and cannot be served by large airline aircraft. They *must* be linked to the national air transportation network. They *must* have a reasonable degree of access to major hub airports. If we tamper with this requirement, we are tampering with industrial decentralization which has been largely responsible for our modern prosperity. May we ask you, Mr. Chairman, to envision the possibility of significant economic expansion in the Salisbury, Maryland, area if air access to Friendship Airport should be denied?

We are in full agreement with the concept that suitable alternate airports can and should accommodate a large portion non-airline civil aviation activity. However, some relatively significant portion of non-airline use must continue to be accommodated at major airports so the total national air transportation network may be linked together.

Respectfully,

JOHN P. WOODS, *Executive Assistant.*

PLANE MOVEMENTS 1967, 6 MONTHS

	KIA (percent)	LGA (percent)	NWK (percent)	3 a/c airports	TA	Region
Airline	85	59	70	74	100	58
General aviation	15	41	30	26		42
Air taxi	9	14	12	11	2	9
Business and private	6	26	18	15	53	23
Government	(1)	1	(1)	(1)		(1)
School					45	10

1 Less than 0.5 percent.

AVERAGE PEAK HOUR PLANE MOVEMENTS

	KIA	LGA	NWK	3 A/C airports
Total	100	100	100	100
Airline	70	49	48	57
General aviation	30	51	52	43
Air taxi	21	18	25	21
Business and private	9	33	29	22

Mr. ADAMS. Thank you, Mr. Chairman. I have no further questions.

Mr. FRIEDEL. Mr. Cunningham?

Mr. CUNNINGHAM. I have no further questions.

Mr. FRIEDEL. Mr. Kuykendall?

Mr. KUYKENDALL. I have already asked my questions.

Mr. FRIEDEL. Have you any other questions, gentlemen?

I want to thank you, Mr. Woods.

Mr. WOODS. Thank you, Mr. Chairman.

Mr. FRIEDEL. The meeting now stands adjourned.

(Whereupon, at 10:45 p.m. the hearing adjourned, to reconvene subject to the call of the Chair.)

AIRCRAFT NOISE ABATEMENT

TUESDAY, MARCH 19, 1968

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND AERONAUTICS,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice, in room 2123, Rayburn House Office Building, Hon. Samuel N. Friedel (chairman of the subcommittee) presiding.

Mr. FRIEDEL. The hearing will please be in order.

Today the Subcommittee on Transportation and Aeronautics resumes hearings on H.R. 3400 and related bills.

As I stated at the opening of these hearings on November 14, 1967, this legislation would authorize the Secretary of Transportation to prescribe standards for the measurement of aircraft noise and sonic boom, and establish regulations for their control and abatement.

We have heard from a number of Members of Congress, the Secretary of Transportation, and several of the various segments of the aviation world.

I believe that we can conclude our hearings this week. To that end, I would ask that witnesses summarize their statements and submit any lengthy prepared statements on the subject, which, of course, will be included in the record.

Our first witness this morning is our distinguished colleague from New Jersey, the Honorable Joseph Minish. Please proceed as you wish, Mr. Minish.

STATEMENT OF HON. JOSEPH G. MINISH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. MINISH. Mr. Chairman and members of the subcommittee, I am gratified that your subcommittee has decided to continue hearings on the important subject of aircraft noise abatement.

Aircraft noise abatement is the neglected child among environmental problems in the United States. Perhaps the neglect is due to the relatively small number of individuals adversely affected by the problem at the present time. However, when consideration is given future prospects, one realizes we cannot repeat the disastrous course of action we undertook in allowing air and water pollution to continue unchecked for years and years. At Newark Airport the number of commercial flights arriving and leaving each day has increased by 64 percent over the last 10 years. Larger and more powerful planes are already on the drawing board. Huge jetliners, now in the planning

stage, such as Boeing's 747 and the supersonic transport, will be in regular service in the 1970's. The SST, as one example, will utilize three times as much thrust per passenger as subsonic aircraft and the noise nuisance increases in proportion to the increase in daily thrust at an airport location.

Mr. Chairman, experts testify that a very loud noise measuring 160 decibels will break a human being's ear drum. Already, jet engine and after-burners discharge up to 140 decibels of sound. A normal individual can experience temporary hearing damage when noise is at a level of 100 to 120 decibels, and frequent exposure to such noise will result in permanent damage to the sense of hearing. Moreover, anyone who has flown or even visited a large airport, ought to be aware of the obvious discomfort to people living in close proximity to such installations.

Effective initiative for eventually solving the problem of aircraft noise must come primarily from a source not compromised by economic interests which conflict with the welfare of our people. Under such criteria, both industry and local government are disqualified. There is only one source—the Federal Government.

Of course, the Federal Government already has assumed responsibility for many aspects of aircraft noise abatement including controls over air traffic and flight patterns. However, it is evident that these efforts, while commendable, have proved inadequate to solve the problem.

The pending legislation would authorize the Federal Aviation Administration, in addition to normal air worthiness tests, to certify aircraft on the basis of uniform noise control standards. I have no doubt that when aircraft manufacturers are compelled to cut noise levels, they will find a way to do so. Millions and millions of dollars are spent each year developing new, faster, and more luxurious planes. If only a portion of the industry's available pool of scientific talent and technical know how were devoted to noise abatment, the problem would undoubtedly be alleviated in short order.

Thank you Mr. Chairman and members of the subcommittee for the opportunity to present my views on this most serious issue. I respectfully urge your favorable consideration of legislation to control aircraft noise.

Mr. FRIEDEL. Thank you for a concise statement Mr. Minish.

If there are no questions, we shall hear next from Mr. W. K. Matheson, director of operations at the Minneapolis-St. Paul Metropolitan Airports Commission. Please proceed Mr. Matheson.

STATEMENT OF LAWRENCE M. HALL, CHAIRMAN, MINNEAPOLIS-ST. PAUL METROPOLITAN AIRPORTS COMMISSION, PRESENTED BY W. K. MATHESON, DIRECTOR OF OPERATIONS; ACCOMPANIED BY ALBERT F. BEITEL, AVIATION COUNSEL

Mr. MATHESON. Mr. Chairman, I am William Matheson, Minneapolis-St. Paul Metropolitan Airports Commission. On my left I would like to introduce my colleague, Mr. Albert Beitel, aviation counsel for the Minneapolis-St. Paul Airports Commission.

Mr. FRIEDEL. You may proceed.

Mr. MATHESON. Thank you, Mr. Chairman. I am here today to present the statement of Mr. Lawrence M. Hall, chairman of the Minneapolis-St. Paul Metropolitan Airports Commission for delivery before the House Transportation and Aeronautics Subcommittee on H.R. 3400.

This statement is made on behalf of the citizens of the Minneapolis-St. Paul metropolitan area to stress the urgency for solution at the Federal level of the problem of aircraft noise as it affects their well-being and the peace and tranquillity of their homes. The problem is real, the problem is acute; and, in the light of the phenomenal growth in air travel, the need for solution is immediate as the next several years will see the investment by commercial air carriers of billions of dollars in ever larger jet aircraft to serve this needed demand for air transportation.

The problem is not a local Minneapolis-St. Paul one, but instead is a major concern of all jet aircraft communities throughout this land. I would not presume to speak for any other communities, and my remarks are limited to our particular local situation, but it is safe to say that my remarks on noise discomfiture appear to a lesser or greater extent throughout the country.

I am intimately acquainted with this jet noise problem through my position as chairman of the Minneapolis-St. Paul metropolitan airports commission, a public corporation and agency of the State of Minnesota, created for the development of, and operation of the air transportation facilities for the Minneapolis-St. Paul metropolian area.

Our local airports commission through the years has developed an airport system of which we are proud. It includes Minneapolis-St. Paul International Airport, Wold-Chamberlain Field and the five reliever airports ringing the Twin City metropolitan area, namely: St. Paul downtown airport (Holman Field); Flying Cloud Airport; Crystal Airport; Anoka County Airport; Janes Field, and Lake Elmo Airport.

I am before you at this time simply in regard to the particular noise problems at Wold-Chamberlain Field which is the major jet airport hub, furnishing commercial air carrier facilities for the Minneapolis-St. Paul metropolitan area.

We are particularly fortunate in the location of Wold-Chamberlain Field which is within a 15 minute drive of the downtown area of both the cities of Minneapolis and St. Paul. We are also very fortunate in the particular topography surrounding the airport with the river bottoms off the southerly end of the northwest-southeast runway and off the northerly end of the northeast-southwest runway.

In addition, our airports commission, with the aid, financial and otherwise, of the Federal and State Government, has acquired substantial lands off the ends of all runways to prevent residential or other development and to provide ample clearance off the end of all runways.

While the clearance requirements of the Federal Aviation Administration call for 2,500 feet of cleared land off the airport instrument runways, the clearance off the end of the instrument runways at Wold-Chamberlain Field is at least 1 mile and over the river bottom exceeds even this amount.

Despite the existence of these extended cleared areas, as chairman of our airports commission, I have knowledge of many complaints by residents of the cities of Minneapolis and St. Paul and in the suburbs as to the noise of jet aircraft using the airport. As chairman of this airports commission I am understandingly sensitive to these complaints and to the responsibility of the public officials and of our airports commission to do all that can be done to ameliorate the noise nuisance to our neighbors.

In addition, I am sensitive to the possibility of movement by neighboring landowners for reduction in property taxes based on claimed depreciation of their properties. Should this occur, our local communities, which are so hard pressed for funds required to carry out necessary municipal activities, would suffer immeasurably, as any reduction of tax revenue puts in jeopardy needed municipal services.

Our airports commission has made a continual effort on the local level to meet this problem of jet aircraft noise. As previously stated, the airport as laid out and the cleared land as provided off the end of runways is far in excess of the Federal requirements. The dispersion of the majority of executive, business, and private aircraft to the reliever airports has reduced the volume of flying to and from our major scheduled airport, Wold-Chamberlain Field.

In addition, there is in existence a noise abatement committee consisting of all airport users of Wold-Chamberlain Field such as the air carriers, military, Federal Aviation Administration, and the Minneapolis-St. Paul Metropolitan Airports Commission.

Through the continuing action of this committee, various operational procedures have been put into effect, such as raising the glide slope for steeper descent of incoming aircraft, navigational facilities for positive pilot identification of their altitude and location when in the neighborhood of the airport, and departure procedures to route aircraft over nonpopulated areas where possible.

While in some places the use of land surrounding airports can perhaps be zoned, residential development does close in against the outer edges of the cleared areas off the end of some airport runways. In view of this situation, zoning to change development of these adjoining areas to compatible use would be ineffective as to existing development, and would require condemnation of numerous properties at a prohibitive cost. The nature of aircraft noise and its effect on people below is such that it would be impractical to arrive at absolute limits for control of land use.

Despite all of the efforts accomplished on a local level, the problem continues and requires solution. From technical reports, I am advised that much can be done in aircraft and engine design to decrease this noise problem. However, control of aircraft design and the development of operating criteria to this end can only be at the Federal level. Local units would not have the necessary authority over certification of aircraft to enforce such requirements, and even if they did, since commercial jet operators operate interstate and, in fact, internationally, any local effort to that end would not apply to interstate air carriers.

Our airports commission cannot simply restrict or prohibit use of the airport to aircraft which in their opinion cause an excess noise prob-

lem. Wold-Chamberlain Field has been developed through contribution of substantial public moneys under agreements known as grant agreements, entered into between the commission and the Federal Government.

These agreements include in them covenants or conditions on operation of the airport based upon Federal law, and include a requirement that the commission keep the airport open to all types, kinds, and classes of aeronautical use without discrimination as to types, kinds, and classes.

This requirement is subject to the right of the commission to impose nondiscriminatory conditions on airport users as are required for the safe and efficient operation of the airport, and includes a right to prohibit or limit the type, kind or class of aeronautical use to be made of the airport if, but only if, such is necessary for the safe operation of the airport, or necessary to serve the civil aviation needs of the public. It is to be noted that under the existing Federal law and the grant agreements this right of the commission to control the use of the airport does not contain control in aid of diminution of noise nuisance and there is question as to the extent to which the commission could restrict flights for this purpose.

As a practical matter, if the local authorities could and were to attempt to restrict or prohibit use of the public airport in aid of the diminution of noise nuisance, any such action would be in direct conflict with the statutory action and responsibility to promote and foster aviation. In addition, the net result of any such action would be a bypass of the local community in favor of other communities which imposed no such restriction or prohibition of airport use.

Over the past 10 years the increase in airport passenger movements to and from Wold-Chamberlain Field has been phenomenal. In 1956, 1,366,000 passengers used this airport and for the year 1967 the passenger total exceeded 4,300,000.

In 1964 the number of persons locally on the payroll of air-oriented companies of Wold-Chamberlain Field was 5,601 and an annual payroll of $40 million. In 2 years this total grew to 7,860 employees and an annual payroll of $59 million. These figures do not include the military activities of the Navy and Air Force. A loss or appreciable decrease in this air-generated activity would be calamitous to the local communities.

This national aircraft noise problem requires enactment of legislation giving the Federal regulatory bodies responsibility and enforcement authority, including authority to set aircraft design standards, in the interest of noise abatement. There are before Congress H.R. 3400 now being considered by your committee and its counterpart S. 707 in the Senate, the effect of which would be to give the Department of Transportation through the Federal Aviation Administration the authority to accomplish this purpose.

Speaking for the residents of the Minneapolis-St. Paul metropolitan area, we urge support for H.R. 3400 and that it be adopted and passed at the earliest opportunity so that the necessary design standards can be built into commercial aircraft and their engines before the air carriers have made the tremendous investment they must make in jet aircraft to meet the demands of the next several years.

Thank you.

Mr. FRIEDEL. I want to thank you, Mr. Matheson, and thank Mr. Hall for a very fine statement.

You say that you have "five reliever airports ringing the Twin Cities metropolitan area; namely, St. Paul Downtown Airport,"——

Mr. MATHESON. Yes, sir.

Mr. FRIEDEL. How far is that from downtown?

Mr. MATHESON. One and a half miles.

Mr. FRIEDEL. Do you allow all types of planes to land there or is that just for general aviation?

Mr. MATHESON. It is general aviation. There are no scheduled aircraft.

Mr. FRIEDEL. There is no problem there?

Mr. MATHESON. No, sir.

Mr. FRIEDEL. You mentioned about zoning around the airport.

Mr. MATHESON. Yes, sir.

Mr. FRIEDEL. Has anything been done toward zoning the property in that area?

Mr. MATHESON. The southeast is the only area that has not been built up and, through local government zoning, we have been successful in keeping that to compatible land use. The other areas to the northwest and northeast are residential area past the clear zones of 1 mile.

Mr. FRIEDEL. Were the homes built first around the airport or was the airport built first?

Mr. MATHESON. Well, the history of the airport goes back to 1926 and at that time it was well out of the city limits.

Mr. FRIEDEL. Mr. Devine.

Mr. DEVINE. I have no questions.

Mr. FRIEDEL. Mr. Kuykendall.

Mr. KUYKENDALL. It is good to have you with us. Again you get us into this quandary. I think that is a good descriptive word for what we have here. It is interesting that in your report and in the discussions that not only have come from your committee, but from other committees throughout the country, we always end up with a whole bunch of things that we cannot do. We cannot spend more local money. We can't cut down on the flights. We can't restrict general aviation. We can't restrict land use. We can't possibly hurt the local industry of the community.

It seems that maybe we have ended up picking on somebody we don't know. We have picked out somebody that is away from home and decided maybe we are going to land on him.

How do you propose that you actually regulate this? You want to give authority to regulate. What do you want him to do?

Mr. MATHESON. Sir, we feel that, in order to have any substantial reduction in the noise nuisance, it would have to come from the correction of the noise at its source, which is the design of the airframe and the engine.

Mr. KUYKENDALL. And you think that somebody can regulate that?

Mr. MATHESON. Well, sir, through operational procedures we have about exhausted the supply as to how we can correct noise or have any substantial reduction. The operational procedures are limited in present-day aircraft due to the design of the aircraft and, since this is our last resort of controlling noise in any great reduction, we feel and we

have been informed, that there is a possibility of reducing noise at its source.

Mr. KUYKENDALL. My point is this. We have had no regulation in this area for the past 6 or 7 years, and I think we certainly agree that the noise level of the aircraft engine, particularly on takeoff, has been reduced. It has not been nearly so dramatic on landings, and I will discuss that later, but there has been a rather unbelievable reduction in the noise level on the takeoff in relationship to thrust in the past 7 or 8 years, has there not?

Mr. MATHESON. The greatest majority of our noise probably is on approaching aircraft.

Mr. KUYKENDALL. I know that. I will get to that in just a moment. I was talking about takeoff. Has there not been a rather dramatic decrease in the noise level of aircraft in relationship to takeoff?

Mr. MATHESON. With 10,000 feet of runway they do climb out well.

Mr. KUYKENDALL. No, sir. That is not my question. I am talking about the noise level of the engine. You are thrusting at the manufacturer, and I am talking about the manufacturer. Has he not reduced in relationship to thrust, and when I say this I don't expect a 20,000-pound-thrust engine to make less noise than a 10?

In relation to thrust, has he not already, without being regulated, done a rather dramatic job in reducing noise in that engine on takeoff?

Mr. MATHESON. Yes, sir.

Mr. KUYKENDALL. That is the answer I wanted because we both know this is true and it was done without regulation.

Mr. MATHESON. Yes, sir.

Mr. KUYKENDALL. Do you seriously think that it would have helped to have regulated him on that subject or do you think he has done his best?

Mr. MATHESON. We feel that the Department of Transportation has submitted an administrative bill feeling that this source of noise can be controlled.

Mr. KUYKENDALL. I asked you do you think he has done his best in the past, sir?

Mr. MATHESON. Up to this time, through research and all, I would say they have done their best; but we are looking for——

Mr. KUYKENDALL. I heard a well-known scientist the other day start talking about trying to hurry up basic research by just adding more money to it. He said it would be like impregnating three women and expecting a baby in three months, and we know it just doesn't work that way.

I wonder if that is not what you are doing in this situation here. We know we have a relationship between noise and safety, do we not?

Mr. MATHESON. Yes, sir.

Mr. KUYKENDALL. And we know that the safety must be utmost, do we not?

Mr. MATHESON. That is right.

Mr. KUYKENDALL. So what I am trying to find out here is that I would hate to sit up here and in this committee pass out a bill saying we must stop noise and then the full committee passes that and it passes the House, "We will do something about noise."

Can we do anything about noise other than encourage the basic research that is already happening?

Mr. MATHESON. This is right, encourage the basic research that is happening so that 3 to 5 years from now we possibly might have it.

Mr. KUYKENDALL. So it is not the Federal Government that is doing anything about noise. It is the aircraft manufacturers on their own that are going to do something whether or not we regulate it, is that not right?

Mr. MATHESON. We feel that we would need the Federal Government's authority to control or regulate to some extent the aircraft noise.

Mr. KUYKENDALL. Do you not believe that the FAA, when determining their guidelines, is simply going to go find the state of the art, what it is at this point, and try to determine from the scientists what the state of the art should be a year from now, 2 years from now, and 3 years from now and base their guidelines on that? Do you not believe that that is what is going to happen?

Mr. MATHESON. Yes, sir. The FAA does this. However, the primary area, and they do have this authority, is the safety of flight.

Mr. KUYKENDALL. I just hate for us in this Government to be leaving the impression with the American people that simply by our voting something out of this committee that we are going to cure anything.

Mr. FRIEDEL. Will the gentleman yield?

Mr. KUYKENDALL. Yes.

Mr. FRIEDEL. Do you know of any new technique that the airplane manufacturers could use to curtail the noise?

Mr. MATHESON. I do not have a report with me but last September 27 the Federal Aviation Administration published a report that stated that there is a possibility of reducing the noise level from 18 to 20 PNdB's by various procedures, and no doubt through research that will follow.

Mr. FRIEDEL. And the manufacturers refused to follow that line?

Mr. MATHESON. No, sir. I don't know whether they have refused that or not.

Mr. KUYKENDALL. Mr. Friedel, I think that is the same thing that the aircraft people have reported to us on their own. I don't object to having the FAA write up some guidelines if they want to. I just object to our implying this to the American people. I think the American people have been misled too much by legislation in the past few years. I don't want to mislead them some more into thinking that, as soon as we pass this bill, they are going to be able to sleep at night now or even 5 years from now if they build a house near an airport. I don't want to imply a panacea here.

If you live near an airport, that is going to keep you awake, and you and I both know it.

We have had witness after witness come here and imply to the American people that if you will just pass H.R. 3400, we will not have noise anymore. This is not true, and you know it is not true, because, as long as we have safe aircraft, we are going to have noise.

I happen to think that the FAA works well in conjunction with the manufacturers because they work with the manufacturers constantly. The FAA and the manufacturers before us don't conflict with each other as to what is possible and I don't certainly object to your concern because we have an airport in Memphis that has the same concern, and I hear this same thing, and I know what your problem is here.

I don't object to your searching for solutions, but I do object to our implying that, if we pass a bill, it will reduce noise.

Thank you, Mr. Chairman.

Mr. FRIEDEL. Are there any other questions?

I want to thank you, Mr. Matheson.

Mr. MATHESON. Thank you, Mr. Chairman.

Mr. FRIEDEL. We had one other witness, Mr. Stannard Potter, a member of Mayor Lindsay's Task Force on Noise Abatement in New York, who asked to be heard today. We just received a call that he will not be here.

With no other witnesses, the meeting now stands adjourned.

(Whereupon, at 10:35 a.m., the subcommittee adjourned, to reconvene at 10 a.m., Wednesday, March 20, 1968.)

AIRCRAFT NOISE ABATEMENT

WEDNESDAY, MARCH 20, 1968

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND AERONAUTICS,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice in room 2123, Rayburn House Office Building, Hon. Samuel N. Friedel (chairman of the subcommittee) presiding.

Mr. FRIEDEL. The meeting will now come to order.

This will be a continuation of the hearings on H.R. 3400 and related bills to authorize the Secretary of Transportation to prescribe aircraft noise abatement regulations.

Our distinguished witness, the first witness, is our dean of the Congress, the chairman of the Judiciary Committee, a very, very close friend of all of us, Mr. Celler.

STATEMENT OF HON. EMANUEL CELLER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. CELLER. Thank you, Mr. Chairman, and other members of the committee.

I am indeed grateful for this opportunity to appear before this House Commerce Committee in order to lend my hearty support to H.R. 3400, which would amend the Federal Aviation Act of 1958 to authorize aircraft noise abatement regulation. At the same time, I would be favorably disposed toward your serious consideration of H.R. 1398, which appears to represent a rather more ambitious approach to the same problem.

When Dr. Sigmund Freud, some two generations ago, wrote about the discontents of civilization, he neglected to include noise in his catalog. When the mythical Daedalus fashioned his crude wings for flight, he could not possibly foresee that the quiet flapping of his wings over an empty space would one day become an ugly roar in the ears of millions of Americans.

While no one here would deny the vast benefits which have accrued to American commerce and American life from modern aviation, no one could be impervious to the plain and well documented truth that the countless American families who dwell on the periphery of our great but over-crowded airports are daily indeed subjected to an enormous practical inconvenience and even to measurable phychological stress through captive exposure to deafening if not shattering airplane noise.

It would appear that low-flying jets on take-off and landing are the most obvious sources of the disturbance, and, with the rapidly increasing volume of jet traffic, we can expect that the problem, if not squarely confronted by sound legislation, will grow more acute, and then intractable.

For those of us from the New York City metropolitan area, serviced by two major facilities, Kennedy and LaGuardia Airports, no one needs to underscore the unhappy implications of airplane noise for the general welfare of our constituents. From personal experience, and from mail coming into my office, I can fully appreciate the dimensions of this nuisance to the residents of my own district.

But, as we all know, the problem of low-flying planes, and, for that matter, of sonic boom, is hardly limited to New York City; it is nationwide in scope; it threatens the quality of our national life; it interferes with work and with leisure, with prayer and with contemplation, with what Shakespeare styled "the sessions of sweet silent thought." It quite literally disrupts the domestic tranquility of every affected household. How grimly ironic it is that we should be able to travel the airways in relative peace and serenity, only to land at a destination made unbearably noisy by the plane which brought us there.

Small wonder then, that President Johnson, with his characteristic concern for human problems, has consistently pressed for legislation in this keenly troublesome area. One of the landmarks bearing witness to the administration's interest was the President's appointment on October 29, 1965, of a White House Task Force on Aircraft Noise Abatement. Thanks to the activities of this group, the Department of Transportation and NASA have been working together to develop "quieter" aircraft and plans for noise abatement geared to the limitations of existing aircraft and airport facilities. These plans have included some rather ingenious changes in orthodox landing patterns. In the same spirit, President Johnson, in his message to the Congress, of March 8, 1968, urged us "to take prompt action on legislation to strengthen the authority of the Secretary of Transportation to deal with aircraft noise." The President advised us that:

> We need greater capacity to deal with the rapidly growing noise problem created by our expanding air transportation system.

The bill before you, H.R. 3400, introduced by your distinguished chairman, Harley Staggers of West Virginia, would take a first crucial step in that direction, inasmuch as it empowers the Secretary of Transportation to prescribe and amend standards for the measurement of aircraft noise and sonic boom, and to prescribe and amend such rules and regulations as he may find necessary to provide for the control and abatement of aircraft noise and sonic boom. This bill would put "teeth" into the regulations promulgated by the Secretary, since he would be further empowered to apply those regulations to the issuance, amendment, modification, suspension, or revocation of any certificate granted an air carrier. Subsection (b) of section 611 wisely preserves to the certificate holder his right to notice and appeal from the Secretary's order to cover those situations in which safety in air commerce and the public interest do not warrant the affirmation of his order. Under the circumstances I have outlined, we have little choice but to support such

a measure, since it reflects the same balance between the public interest and the interests of the affected industry.

Of course, it may become necessary in the future for us to consider subsidizing the efforts made by the civil aeronautics industry to redesign its aircraft for the achievement of minimum noise levels, and also to subsidize States and municipalities in the acquisition of land for uses compatible with such noise reduction. In the meantime, however, H.R. 3400 gives the Secretary of Transportation the discretion he requires to begin, and I emphasize to begin, to make the necessary changes. There seems to be little doubt that he will exercise that discretion wisely, in such a manner as to protect the citizens oppressed by noise and the aviation industry which must inevitably bear the economic brunt of the ultimate changes which we have a right to demand.

If those who make policy, if we in Congress are vigilant, man will remain master of the machines which he devises for his self-improvement; otherwise, man will become a slave of technology, a slave of his most glorious inventions. I have come here this morning to join you in being vigilant, and to reiterate my support for H.R. 3400.

Mr. FRIEDEL. I want to thank you for a very cogent statement.

Mr. CELLER. Thank you.

Mr. FRIEDEL. Are there any questions?

Mr. Adams.

Mr. ADAMS. I have no questions, Mr. Chairman. I would just like to recommend to everyone that they read the statement, and to say how much we appreciate your coming over this morning, Mr. Chairman, to be with us. We enjoyed your statement.

Mr. CELLER. Thank you very much, sir.

Mr. FRIEDEL. Our next witness will be Mr. Thomas P. Callaghan, assistant to the executive director of the Massachusetts Port Authority.

We have one of our distinguished members on the full committee from your State who would like to say a few words, Congressman Hastings Keith.

STATEMENT OF HON. HASTINGS KEITH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS

Mr. KEITH. Thank you, Mr. Chairman.

It is good to see you here, Tom.

It was nice of your Washington staff to alert me to the importance of this problem, and the fact that you were going to testify.

We will rely heavily on the information gained by the experience which Boston has had, and is currently having.

I appreciate the fact that Chairman Friedel, who has Friendship Airport as one of his prime concerns, recognizes my similar concern for local problems that assures sympathetic attention to the testimony that you offer regarding the problem which confronts you.

We have in Boston an airport that certainly rivals Friendship. I am glad to see such "friendship" between the committee chairman and Boston.

Thank you, Mr. Chairman.

Mr. CALLAGHAN. You have been most helpful, Congressman. Thank you.

Mr. FRIEDEL. Please proceed, Mr. Callaghan.

STATEMENT OF THOMAS P. CALLAGHAN, ASSISTANT TO THE EXECUTIVE DIRECTOR, MASSACHUSETTS PORT AUTHORITY

Mr. CALLAGHAN. Thank you.

Mr. Chairman and gentlemen, I appreciate being allowed to speak briefly on short notice.

I am Thomas P. Callaghan, assistant to the executive director at the Massachusetts Port Authority, and I have the responsibility of directing the noise abatement program at Boston-Logan International Airport.

I have been associated with the noise abatement program over the course of 5 or 6 years as public relations director, and now as assistant to the executive director.

I would like to summarize the essence of my few comments by saying that I believe that, if the Congress and the State government officials and the airport operators can work together, that we can offer to the people who are most seriously affected by aircraft noise a program of peaceful solution.

I think at the present time the airport operators find themselves the target of a good deal of criticism, even abuse, and I believe that it is possible, by having a three-part program, to offer to the people who are close to airport runways a freedom of choice, an opportunity to sell their homes, to leave, if they desire, or stay if they prefer, because of family or community ties.

We believe that, first, we have our responsibility to show leadership in disciplines and takeoff procedures along with the airlines, the Air Line Pilots Association, the FAA on the local and regional basis, the State aeronautics commission, and community representatives to establish every possible ground control discipline and takeoff procedure which will alleviate the aircraft annoyance in the airport environs.

We are faced with bigger planes, and with more flights, and we are not finding it an improving situation.

Second, we respectfully submit that the FAA should be authorized under H.R. 3400 to establish standards to regulate the generation of noise from the aircraft itself, while at the same time the Federal Government pursues its research for quieter aircraft engines.

Third, we believe that, if persons living within a prescribed proximity to airport runways still find aircraft noise something they don't care to bear, then there should be, we submit, a Federal-State-local program to permit an individual the opportunity to sell his home, and to move elsewhere.

Perhaps it should be similar to an urban renewal program.

I might cite a few of the measures which we have taken under this concept of responsibility:

We have an Air Traffic Cooperation Committee, which is composed of the Massachusetts Port Authority representatives, airline representatives, airline pilots, FAA air controllers, State aeronautics commission, and now community representatives to analyze the various complaints that we receive.

We do not have a tremendous volume of complaints, but we readily admit that the volume of complaints is apt to drop if there are not measures which answer these particular complaints.

If a person or a neighborhood is suffering from aircraft noise, that neighborhood or individual is going to complain for quite a while, but then after awhile, the person just discontinues complaints and starts seeking relief from State legislatures or from Congressmen or from somebody else that he feels can influence the situation.

So that we don't minimize the fact that we don't receive a tremendous number of complaints, but what we have done is to have each complaint analyzed by a technical subcommittee which is composed of a representative of the port authority, the chief pilots at the airport, a member of the Massachusetts Aeronautics Commission, and one or two other people who have particular expertness as technicians.

We have established one of the first perferential runway systems in the United States. There is a prohibition of flights over Boston proper at less than 3,000 feet, unless the air controllers direct otherwise.

We have displaced threshold on one runway at the present time. We will have a displaced threshold on another runway. It is an expensive way of requiring the pilot to pass over houses at a higher approach angle.

We also have a restriction against aircraft proceeding to a noise sensitive takeoff area until actual clearance to take off on that particular runway.

We have reduced the training flights at night by 75 percent. We have limited the maintenance runups to propeller planes alone, and these must be stationed in a corner of the airport close to the open harbor. We require a left turn toward the sea to avoid a thickly settled neighborhood of South Boston. We require the pilots to direct their jet exhaust away from East Boston and Winthrop when they are awaiting takeoff; and the FAA, which has been very cooperative, has required a doubling of the height at the Whitman checkpoint, so that pilots can virtually coast onto the runway.

I would just finish by saying that it is my personal belief, and I believe it is the understanding of the staff of the Massachusetts Port Authority and the members of the authority, that we are faced with an increasing problem.

We believe that the homeowner and the tenant should have some freedom of choice, so that we have suggested this three-part program.

We believe that perhaps soundproofing within a certain prescribed area close to runways may be helpful for those who want to stay; but perhaps the ultimate, the final answer, is that a person be given a fair price for his home, and allowed to leave, if he cares to.

The final comment that I would like to make is that we now have 300,000 operations at Logan Airport. By 1972, these will double.

The duration of noise, the declining interval of silence between the landing and the takeoff of planes during rush hours, is one of the most important aspects of this worsening problem. People can stand a certain amount of noise, so long as it does not have the quick repetition that exists at the present time during rush hours.

There are no criteria presently that establish a zone where we can tell people that, "If you are within this PNdB curve, we will be willing to purchase your home"—and of course that willingness would be based on a federally sponsored program, inasmuch as this urban renewal type of program I believe must be sponsored by the Federal Government.

Thank you, very much.

Mr. FRIEDEL. I want to thank you, Mr. Callaghan.

Mr. Pickle, do you have any questions?

Mr. PICKLE. Mr. Callaghan, I noticed that you recommend that the FAA should be authorized to establish the standards, rather than the DOT. Is that a choice, or a preference, or a strong recommendation?

Mr. CALLAGHAN. No. I merely have used the FAA as the appropriate element within the DOT.

Mr. PICKLE. Well, the bill calls for the Department of Transportation to establish these standards. Are you in opposition to that position?

Mr. CALLAGHAN. Not in opposition. I do think that I have read that the certification for safety is under the FAA, and presumably certification for noise might be under the same particular governmental level. I don't have any knowledge of the exact value of having it under the DOT or the FAA, sir.

Mr. PICKLE. I assume, then, you are saying that the FAA would in effect be making the recommendations to the DOT, that they would be the primary agency that would make the recommendations, but the final decision would in effect be left up to DOT.

Would that be acceptable to your group?

Mr. CALLAGHAN. That would be satisfactory, sir.

Mr. PICKLE. I have one other question.

By and large, when airports are built, they are put out in the edge of a city or a town. Then, as conditions develop, homes are gradually built out and surround the airport. The homes are added usually after the airports have been placed there.

Are you saying that, although they do buy and build these homes, that if the noise abatement problem isn't solved, that the Federal Government ought to go out and buy the homes that they have built?

Mr. CALLAGHAN. Well, we have a little different situation, being an old city. East Boston was settled by a Mr. Maverick before Boston itself was settled, so that most of the homes that surround Logan Airport were there when the airport was being constructed.

I would say more specifically, by the time that the present conformation of Logan Airport was established, that probably about 75 percent of the homes on the periphery had already been located.

Mr. PICKLE. Do you have any idea what it would cost the Federal Government if we entered into a program through eminent domain of purchasing these homes?

Mr. CALLAGHAN. I believe two things, sir: I believe that the work that is being done by the National Aircraft Noise Abatement group to establish a systems analysis and a mathematical model is very important with respect to your question.

And I would also like to preface my answer by saying that, when a Federal interagency group was with us in Boston to look over the total situation, one of the gentlemen from HUD said that when it came to considering what it would cost at O'Hare to take the property or to redevelop, let us say, the property within the 110 PNdB curve, that it would take all the money that HUD has to accomplish that.

Now, I would say that with a relatively small amount of money, perhaps, to be specific, somewhere in the neighborhood of $5 million

or $10 million, which does not mean a great deal when you consider the user charges that are involved at the present time, and could be involved, we could keep Logan Airport and the community compatible for a good many years.

Mr. PICKLE. There might be a few select places in the country where homes would be located, as you say, within prescribed proximity to airport runways.

I admit that might be small, but you multiply that by hundreds of places, and you have a very severe problem.

Would not a better approach be to say that, with the establishment of airports in the future, homes could not be built within a prescribed proximity to the runway?

Mr. CALLAGHAN. I think we have to do both things. We have to have an answer to the airport which exists today, which either has been encroached upon, or which itself has encroached upon the community and the airport which may be established in an outer harbor or established in some undeveloped territory.

But I personally would like to emphasize that I don't believe that the amount of $10 million in an industry, and specifically at an airport which has such a tremendous economic value, and which is generating such great sums of money in its own economic mechanism, is a great deal of money to take care of this particular problem.

Mr. PICKLE. Mr. Chairman, that is all I have.

Mr. FRIEDEL. Mr. Adams.

Mr. ADAMS. I have no questions.

Mr. FRIEDEL. Thank you very much.

Our next witness is Mr. Frank C. Waldrop, chairman, the Committee Against National.

I imagine that is National Airport. Is that correct?

Mr. WALDROP. That is correct, Mr. Chairman.

Mr. FRIEDEL. You may proceed.

STATEMENT OF FRANK C. WALDROP, CHAIRMAN, THE COMMITTEE AGAINST NATIONAL

Mr. WALDROP. Thank you, Mr. Chairman.

Mr. Chairman, members of the committee, my name is Frank C. Waldrop. My address is 4900 Loughboro Road NW., Washington, D.C. 20016.

I appear here today as chairman of the Committee Against National, an unincorporated association of persons in the District of Columbia, Maryland, and Virginia, having broad and substantial interests in the nature, composition, and operating characteristics of aviation in the Washington-Baltimore area.

On behalf of our group, I thank you for this opportunity to comment on the need for such legislation as that proposed in H.R. 3400.

I shall be brief and try not to deal with details already in your record from other witnesses, but must beg your indulgence, before going to the substance of our position, to touch on one aspect of prior testimony, that which purports to characterize and define the motives which bring me before you today.

I refer to the remarks of Vernon C. Brunelle, chairman of the

Noise Abatement Committee of the Air Line Pilots Association, as these appear in the transcript of your proceeding for December 5, 1967.

In that transcript, Mr. Brunelle is recorded as identifying a group, the Committee To Close National, which can only mean our committee, as politically motivated, and having real estate interests he does not further specify, concerned with its purposes.

So that you may have a foundation from which to pursue any curiosity you may have as to these matters, I annex to this text copies of certain documents bearing on our activities, and invite the fullest examination pursuant to these, or on any other basis pleasing to you.

Mr. Chairman, I would like to interpolate that those annexes were handed into the committee staff some days ago, and are not attached to this brief statement I am making here.

Mr. FRIEDEL. We will have those for our files.

(The material referred to has been placed in committee files.)

Mr. WALDROP. Of course, I am unaware of all the motives which may now or may hereafter exist among all the people associated with our activities, but I certainly can speak for myself, and feel sure that what I say in my own behalf reflects the views of others.

You may be quite certain that I am politically motivated in this matter of dealing with aircraft noise, and that I am present today in what I believe to be a due and lawful pursuit of remedy against a major detriment to the public welfare.

I cannot imagine that you, as Members of the Congress, would have it otherwise.

As to real estate interests, I most specifically have these too, in that I am a joint tenant by the entirety of a certain parcel of real estate in the District of Columbia, to wit: lot 6, square 1426, which I have held since 9:40 a.m., February 23, 1945, as may be seen at the office of the Recorder of Deeds by looking in liber 8073, folio 239.

Since April 24, 1966, on which occasion jet carrier traffic was introduced at National Airport, approximately 6 miles distant from that property, my peaceful enjoyment and beneficial use of it has been substantially damaged by the passages of these aircraft both near to and directly above it.

Indeed, I confess to you without reservation or evasion that it was because of my interest in that said parcel of real estate I concerned myself in the forming of the Committee Against National, and agreed at the outset to serve as its acting chairman.

Developments following, however, have considerably broadened the scope of my information on the whole issue of environmental pollution, in which aircraft operations are a most significant element, and my present concern is enlarged to that of a citizen determined to participate in the forming of public policy on that whole issue.

Now, as to H.R. 3400 and related bills, the Committee Against National, in a meeting on January 12, 1968, at the Hardy Recreation Center, 45th and Q Streets NW., in the District of Columbia, adopted, without dissent, the following resolution:

Whereas, pollution caused by aircraft noise and engine waste is a growing menace both nationally and in the Potomac Valley, and

Whereas, the Federal Aviation Administration, the Civil Aeronautics Board, and other responsible agencies in the Executive Branch of the Federal Gov-

ernment have failed to exercise their obligation, or have claimed lack of authority to protect the public from such pollution.

Now be it resolved that:

The Committee Against National petition the Congress to enact mandatory legislation

(1) to require one or more agencies of the Executive Branch to take prompt and effective action to abate pollution caused by aircraft noise and engine waste in this Potomac Valley region and throughout the nation,

(2) to require responsible agencies to permit and encourage full citizen participation in the establishment of permissable aircraft noise and engine waste tolerances.

(3) and to entrust the final authority to establish these permissable standards, binding on all Federal agencies, to an impartial council of environmental conservation experts entirely independent of the aviation industry or the promotion of aviation.

Mr. Chairman, and members of the committee, I have only one further point to make.

The noise pollution alone, not to mention other consequences of operating a major airport in the heart of a city, have passed the point of reason in at least one instance, and if my files are any evidence, in many more than one.

From almost every part of the country I have letters of inquiry from citizens asking how to organize against this hazard, and certainly the record is voluminous as to the attitude of citizens in the Potomac River Valley adjacent to National Airport.

I invite you to examine these files and test the validity of their tenor to the fullest. They support your purposes, without doubt.

I thank you.

Mr. FRIEDEL. Mr. Waldrop, I speak for myself, but I think we have the assurances of every member of this committee that we are trying to find a solution for the noise.

I might be a little prejudiced, in a way, but I would like to see more jets taken out of Washington National and diverted both to Dulles and Friendship. I have been in the forefront for that.

In your resolution, here, where it says:

(1) to require one or more agencies of the Executive Branch to take prompt and effective action to abate pollution caused by aircraft noise and engine waste in this Potomac Valley region and throughout the Nation.

I think Congress has already taken that step. I don't know.

Was your problem before jets at Washington National, or are you complaining of too many planes there, or too much noise, even without jets?

Mr. WALDROP. Mr. Chairman, before the jets were introduced, the situation at National was within reasonable tolerances, so far as I know.

As I have mentioned in my statement, I have been living where I am living since 1945, and I was quite interested in the comment of this witness who just preceded me on the point of airports in areas which are long since built up.

There has been, of course, a great deal of increased population in the vicinity of National, but it is not as simple as saying people have moved near it. It is the increase in the noisemaking capability of the new generations of planes that have come in that has distributed this effect intensively, as well as extensively.

For example, Georgetown is considerably older than National Airport. I don't live in Georgetown. I lived in Georgetown before I moved to this particular house, and as a matter of fact, I remember when people used to fly out of what was called Hoover Field, right where the Pentagon is.

We have always had intown planes, but the DC–3 and other planes, no matter what volume of traffic, did not create the type of problem that the current and anticipated types of planes can be demonstrated to create.

It is not only how many, but what kind, that makes it seem to me that H.R. 3400, such enterprises, are really essential to set up an admissible limit of impact from noise.

Mr. FRIEDEL. I thank you.

Mr. Pickle, do you have any questions?

Mr. PICKLE. Mr. Chairman, thank you.

Mr. Waldrop, I live out in the general neighborhood of your residence, 3900 Watson Place, which is approximately 10 blocks from your street.

I don't find the noise problem nearly as severe, apparently as you do, but I think that would depend on your location. I live in a cooperative apartment house. I am sure that those homeowners who are directly under a path of the plane on either approach for landing or takeoff find it a nuisance.

I am concerned that you indicate to me that we can just turn the faucet and change the picture as abruptly as your testimony indicates. We are trying to find an answer to this problem. The FAA and the Department of Transportation have studied this thing as assiduously as they can.

We do need to settle the problem of standards, and we are making an herculean effort to solve the problem. To find an answer is not a simple matter.

I am primarily concerned when you say that you want to leave the final authority to establishment of these standards "to an impartial council of environmental conservation experts entirely independent of the aviation industry."

Do you mean entirely independent of the FAA or DOT? Are you saying that you want a group of citizens to set these standards?

Mr. WALDROP. Well, not in the sense that I would propose people like myself to set such standards, but there is a very excellent study of noise and airports made by the President's Science Advisory Council, which was issued in March of 1966, for example, in which a Dr. Karl D. Kryter, who is a real expert on noise measurement means, has some material which would be I think quite helpful to the committee's consideration of measuring human response to noise, as against mechanistic ways of measuring noise.

The FAA and all aviation-related standards are governed by the purposes of aviation, but the responses of people of all kinds, including people who fly and who operate planes, is important.

I heard an airline pilot, for example, who flies into National quite regularly, describing the effect on him. He lives up the river some distance from your area, and from mine. He lives, to be exact, in an area called Mohican Hills. He flies in and out of National regularly.

At a meeting of a citizens' association which I attended, this man was one of the most vocal critics of this condition.

It is what affects the people, whether they are flying, or in aviation, or out of aviation, or whatever they do, that is the real question.

Mr. PICKLE. You would leave the establishment of these standards to a group of experts?

Mr. WALDROP. That is correct, but not involved in aviation.

Mr. PICKLE. Now, the very group you mentioned—and I assume you have reference to Dr. Kryter, as an example.

Mr. WALDROP. Yes.

Mr. PICKLE. That group's primary function has been transferred to the Department of Transportation.

That is what we are trying to do in this bill, say to DOT, "You establish these standards, and you recommend."

It seems that you are opposing the very thing you recommend, here.

Mr. WALDROP. Let me make this clarification of my mention of Dr. Kryter. He is not an employee of the Department of Transportation at all. He is a professor at I believe the Stanford, California Research Institute, who was retained by the science advisers to the President to introduce one of the papers in this panel study.

It is people like that that I am urging your committee to consider as the final standards makers. To leave the matter in the hands of aviation would be, if I may use a not too precise analogy, as if the manufacturers in the drug business, and people who have their business purposes at heart, were setting standards for the quality and effectiveness of medicines, rather than an independent board such as the Pure Food and Drug Administration.

Mr. PICKLE. I am sure we are all after the same objective, here.

Mr. WALDROP. That is correct.

Mr. PICKLE. It is impractical, though, to say that experts alone, such as you mention, could have the final authority.

In my opinion, people who are primarily concerned in the manufacture of airplanes, people primarily concerned in flying the planes, must have a voice in this thing, to some extent, but the Department of Transportation must listen to the views of groups such as yours, and I am sure that they will.

Thank you, Mr. Chairman.

Mr. FRIEDEL. Mr. Adams, do you have any questions?

Mr. ADAMS. Would you favor the condemnation of the necessary land to provide immediate land links out to the airports at Dulles and Friendship?

Mr. WALDROP. I am sorry. I couldn't hear all of that question, sir.

Mr. ADAMS. Would you favor the condemnation of properties in the area, including people who live in this area, of the necessary land to provide links that were completely limited access out to the airports, such as Friendship and Dulles?

Mr. WALDROP. Would I say that condemnation should apply in those? I am not really too well informed on the legal aspects of condemnation.

Inverse condemnation I believe is being tested out pretty generally, but as a matter of policy, I don't think that Congress could possibly enact legislation which would be equitable to all parties, including

the general taxpayers of the United States, based on a principle of condemnation.

I mean you could just condemn the whole country, if it came to that, to fly the SST. There has to be an operation at the other end, of putting the burden on the operators of this equipment not to create a situation which is unreasonable to the country as a whole.

Mr. ADAMS. I am asking, would you favor the condemnation of the necessary land links to Dulles and to Friendship, to get people in and out to those airports, even if it meant your land, and that of others, to get back and forth out there.

Mr. WALDROP. Condemnation in order to improve transportation?

Mr. ADAMS. Ground transportation.

Mr. WALDROP. I certainly would.

I am particularly struck with the point that Dulles Airport continues to operate at a loss of $6 or $7 million a year, at a time when the President of the United States is quite rightly calling for austerity across the board.

It doesn't seem to me that it is a very good practice to manage an enterprise of that character in such a way that it continues to lose money, and another one at National Airport to be in such a condition that the Civil Aeronautics Board, of its own initiative, has started a hearing to determine the condition of congestion, and what to do about it.

It doesn't seem like good management.

Mr. ADAMS. Have you ever tried to get out to Dulles Airport in the afternoon?

Mr. WALDROP. I have been out to Dulles quite often, sir.

Mr. ADAMS. Do you know how long it takes?

Mr. WALDROP. It depends on where you start.

Mr. ADAMS. I would say at 5 o'clock in the afternoon, from the Capitol.

Mr. WALDROP. At 5 o'clock in the afternoon, from the Capitol, I would assume it would take considerably longer time.

I would be delighted to see National set aside entirely as a Government enterprise's airport to accommodate not merely the Members of the Congress, who certainly are entitled to it, but the whole Executive—make it a Government business airport, put all the other business at Dulles and Friendship.

There are many solutions other than this current one.

Now, I might add from where one starts is important in order to determine the time it takes to get somewhere. If you are out at, let's say, the National Institutes of Health, you can go to Dulles quicker than you can go to National.

Mr. FRIEDEL. Are there any more questions?

Mr. ADAMS. I have no further questions.

Mr. FRIEDEL. Thank you very much.

Mr. WALDROP. Thank you very much, Mr. Chairman, and members of the committee.

Mr. FRIEDEL. The Chair recognizes one of our beloved Members from California, Congressman Wilson.

We are going to allow him to present our next witness.

STATEMENT OF HON. CHARLES H. WILSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. WILSON. Thank you very much, Mr. Chairman, and gentlemen.

I think this a very commendable job that you are doing in conducting public hearings on this extremely important subject.

I have two gentlemen with me from the city of Inglewood. Inglewood is part of the 31st Congressional District, and is the city that is adjacent to the Los Angeles International Airport.

Before introducing them, however, I would just like to make a very brief statement.

Mr. FRIEDEL. You may proceed.

Mr. WILSON. We have to start someplace, and I think H.R. 3400 and the companion bills that are attempting to do the same thing is an absolute must. It is important that we establish a responsibility in a reputable agency of the Government to establish standards. This is the purpose of this particular legislation.

I am not one of those who feels that nothing is being done, or that the Federal agencies are turning their backs on this very serious problem. I feel that they are making every effort possible to try and find some answer to the noise condition that we have at our airports, but apparently we do need some legislation to give them a little more help in this important job they are doing.

I would just like to mention that the Los Angeles International Airport has done an outstanding job in trying to approach this problem. The city of Los Angeles recently adopted a $1 per head tax on all persons coming in to Los Angeles International Airport, with this money earmarked for research and programs to try and solve the noise problem around the Los Angeles airport.

They have made an offer to the school districts, and this is what our major problem is, the noise affecting the children who are trying to study, and we have some 50 schools under the flight pattern in the Los Angeles airport, where the planes come in in the approach pattern.

The city of Los Angeles, through the airport commission, has offered a matching amount to soundproof the schools that are under the flight pattern. If the school districts can come up with an equal amount of money, they will give 50 percent of the money necessary.

I think this is a very commendable effort by the Los Angeles International Airport, and I think that they are taking the lead in trying to assist in the solving of this problem.

I would like to introduce Mr. Ted Merrill, who is the president of the Inglewood Unified School District, one of our fine citizens of Inglewood, and Dr. Bernard Hopkins, who is the assistant superintendent of the Inglewood Unified School District.

Dr. Hopkins will make the statement. It is a brief one.

They do have a tape recorder with some planes going overhead. We have all heard them, but they have brought them with them, so get the cotton in your ears.

I would like to introduce Dr. Hopkins at this time.

Mr. FRIEDEL. You may proceed, and, if you want to play the tape, go ahead.

STATEMENT OF DR. BERNARD M. HOPKINS, ASSISTANT SUPERINTENDENT, INGLEWOOD UNIFIED SCHOOL DISTRICT; ACCOMPANIED BY TED MERRILL, PRESIDENT; REPRESENTING THE CITY OF INGLEWOOD, CALIF., AND INGLEWOOD UNIFIED SCHOOL DISTRICT

Dr. HOPKINS. Mr. Chairman, I want to thank you for this opportunity to speak to you today, and I will make my remarks very brief.

I am Dr. Bernard M. Hopkins, and I represent the Inglewood Unified School District and the city of Inglewood, which is adjacent to the Los Angeles airport.

The proposed legislation under consideration today, H.R. 3400, will benefit over 50,000 students in the Centinela Valley as well as the residents in Inglewood, El Segundo, Hawthorne, Westchester, Los Angeles, Lennox, and Lawndale.

It is imperative the the Government create a commission for the study of methods for elimination of excessive noise produced by airplane traffic.

In order to illustrate the problem, I have brought along still photographs, which I will leave for you afterward, so that you can see the height of the planes as they come over.

Students attending schools in this area are severely handicapped in their educational programs, due to interruptions produced by airplane noise. Approximately 3 hours of instruction is lost each day because of this harassing problem.

I have with me a tape recording showing the ear-shattering intensity of the airplanes when they fly over our schools. With your permission, Mr. Chairman, I would like to play a short section of this tape. As you will hear for yourself, it is hardly possible for the students to hear their teachers during instruction.

Mr. FRIEDEL. You may proceed.

(At this point the tape referred to was played.)

Dr. HOPKINS. That is just the sequence which I will give.

Mr. FRIEDEL. Were the windows open?

Dr. HOPKINS. No, sir; that is not a soundproof building, and it is part brick and stucco.

They will come in on two paths. We have a north and south runway, so that many times two will be coming in simultaneously. That is only one area.

Mr. FRIEDEL. You may proceed.

Dr. HOPKINS. Yes, sir; while our local Government, city officials, and community leaders have worked very diligently to combat the irritating problem of jet noise, they have so far been largely unsuccessful. Therefore, it seems to us that it is not possible for local authorities to do this job alone.

There is no doubt that the Federal Government must step in now to set up national standards for solution to this vexing problem.

We are glad that there is now Federal recognition of this problem. Please be assured of our cooperation with you in seeking satisfactory solutions to the jet noise pollution.

Again, Mr. Chairman, let me thank you for your courtesy and patience in allowing me to appear before you.

I surely hope that H.R. 3400 will be enacted into legislation as soon as possible.

Mr. FRIEDEL. I want to thank you, Dr. Hopkins.

As I said earlier, every Member of Congress is fully aware of the noise around airports, and we are hoping to get the solution, without adversely affecting the industry. That is the purpose of these hearings. We have had very good hearings.

I want to thank you for coming all the way from California to get your point over.

I want to thank Congressman Wilson for his fine introduction of you.

Mr. Pickle, do you have any questions?

Mr. PICKLE. Mr. Chairman, I have no questions. I want to point out to Dr. Hopkins that we have had other tapes and demonstrations of noise before the committee, and, of course, we recognize that it is a problem, as so vividly pointed out here this morning.

I assume your testimony is that you are glad we are considering this, and that Federal standards need to be established.

Dr. HOPKINS. Yes, sir.

Mr. PICKLE. I also want to say that you come well recommended this morning, with our colleague, Charlie Wilson, to present you. He is one of our able and outstanding Congressmen here serving in Washington.

Mr. FRIEDEL. I want to thank you all.

The meeting now stands adjourned.

The hearings are concluded, and the record will remain open for 5 days.

(The following material was submitted for the record:)

STATEMENT BY MAYOR ARTHUR NAFTALIN, MINNEAPOLIS, MINN.

My name is Arthur Naftalin. I am the mayor of Minneapolis and I am presenting this statement on behalf of the city of Minneapolis and the United States Conference of Mayors.

The need for legislation to provide for aircraft noise abatement has become one of our most critical urban priorities.

My office in Minneapolis and city halls throughout our Nation are being besieged with phone calls and letters, ranging from pitiful to irate, clamoring for relief from the harassment of jet noise.

Householders who live along flight approach paths tell us of sleepless nights and din-filled days, of rattling windows and of cement, stucco, and plaster cracked from endless vibration. As noise levels have risen, property values have fallen. The steadily burgeoning traffic of the air age has been exacting a needlessly heavy price from a large segment of our citizens.

The deplorable fact is that, even if the volume of jet noise were maintained at its present level, we would be confronted with a national problem of imposing dimensions.

But new technology is rapidly producing aircraft which dwarfs the present day jet. One can only imagine the escalation of noise levels which will result unless stringent federal regulations are firmly imposed to control and abate aircraft noise.

The U.S. Conference of Mayors believes that the following four guidelines should be employed in developing legislation to deal effectively with this urgent matter:

1. The criteria set for regulating levels of aircraft noise should be acceptable to persons on the ground.

2. All aircraft used in civil transportation should be required to meet the noise control standards as a condition for receiving federal airworthiness certification.

3. The establishment of such rules and regulations as may be required to impose such criteria should be authorized.

4. Adequate financial assistance should be provided to municipalities and other public bodies which operate airports for whatever expansion of these facilities might be needed to help resolve the noise problem.

As an important first step forward, we support passage of H.R. 3400 which will permit the Secretary of Transportation to establish minimum aircraft noise standards for use in certifying aircraft.

But we believe that the ultimate solution to noise control lies in reducing the noise at its source, which is the engine itself. We therefore endorse the program now under development by the National Aeronautics and Space Administration for research and testing of quieter jet engines and urge that fullest funding be given to its continuation.

We further support an immediate program of retrofitting existing jet engines if necessary to regulate noise in the operation of present day aircraft.

We contend that jet noise is a national problem and only national action can effectuate its solution. Personally, I regret that the aviation industry has been unwilling to take the lead in solving this problem and I would hope in the future that joint government-private industry efforts would be cooperatively undertaken so that we may achieve the solutions we seek.

But the public is now entitled to some long-overdue relief. It is important to the public interest for Congress to make clear as quickly as possible through passage of necessary legislation that it intends to establish and enforce minimum jet noise standards. Such legislation is essential toward the establishment of an economically healthy national air transportation system which will not disrupt the lives and health of millions of our citizens.

RESOLUTION ADOPTED BY THE U.S. CONFERENCE OF MAYORS AT ITS 1967 ANNUAL CONFERENCE, HONOLULU, HAWAII

Whereas, use of jet aircraft has created a serious national aircraft noise problem which will be worsened by expansion of jet service and development of supersonic service; and

Whereas, the aircraft noise problem cannot be solved at the local governmental level and properly is a national concern by virtue of federal statutes defining airspace as within the public domain and subject to jurisdiction of the federal government; and

Whereas, the President of the United States in his message on transportation on March 2, 1966, noted the aircraft noise problem and the urgent need for solution, and ordered the White House Office of Science and Technology to direct all involved federal agencies in an action program to solve the problem; and

Whereas, numerus bills dealing with the problem have been introduced in Congress; now therefore be it

Resolved, That the U.S. Conference of Mayors urges enactment of federal legislation to: (1) Establish criteria for levels of aircraft noise acceptable to persons on the ground. (2) Make it necessary for civil transport aircraft to meet such standards as a condition of federal certification of airworthiness. (3) Authorize establishment of such rules and regulations as may be required to impose such criteria. (4) Provide financial assistance to municipalities and other public bodies which operate airports for necessary expansion of them to help resolve the noise problem.

STATEMENT OF MAYOR STANLEY W. OLSON, RICHFIELD, MINN.

Thank you Mr. Chairman for granting me permission, as I requested of you through our Congressman Clark MacGregor, to have this statement made a part of the official record of your subcommittee hearings.

The entire House Committee on Interstate and Foreign Commerce is to be commended for recognizing a problem that is no respecter of persons. Regardless of whether the victims of aircraft noise fallout are central citians or suburbanities; Democrat or Republican; rich or poor; educated or uneducated, they deserve eardrum relief. Since airplanes cross state lines and airports are located in every

state, aircraft noise control is properly a matter of nationwide concern and federal responsibility.

Please have the record show that the mayor of Minnesota's sixth largest city vigorously supports legislation to amend the Federal Aviation Act of 1958 to authorize aircraft noise abatement regulation. Specifically, I favor the bill H.R. 3400 which was introduced by Congressman Harley Staggers, the chairman of the House Committee on Interstate and Foreign Commerce. As I understand it, this is the mail bill under consideration and it is identical to H.R. 11736 that was authored by Congressman MacGregor. The statement of MacGregor, as presented to your subcommittee on November 14, 1967, excellently defines the noise problems and constructively provides for solutions, as embodied in H.R. 3400.

The City of Richfield is located immediately west of the Minneapolis-St. Paul International Airport, one of the 15 most noise producing airports in the country. Much of the airport land once belonged to Richfield. Our history as a community predates the Jet Age by almost a century. We got here first.

While industry has voluntarily made typewriters and automobiles relatively noiseless, aircraft manufacturers greedily turn out bigger, noisier jet engines to thrust larger payloads. Noise suppression if it is to come must be legislated on a uniform, safe and technically sound basis. Only then will the aircraft producers be forced to suppress noise output and the airline companies be forced to buy quieter models.

Please take a positive action now to stop the spread of blight and discomfort caused by a geometric increase in airport noise.

I'm certain the 1.7 million citizens of the Twin Cities metropolitan area surrounding the airport and the 2.3 million more to arrive during the next 33 years will join with millions elsewhere in thanking you for favorably considering effective aircraft noise abatement. Thank you Mr. Chairman and members of this subcommittee for your consideration.

[Telegram]

NEW YORK, N.Y., *November 13, 1967.*

Hon. HARLEY O. STAGGERS,
Chairman, Interstate and Foreign Commerce Committee,
Rayburn Office Building,
Washington, D.C.:

On behalf of Mayor Lindsay's task force on noise control, we commend the action of your committee in its concern for the growing serious noise problem as it relates to the aircraft industry. It is our studied opinion that any noise level of 100 EPNdB is not satisfactory for residential areas. We assume that with technological progress, we should be able to expect levels below 90 EPNdB within a reasonable time. This begins to approach the demonstrated progress of other industries that pledge their support to reducing noise pollution. By the continuing encouragement from your committee, much can be done to further the implementation of present research of existing and new operational techniques now under development in the aviation industry. Our committee welcomes an opportunity to work with you and your colleagues on this important problem.

NEIL H. ANDERSON,
Chairman, Mayor's Task Force on Noise Control.

HAWAII DEPARTMENT OF TRANSPORTATION,
Honolulu, Hawaii, December 1, 1967.

Hon. HIRAM L. FONG,
Senator from Hawaii,
U.S. Senate,
Washington, D.C.

DEAR SENATOR FONG: Thank you for your letter of November 17, 1967 and your offer to testify on H.R. 3400 when hearings are resumed.

I regret that it will be impossible for me to come to Washington and testify personally in this matter. I do, however, consider it of the utmost importance to the people of Hawaii.

I am sure that you are completely familiar with the history of noise abatement problems at Honolulu International Airport. Information available to us now indicates that the Concorde Supersonic Transport, which is expected to be operational through Hawaii in 1969, will be somewhat noisier in the vicinity of airports than any aircraft with which we are now familiar. A conceptual master plan for Honolulu International Airport has just been completed and is in the final stages of refinement within our department. The recommendations include a new jet runway and the extension of the existing runway to reduce community noise levels during take-offs and landings. This effort will be negated, however, if the noise level created by aircraft is permitted to increase appreciably.

We feel that aircraft noise can be effectively controlled by the Secretary of Transportation through rules and regulations and that this must be accomplished at the Federal level to assure acceptable noise levels by not only U.S. manufactured airplanes but also by foreign manufactured aircraft such as the Concorde SST. If prompt Federal control is not exercised over aircraft noise, we must then look forward to increased pressure by local groups for banning flight operations during specified hours of the day or at specified noise levels with the attendant problems to the tourist industry which this pressure will create as well as increased litigation by property owners over alleged damage to their property values by aircraft noise and increased capital requirements for expansion of airports to cope with aircraft noise.

I am sure that you can see the importance of this legislation to the people of the State of Hawaii and I thank you again for your willingness to testify in its behalf.

Kindest personal regards.

Sincerely,

E. ALVEY WRIGHT, *Acting Director.*

THE PORT OF NEW YORK AUTHORITY,
New York, N.Y., March 18, 1968.

Hon. HARLEY O. STAGGERS,
Chairman, Interstate and Foreign Commerce Committee,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: The Port of New York Authority as operator of Kennedy International, LaGuardia and Newark Airports followed with interest the hearings held to date on H.R. 3400 by the House Interstate and Foreign Commerce Subcommittee on Transportation and Aeronautics. We are hopeful that prompt action on the bill can be taken.

The problem of aircraft noise has reached critical proportions which our society probably will not be prepared to tolerate much longer. Yet, we face in the near future an intensification of aircraft noise through the introduction of new families of aircraft such as the 747 and the SST and through the rapid growth of air traffic. The manufacturer apparently is already planning "strecthed" versions of the 747 and SST which, based on past experience, will be noisier than the original models. In addition, the success of the smaller jets such as the Boeing 727 and the DC–9 in introducing jet service to our smaller cities is causing a proliferation of aircraft noise problems throughout the nation.

The Port Authority has been deeply concerned and involved in aircraft noise problems since 1951. Our efforts throughout the years to abate the nuisance of aircraft noise is well documented, but despite our best efforts the problem of aircraft noise in communities near our airports has become increasingly severe, resulting in rapidly deteriorating relations between the aviation industry and the community it serves. If we have learned nothing else, we have learned that the aircraft noise problem can never be solved by local government because the creation of the noise is uncontrolled. And as long as there is no control over the source of the noise—namely the engine and the aircraft, then there can be no resolution of the problem of the amount of noise an aircraft creates over populated areas adjacent to airports.

All efforts to deal with the problem have been limited to the amelioration of neighborhood noise. The fact is, however, that noise can only be controlled at the source, i.e., the airplane. It is our understanding that competent aeronautical research scientists assert that the development of an enconomical aircraft engine some 15 to 20 PNdbs quieter is well within the state of the art and could be avail-

able commercially within 5 years. Moreover, we understand that such an engine could be retrofitted to aircraft in the current fleet. It does not now exist because there has been no real insistence upon its development. Quieter jet aircraft hold no economic incentives for the airlines and no local governmental body representing the public interest has effective power to require the development and use of quieter jet engines and aircraft. Only the Federal government can provide that incentive by the development and promulgation of noise standards and by their application to all aircraft through the certification process. This is basically what H.R. 3400 would do.

Many leaders of the aviation industry agree to this, as I am sure you are aware from the testimony before the Subcommittee. They fully recognize that the intensification and proliferation of aircraft noise constitutes the single greatest inhibitor and hazard to the growth of aviation today.

The testimony of Mr. John E. Stephen, General Counsel of the Air Transport Association, before your committee, has suggested that the air carriers have taken the lead in aircraft noise abatement and has catalogued their achievements in noise abatement.

Mr. Stephen's catalogue of achievements is more fictional than factual. Nevertheless, we have had the cooperation of various air carriers in carrying out our rules for the amelioration of neighborhood noise. On the other hand, there have been vigorous objections by certain air carriers and these terms and conditions have been the subject of litigation on more than one occasion. The present preferential runway system and various noise abatement procedures at our airports were first and foremost instituted by the Port Authority; in some instances over the strenuous objections of airlines. The airlines continue to be unhappy about any of these procedures to the extent that they believe that any restrictions involve economic penalties.

I do not believe that the fan-jet engine was developed for the primary purpose of noise abatement. It was in fact purchased because of its great economy in operation (it is about 20 per cent more efficient in terms of fuel consumption) and, luckily, has succeeded in operating with less takeoff noise than its predecessors. However, the fan-jet has not, because of its characteristic high pitched noise during landing, aided in a solution of the landing noise portion of the overall problem. We consider that landing noise is about 80% of our problem in New York.

Mr. Stephen's objections to H.R. 3400 appear to be consistent with long established ATA objectives: to make the treatment of aircraft noise solely a local problem to be solved locally through "compatible land use" programs. It is well known throughout the industry that the ATA policy for years has been one of opposition to any Federal intervention in aircraft noise abatement or even to participation by the Federal government in land purchases for purposes of noise abatement. Rather, it is the ATA's policy that aircraft noise is a local problem to be decided by the courts on a case-by-case basis.

The ATA advocates that the local government should purchase all noise-affected land and convert its use to other than residential purposes. Such a policy is impossible of fulfillment in our urban society. Airports already take 5,000 to 10,000 acres each of highly valuable land, and many metropolitan areas now require two, three and sometimes four major airports. Can we now acquire substantial additional acres for noise abatement? In the New York-New Jersey Metropolitan area, for example, densely populated communities seriously affected by aircraft noise stretch five miles or more from the airport, and large communities more than ten miles from the airport are disturbed by jet aircraft noise. The suggestion that these hundreds of thousands of people be removed from such large areas and that the land be redeveloped for industrial purposes is politically, socially and economically impossible.

Mr. Stephen states that "certification (of aircraft) can yield no more than technology can produce. This result would probably follow without legislation." In the absence of legislation technology has produced no significant solutions to the jet aircraft noise problem during the past 20 years. Nor will technology produce significant and desperately needed noise abatement in the next 20 years without government insistence and encouragement that can only be secured from new legislation.

Mr. Stephen further states that only a few major airports have a noise problem and to design aircraft to them would unduly penalize an air transport system. In fact, 70 per cent of all United States air commerce is conducted at twenty-two

major hubs and a majority of them have serious noise problems. Without these major hub airports, there is no national air transport system. In fact, the problem of aircraft noise has reached such proportions that the Fifth Air Navigation Conference of the International Civil Aviation Organization meeting in Montreal in December 1967, attended by 61 nations and 5 international organizations, adopted as part of its Recommendation 7/5:

"That

(i) substantially quieter aircraft be made available and introduced into service as soon as possible;

(ii) for the above purpose a system of aircraft noise certification (as suggested at the "International Conference on the Reduction of Noise and Disturbance Caused by Civil Aircraft", London 1966) (the London Noise Conference) is urgently needed."

While purporting to support the idea of the regulation and control of aircraft noise through a Federal program of aircraft certification, the Air Transport Association has decided not to support the legislation (H.R. 3400 and S707) which would establish such a program. It suggests instead legislation that empowers and directs the Federal Aeronautics Administration only, in Mr. Stephen's words: "to prescribe and amend reasonable standards for the *measurement* of aircraft noise and sonic boom . . ."

Certainly we need better standards for the measurement of aircraft noise, but we need as well to have the Administrator empowered to set maximum limits for the noise aircraft can make in populated areas. Such powers are provided in H.R. 3400 and S707.

And finally, Mr. Stephen would have the certification for noise apply only to aircraft not now in the fleet, in production or on the drawing boards. Since the principal aircraft projected for fleet service through 1990 are all in one category or the other, Federal noise legislation would have no practical effect for nearly 25 years. Mr. Chairman, I do not believe either the people around our airports or, indeed, the aviation industry itself, can wait that long.

I trust that these comments are useful to the Committee in its deliberations on H.R. 3400. The Port Authority commends it to the Congress as, I am sure, do the millions of people from coast to coast, who live within "hearing" distance of our American airports.

Sincerely,

AUSTIN J. TOBIN, *Executive Director.*

AMERICAN ASSOCIATION OF AIRPORT EXECUTIVES, INC.,
Washington, D.C., November 14, 1967.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce, House Office Building, Washington, D.C.

DEAR SIR: We are greatly encouraged by the leadership you have demonstrated by the scheduling of hearings on H.R. 3400.

Our members, the professionals who manage the nation's airports, have been on the front line of the aircraft noise battle for years. They are the ones who have borne the brunt of the neighborhood complaints and who have been expected to provide quick solutions to the problem. Many of them have made diligent efforts to protect airport approaches, prevent residential encroachment, promote aircraft noise abatement procedures, and provide additional facilities to remove the noise from sensitive areas.

They realize that these efforts have in most cases accomplished, at best, temporary relief; also that the noise problem rather than improving is worsening due to increased flight frequencies and aircraft weights. They are convinced that the basic solution lies in the aircraft itself; that until quieter aircraft are produced and operated, only limited progress will be made. This is why they consider Federal legislation, authorizing the FAA to establish noise emission criteria as part of the aircraft certification program, is the basic answer to the noise dilemma.

Present aircraft noise is affecting airport capacities. Airports, because of aircraft noise, are now considered as undesirable neighbors with consequent community resistance to airport expansion or new sites. Communities that have conscientiously planned to provide noise buffer zones have been frustrated as