

BUDGET REVIEW

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BEFORE THE
COMMITTEE ON PUBLIC WORKS
UNITED STATES SENATE
NINETY-FOURTH CONGRESS
FIRST SESSION

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FEBRUARY 26, 27, MARCH 3, 4, AND 5, 1975
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BUDGET REVIEW

GENERAL SERVICES ADMINISTRATION

WEDNESDAY, FEBRUARY 26, 1975

U.S. SENATE,
COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The committee met at 10:10 a.m., pursuant to call, in room 4200, Dirksen Senate Office Building, Hon. Jennings Randolph (chairman of the full committee) presiding.

Present: Senators Randolph, Culver, Morgan, Baker, and Stafford.

OPENING STATEMENT OF HON. JENNINGS RANDOLPH, U.S. SENATOR FROM THE STATE OF WEST VIRGINIA

The CHAIRMAN. The members of the Public Works Committee are beginning a series of hearings that we anticipate will have a substantial and a significant effect on the operation of the Congress.

During our work together, we will review the spending proposals by agencies whose activities are within the jurisdiction of the Public Works Committee.

The ranking minority member of the committee, Mr. Baker, has evidenced his intense interest in this subject matter as we begin this series of hearings by rearranging his schedule to be with us briefly today and to present a statement.

Senator Morgan of North Carolina, one of the new members of our committee in the 94th Congress, will conduct the formal hearing today.

These hearings are a new responsibility delegated to us by the Congressional Budget Act of 1974. That legislation is intended to provide the mechanism for an overall understanding of Federal expenditures.

Through the procedures established by that legislation we trust that we will be able as a Senate, in fact the Congress, to carry out our work in the context of the impact of what we do in this committee and other committees on the Federal budget.

I think we need, perhaps more than we have had in the past, an overall look as the Members of Congress attempt to grasp the total spending situation. It is essential at this particular time when there is a greater emphasis placed on the fiscal activities of the Federal Government.

When we come together, as we do today, we look for an exchange of fact, expression of thought, and hopefully a better understanding, be-

cause if we are to examine the monetary impact of the actions of the Congress itself, the authorizing committees have a very real responsibility.

Now the procedures of the Budget Act are new, and yet the members of this committee have had some experience in this area. Since the establishment of the Environmental Protection Agency, there have appeared before us those persons who come to annually discuss the spending proposals of that Agency.

We have utilized the information to advise the Appropriations Committee as to our evaluation of the adequacy of Environmental Protection Agency budget proposals.

So as we concern ourselves today with more than just the spending by agencies and the requests that have been submitted to the Congress and the President's budget, we have a responsibility to explore the factors that have gone into the preparation of the budget as it is coming to Capitol Hill.

We shall want to know what differences there may be between, let's say, an original estimate by an agency, and what has gone into the budget message itself.

In some agencies we will have to discuss the impact of the impoundments, Senator Baker and Senator Morgan, on the activities of those agencies.

We have, as members of this committee, been exceedingly active in connection with the impoundment subject. I have long felt that the Executive oversteps the President's power to act in the impoundment of moneys that have been authorized by the Congress.

I remember very well that in 1967 I vigorously opposed impoundment of Federal highway funds by the administration of Lyndon Johnson. That is a matter of record, which was of concern to the Public Works Committees in the House and in the Senate.

We entered into an agreement with the House committee members to hold a joint hearing or hearings on that subject.

President Johnson, realizing the extent to which the Congress expected to go in the matter of working for the release of the impounded highway funds, took the initiative at the beginning of our hearings and released the money. We might say that he was sensitive to what was about to happen here on the Hill. I remember him as being a person who could read the minds of the Congress rather well.

In these cases, the impoundment cases, we will have in our minds the ability of Federal programs to meet the real public needs, and yet we realize there are certain fiscal restraints in which these programs must move forward.

So we have a difficult task, but one that we approach with no misgiving, because we shall work with you and others in these matters.

We have, of course, the recession with its increasing problems affecting the economy. Certainly, Senator Baker and I are well aware of the job opportunities program passed late last year. It was intended to be a program that would provide jobs through quick-start, labor-intensive, federally assisted programs.

So we must review with the agencies their abilities to generate employment through legislation such as that which I have just mentioned.

We are in a sense moving into uncharted waters with this sort of a program, but I think it is important that we move.

I do understand that both the agencies and the authorizing committees can profit from the experience and there will be a better understanding of the problems and how we meet them.

So I am sure that Senator Baker, Senator Morgan, and Senator Culver, and other members of the committee who will have the opportunity to participate in these hearings, you will give us information that will be very important.

We move in these matters hopefully in concert. There is no polarization that should flow from such hearings. Differences, yes, can exist. But a vociferousness certainly would not be in the best interest of the members of the committee. We have no desire for that.

We have only a desire to be responsive to the Budget Act and to counsel with you in this instance about the problems which are your responsibility.

Senator Baker?

**OPENING STATEMENT OF HON. HOWARD H. BAKER, JR., U.S.
SENATOR FROM THE STATE OF TENNESSEE**

Senator BAKER. Mr. Chairman, thank you very much. I welcome the opportunity to participate in these initial hearings of this committee in the budget review process.

I believe, as you believe, that the exercise will be not only instructive and useful to this committee but hopefully will be valuable to the General Services Administration as well.

Our objective, of course, is not to duplicate the role of our colleagues on the Appropriations Committee but, rather, to seek to determine the general adequacy within GSA's authorized functions of the President's budget proposals.

We have an opportunity in the GSA program to accelerate labor intensive areas of public works on existing buildings and repairs that can and must be designed to conserve energy. We have an opportunity to obtain new offices, preserve neighborhood character, and renovation of older buildings.

Mr. Chairman, I will be most pleased and honored to join with you and Senator Buckley and Senator Morgan in introducing legislation tomorrow to try to accomplish this goal.

Possibly most significant, we confront a major decision on the fundamental concept of the Federal office space. GSA is accumulating massive debt against future funds through its Purchase Contract Program.

Rather than implementing the revolving fund approach program, the Federal Government is moving toward leasing instead of ownership in long-term office needs. And, as a matter of fact, it comes as a great surprise to me to observe that there has been a decline of approximately 2 percent in the past 6 years of federally owned office space and an increase of 50 percent in federally leased office space.

These, of course, are important and significant recent developments that bear our intensive and careful attention; not only in the context of the budget review process, but in terms of coherent national policy in that respect.

Both of those inquiries are jurisdictional to this committee, and I look forward to these hearings.

The CHAIRMAN. Thank you very much, Senator Baker.

I am going to ask, before I turn the Chair over to Senator Morgan, whether you, Senator Culver, have a statement this morning.

Senator CULVER. No. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator.

Senator Stafford, as we begin these hearings, perhaps you would want to make an opening comment.

Senator STAFFORD. Thank you very much, Mr. Chairman, but I think that the comments that have been made by Mr. Baker and others I would concur with. I am ready to hear the witnesses.

The CHAIRMAN. Thank you very much for coming today.

We are going to have you, Mr. Meisen, as the leadoff witness, I presume together with your colleagues, Mr. Shipp to your right.

Mr. MEISEN. Yes, sir.

The CHAIRMAN. And Mr. DiLuchio.

Mr. MEISEN. Yes, sir.

The CHAIRMAN. Mr. Wendehack.

Mr. MEISEN. Yes, sir.

The CHAIRMAN. And Mr. Fontaine.

Mr. MEISEN. Yes.

The CHAIRMAN. Fine. You look like a scholarly group.

I will ask you, Senator Morgan, to shift gears, as it were, and move here to the chairing of our hearing.

I wish to say that the new members of our committee are very active in accepting on their shoulders the robes of responsibility. We are very appreciative of this. To you, Senator Morgan, and Senator Culver and the other new Senators on our committee we are especially grateful.

We know you have been doing some work on this subject. You have been doing some digging. You are, I think, worried about the overruns in certain Federal structures and the way we construct them and operate them.

We want you gentlemen to be completely at ease and work with us. That is the way we want to work with you.

Senator?

Senator MORGAN [presiding]. Thank you very much, Mr. Chairman. I might say that the Chairman has very graciously provided the robes of responsibility. The only trouble I am having, Mr. Chairman, is getting mine to fit. I am afraid they are much too large for me.

The CHAIRMAN. Just a moment, Senator. I imagine in North Carolina that you are under a fiscal umbrella you are able to look at and understand. Isn't that right?

Senator MORGAN. Yes.

The CHAIRMAN. Then you come to Washington and you are not sure where the spread stops. I think that is something that happens to a person who comes up from a State responsibility, with a knowledge of the problems of that State. In a sense you are not overwhelmed but you are wondering. And when you come, you help those of us who have been here longer.

We sometimes become immune to these figures that you look upon as very real. So we welcome your leadership.

Senator MORGAN. Thank you, sir. I would almost say that I was overwhelmed when Mr. Meisen yesterday tried to help educate me in the ways of the Federal Government.

Mr. Meisen, I won't start off by saying this, but I read the overrun story this morning.

Mr. MEISEN. I did also, Senator.

Senator MORGAN. As the chairman mentioned, coming from North Carolina where we usually appropriate the money before we build the building and let the contract and live with it, it is almost overwhelming.

I hope that maybe I can explore some of the avenues before doing things to you.

Mr. MEISEN. I would be happy to speak to that, Senator, when it is appropriate.

Senator MORGAN. Let me say in the beginning, as indicated in my memorandum to the members of this committee, GSA budget requirements for the public buildings program through fiscal year 1976 are of great concern to all of us.

A budget of more than \$1 billion—to be exact, \$1,149,983,000—is being requested. It seems to me an almost incomprehensible sum.

As I learn of some of your commitments which must be fulfilled, not only from year to year but on a continuing basis, I am beginning to understand what a tremendous job you have.

Because of this, I think it is incumbent upon the Congress to seriously consider whatever proposals you feel obligated to submit to the Congress, and to give very careful consideration to those requests, and to weigh their merits very carefully.

Although that portion of your request pertaining solely to projects within our jurisdiction is only about \$690 million, this nonetheless presents a staggering expenditure, deserving of our most attentive consideration.

There are a few points I think we should clarify. But I wonder, Mr. Meisen, if you would like first to make an opening statement, generally outlining the proposals.

Mr. MEISEN. I would like to do that, Mr. Chairman. If it would be appropriate at this time, I have a very brief opening statement I would like to read. I believe copies have been furnished.

Senator MORGAN. Without objection, if you would proceed to do that.

STATEMENT OF WALTER A. MEISEN, ACTING COMMISSIONER, PUBLIC BUILDINGS SERVICE, GENERAL SERVICES ADMINISTRATION; ACCOMPANIED BY LOY M. SHIPP, JR., ASSISTANT COMMISSIONER, OFFICE OF SPACE PLANNING AND MANAGEMENT; ROBERT DILUCHIO, ACTING EXECUTIVE DIRECTOR, PUBLIC BUILDINGS SERVICE; FRED J. WENDEHACK, DEPUTY ASSISTANT COMMISSIONER, OFFICE OF BUILDINGS MANAGEMENT; AND RAYMOND A. FONTAINE, DIRECTOR OF BUDGET, OFFICE OF FINANCE

Mr. MEISEN. Thank you, Mr. Chairman.

Mr. Chairman and members of the committee, on behalf of Administrator Sampson, I am pleased to appear before this committee to discuss the programs of the General Services Administration, Public Buildings Service.

In harmony with Public Law 92-313, GSA has recently changed its way of doing business with the establishment of the Federal buildings fund on July 1, 1974.

Fiscal year 1976 will be our second year of operation under this new concept. During the first year, we have refined our rate survey and space measurement techniques and have made other improvements in the fund's operation and will continue to do so.

Under the Federal buildings fund, Federal agencies pay for the space and related services which they need to perform their functions. The General Services Administration is then responsible for the provision of these space needs and related services and for the overall management of the Government's real property operations.

Our fiscal year 1976 budget now before you presents our program for providing the necessary space and related services to the Federal agencies. We have made every effort to simultaneously confront the continuing problem of inflation and the immediate problem of recession and unemployment.

I want to emphasize that our programs are a part of this administration's effort toward solving both of these serious economic problems.

Our budget is consistent with the national efforts to solve these problems within the long-term objectives that are important for the future well-being of the economy, and we strongly support the President's budget.

We are also attacking the problem of energy conservation in our various programs. During the last year we have achieved a 30-percent-savings in the operation of our buildings. Energy design guidelines have been issued for construction of new Federal buildings and for existing buildings.

Projects in Manchester, N.H., and Saginaw, Mich., will utilize the latest energy-saving techniques and will serve to guide us in construction of future buildings.

The functions of the Public Buildings Service can be classified in six major activities as follows:

1. Construction.
2. Alteration and major repairs.
3. Purchase contract payments.
4. Rental of space.
5. Real property operations (protection and cleaning of Federal buildings).
6. Program direction.

Our construction program for fiscal year 1976, to be financed directly from Federal Buildings Fund revenues, consists of four new construction projects and acquisitions of excess Government-owned property. The amount requested is a modest \$29 million and reflects a program level comparable to the \$25 million construction program for the current year.

The four projects proposed for new starts next year are a border station at Haines, Alaska; a Federal Office Building and a Motor Pool Facility at Miami, Fla.; and the restoration and conversion of the Customhouse at New Orleans, La.

I would like to take a moment of your time here to discuss an important matter which seriously hinders our construction program.

Until this current year, construction funds were appropriated to us on a no-year basis, so that once the Public Works Committees had authorized a project and the Appropriations Committees had funded it, we could proceed as quickly as possible to construct the building.

I might add at this point, Senator, that this was not the case, for example, at the start of the FBI building which was appropriated in pieces at various times throughout its history.

We at the General Services Administration are quite proud of the work which we have done to promote efficient use of our construction and repair funds by employing such techniques as phased construction, applications of buildings systems in design and construction, and the use of project and construction managers.

All of these techniques require full-funding authority without fiscal year restriction, so that we may move ahead with phases of each project as soon as possible. Our construction budget for fiscal year 1976 requests full-project funding in order to complete projects as economically as is possible.

As you know, it takes more than 1 year to construct a building and, therefore, funds have been made available in the past on a no-year basis. This current fiscal year we received annual funds.

Consequently, we must return to the Congress to request funds for projects which have already been authorized and funded. We propose to return to the no-year funding concept so that once a project is authorized and funded, we may proceed without further delay. Our fiscal year 1976 appropriation language has been revised to reflect this change.

In the past few years we have constructed a large portion of our new Federal buildings under the purchase contract method of financing. This program provided for additional space requirements of the Federal agencies, but has little or no impact on new current space requirements now being met through the leasing of facilities.

The purchase contract financing authority ends June 30, 1975. This budget contains \$60 million for the payment of principal, interest, and taxes.

Unless purchase contract is extended, our ability to provide new Federal buildings will then be limited to that portion of the Federal buildings fund allocated to the construction activity: the \$29 million I referred to earlier.

Our alterations and major repair program maintains buildings at a proper level of operation by repairing the heating and air-conditioning systems, repairing roofs and sidewalks, installing fire safety, and other protective systems and performing any other necessary repairs, including those relating to energy conservation. Our proposed level of funding this year is \$110 million.

The rental of space activity provides \$453 million for payment of rent for fiscal year 1976. This represents an increase of \$61 million over the last year and contemplates implementation of our program to achieve better utilization of space.

The increase of \$61 million is composed of a net of \$22 million for new space to be acquired in fiscal year 1976; \$20 million to provide for the annualized cost of space acquired in fiscal year 1975; and \$18 million for rental rate increases occurring in fiscal year 1976.

It should be realized that emerging Federal programs must be accommodated and it is impractical to maintain partially occupied Federal buildings at the right place and the right time to house such programs.

The short leadtime necessary to acquire leased space gives GSA the flexibility to meet these needs. Leased space will comprise about 36 percent of our total inventory in fiscal year 1976, and we expect it to be only 39 percent by fiscal year 1980.

At this time we are experiencing major expansion in a number of Federal programs. For example: Treasury projects an increased requirement for over 3 million square feet; HEW more than 1.7 million square feet; and Justice and Interior a little over 1 million square feet each.

Additionally, the number of Federal employees that GSA is called upon to house continues to increase. The number of employees housed in GSA-controlled space has grown from 662,754 in fiscal year 1966 to an estimated 905,000 in fiscal year 1976.

Budget years 1977 and beyond should reflect less of an increase, in terms of both dollars and square feet for the leasing program, as the full effects of our current space utilization efforts and construction programs are realized.

The real property operations program to clean, heat, air-condition, maintain and protect our facilities is proposed at \$397 million for fiscal year 1976.

This activity finances all of the PBS employment engaged in these functions, including approximately 6,600 custodial workers, 4,200 maintenance mechanics, 3,000 guards, and 1,600 building services employees.

Program direction, providing management direction, planning, and staff support for these areas, including staff for implementation of our space utilization programs, is proposed for \$67 million in fiscal year 1976.

These programs are funded from payments from Federal agencies for space and related services. These payments are approximately equivalent to commercial charges.

Our income for fiscal year 1976 from these standard levels user charges is estimated to be \$1,177 million. We are requesting authority to obligate \$1,150 million in fiscal year 1976.

This will be coupled with an estimated fund balance at the end of fiscal year 1975, so that total resources in the Federal buildings fund will be \$1,285 million.

In addition, \$80 million will be retained in the fund during fiscal year 1976 for authorization by the Congress for PBS real property activities as required, and \$55 million is slated to be returned to miscellaneous receipts of the Treasury and will be no longer available for Federal buildings fund programs.

The Federal buildings fund has been in operation for approximately 8 months. Both the concept of the Federal buildings fund and its operation, as a practical means of doing business, have proved highly successful.

However, the Federal buildings fund could be an even greater success if the following changes were made in fiscal year 1976:

A no-year limitation on construction and repair and alteration funds as previously mentioned.

Allow GSA to use more of the income generated into the Federal buildings fund in any one year.

Do not require deposits to the miscellaneous funds of the Treasury where they are lost to the Federal buildings fund forever.

Authorize use of revenues in the Federal buildings fund under single limitation to provide the necessary management flexibility to carry out programs under the original concept of the fund.

These improvements will give us the operational flexibility to make the Federal buildings fund the success which was originally contemplated by the Congress.

I will be pleased to answer any questions which the committee may have.

I have some charts as well, Mr. Chairman, that graphically illustrate some of these things that, I think, we can use as the questions appear to apply to these areas, if that is agreeable to you, sir.

Senator MORGAN. Mr. Meisen, I would like to insert into the record the article appearing in today's Washington Post with regard to the overruns of GSA.

I think the record should reflect, while I am placing this in the record, that I have been in the public life long enough to know you don't accept newspaper articles as accurate, necessarily, or as reflecting the whole story. But, I think, because it is or will be of some public interest and comment, that we should insert it into the record.

[The article referred to follows:]

[From the Washington Post, Feb. 26, 1975]

U.S. REPORTS \$57 BILLION IN OVERRUNS

(By Douglas Watson)

Cost overruns of \$57 billion were reported on 269 recent federal construction projects yesterday by the General Accounting Office.

The overruns increased original estimates 75 percent, from \$76 billion to \$133 billion.

GAO said that costs of 59 of the non-military construction projects soared from at least two to nearly nine times the original estimates. Those 59 projects accounted for \$46 billion of the overrun total.

GAO, Congress' auditing agency, said that engineering changes after projects were authorized—not inflation—were the most frequent reason given by federal agencies for the cost overruns.

GAO said that inflation was probably a much more important factor than the \$2 billion in increases federal agencies attributed to it.

Comptroller General Elmer B. Staats, head of the GAO, said yesterday's report is the first the office has done on cost overruns by the civilian agencies of the federal government. Staats said GAO henceforth will issue annual reports on such spending.

GAO previously has issued four semiannual reports on cost overruns occurring in Defense Department purchases of major weapon systems. Earlier this month it said costs for 49 weapon systems increased by \$17.1 billion during the past six months, largely because of inflationary factors.

Those Defense Department cost overruns, which have drawn considerable criticism, may get comparatively less attention now that GAO has pointed out similarly large overruns by the federal government's civilian agencies.

Local projects in GAO's report included the Metro rapid-transit system, originally estimated to cost \$2 billion and now estimated to cost \$4.5 billion, and the J. Edgar Hoover FBI Building, originally estimated at \$60 million and now expected to cost \$126 million.

GAO reported these other cost overruns for local federal construction projects: Federal Law Enforcement Training Center at Beltsville, from an original \$18 million estimate to \$56.3 million.

Howard University Teaching Hospital, from \$23.4 million to \$43 million.

Extension of the Dirksen Senate Office Building, from \$68.8 million to \$85.1 million. No cost overruns were reported in construction of the \$158.8 million James Madison annex of the Library of Congress and only a 6 percent overrun was reported in construction of the \$41.9 million National Air and Space Museum here.

GAO looked at most non-military federal construction projects under way as of Dec. 31, 1973, involving more than \$25 million in spending, but its study did not include some construction resulting from federal grants.

In analyzing projects found to have cost overruns of 100 percent or more, GAO said of the \$46.4 billion in overruns, \$19.1 billion resulted from engineering changes, \$10.4 billion from changes in estimate calculations and \$7.6 billion from increases in the size of projects.

The Federal Highway Administration was the agency with by far the largest total of cost overruns, from \$37.7 billion to \$76.4 billion. Next was the Army Corps of Engineers, up from \$9.7 billion in original estimates to \$19.4 billion.

Senator MORGAN. I know you may not be in a position to do so, but I wonder if you would care to comment for the record.

Mr. MEISEN. Yes; I would like to. I would like to furnish more complete details for you and to the committee in writing, if that is appropriate.

Senator MORGAN. That would be all right.

Mr. MEISEN. I would like to mention that I think the use of a title such as "Cost Overruns" is really inappropriate to the FBI building.

All of the phases of construction for that project were bid as a lump sum competitive bid, and the actual overruns over the bids for each phase was very minimal.

I would like to say that the \$60 million original estimate that is quoted there is substantially correct and was made in 1962, and the completion is now just going to be done this year, and the figure they quoted for the completion is reasonably accurate as well and included all project costs, not just construction costs.

I would like to say the funds for that project were appropriated and the actual construction was done, in widely separated years, and so the original \$60 million would have been the figure had we bid and awarded that project in 1966.

Just as you stated your experience in North Carolina, that's how it would have been built. As it was, we had to build a foundation in two phases first in subsequent years and the structure again in a later year. As a result, the inflation, if you look at what the inflation has been in the last 9 years, you will find it is almost 100 percent.

I think the overrun alluded to is, in that order of magnitude, slightly less than double the original estimate.

I would say that just briefly because I think it is important, but we would like to furnish some additional data and details to you.

I am also pleased to note in the article we were not mentioned as one of the major agencies having cost overruns. That might be because our programs are not quite as large as some of the ones referenced.

Senator MORGAN. I thank you for the comments. You may submit whatever statement you like.

Mr. MEISEN. Thank you.

[The following information was subsequently supplied:]

J. EDGAR HOOVER FBI BUILDING, WASHINGTON, D.C.

A recent GAO report to the U.S. Congress reported an increase in the FBI building costs. Following is a status report for this project at critical stages, when major contracts were awarded, illustrating that at no time did the aggregate of the construction costs (contracts awarded by GSA) exceed the limit of authority for construction or the funds appropriated for construction.

Item	Obligated amounts for construction	Limit of authority for construction	Funds appropriated for construction
Phase I substructure and demolition contracts awarded (November 1967)	\$11, 109, 571	\$47, 735, 000	\$11, 320, 000
Phase IA substructure contract and steam lines contracts awarded (August 1970)	14, 930, 600	47, 735, 000	15, 120, 000
Phase II substructure contract award (June 1971)	84, 372, 500	84, 920, 000	84, 920, 000
Status: Contract amounts to date, including elevator and escalator contract and other contracts (February 1975)	107, 316, 000	107, 762, 000	107, 762, 000

HOWARD UNIVERSITY TEACHING HOSPITAL, WASHINGTON, D.C. (TRANSFER TO GSA FROM DHEW)

A recent GAO report to the U.S. Congress showed an increase in the cost of the Howard University Teaching Hospital. Cost increases are attributed to an increase in gross area between the original concept and the final plans plus escalation of construction costs from June 1967 to August 1971.

No obligations were incurred without transfer of funds from Howard University. Financial management was the responsibility of Howard University and GSA's authorization to award any contracts was authorized by the transfer of funds from Howard.

Item—January 1975 project summary report:

Obligated amounts for project	\$41, 768, 518. 72
Limit of authority for project	43, 283, 875. 00

CONSOLIDATED LAW ENFORCEMENT TRAINING CENTER, BELTSVILLE, MD. (TRANSFER TO GSA FROM TREASURY DEPARTMENT)

A recent GAO report to the Congress showed an increase in the costs for the Consolidated Law Enforcement Training Center. The present limit of cost as approved by the Public Works Committees of the House of Representatives and the Senate on May 14, 1971 and November 18, 1971 respectively is \$52.6 million. Cost increases are attributed to a larger total project and escalation.

In the administration of this project by GSA, funds were obligated only after transfer from the Treasury Department. Further, contracts and amendments thereto were not awarded without prior approval of Treasury.

Item—January 1975 project summary report:

Obligated amount for project	\$5, 674, 991. 38
Limit of authority for project	52, 664, 000. 00

Senator MORGAN. Senator Stafford, I was wondering if you have any questions on that particular article. You may not have seen it.

Senator STAFFORD. Mr. Chairman, I do have some questions. Shall I go ahead with them now?

Senator MORGAN. I suggest you do. On this question, we can do it now.

Senator STAFFORD. I wonder if the witness could, in the light of the newspaper report of very large cost overruns, including some GSA buildings, provide us for the record at least with figures on the final construction of those buildings among the 63 that were in the 1972

backlog and compare that final estimated cost with that estimated in the prospectus. Could that be done?

Mr. MEISEN. Yes. We could get you that, sir.

[The information requested follows:]

PURCHASE CONTRACT—COMPARISON OF ESTIMATED PROJECT COST WITH PROSPECTUS FOR ORIGINAL 63 PROJECT BACKLOG

Project	Estimated TPC on approved prospectus	Date of submission to Congress	Maximum allowable prospectus limitation under Public Law 92-313	Estimated TPC
Arizona: Tucson, FO 5	\$4,434,000	Aug. 30, 1966	\$7,939,629	\$5,579,540
Arkansas: Batesville, PO CT FOB	1,841,000	Aug. 1, 1966	3,376,707	2,873,733
California:				
Los Angeles, PF 1				
San Diego, FB	44,258,000	Oct. 13, 1970	53,552,180	39,890,560
Santa Ana, FB	10,304,000	Mar. 27, 1968	15,832,679	11,940,784
Santa Rosa, FB	5,691,000	Oct. 13, 1970	8,010,049	5,290,955
Van Nuys, FOB	10,090,700	Apr. 17, 1972	10,824,995	8,414,913
Connecticut: New Haven, FB PO	6,810,000	Nov. 6, 1967	14,232,671	13,705,000
Delaware: Dover, FOB	1,215,000	June 28, 1955	2,428,439	1,891,263
Florida: Orlando, CT FB	10,576,000	Nov. 13, 1959	15,745,205	10,394,491
Georgia:				
Athens, FOB	4,602,000	Apr. 17, 1972	4,974,387	2,929,999
Atlanta, R. B. Russell FB	27,353,000	Aug. 30, 1966	62,450,997	27,066,000
Griffin, PO FB 3				
Rome, PO CT	3,320,000	Aug. 1, 1966	5,955,762	3,904,519
Waycross, PO FB 3				
Hawaii: Honolulu, Prince J. K. Kalaniana'ole FB	47,541,600	Apr. 17, 1972	50,313,275	33,934,250
Idaho:				
Moscow, PO CT	1,739,000	Feb. 5, 1964	3,944,003	3,073,533
Sandpoint, FOB	1,508,000	Feb. 27, 1968	2,407,814	2,407,800
Illinois:				
Chicago, FARC	3,508,000	Aug. 1, 1966	6,309,472	5,118,685
Mount Vernon, FOB	1,599,000	Nov. 20, 1973	4,159,000	1,478,877
Indiana: Indianapolis, FO FB 3	13,638,000	Feb. 5, 1964	31,181,923	18,062,700
Iowa: Iowa City, PO FB	4,714,000	Feb. 27, 1968	7,373,161	4,986,544
Louisiana: New Orleans, Hale Boggs FB	24,877,000	do	38,546,912	32,382,500
Maine: Waterville, PO FB 3				
Maryland: Baltimore, E. A. Garmatz FB	19,494,250	Apr. 4, 1969	29,450,128	27,488,824
Massachusetts:				
Fitchburg, Philbin FOB	6,778,300	June 8, 1972	4,700,625	5,018,777
New Bedford, Keith FB	2,408,000	June 2, 1972	4,264,800	2,648,800
Michigan:				
Ann Arbor, FOB	3,766,000	Feb. 27, 1968	7,367,673	7,367,673
Detroit, P. V. McNamara FOB	33,021,000	Jan. 31, 1963	83,044,513	59,842,360
Saginaw, FOB	6,244,000	Feb. 28, 1974	4,868,400	6,868,400
Mississippi: Hattiesburg, W. M. Colmer FB	2,841,000	Feb. 27, 1968	4,472,668	3,911,743
Nebraska: Lincoln, CT FOB PF	14,890,000	Jan. 28, 1965	30,707,647	19,745,438
New Hampshire: Manchester, FOB	11,090,000	Oct. 24, 1974	11,090,000	11,025,200
New Mexico: Las Cruces, CT FOB	3,815,000	June 30, 1971	4,336,866	3,148,154
New York:				
Albany, L.W. O'Brien FB	8,524,000	Feb. 5, 1964	19,402,891	12,942,466
Auburn, PO CT FB 6				
Hempstead, FB 6				
New York, CU CT FOB Annex	37,910,000	June 30, 1965	76,957,300	61,679,400
Syracuse, CT FOB	13,690,000	Aug. 30, 1966	24,859,671	20,150,110
North Carolina: Winston-Salem, CT FOB	13,792,000	June 8, 1972	4,151,711,200	15,171,200
Ohio:				
Akron, CT FOB PF	16,957,000	Nov. 23, 1970	20,517,970	17,064,000
Dayton, CT FOB	9,797,000	Feb. 22, 1974	4,979,000	9,797,000
Oregon:				
Eugene, CT FB	5,530,000	Feb. 27, 1968	9,223,246	7,828,780
Portland, FB	15,513,000	Jan. 31, 1963	39,620,202	23,151,973
Pennsylvania: Williamsport, CT FOB	5,003,000	June 8, 1972	4,503,300	5,405,601
Puerto Rico: San Juan, CT FOB	12,445,000	June 30, 1965	25,263,350	21,891,000
Rhode Island: Woonsocket, PO FB 3				
South Carolina: Florence, J. L. McMillan FB	4,603,000	Aug. 1, 1966	9,372,228	4,859,684
South Dakota:				
Aberdeen, FOB	6,387,000	Feb. 27, 1968	9,891,176	7,755,055
Huron, FOB	6,819,000	June 4, 1974	4,750,900	6,651,800
Rapid City, CT FOB	3,217,000	Nov. 6, 1957	5,116,481	4,670,373
Tennessee: Nashville, CT FOB Annex	8,735,000	Mar. 2, 1955	18,042,746	13,778,258

PURCHASE CONTRACT—COMPARISON OF ESTIMATED PROJECT COST WITH PROSPECTUS FOR ORIGINAL 63
PROJECT BACKLOG—Continued

Project	Estimated TPC on approved prospectus	Date of submission to Congress	Maximum allowable prospectus limitation under Public Law 92-313	Estimated TPC
Texas:				
Denton, PO FB ³				
Fort Worth, Pkg. Fac.....	3,081,000	Oct. 3, 1966	5,428,349	3,746,301
Houston, VMF ⁷				
Pearsall, PO FOB.....	271,000	Feb. 5, 1964	615,101	532,679
San Angelo, PO CT FB ⁷				
Vermont: Essex Junction, W. Prouty FB.....	460,000	Mar. 2, 1965	946,195	726,309
Virginia: Roanoke, R. H. Poff FB.....	15,610,000	Feb. 22, 1974	4 15,610,000	15,498,027
Virgin Islands: Charlotte Amalie, CT FOB.....	5,931,000	June 2, 1972	4 6,524,100	8 7,823,700
Washington: Wenatchee, PO FB.....	4,308,000	Aug. 1, 1966	7,716,069	4,531,413
Wisconsin:				
LaCrosse, PO CT ³				
Madison, FB ⁹				

¹ Design deferral request granted; use of site for surface parking in lieu of proposed structure. Cost estimates being revised.

² Revised prospectus to be transmitted.

³ Withdrawn August 1972—transferred to Postal Service.

⁴ Escalated in accordance with 40 U.S.C. 606(b). All others escalated in accordance with 40 U.S.C. 602a(e).

⁵ Proposed for cancellation.

⁶ Design deferred pending resolution of housing plan.

⁷ Canceled—lack of space requirements.

⁸ Revised prospectus pending.

⁹ Revised prospectus being restudied.

Senator STAFFORD. In the general area of questions which I am interested in, for the last several years this Senator has watched the construction of the building just as we leave the Southwest Freeway and approach the Rayburn Building. I think it is one designed for HEW.

Mr. MEISEN. That is correct, sir.

Senator STAFFORD. Frankly, my curiosity and my friends' has been aroused by the apparent strength of the building. It appeared to us to have a skeleton sufficient to make it an armored spot of some kind. Maybe the Secretary needs an armored spot in these times.

I wonder why this building has been built so unusually strong.

Mr. MEISEN. I think it gives the appearance of being unusually strong. The main reason, as you know, the freeway goes under that building as does a 13-foot interceptor sewer. As a result, that building basically only has four main piers that go down to the foundations.

These piers hold up the trusses at the very top of the building. The rest of the building is hung from those roof trusses. The reason was to avoid too many little individual footings coming down on top of the footing and interceptor sewer that happens to be in there.

I am sure it does give that appearance. It is a very economical building, I might add.

Senator STAFFORD. Is that one of those subject to a cost overrun?

Mr. MEISEN. Senator, I have an awful lot of difficulty with that term. What we would call a cost overrun is if we lump sum bid a building for \$100 million and through change orders negotiated with a construction contractor, the total price goes up to \$110 million, we would say we had \$10 million worth of overruns.

If, however, we come to Congress and estimate a project at \$100 million and before we can get appropriations, the cost rises to \$110 million, and then we solicit bids and get bids of \$110 million, we would not consider that an overrun although it would be an increase over an original estimate.

That is what is being referred to as an increase over original estimate rather than increase over bid prices. I think you will find as an average that on GSA projects we have increases over bid prices of approximately 5 percent, overall, on all of our projects.

About 3 percent of these involve changes in agency requirements where, say, a computer is now needed where it originally wasn't planned. About 2 percent is in the area of unforeseen conditions or design changes.

Those are rough figures. I would be glad to furnish more detailed figures if you would like.

Senator STAFFORD. All right.

[Additional information, subsequently supplied, follows:]

GSA uses a 5 percent contingency allowance for new construction projects to fund change orders which typically occur after the award of the basic construction contract. These changes can be classified into: (1) agency or tenant changes; and (2) unforeseen conditions or design modifications.

Following is a tabulation of a survey of 39 projects in ten GSA regions in which \$28.9 million was spent on \$391.0 million worth of construction contracts or 7.41 percent:

Type of change	Percent of total contracts	Factor to reduce to 5 percent ¹	Adjusted change order percentages
Agency or tenant change.....	4.64	0.674	² 3.13
Unforeseen conditions or design modifications.....	2.77	.674	³ 1.87
Total.....	7.41	.674	5.0

¹ GSA currently uses 5 percent because turnaround time between design completion and start of construction is shorter.

² Say 3 percent.

³ Say 2 percent.

Senator STAFFORD. In your prepared statement you refer to the percentage of GSA inventory that is leased.

Does the percentage include the space under the purchase contract program? What are the square footage figures over 1980? What is the estimated annual cost of that lease plus the purchase contracts base in 1980, if you have those figures.

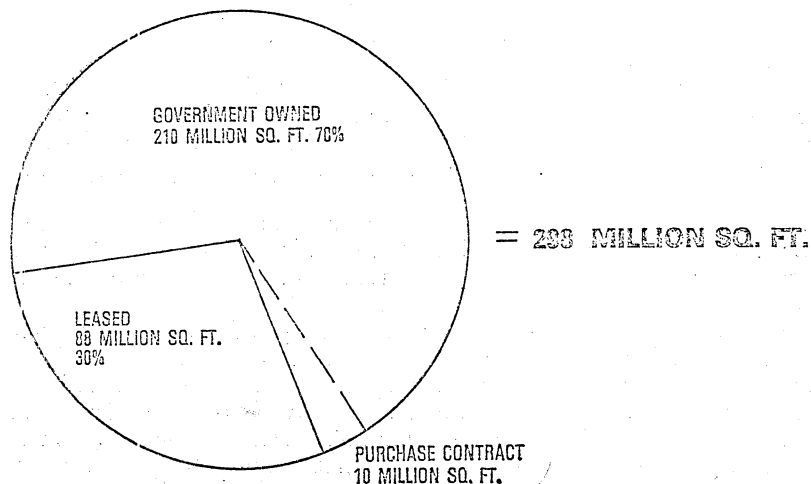
Mr. MEISEN. The answer to the first part of your question is the purchase contract buildings are not included in lease space. They are, for all practical purposes, Government-owned buildings.

The chart is a pie showing the amount of space we have in inventory: some 298 million square feet of space.

It indicates that we own approximately 210 million square feet of which about 10 million is in the purchase contract program, and we lease about 88 million square feet of space, which is approximately 30 percent of our total space inventory.

[The chart referred to follows:]

GSA SPACE INVENTORY



Mr. MEISEN. But for all purposes, the purchase contracts are Government-owned buildings. We build them as Government projects. We operate them as Federal buildings and we own them at the end of 30 years, as any other Federal building.

The only difference between that and a direct financed construction project is that we borrow the money to build them from the Federal Financing Bank and we pay it back over 30 years, and during that 30 years we pay taxes to the local community in which the building is housed.

Senator STAFFORD. Could you tell us what departmental programs will require the major increases in space you have outlined in your statement?

Mr. MEISEN. Are you asking which programs of Treasury and HEW, et cetera?

Senator STAFFORD. Yes.

Mr. MEISEN. Mr. Shipp, assistant commissioner of the office of space planning and management, has those figures.

Mr. SHIPP. There are significant expansions taking in the Social Security area. For example, just to give you some idea of the trend, between 1965 and 1975 there was a total increase of Social Security employment in the neighborhood of 40,000 people that we had to house.

I know from talking with HEW and SSA representatives that they are now discussing with the Office of Management and Budget the pos-

sibility of getting a special exception from that office to employ as many as 15,000 additional employees during fiscal year 1975 and fiscal year 1976.

The Treasury Department is experiencing some expansion, too, in their efforts to expand the audit program, to expand the tax collection program.

We have other instances where the Department of Defense, for example, because of their inability to get through their committee a military construction program for the construction of a building to house or to replace older buildings on a fort, will ask us to lease a major facility for them.

We have examples of this up in New Jersey where we leased almost 600,000 square feet just outside of Fort Monmouth to house people who were housed in substandard houses that were World War II barracks that are scattered over a wide area, making the operation inefficient.

It is this type of thing creating these additional demands. In fact, over a period of time, historically we project about a 23.5-percent increase annually in our total space requirements because of the continuing expansion of Federal programs.

This doesn't take into consideration my previous statement with regard to specific agencies, added to the fact we have the creation of new agencies such as EPA, for example. We had to go out and lease space for various agencies' headquarters of over a quarter of a million square feet of space. This, plus regional offices throughout the country.

Recently the FEA was established. That immediately created a demand for 300,000 square feet of space in which to consolidate activities of that particular agency.

So the expanding social programs, the expanding energy programs, environmental programs, tax programs, and so forth, all create demands for additional space. We respond to those requirements.

Senator STAFFORD. Thank you, Mr. Chairman. I don't know what your plans are here. I have other questions, but I can pass the time back and forth every 5 minutes, or I can submit mine for the record; whatever the Chair desires.

Senator MORGAN. It doesn't really matter. We will now proceed with a few of the staff questions.

Mr. Meisen, before I begin, let me do as I did yesterday and ask you to educate me on some of the terms that you have used.

You speak of appropriations being made on the no-year basis. Would you explain what that means?

Mr. MEISEN. Yes, sir, prior to fiscal year 1975, appropriations for construction were appropriations that once appropriated for a project were available without fiscal year limitation, we could obligate by letting a contract, even though the contract went over a number of years or even though all the costs associated with that project weren't obligated the same fiscal year as the year of appropriation.

The total lump sum for the design and construction of a building would be appropriated at one point in time. That appropriation would be available until that building was completed.

Under the Federal building fund programs, a similar arrangement was anticipated. However, there were annual fiscal year limitations placed on the funds authorized by the Congress. After 1 fiscal year those funds would have to be requested again for whatever was needed to complete the balance of the building.

So at the current time, we have to come back to the Congress at the end of this fiscal year to rerequest money for that portion of contracts or that portion of supervision work that has not been completed on any ongoing construction project.

Senator MORGAN. If I understand you correctly, then, when you say appropriations have been made on a no-year basis, you have the authority and the money available; then you draw your plans, let your contracts, and get a firm competitive bid.

Mr. MEISEN. Yes, sir.

Senator MORGAN. If they are not appropriated on a no-year basis, you can only go so far as you have funds appropriated.

Mr. MEISEN. As you can imagine, whenever we award a construction contract, we reserve a percentage, for example, for contingencies. This would be 5 percent, I would say on an average project for unforeseen conditions and so on.

As it stands now, at the end of each fiscal year we have to return any of those contingencies that we don't use and have to reask for them the next day to go on with the project again.

We feel if the Congress authorizes a project in total dollar limitations, we will stay within that dollar limitation. Having no-year funds helps us speed up our whole construction program. We have the funds available for the duration of the entire project rather than having to go back for the remaining balance each fiscal year.

Senator MORGAN. Let me go back further, if you will bear with me. On the FBI building, you were allocated, or there was appropriated by the Congress, only enough funds to let the contract for the basement and first floor.

Mr. MEISEN. Yes, sir. That project was done in three construction phases over a number of years. The Appropriations Committee appropriated just sufficient funds to do the first two lower levels of the basement. A year or 2 years later they gave us the money, as that phase was completing, to award the contract for the next two levels and bring it up to ground level; and then in subsequent years gave us sufficient money to complete the project.

As a result, we couldn't award a one-lump-sum construction contract for the whole building initially.

Senator MORGAN. Are we constructing any buildings under that process now?

Mr. MEISEN. Yes, but we are doing it on a planned basis as opposed to a forced basis because of incremental funding. In fact, we find it very practical to phase construction, not over long periods of years, but as required to keep the project moving to completion as quickly as we can.

For example, instead of waiting for a design to be totally completed on a project now, as soon as the foundation is designed, we will start

construction of that foundation. While that is being constructed, we will complete the design of the rest of the building and award the contract for the rest of the building.

We save about 8 months on an average job by doing it this way. The process I referred to on the FBI building is strictly an appropriations problem rather than construction scheduling, and projects are stretched out over many, many years because of incremental funding.

Senator MORGAN. There are a number of other questions but, because of time, let me ask two more general questions and then we will move on.

First of all, you mentioned that rent charged the various Federal agencies for the use of buildings is generally equivalent to that charged by commercial owners.

Mr. MEISEN. It is generally equivalent commercial rental, yes, sir.

Senator MORGAN. Taking into consideration the fact that the Federal Government does not normally pay property taxes and many other liabilities, why is it as expensive as commercial?

Mr. MEISEN. Let me have Mr. DiLuchio speak on this.

Mr. DiLUCHIO. Public Law 92-313 authorizes the Federal buildings fund procedure, and it requires that our rates charged to occupants should approximate commercial charges.

The statement that you make is true. There are some costs that private entrepreneurs do have that Government doesn't have. There are some costs we incur that they do not incur, either.

Senator MORGAN. Such as?

Mr. DiLUCHIO. Such as the type of buildings that we build some of which are monumental-type structures; the preservation of historical buildings that we have to operate and maintain is costly. These are costs they don't have but which we have.

The commercial equivalency is determined annually by conducting market surveys to find out what the commercial rate is in various areas throughout the country.

We have a chart here that depicts some of those rates in the major areas where we have space around the country. As you can see from the list, the column on the lefthand side represents the fiscal year 1975 average rate for office space that we may charge in those areas for a typical facility where agencies are located.

The second column shows those same rates to be used for fiscal year 1976. You can see the pluses and minuses arrayed on the chart.

The second chart shows the overall average of the rates between 1975 and 1976. Where our average rate in fiscal year 1975 for office space throughout the country was \$7.35 a square foot, by conducting our market survey recently, we determined that it should be 31 cents a square foot less for fiscal year 1976.

These rates are derived from sampling space that is available on the commercial market for lease by anyone.

[The charts referred to follow:]

COMPARISON OF SLUC RATES FOR OFFICE SPACE BY MFSA

[Dollars per square foot]

Major Federal space area	Fiscal year 1975	Fiscal year 1976	Change	Major Federal space area	Fiscal year 1975	Fiscal year 1976	Change
Boston.....	10.03	7.65	-2.38	St. Louis.....	5.43	4.82	-.61
Buffalo.....	6.69	5.34	-1.35	Topeka.....	4.52	5.48	+.96
Nassau-Suffolk.....	7.93	6.63	-1.30	Albuquerque.....	6.09	6.56	+.47
Newark.....	7.93	8.22	+.29	Austin.....	6.02	7.19	+1.17
New York.....	7.80	9.72	+.08	Dallas.....	6.96	6.02	-.94
Baltimore.....	7.80	6.03	-1.77	Houston.....	6.45	7.31	+.86
Philadelphia.....	9.18	10.71	+1.53	New Orleans.....	7.13	5.93	-1.20
Pittsburgh.....	7.86	8.45	+.59	Colorado Springs.....	6.38	5.17	-1.21
Washington, D.C.....	6.51	7.21	+.70	Denver.....	7.49	6.85	-.64
Atlanta.....	5.21	6.95	+1.74	Salt Lake City.....	5.14	5.17	+.03
Birmingham.....	4.93	5.30	+.37	Honolulu.....	8.46	9.04	+.68
Louisville.....	6.19	7.42	+1.23	Los Angeles.....	8.60	6.58	-2.02
Memphis.....	6.26	4.82	-1.44	Phoenix.....	7.20	7.46	+.26
Miami.....	6.63	7.12	+.49	Sacramento.....	7.67	6.53	-1.14
Chicago.....	9.08	7.68	-1.40	San Diego.....	8.97	7.47	-1.50
Cincinnati.....	7.19	6.99	-.20	San Francisco.....	9.09	10.07	+.98
Cleveland.....	8.19	8.35	+.16	Anchorage.....	13.09	12.29	-.80
Detroit.....	7.82	7.68	-.14	Portland.....	8.03	5.51	-2.52
Milwaukee.....	8.00	5.31	-2.69	Seattle.....	7.49	7.65	+.16
Minneapolis.....	7.68	6.73	-.95				
Kansas City.....	5.18	5.73	+.55	Average.....	7.35	7.04	-.31
Omaha.....	4.85	5.48	+.62				

Senator MORGAN. Is it not true that perhaps one of the reasons for additional cost is that it is just simply more expensive for the Federal Government to maintain the buildings because of salaries, fringe benefits, retirement benefits, and so forth?

Mr. MEISEN. No, Senator, I don't think that is true; although I think the average cleaning worker employed by the Government is probably paid slightly more.

I think the productivity of our employees who operate buildings offsets the slightly higher wage rate. More important I think is the cost of building our buildings versus the commercial buildings in many respects.

It has been published by the American Contractors Association that the Davis-Bacon Act adds about 15 percent on the average construction facility.

Senator MORGAN. What was that?

Mr. MEISEN. The Davis-Bacon Act, which is the Fair Labor Provisions Act. I am not speaking against the fair labor provision. I think it is an important goal of the program. It does add about 15 percent to our construction cost that a private entrepreneur doesn't pay.

Many other programs of the Federal Government similarly add costs to our building costs. You can see construction is not a major program in fiscal year 1976; it is about \$63 million a year, and repairs and alterations are about \$100 million. So it is about \$200 million of the \$1 billion is what we are spending on construction.

Senator MORGAN. You partially answered my next question. It is on an issue that, with the permission of the committee chairman during the next few months I would like for us to explore. That is—and you will have to pardon my continued reference to North Carolina but that is the only area in which I have had experience. At the present time we

are building a high-rise office building on Heritage Square in the capital city.

It was let by contract, as I mentioned, with funds available. Its cost per square foot is \$45. I believe you told me that the average cost per square foot or projected cost for the Baltimore project would be about \$100.

Mr. MEISEN. Our construction costs have been running in the \$40 to \$50 a square foot range for that building. I have the same difficulty that you often have in this regard, that it is very difficult to get comparisons between the public sector and the commercial sector, and, in fact, even between the different Government levels, because it is never clear whether they are including design costs or only construction costs.

One of the things we have to work on jointly in discussing projects is developing a common language so when I say we pay \$40 a square foot and you say you are paying \$40, we know we are talking about the same thing.

Senator MORGAN. In the next few months I would like for us to explore this, to see if it is a myth that the public is talking about. It seems to be generally conceded that Federal buildings cost more, and we ought to find out why.

If it is true, then we ought to look and see what we can do to bring them closer together.

Mr. MEISEN. We certainly support you in that, sir.

Senator MORGAN. Mr. Meisen, in your prepared statement you mentioned four projects had been selected or proposed for fiscal year 1976. Could you tell the committee how these four projects were selected, and which will be financed directly from building fund revenues in fiscal year 1976?

Mr. MEISEN. All of these projects will be funded from Federal building fund revenues. These are not purchase contract projects.

I would like to have Mr. Shipp outline for you generally the procedure we follow in selecting projects such as this.

Mr. SHIPP. We start off with a series of surveys out in the regions called the Federal space situation reports. We proceed from that point to further development and we identify the potential need for a new Federal building in the community.

We proceed further with what we call a project development report which goes into greater detail in terms of local planning objectives, the space situation in the particular community, and the condition of the space that employees are in in the community at that time, taking into consideration a whole myriad of factors that impact a decision as to whether we will include that project in a particular construction program.

Based on the data developed in this way, we identify projects that would be included in construction programs for the next 5 years.

To establish an order of priority, utilizing a model that applies or takes into consideration certain factors, we identify those projects that have the greatest priority or urgency of need, due consideration being given to equitable distribution of those projects throughout the country.

These four projects that were identified were ones that have relatively high priority. For example, in Miami there is a very urgent need to expand the court facilities at that particular location. That weighs very heavily with us in terms of identifying projects with high priorities, the need to provide additional court facilities.

With respect to border stations and these types of things, we do not apply priority to those in terms of the larger system that I outlined. We do that by consulting with the people in the Bureau of Customs and Immigration and Naturalization Service.

We have a separate list of priority projects that really is their priority list. Then we try to mesh the two within the amount of money that we have available for construction.

Senator MORGAN. Who actually does the meshing together of the projects, to make a final decision? Is it a committee or the Commissioner?

Mr. SHIPP. It is done in my office. I submit those recommendations to Mr. Meisen who then concurs or rejects or makes additions or changes.

Senator MORGAN. You mentioned the Miami project. When do you expect to submit the prospectus on the Miami project, as well as the one in Alaska?

Mr. SHIPP. We anticipate that we will be able to submit the prospectus on the Miami project within the next 60 days. With respect to the Haines, Alaska, project, the prospectus which has to be first submitted to the Office of Management and Budget is in the process now, and I would anticipate within the next 30 days after being submitted to that office for review and concurrence we can submit it to the Public Works Committee.

Senator MORGAN. Do you have any idea how long it would be after you submit it to the Office of Management and Budget, before you will be able to submit it to the committee?

Mr. SHIPP. Our experience there varies from a matter of days to a matter of years.

Senator MORGAN. You are not a prophet.

Mr. SHIPP. We hope they will move very promptly.

Mr. MEISEN. They have indicated, Senator, that these are necessary and viable projects, so I wouldn't anticipate a major delay in the processing.

Senator MORGAN. Mr. Meisen, one of the four projects you submitted, the New Orleans Customhouse, was authorized in 1972. I am somewhat at a loss as to why work has not been done on it. Why does it now have priority if it hasn't had any since 1972?

Mr. MEISEN. Actually, this is a restoration project.

Senator MORGAN. Is that the old customhouse?

Mr. MEISEN. Yes, sir. Part of the design and planning has been to assess considerable damage or deterioration to some of the older parts of this historic building. We are requesting funds at this time.

Senator MORGAN. A little while ago when we were talking about no-year appropriation and the no-year basis, you mentioned that GSA could proceed with construction of a building without delay if appropriations were made by the Congress on a no-year basis.

Mr. MEISEN. Yes, sir.

Senator MORGAN. Did you always do that, even when Congress was making appropriations on a no-year basis?

Mr. MEISEN. Do you mean, did we phase construction?

Senator MORGAN. What I am really saying is, was it only the Congress that held you up on that?

Mr. MEISEN. On the FBI building?

Senator MORGAN. Yes.

Mr. MEISEN. My recollection, and it goes back a few years, is the plans were totally complete in about 1970. Completion of the FBI structure itself subsequent to that, because of the passage of time, did require some design changes. But basically I think the plans were completed in 1970, so we could have gone ahead with the whole building.

Senator MORGAN. You cite that GSA promoted efficient use of construction and repair funds by the application of the building-system technique, among other things, but you state it requires full funding authority without fiscal year restriction.

Mr. MEISEN. Yes, sir.

Senator MORGAN. Is it not true that GSA's only effort in this respect has been through a purchase contract arrangement using private funds?

Mr. MEISEN. No, sir, that is not correct. We have a number of projects that have been highly successful. In fact, one that was mentioned in the newspaper this morning, the Air and Space Museum, was a construction management-project management effort. It will be completed about 3 months ahead of schedule and within 3 percent—it mentions the number—of its cost.

It is a directly appropriated project. There are a number of others as well, such as the Columbus, Ohio, Federal Office Building; the Oklahoma City Federal Office Building; and the Winston-Salem, N.C., Courthouse and Federal Office Building.

Senator MORGAN. Is GSA's level of planning sufficient to accommodate the expanded building program if increased appropriations are approved by this Congress?

Mr. MEISEN. We think we have the technical ability to move out.

Senator MORGAN. You do have?

Mr. MEISEN. Yes, sir.

Senator MORGAN. At this point, I did have another question.

Senator STAFFORD. Mr. Chairman, while you are checking the papers, I will go ahead with one or two questions. Then I will have to leave.

Senator MORGAN. I was going to suggest that.

Senator STAFFORD. Mr. Meisen, what renovation work is contemplated in the budget which we see before us this morning and how much renovation could be accomplished by GSA without budget constraints?

Mr. MEISEN. We have a backlog of almost \$965 million worth of repairs and alterations work. This program proposes approximately \$110 million worth of repairs and alterations.

Naturally that repair and alteration work is necessary to maintain our buildings.

Senator STAFFORD. I guess we are talking about semantics when we call it repairs and alterations and renovation.

Mr. MEISEN. Yes, sir.

Senator STAFFORD. It all adds up to the same item.

Mr. MEISEN. That is correct.

Senator STAFFORD. May I ask, then, how many jobs can be provided for \$1 million investment in renovation work or repairs and alterations work and how does that compare with the number of jobs that might be available in a new Federal constructions spending program of the same amount, that is, \$1 million?

Mr. MEISEN. A million dollars?

Senator STAFFORD. A million dollars.

Mr. MEISEN. I would estimate that a million dollars provides very few. Let's analyze it for \$100 million.

We estimate that new construction of \$100 million, that is an average, large-size new construction projects, creates about 5,000 jobs. If you were to do the same \$100 million in renovation work, you would probably create about 25,000 jobs, about five times as many.

Senator STAFFORD. That is an interesting figure to have.

Could you comment, Mr. Meisen, on what is the average amount of office space available to a typical Federal employee and how that compares with the average for an employee in the private sector of industry?

Mr. MEISEN. Mr. Shipp will comment on that.

Mr. SHIPP. In terms of office space, the space utilization for a typical employee will be in the range of 130 to 150 square feet, depending on the function of the employee, what kind of work he is doing.

This means in many agencies you will get the type of activity that is largely clerical or very repetitive assembly type of work where it can drop below that range.

There may be other areas where as in the private sector it is scientific work and the amount of space may rise above that. Generally it is in the range of 130 to 150 square feet per person.

This compares very favorably, as best we have been able to ascertain, with the private sector, trying to match up comparable types of activities.

The CHAIRMAN. Could I interrupt?

Senator STAFFORD. Yes.

The CHAIRMAN. Senator Stafford and I work together in the subcommittee on the Handicapped of the Labor and Public Welfare Committee.

We have been working on construction and alteration of our Federal buildings to accommodate the physically handicapped, including, Mr. Chairman, paraplegics and others who use the wheelchairs.

We found that here on Capitol Hill we move too slowly, but we accelerated the effort so these buildings would be accessible to the handicapped. That is as it should be throughout the country.

On a recent occasion Senator Byrd of West Virginia and I dedicated the U.S. Public Debt Building in Parkersburg. Then recently, just a few days ago, we were together and dedicated a city building in Weirton; the latter building, by the way, built under the revenue sharing program.

If money is as well spent as it was in that project, I think revenue sharing is successful. But we know that in those structures the physically handicapped were considered in planning the dimensions of

rooms. We have to take into account the hallways, we have to take into account an elevator that will accommodate the movements of the person in a wheelchair.

I know that these matters are very much a part of your thinking these days. It was not so in years past.

But when we consider alterations to a building to make it more accessible to the physically handicapped, do you find you have to think in terms of higher costs than you ordinarily would?

Mr. MEISEN. To modify existing buildings to make them more accessible to the handicapped does incur costs. We anticipate spending about \$500,000 in fiscal year 1976 to install the special aids to handicapped that we feel are desirable in our buildings.

We feel that it is an absolute benefit to the Government. I think we get a return far in excess of what it costs to make buildings more accessible.

There are limitations. In some buildings it is very, very difficult and very expensive.

The CHAIRMAN. Because of the obsolescence of the building itself?

Mr. MEISEN. Right.

The CHAIRMAN. It doesn't adapt itself to change.

Mr. MEISEN. That is generally true of the old type of buildings built on a pedestal.

Generally speaking we find it is not overly expensive to make buildings accessible. All of our existing buildings have had work done in them.

The CHAIRMAN. Thank you, Mr. Meisen, and thank you, Senator.

Senator STAFFORD. Thank you, Senator Randolph, for bringing that subject up. I do share your interest in it. I know how active and forceful you have been in looking out for the handicapped in buildings.

Mr. Meisen, let me ask you in these cases of purchase contracts that have been under discussion here, who pays the local taxes if they are paid during the 30 years of time intervened during the actual acquisition?

Mr. MEISEN. The payments which the Government makes include the principal, interest, and taxes on all of the projects.

Senator STAFFORD. What is the rationale for entering into a purchase contract construction project costing \$165 million I think in fiscal year 1976—in effect, a mortgage not reflected as a deficit in the budget—and then returning \$55 million in surplus to miscellaneous receipts from the Treasury?

The CHAIRMAN. Can I interrupt once again? You understand I am not taking the temperature of Mr. Meisen. I have been taking temperatures all over Capitol Hill, and this is no gimmick.

I have been interested in determining whether buildings are overheated. They have generally been overheated, which is an important part of your picture.

I find this room this morning is 70 degrees. We are trying to keep our rooms in the public works sector of this building at 68 degrees to 70 degrees.

We are finding in some of the rooms in this building, Mr. Meisen, and other buildings, you have 80 degrees, 81, 82, and 83 degrees. So I am sure you are all comfortable here today.

Mr. MEISEN. Mr. Chairman, it might be interesting to note that it is estimated by many sources that the potential for energy savings in existing buildings is approximately 40 percent of the energy we use.

We have found in GSA that by simply doing the type of thing you are talking about right now, adjusting the temperature for summer and winter, we can save 30 of that 40 percent without any major retrofitting, on an average.

It is true that in some buildings you cannot achieve as much. I think it is a very important program. We certainly heartily endorse your efforts, as well as any private citizens who would want to help the overall energy situation by doing likewise in their buildings.

The CHAIRMAN. I think it is a very important statement you are making. I thank you, Senator, for allowing me to pick up the thermometer. I am going to another room.

Senator MORGAN. I might comment, we propose to have a hearing in the near future concerning energy and public buildings. We were talking about that.

Mr. MEISEN. Thank you, sir.

Senator STAFFORD. Mr. Meisen, since we have been slightly distracted by heat consideration, would you like me to repeat the question?

Mr. MEISEN. I think you were asking why are we not using the \$55 million that is being returned to miscellaneous receipts.

We currently have an appropriation limitation in fiscal year 1975 of \$1,088 million. We anticipate an income of \$1,098 million. We will be returning to the Treasury this year at least \$10 million.

The limitation was specified in the Appropriations Act that we cannot have obligations in excess of \$1,088 million.

Senator STAFFORD. One last question, Mr. Meisen. I understand I am asking this question for Senator McClure who would like to be here but has other commitments.

I understand that your agency has been asked to participate in the job opportunities program, title X of the Public Works and Economic Development Act. Could you tell this committee whether you have outlined or submitted any proposals in this area up to the present time?

Mr. MEISEN. Yes. We have submitted a proposal to the Secretary of Commerce outlining what things we believe we could accomplish in that program.

Senator STAFFORD. All right. I may have some other questions, Mr. Chairman, that I would submit for the record rather than taking up the witness' time and the committee's time.

I would ask the witness, Mr. Meisen, if answers to any written questions could be made available to this committee within the next 7 days in view of the fact that we have to go to the Budget Committee by March 15.

Mr. MEISEN. We would certainly make every effort to do so. I am sure we can comply, sir.

Senator STAFFORD. Thank you very much.

Senator MORGAN. Thank you, Senator.

Mr. Meisen, many interesting points have been raised that I could pursue all day, but I am going to try to stick to my questions.

You mentioned that GSA was sufficiently geared up to accommodate the expanded building programs if sufficient appropriations were made or restrictions lifted. What prospectuses have already been approved that you might use to expand a program?

Mr. MEISEN. We only have one new construction project, Norfolk, Va., which has been fully approved in both the House and the Senate.

There are many prospectuses for repair and improvement. Prospectuses normally run over a long period of time. We have certain ones in that area already approved.

Senator MORGAN. What is the project in Norfolk?

Mr. MEISEN. It is a Federal office building. Its estimated cost is approximately \$14 million.

Senator MORGAN. The budget request proposes an expenditure of about \$62 million for direct Federal construction. Of that, \$29 million is for new work to begin in fiscal year 1976, and the remainder for continuation of ongoing projects.

Is this level in your opinion appropriate or will an increase now serve to better fulfill the Federal space requirements?

Mr. MEISEN. Senator, I think as far as fulfilling the space requirements of the Federal Government, that this is not an adequate amount.

As for the projection of space needs, this particular chart shows the total space requirements of the Federal Government as far as our agency is concerned for the years 1975, 1977 and 1980. It indicates the growth we anticipate at about 2.5 percent.

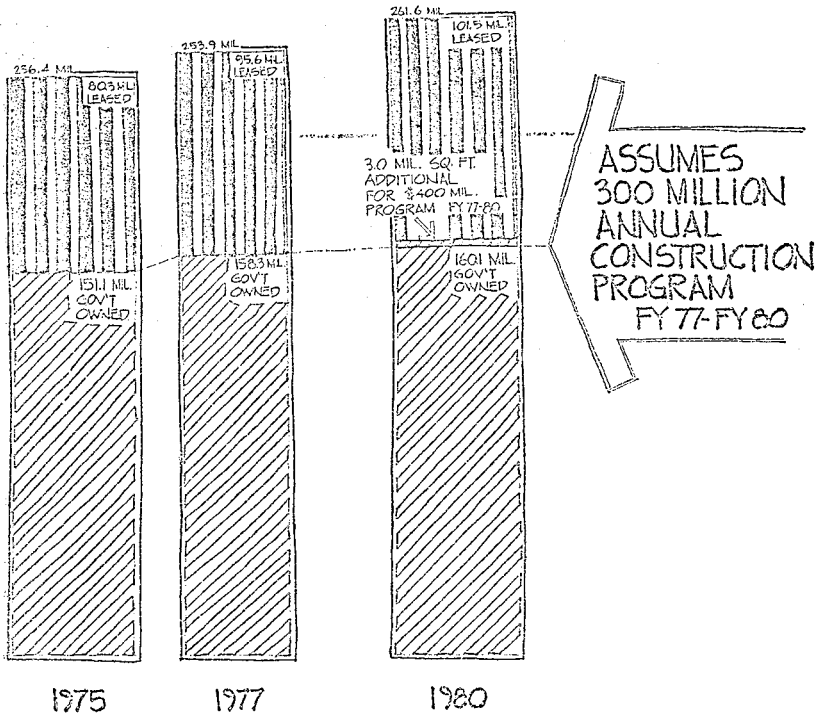
The red area at the top is leased space, and the blue hatch at the bottom is Government-owned space. The growth in Government-owned space was an example to show that if we were to get \$300 million a year in new direct construction, how much space we could add to that inventory.

The little bar that you see shows how much \$100 million a year for 3 years adds to the Government-owned inventory.

I think you can see that with the amount of space and the growth that we have, it would take a program in excess of \$400 million a year direct Federal construction to maintain the status quo and not have to lease any more. But it certainly wouldn't reduce the lease backlog.

[The chart referred to follows:]

FEDERAL SPACE REQUIREMENTS PROJECTION



Mr. MEISEN. It is very difficult to equate a single project as having a need simply because of the ratio of space. The order of magnitude of what we are talking about is so vast.

Yes, we prefer to have Government-owned space, Senator, and we think it should be the goal of the Government to approach to the extent practical within any fiscal constraints as much federally owned space as is possible as a general policy.

I don't think that any 1-year program, in fact, any 10-year program, of any reasonable magnitude is going to make a major shift in the proportion of space we now have in inventory.

Senator MORGAN. What GSA policies or guidelines determined development of the program reflected in the budget request now before us? How were cost allocations worked out between the various programs?

Mr. MEISEN. The chart on your right, Senator, indicates how we plan to execute our fiscal year 1976 programs.

The section on the right is for rental of space at \$453 million. This is almost a fixed cost, although it is accelerating because of increases in space, both in amounts of leased space and lease costs because of inflation.

The real property operation activity is only increased to the extent we have taken on new Government-owned space and services, but it represents \$397 million. So we are talking about two-thirds of our outlay being in those two areas that are relatively fixed.

We have purchase contract payments of some \$60 million. We will have payments such as these for quite some time to come. It is a fixed cost even though the amount will vary each year.

We have indicated that we felt a larger major repair program was more desirable, so we have allocated \$110 million for alterations and major repair, and \$63 million for ongoing construction.

The program direction area is our supervisory and management staff. It is about 6 percent in relation to the total program.

Unapplied revenues is \$80 million. This is money that is left in the fund for any additional projects that may arise during the fiscal year which might be authorized by the Congress.

The \$55 million is being returned to miscellaneous receipts.

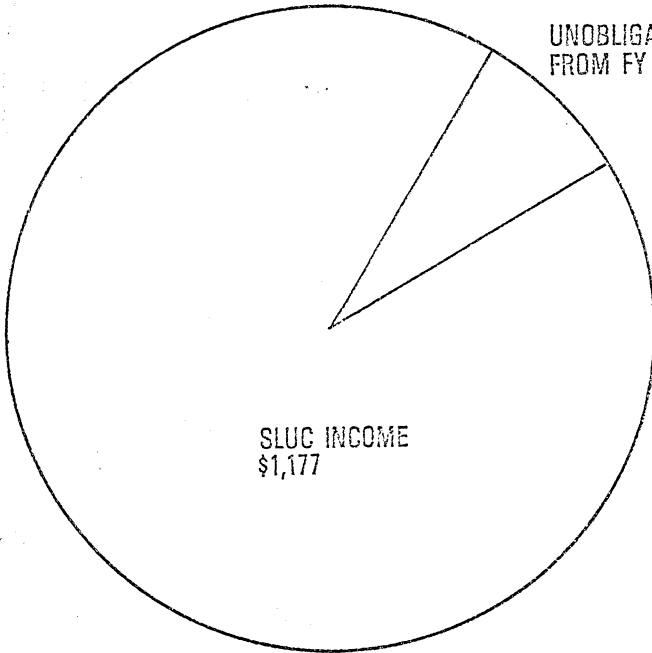
[The charts referred to follow:]

FEDERAL BUILDINGS FUND

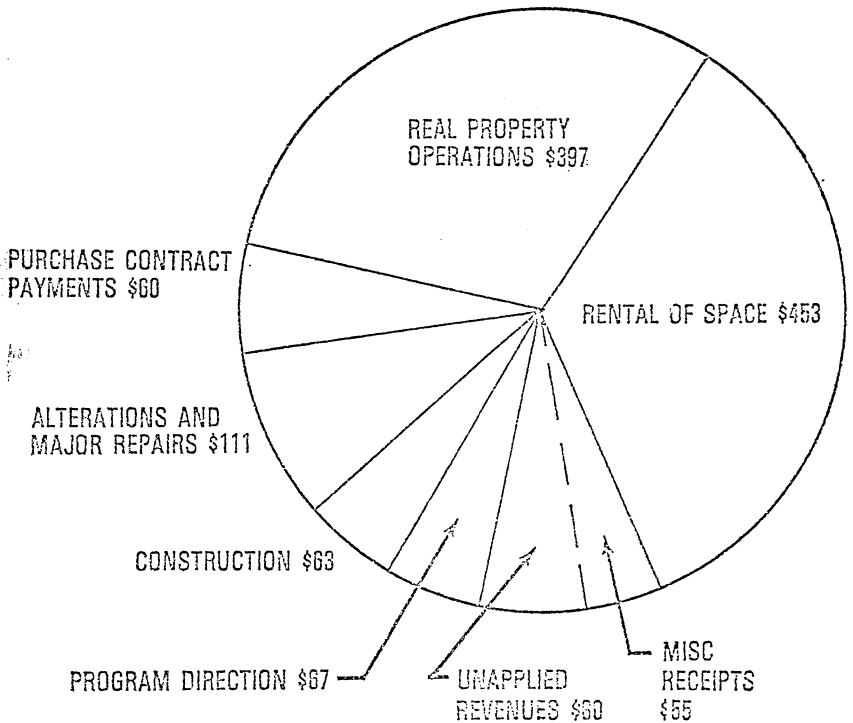
FY 1976 (\$ IN MILLIONS)

REVENUE \$1,265

UNOBLIGATED BALANCES
FROM FY 1975 \$108



LIMITATIONS ON REVENUE \$1,285



Senator MORGAN. Mr. Meisen, would you tell us how the estimate was computed for the transitional quarter between July 1, and September 30 of 1976?

Mr. MEISEN. Yes, sir. It was computed as simply 25 percent of all ongoing work at the end of fiscal year 1976, with no new starts contemplated for that one quarter.

Senator MORGAN. Over \$110 million are budgeted for major alterations and repairs during the fiscal year 1976.

Mr. MEISEN. Yes, sir.

Senator MORGAN. How could this be allocated to alleviate the Nation's unemployment problem? And I will go further and propose another question at the same time. What percentage of that alterations fund will actually be used for new work such as building extensions and equipment upgrading?

Mr. MEISEN. The alterations and major repairs activity does not include building extensions. This activity consists only of repairs, alterations, and modifications to existing buildings. Any major extensions are included in the construction program.

Senator MORGAN. Are you making an effort to expedite alterations and expenditures of these funds to do anything about or alleviate unemployment?

Mr. MEISEN. We will be prepared to move out as quickly as possible as soon as these funds become available.

Senator MORGAN. How essential is continuation of the purchase contract authority to GSA public buildings program? And another question along the same line: Doesn't the Treasury's new Federal financing bank preclude further need for this?

Mr. MEISEN. To answer the first part, the purchase contract authority is critical to our ongoing construction programs. I am concerned that through direct construction our levels of construction are going to be minimal.

As I indicated earlier, even at \$300 million a year, it is very difficult to see us making any reduction in the amount of lease space we now have. It is likely to grow.

I think I might be able to show you a chart that indicates why I think the Federal buildings fund is a technique that can actually help us to reduce some of this backlog.

I know this looks a little confusing, Senator, but what it says is, if we wanted to spend \$100 million a year for the next 30 years, one way would be to incur \$100 million worth of purchase contracts payments immediately and then pay that off over 30 years.

The other way would be to build \$100 million of direct construction each year for 30 years. But for the same budget outlay of \$100 million a year, using purchase contracts, we could build about 9.2 million square feet of space.

For the next 30 years we would have that space in our inventory.

Considering construction escalation, \$100 million a year for direct construction over the next 30 years, we could build about 10.2 million square feet of space but it would not all be available until the end of 30 years.

What you see under this curve is how much space we will not have to lease for the period of time indicated, at least until 21 years.

But the difference is something like \$80 million for leasing under the direct Federal construction alternative, as opposed to about \$8 million in leasing under the purchase contract alternative.

In addition to that, we will be paying 18 percent taxes to the local communities for those 30 years, which I believe represents something like \$540 million to these local communities over 30 years.

I agree there are many different ways you could look at this. But what I am saying is for a given output of purchase contract payments, we can get more space on board now and in addition pay taxes, which we think is a desirable feature.

By the way, if it is decided by the Congress, it is not necessary or desirable to pay taxes, the relationship changes slightly because of inflation and what it does each year to the construction dollar.

Senator MORGAN. Mr. Meisen, could you give us the assumption on which you based this chart?

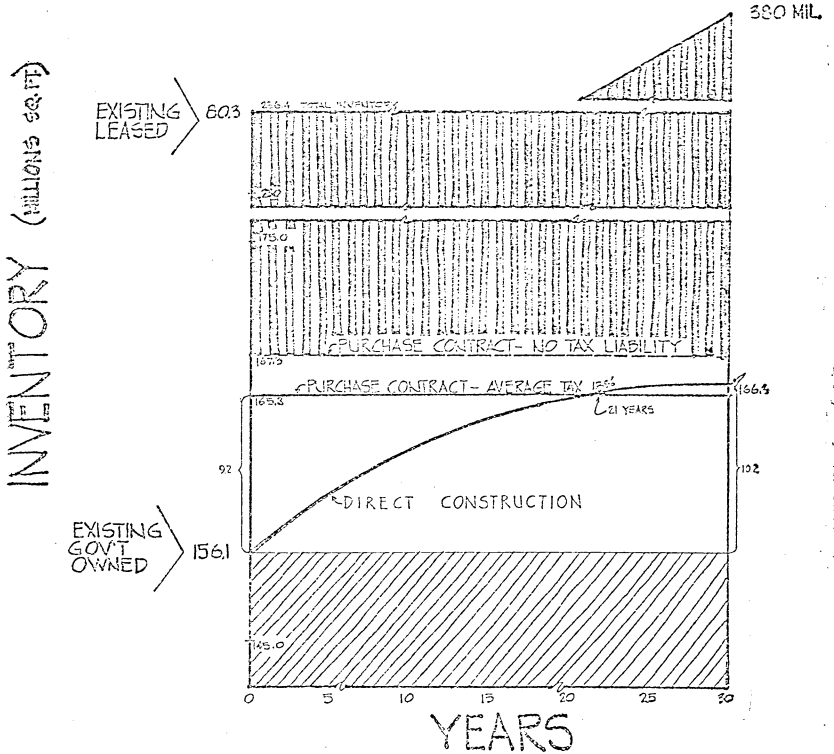
Mr. MEISEN. I would be very happy to give you that, Senator.

Senator MORGAN. If you would, for the record, we would appreciate that.

Mr. MEISEN. Certainly.

[The chart referred to and the additional information requested follows:]

PURCHASE CONTRACT VS. DIRECT CONSTRUCTION (ASSUME \$100 ML. ANNUAL APPROPRIATION)



ASSUMPTIONS

(Related to Graph Depicting Purchase Contract Versus Direct Federal Construction)

1. An annual appropriation of \$100 million is available each year for thirty years for (a) Direct Federal Construction or (b) Purchase Contract payments of principal, interest and taxes.
2. Construction costs escalate at 10 percent per year compounded.
3. There is a zero construction period so that construction initiated in any one year is occupiable during that year.
4. The principal amount borrowed for purchase contract financing is amortized at 8 percent in equal annual payments.
5. The annual purchase contract payment of \$100 million includes \$18 million for taxes and \$82 million for payment of principal and interest.
6. Annual payments of principal and interest of \$82 million at 8 percent for 30 years will produce \$923 million worth of construction in year zero.
7. The gross inventory increases approximately 4.8 million square feet per year.
8. There is \$923 million worth of purchase contract construction authorized and ready for construction in year zero.

Senator MORGAN. Could you provide us with some duplicates of those charts, so that the committee members could have them for the record?

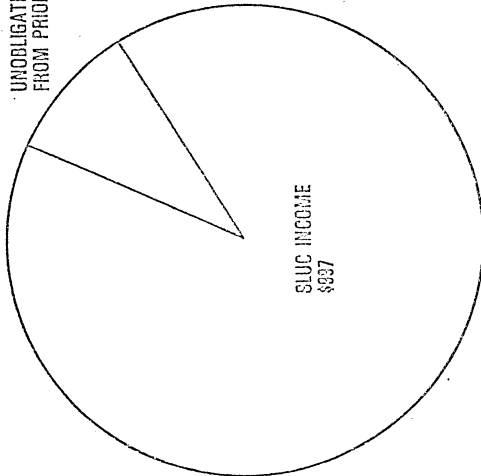
Mr. MEISEN. Yes, sir. We have most of them made. We will have them before the end of the week.

[The charts requested follow:]

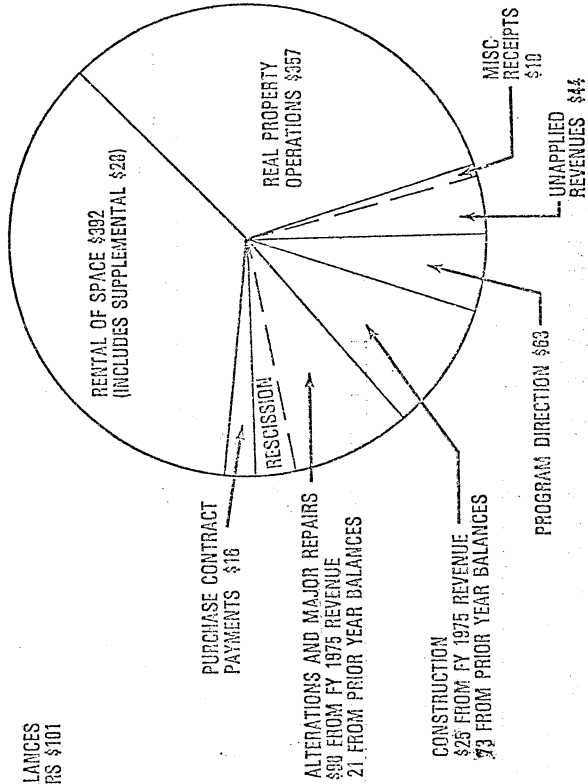
FEDERAL BUILDINGS FUND

FY 1975 (\$ IN MILLIONS)

REVENUE \$1,098



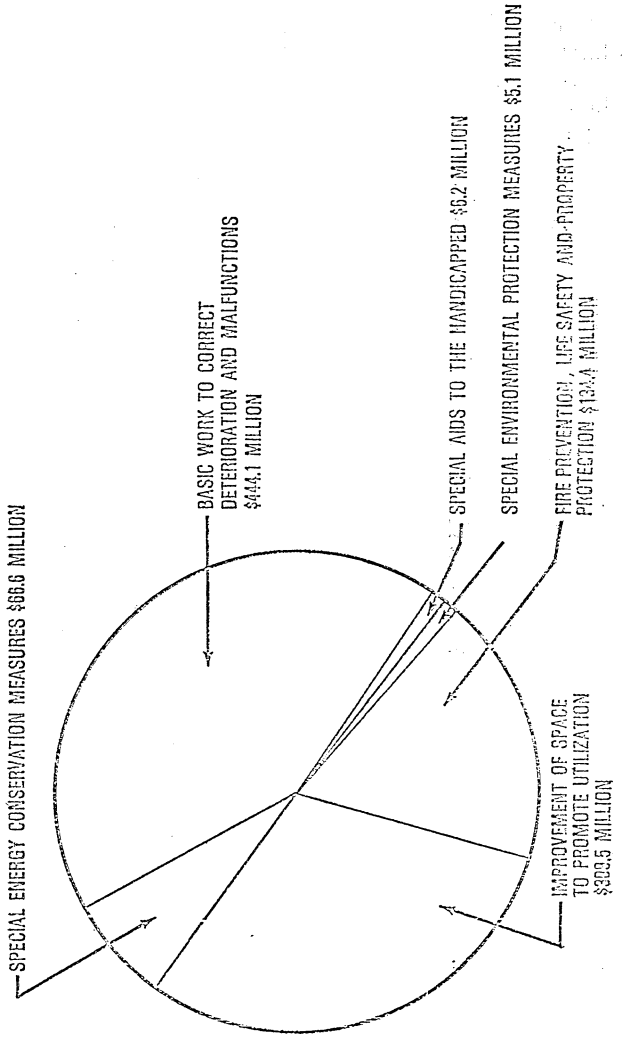
LIMITATIONS ON REVENUE \$1,098



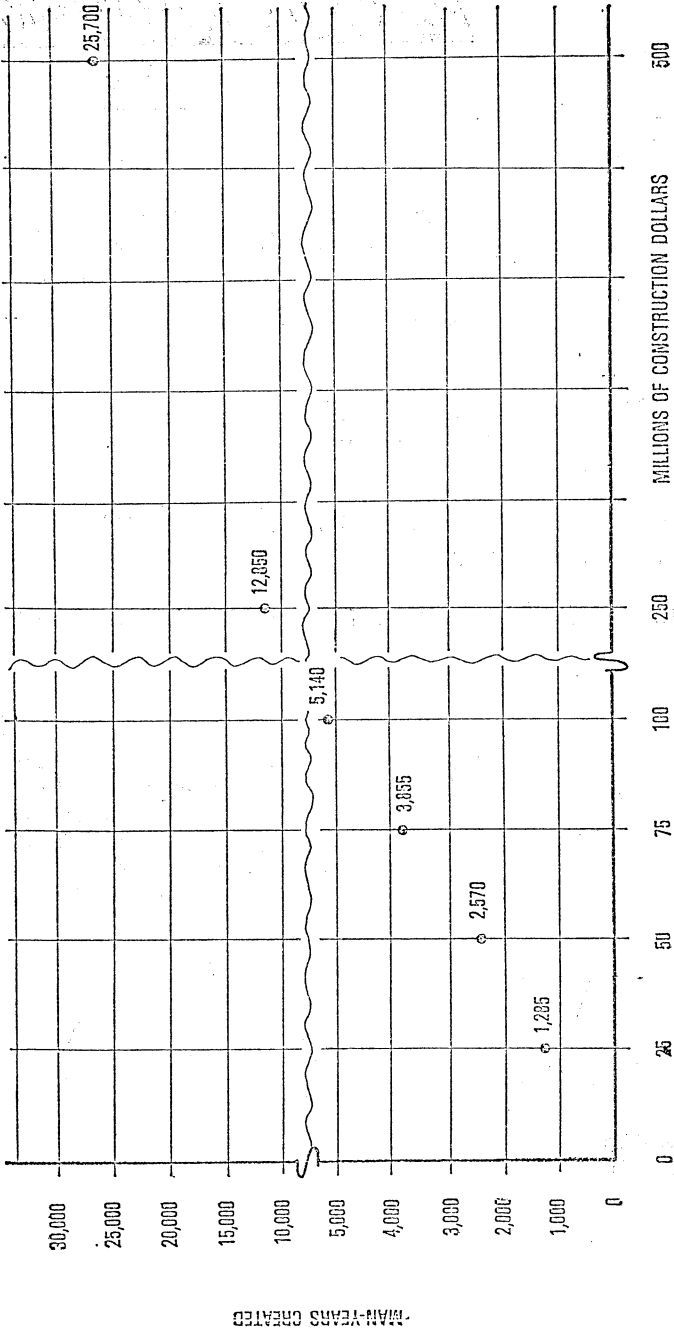
ALTERATIONS AND MAJOR REPAIRS

5 YEAR WORKLOAD INVENTORY

ESTIMATED COST AT BEGINNING OF FY 1976 - \$965.9 MILLION



EMPLOYMENT CREATED IN PRIVATE SECTOR (CONSTRUCTION AND ALLIED INDUSTRIES)



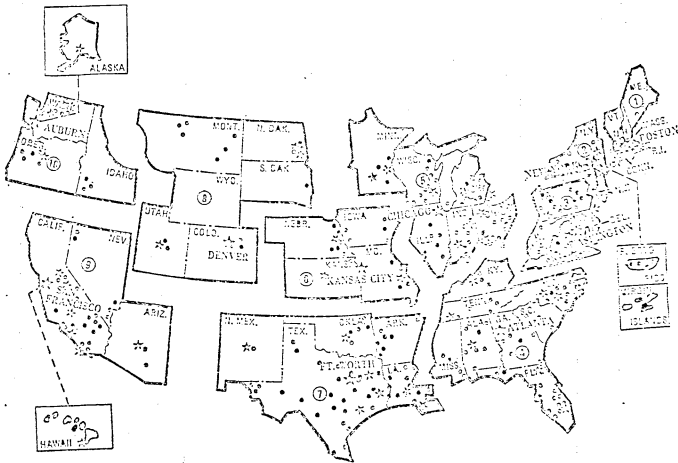
NOTE: FOR ALTERATIONS AND MAJOR REPAIRS, INCREASE THE MANYEARS FIVE TIMES

MAN-YEARS CREATED

FBF SYSTEM IMPROVEMENTS

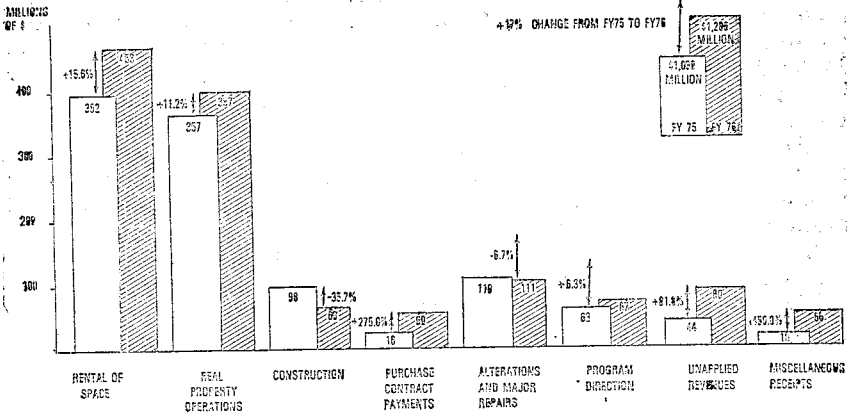
	<u>FY75</u>	<u>FY76</u>
MARKET SURVEY		
LOCATIONS IDENTIFIED	500	4-800
LOCATIONS SAMPLED	500	2,400
METROPOLITAN CITIES SURVEYED	66	
SMSA'S SURVEYED		268
CLASSIFICATION SYSTEM		
NO. OF CATEGORIES	7	12
MEASUREMENT SYSTEM		
INTERNAL GSA SYSTEM	X	
BOMA		X
TWO-TIER SYSTEM (REDUCE RATES FOR TIME IN SPACE)	-	X

MAJOR, LIMITED, AND RURAL FEDERAL SPACE AREAS

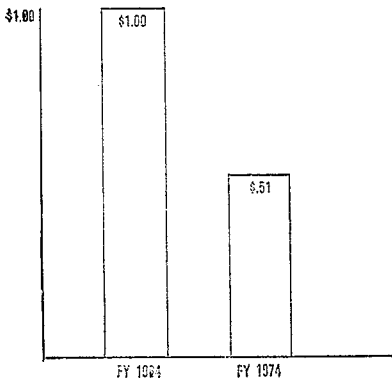


☆ SMSA's
○ LPSA's

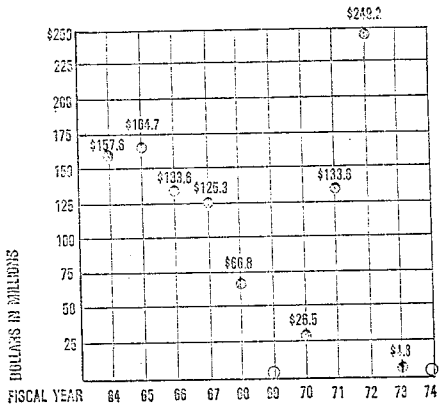
FBI LIMITATION LEVELS
FY 1976 VS FY 1975



SHRINKING CONSTRUCTION DOLLAR
FY 1964 - FY 1974



GSA's CONSTRUCTION APPROPRIATION
FY 1964 - FY 1974



Senator MORGAN. I was going to ask you to digress for a moment. You keep referring to paying taxes on buildings that the Federal Government builds with Federal—what do you call it?

Mr. MEISEN. Purchase contracts, sir.

Senator MORGAN. Who made the decision to pay those taxes?

Mr. MEISEN. Congress provided in the Public Buildings Amendments of 1972 that these projects would be subject to real estate taxes. It was envisioned that we would finance these buildings with private sector funds and that title to the buildings would remain in the private sector until the Government completed paying for the buildings.

We have since found it more economical to finance these projects through the Federal Financing Bank under an arrangement that continues to allow the buildings to be subject to real estate taxes. We could have structured this program so as to eliminate real estate taxes, but we did not believe that the Congress intended that we should do so.

Senator MORGAN. I am not necessarily complaining because I know how the local governments need the taxes, but I just wondered on what basis it was made.

Mr. MEISEN. That was the basis.

Senator MORGAN. Let me go back to our line of questions. Would you provide us, for the record, a list of projects which you think could begin within, say, the next 6 to 18 months?

Mr. MEISEN. Repairs and alterations projects?

Senator MORGAN. Yes, sir.

Mr. MEISEN. We would be happy to do that, sir.

[The information requested follows:]

FISCAL YEAR 1976 CONGRESSIONAL BUDGET BACK-UP ALTERATION AND MAJOR REPAIRS—\$250 MILLION PROGRAM, LIST OF PROJECTS BY PROGRAM AREA OVER \$100,000

	Proposed fiscal year 1976	Basic work to correct deterioration and malfunctions	Improvement of space to promote utilization	Special fire prevention, life safety, and property protection	Special aids for the handicapped	Special environmental protection measures	Special energy conservation measures	Description
Alabama:								
Anniston, FB CT.....	\$161,300		\$116,500	\$9,000			\$35,800	New boilers, handicapped facilities, fire protection, space renovation.
Birmingham, FB CT.....	443,500		105,700				337,800	New windows, space renovation.
Gadsden, FB CT.....	150,500		150,500					Space renovation.
Mobile, FB CT.....	436,400	\$44,800	351,600					Space modernization.
Montgomery, PO CT.....	257,600		141,100		\$44,800		71,700	Refrigerator repairs, interior repairs, handicapped facilities.
Opelika, FB CT.....	312,700	109,800	179,200		23,700			Space renovation, general repairs, handicapped facilities.
Tuscaloosa, FB CT.....	223,600	71,700	134,400		17,500			Interior painting, space renovation, handicapped facilities.
Alaska: Anchorage, Alaska Mutual.....	116,500		116,500					Reckless vacated space.
Arizona: Phoenix, FB CT.....	836,100	46,100		338,200			851,800	Replace light fixtures, sprinklers, new freight elevator, power basement door, interior paint.
California:								
Los Angeles, CT.....	1,452,600	130,700		1,233,000				Piping, heat exchangers, cooling towers, sprinklers, emergency communication system.
Los Angeles, FB (6th St.).....	331,500		331,500					Install central air conditioning.
Los Angeles, FB (L.A.).....	2,079,000		338,200	1,740,800				Initial space alterations, sprinklers, emergency communication system, elevator firesafety.
Menlo Park, USGS.....	424,900		424,900					Install central air-conditioning buildings 1 and 2.
Sacramento, FB (Eye St.).....	179,200		179,200					Fire subdivision.
Sacramento, FB (650 CH).....	912,800	290,400	297,700	324,700				Fire subdivision, emergency communication, replace switchboard and lights, upgrade courts 1, 2, and 3.
Sacramento FB (Cottage W).....	143,200	140,700					2,500	Interior painting, exterior painting and caulking; improve drainage.
San Diego, BS.....	111,300					\$111,300		
San Francisco, AS.....	1,432,400		221,000	936,300			275,100	Fire subdivision, emergency communications, fire protection, suspended ceilings, improved lighting.
San Francisco, CU.....	750,100	57,700	227,800	464,600				Repair windows and doors, new lights, ceilings and toilets; painting; improved firesafety.
San Francisco, FOB.....	1,280,800	640,400	153,300	487,100				Replace emergency generator, painting, improved firesafety, replace ceilings and lights, install two elevators.
San Francisco, PO CT.....	161,300	121,200					40,100	Replace mosaic tile, repair exterior terra cotta, replace heat exchanger.

FISCAL YEAR 1976 CONGRESSIONAL BUDGET BACK-UP ALTERATION AND MAJOR REPAIRS—\$250 MILLION PROGRAM; LIST OF PROJECTS BY PROGRAM AREA OVER \$100,000—Continued

	Proposed fiscal year 1976	Basic work to correct deterioration and mal- functions	Improvement of space to promote utilization	Special fire prevention, life safety, and property protection	Special aids for the handicapped	Special en- vironmental protection measures	Special energy conservation measures	Description
California—Continued								
San Francisco, FB CT	\$291,200	\$291,200						Interior painting.
San Francisco, 211 Mail	277,800		\$277,800					Initial space alterations.
South San Francisco, FSC	574,400	168,500					\$405,900	Roofing and insulation, rewire and revise ware- house lighting.
Stockton, FSC	1,272,900			\$189,400			1,083,500	Install door shelters, skylights, sprinklers, revise lighting.
Colorado:								
Denver, FB CT	1,894,200	88,100	228,000	1,894,200	\$66,800			Firesafety, subdivisions, smoke control.
Denver, FB CU	431,400			48,500				Office excellence, firesafety, interior painting, elevator fire capture control, improved lighting panels, handicapped ramp and entrance.
Denver, FC	5,969,000	1,876,000	2,877,200	343,100	63,800	\$30,100	778,800	Steamplant improvements, extend road, improve electrical systems, modernize space, interim occupancy costs, handicapped facilities, im- proved firesafety, initial tenant alterations.
Glenwood Springs, FB	138,000				138,000			Elevator and toilets for handicapped.
Connecticut:								
Hartford, FB CT	237,400			192,600	44,800			Fire subdivision and facilities for the handi- capped.
New London, CT PO	353,900		353,900					Alterations for the courts.
Florida:								
Gainesville, FB PO CT	309,100	35,000		9,000			265,100	Cleaning, weatherproofing and painting, improve fire protection, handicapped facilities, sep- arate air-conditioning system for after-hour operation.
Pensacola, PO CT	443,500	98,600	321,200		23,700			General repairs, painting, handicapped facili- ties, space renovations, fire protection.
Perrine, RNAS	156,800	156,800						Painting, repairs, landscaping.
Tampa, FB CT	313,600	89,600	179,200		44,800			Painting, waterproofing, space renovations, han- dicapped facilities.
St. Petersburg, FB	353,500	107,500			134,000		112,000	Interior paint, handicapped facilities, replace floors, install sun-flare windows.
West Palm Beach, FB PO CT	402,300		402,300					Construct courtroom and judge's suite.
Georgia:								
Atlanta, PO CT	902,000		902,000				134,400	Construct facilities for courts.
East Point, FRC	445,300			266,100	44,800			New heating system, for efficient operation fire protection handicapped facilities.
Macon, FB CT	264,300	85,100			44,800		134,400	Auxiliary air-conditioning to avoid excessive energy consumption, clean exterior, interior painting, handicapped facilities.

Savannah, FB CT.....	403,200	206,100	134,400	62,700	-----	Structural repair, interior paint, general repairs, handicapped facilities.
Savannah, FSS Depot.....	132,200	87,400	44,800	-----	-----	Pave roads and install fire doors.
Illinois:						
Chicago, CU.....	742,000	238,500	238,600	239,600	24,500	Emergency generator, space alteration and modernization, improve fire safety, roof insulating and window repairs, elevator conversion.
Chicago Railroad Retirement Bldg.....	116,800	-----	116,800	-----	-----	Elevator capture and emergency PA.
Chicago, FB (536 South Clark).....	1,272,300	156,800	173,700	345,300	556,560	General repairs, painting, renovate elevator lobbies and cabs, boiler repairs, improve fire safety, convert No. 9 elevator.
Chicago, Dirksen FB.....	1,062,200	157,500	535,500	304,400	64,000	Air-condition basement, improved air-conditioning controls, exterior painting, re-key building, new courtroom, cross-connect compressors.
Chicago, FB (1819 Pershing).....	254,200	17,200	86,000	151,000	-----	New dock doors, interior paint, elevator conversion, new standpipes, sprinklers.
Chicago, FSS Depot.....	131,900	131,900	-----	-----	-----	Road repairs.
Indiana:						
Indianapolis, FB CT.....	108,400	-----	35,800	72,600	-----	Elevator conversion and fire capture system, enclose stairwells.
Jeffersonville, FC.....	271,500	-----	156,800	-----	114,700	Roofing and insulation, replace windows to stop air leakage, fire alarm system.
New Haven, FSS Depot.....	1,055,200	1,055,200	-----	-----	-----	Roof repairs.
South Bend, PO CT.....	2,852,700	2,797,700	55,000	-----	-----	Elevator repairs, install panic hardware, repair lobby floor, carpeting, cleaning and pointing, repair parapet flashing, elevator capture system fire alarm, convert postal space to general purpose office space, upgrade court facilities.
Iowa:						
Des Moines, CT.....	191,700	58,200	41,100	5,400	87,000	Clean and weatherproof masonry, repair parking, elevator capture, air-condition penthouse, replace windows to stop air leakage.
Fort Dodge, FB PO CT.....	324,400	241,200	69,800	-----	13,400	Replace chiller, masonry repairs and weatherproofing, interior painting, elevator capture.
Kentucky:						
Covington, IRS.....	252,300	-----	252,300	-----	-----	Space renovations.
Frankfort, FB.....	176,000	134,200	-----	35,800	-----	Interior painting, handicapped facilities, air-conditioning, alterations.
Maine:						
Louisville, FB.....	444,200	206,600	237,600	-----	-----	Fire protection, mechanical alterations.
Ennis, BS.....	112,000	112,000	-----	-----	26,100	Canopy alterations.
Portland, CU.....	334,200	31,200	201,600	75,300	-----	Painting, air-conditioning, roof insulation repairs, replace floor covering, stairway rail restoration, fire safety wall.
Maryland:						
Silver Spring, Wms. Bldg.....	121,000	-----	109,000	-----	-----	Initial tenant alteration.
Silver Spring, Wiliste Bldg.....	529,000	-----	475,500	-----	53,000	Do.
Silver Spring, Robin Bldg.....	161,300	-----	145,300	-----	16,000	Do.

FISCAL YEAR 1976 CONGRESSIONAL BUDGET BACK-UP ALTERATION AND MAJOR REPAIRS—\$250 MILLION PROGRAM, LIST OF PROJECTS BY PROGRAM AREA OVER \$100,000—Continued

	Proposed fiscal year 1976	Basic work to correct deterioration and malfunctions	Improvement of space to promote utilization	Special fire prevention, life safety and property protection	Special aids for the handicapped	Special environmental protection measures	Special energy conservation measures	Description
Massachusetts:								
Andover, IRS	\$358,400						\$358,400	Roof insulation.
Boston, AS	268,800		\$268,800	\$46,600	\$112,000		67,200	New passenger elevators.
Boston, CU	365,600	\$139,800						Interior paint elevator fire-safety, convert to purchased steam toilet modernization.
Boston, J. F. K.	806,400	358,400		268,800			179,200	Fire subdivision, recycle condensation.
Boston, J. W. McCormack	1,283,400	644,000	156,800	482,000				Paint, emergency communications, fire doors, air-conditioning duct and fire control, hand-rails.
Higham, FSS Depot	559,200	451,000		108,200				Approach repairs, install siding, fire walls interior paint.
Springfield, FB CT	134,400			134,400				New stairwell, fire alarm system.
Worcester, FB	112,000						112,000	Replace roof and insulation.
Michigan:								
Battle Creek, FC	1,004,800	467,700	451,000	75,300	10,800			Elevator conversion and capture system, sprinklers, painting and sealing, toilets for handicapped, piping repairs.
Detroit, FB CT	6,057,500	370,200	5,378,000	191,700			117,600	Replace roof and insulation, doors, steps and landings, sprinklers, emergency power, electric repairs.
Flint, FB CT	125,400		35,800				89,600	Replace windows to reduce air leakage, space modernization.
Port Huron, FB CT	125,400		125,400					Space modernization.
South St. Marie, FB	577,300	577,300						Install new elevator, modernize space.
Minnesota: Minneapolis, FB CT	107,500			107,500				Emergency power and PA system, fire subdivision.
Mississippi:								
Vicksburg, MRC	174,700	129,700					45,000	Roof repairs, and insulation, interior painting, plumbing repairs.
Missouri:								
Vicksburg, PO CT	340,100		205,700	107,500	\$26,900			New fire stairs, handicapped facilities.
Independence, Truman Library	388,900	249,000	16,200			\$29,200	94,500	Install drain tile, interior paint, replace roof and insulation, thermopane windows, carpeting, repairs to walks, curbs and entrance.
Kansas City, FB (East 12th)	2,958,600	406,800	1,641,400	576,400			334,000	Repair roof and insulation, paint, carpet, space alteration and modernization, elevator capture, fire doors, window repairs (calking).

Kansas City FB (1500 East Bannister).....	9,330,700	5,527,800	793,800	320,800	200,300	2,488,000	Replace roof and insulation, install security fence, replace sewer pump station, improve fire safety, replace leaking water mains, replace obsolete circuit breakers, replace heating and cooling coils.
Montana:							
Billings, FB CT.....	108,700	91,100		12,600	5,000		Interior painting, handicapped doors, elevator fire capture.
Missoula, FB PO CT.....	283,400	259,300		25,100			Lighting, parking, elevator fire capture.
Missoula, FB Missoula.....	172,300	77,700			94,800		Interior painting, resurface parking, handicapped facilities.
Nebraska: Omaha, FB PO CT.....	310,900	198,900				112,000	Roof and insulation replacement, interior painting, masonry repairs.
New Jersey: Camden, PO CT.....	2,798,900	276,300	1,969,300	525,700	27,600		Alteration and modernization of space, install air-conditioning, improve fire safety.
New York:							
Albany, PO CT.....	1,918,600	655,600	1,078,000	156,000	29,000		Modernize space, toilets and elevators.
New York, FB CU CT.....	785,600	420,800	140,000	225,000			Construct pistol range, interior painting, mechanical alterations.
New York, FB (201 Varick).....	12,815,600	1,604,000	10,983,600	228,000			Install air-conditioning, new lighting and modernize space.
New York, FB (20 Wash).....	930,000	385,000	475,000	70,000			Modernize space and elevators, install air-conditioning, new floors, improve fire protection.
North Carolina:							
Asheville, FB.....	223,900	80,600	107,500		35,800		Interior painting, space renovations, facilities for handicapped.
Asheville, PO CT.....	428,700	267,500			53,700	107,500	Handicapped facilities, general repairs, install auxiliary air-conditioning to preclude use of central system for weekends and after hours.
Greensboro, FB.....	239,100	96,300	89,600		53,700		Handicapped facilities, new entrance, interior paint, space renovations.
Greensboro, FB CT.....	443,500	44,800	114,500		44,800	239,400	Install auxiliary air-condition to preclude use of central system on weekends, space alterations, interior paint, handicapped facilities.
Raleigh, FB (New).....	238,000	134,400	49,900		53,700		Handicapped facilities, painting, space renovations.
Raleigh, FB (Old).....	259,700		170,100		89,600		Space alterations, handicapped facilities.
North Dakota: Minot, FB CT.....	118,600	10,100	108,500				Ceilings and lights, grading, upgrade court space, air-condition 15,000 ft. ²
Ohio:							
Canton, FB.....	113,600	42,000	55,600			16,000	Clean, point and seal masonry, replace elevator, caulk windows.
Cincinnati, PO CT.....	167,600	63,700		69,900		34,000	Repair floors, refrigeration room hoist, fire safety, central HVAC controls.
Columbus, FB CT.....	179,200	179,200					Repair roof, esplanade and retaining wall.
Toledo, FB.....	131,700			131,700			Fire subdivision and fire stops.
Warren, FSS Depot.....	669,000	669,000					Roof repairs.

FISCAL YEAR 1976 CONGRESSIONAL BUDGET BACK-UP ALTERATION AND MAJOR REPAIRS—\$250 MILLION PROGRAM, LIST OF PROJECTS BY PROGRAM AREA OVER \$100,000—Continued

	Proposed fiscal year 1976	Basic work to correct deterioration and malfunctions	Improvement of space to promote utilization	Special fire prevention, life safety, and property protection	Special aids for the handicapped	Special environmental protection measures	Special energy conservation measures	Description
Oregon:								
Portland, CU.....	\$1,271,800	\$1,271,800						Restoration of building on National Historical Register.
Portland, FB.....	419,300	256,400		\$134,400			\$28,500	Masonry pointing and repairs, sprinklers and fire subdivision.
Portland, FB (New).....	434,600			217,300			217,300	Provide central control for all protection, fire-safety and equipment operation.
Rhode Island:								
Providence, JEF.....	179,200		\$179,200					Install air-conditioning.
Providence, FB CT.....	380,800							Replace windows.
Providence, FB PO.....	112,000		112,000					Install air-conditioning.
South Carolina:								
Charleston, CU.....	268,800	268,800						Structural repairs.
Charleston, FB.....	107,500	71,700			\$35,800			Handicapped facilities, interior painting.
Charleston, PO CT.....	434,600	434,600						Structural repairs.
Columbia, Varo Bldg.....	426,300	76,200	247,100	80,600			22,400	Space operations, emergency power, handi- capped facilities, fire protection, replace cool- ing towers.
Greenville, FB CT.....	184,500		103,900		35,800		44,800	Roof and insulation, space renovation, handi- capped facilities, fire protection, facilities for the handicapped.
Spartanburg, FB CT.....	223,500		138,900	48,800	35,800			Space renovation, fire protection, facilities for the handicapped.
Tennessee:								
Columbia, PO CT.....	170,000	49,300	111,800	8,900				Interior paint, plumbing, electrical and struc- tural repairs.
Memphis, FB CT.....	425,600			425,600				Emergency power, fire protection for high rise.
Texas: Dallas, FB (1114 Commerce).....	11,335,200	1,804,800	7,136,700	1,165,200		\$188,500	1,040,000	Modernize building and eliminate health and livesafety hazards and install more efficient electrical and air-conditioning system.
Utah:								
Clearfield, FD.....	666,000	438,400		178,900			48,700	Fire walls, sprinklers and alarms, standpipe, roof repairs.
Ogden, FS.....	358,400	35,800	281,900	40,700				Fire doors and alarm, upgrade offices, interior painting, elevator capture.
Ogden, IFS.....	324,800	56,000				268,800		Interior painting, parking lot drainage.
Salt Lake City, AD Bldg.....	190,300	105,800	8,700	75,800				Interior painting, replace combustible ceilings, sprinklers, roof and general repairs.
Salt Lake City, PO CT.....	388,800		310,500	60,400	17,900			Fire stair, doors and alarm, handicapped ramp, elevator capture, initial alterations.

Washington:	394,200	394,200	313,500				Paving repairs, floor slab and roof repair.
Auburn, GSA Center.	313,600		586,300	315,700			Construct new jury facilities.
Seattle, CT	1,274,500	372,500					Upgrade space and electrical system, improve firesafety.
Seattle, FOB							
Seattle, FB USDS/IMS	268,800		268,800	351,300			Backfill vacant space.
Seattle, FCS	626,900		275,100				Site improvements, firesafety, initial tenant alterations.
Seattle, FB (New)	525,100		224,000	301,100			Backfill vacant space.
Seattle, AT No. 7	134,400		134,400				Initial tenant alterations.
Spokane, CT	388,700		388,700	190,000			Sprinklers, central control panel.
West Virginia: Wheeling, FB CT	2,886,000	1,705,000	900,000	90,000			Space modernization, improve firesafety, upgrade HVAC and electrical systems.
Wisconsin: Milwaukee, FB CT	143,800	28,400		115,400			Emergency generator, fire subdivision, interior paint, sidewalk repairs.
Wyoming: Casper FB CT	146,400	54,900		10,800	80,700		Landscaping, convert heating system, paving repairs, painting.
Agriculture South.	6,668,000	3,000,000	3,498,000	170,000			Firesafety improvements space modernization, upgrade air-conditioning distribution and electrical systems.
Central heating plant.	7,155,600	4,720,000		2,435,000			Additional fuel storage coal pulverizer, precipitators.
GAO	14,073,000	7,448,000	3,730,000	2,095,000	800,000		Modernize space, replace central air-conditioning and electrical systems and improve firesafety.
GSA, CO.	13,454,000	10,395,000	2,705,000	354,000			Modernize space, air-conditioning distribution and electrical systems and improve firesafety.
HEW (N)	12,628,000	5,714,000	5,184,000	1,130,000	600,000		Modernize space, replace central air-conditioning and upgrade electrical systems and improve firesafety.
Justice	7,616,000	6,776,000		90,000	750,000		Replace central air-conditioning and upgrade electrical systems and improve firesafety.
Labor	6,809,000	622,000	5,900,000	287,000			Space modernization, firesafety, repairs to central air-conditioning and upgrade electrical improvements.
PO (New)	8,340,000	5,142,000	3,698,000				Space modernization, air-conditioning distribution and electrical improvements.
Tariff.	5,232,000	2,092,000	2,800,000	90,000	250,000		Modernize space, upgrade firesafety, electrical and HVAC systems.
Leased locations:							Initial tenant alterations.
209 K St. NW	201,600		181,600	20,000			Do.
Railway Bldg.	152,300		137,300	15,000			Do.
Virginia Bldg.	161,300		145,300	16,000			Do.
717 2 1/2 St.	180,800		171,800	19,000			Do.
411 14th St.	230,300		207,300	23,000			Do.
411 14th St. NW	481,400		584,400	65,000			Do.
2033 W St.	313,600		282,600	31,000			Do.
German Bldg.	132,800		132,800	15,000			Do.
Pennsylvania Bldg.	152,300		137,300	15,000			Do.
One McPherson Sq.	112,000		104,000	11,000			Do.

Senator MORGAN. Now back to the other questions.

Which of the 63 backlog purchase contract projects included in the fiscal year 1976 budget require an increased authorization?

Mr. MEISEN. I believe you mean the original 63 projects that were in the purchase contract program.

Senator MORGAN. Right.

Mr. MEISEN. None of them will need additional authorization. There are some that are not underway yet for various reasons. But all of those underway do not.

Senator MORGAN. Getting back to the no-year funding which I still have problems with. Wouldn't restoration take away most of the Congress' control over the building program?

We have been thinking of initiating a two-stage operation procedure just in order to maintain control. I have some questions in my own mind. I would like to have your comments.

Mr. MEISEN. We feel very, very strongly that we have to have full project funding. Certainly we are strong advocates of shortening the construction time wherever we can, because we find it not only saves you money but it saves you changes during the life of the project. But this can only be done with no-year full project funding.

As agencies change they seem to want to change buildings. It is a very expensive process. If we are allowed to proceed with construction of the foundations as I described before, immediately upon their being designed, we usually find we can start actual construction work within 4 months of starting the design.

The history has been we have been waiting 12 and 18 months before we put the first shovel in the ground. The whole philosophy of sequential design and construction is being changed now, finally, by my fellow architects recognizing that to an owner it is a very wasteful process to design the last doorknob on the last floor before you begin putting your first shovel in the ground.

It requires considerably more planning and a lot more careful scheduling so you know when you award the first contracts what your total contract obligations are going to be.

The problem with sequential financing or sequential approval is that it doesn't allow you to do that. I do think there is a need in the Congress to know more about the total project before it authorizes it.

We certainly don't want by phased construction to obligate the Congress to spend more money than it envisioned. We feel we can develop procedures whereby we can give you sufficient detail about what the building objectives and goals are, its size and cost, so that you can authorize the project. We can have enough safeguards that the moment it appears we are going to exceed any of the limitations placed by Congress, we can, before obligating ourselves, come back to the Congress and explain where those potential increases might be.

Senator MORGAN. Is it fair to say, then, that your feeling is that Congress ought to know what it is doing before it authorizes a project? Then, once it authorizes it, in the absence of unforeseen events, we ought to leave you alone and let you go and do it?

Mr. MEISEN. I wouldn't put it that way. I would say I don't know of any major construction agency, both private and public, that does not today use phased design and construction in order to save itself a lot of money.

Senator MORGAN. I was not sure if you would agree, but I was asking.

What benefits would accrue, in your opinion, from eliminating the annual restriction on the repair and alterations fund?

Mr. MEISEN. Clearly we have almost \$1 billion of repair and alterations that will have to be done at some time or another. The more that we could program those on an ongoing basis, the better off we would be.

I think we do have a concern about maintaining a balance in the overall budget. I don't mean a balanced budget so much, but a balance of priorities.

I firmly believe that at the present time there is a serious problem in the construction industry. That and the auto industry are probably the hardest hit industries in the United States.

I would be less than candid to think that increase in that activity would not help that program considerably. At the same time I feel we can't keep adding to a 50-some billion dollar deficit.

I would think it would be appropriate to balance priorities. If it is deemed appropriate by the Congress to expand a program significantly, that perhaps adjustments would be made in the total budget to try to avoid adding to what I think is an astronomical potential debt this year.

We are talking about the R. & A. program also, as far as no-year funds are concerned.

Mr. DiLUCHIO. The big advantage to no-year funds in both construction and R. & A., Senator, is that under the annual appropriations we must use or obligate all the funds that are made available to us in the year that they are appropriated or for the designated period of time for which they are appropriated, usually, a single fiscal year.

In both construction and R. & A., some of the projects cannot be financially completed in that given 12-month period of time.

What no-year funds do for us is that it allows us to carry from beginning to end. Both R. & A. and construction, projects which have been approved both by your committee and by the Appropriations Committee and have been funded in appropriation acts, rather than stopping financially in the middle of those projects and, as previously explained by Mr. Meisen, coming back the next year and asking for reauthorization of those same funds again to continue the work on those projects.

No-year funding makes funds available on a start to finish basis for authorized projects. Annual appropriations don't do that.

Mr. MEISEN. It is important, also, Senator, that I am sure you appreciate the budget process starts more than 12 months in advance of the fiscal year in question.

What you find us trying to do is predict what are we not going to finish in that 12-month period so we can include it in a request for reauthorization. It is a very difficult thing to project. If a project slips by 1 month and you don't have it in your budget for next year, you find yourself without the capability of finishing a project.

Senator MORGAN. Unfortunately, there doesn't seem to be any way to expedite it in our system.

How much funds accrued from rent, or from standard level user charges, do you think GSA should retain for the building fund if any?

Mr. MEISEN. We definitely feel we should have some flexibility. We had \$80 million last year. We had requested \$80 million to remain as a carryover into fiscal year 1976.

We basically think that the \$80 million is a reasonable amount of flexibility for any new programs that might come up. There could be a question of whether we should be depositing into the receipts of the Treasury since the funds were paid by Federal agencies for space and services. I would have no objection, of course, to keeping all the remainder in the fund, if the Congress considered that appropriate.

Senator MORGAN. What is the rationale behind requiring deposits from this fund each year into Treasury's miscellaneous fund, and what was the original concept?

Mr. MEISEN. Mr. DiLuchio will answer that.

Mr. DiLuchio. The original concept behind the deposits to miscellaneous receipts, developed in conjunction with the Office of Management and Budget, was an attempt to theoretically compensate for losses incurred by a private entrepreneur, such as taxes, insurance, advertising, and the like, but which we don't incur.

However, no provision was made to allow for the costs which we have, that I discussed earlier, which the private sector does not have.

Mr. MEISEN. If the deposits were retained in the Federal buildings fund, they could be available for programs of GSA construction, other real property programs, R. & A., and even maintenance and operation programs as they are deemed to be necessary.

But once going to the Treasury out of the Federal buildings fund, they are lost to the fund as resources to do work in the future forever.

Senator MORGAN. You may have already answered my next question. I think maybe you have. But again for the record, if you would, what is GSA's philosophy with respect to leasing versus construction, and what will be the tendency for the next 5 years?

Mr. MEISEN. Senator, as a basic concept I think the GSA prefers to have Government-owned spaces versus lease space. I think also as a practical matter many administrations have seen fit that it was not necessarily appropriate to charge 1 fiscal year for all of the costs associated with building a 40- or 30-year building.

In other words, why should one budget reflect the full cost of the building that is going to be used by the Federal Government and Executive for 30 or 40 years?

So there has been a major emphasis I think on the part of the Executive to try and spread costs as opposed to inflating the annual budget in 1 year for direct construction.

Given these two positions of the Executive and the Congress, which I know feel strongly in favor of Federal ownership, it is our opinion that the purchase contract program offers an alternative that can in fact satisfy the need and desire for Government ownership and control of both the projects and their operation and their design and still not cause the cost of any one project to be carried on in 1 fiscal year, but spread it over the life of the building.

Senator MORGAN. Mr. Meisen, some day I would like to have a discussion with you about whether or not any studies have ever been made with regard to leasing of office space, taking into consideration the benefits to the counties, and cities, and State, and so forth with regard

to taxes, and then taking into consideration what the owners probably pay in income taxes, and then see how that would offset Government ownership.

But I don't believe time will permit us to get into that right now.

Mr. MEISEN. Yes, sir.

Senator MORGAN. Let me ask you, how many of the lease projects shown in the budget are for buildings yet to be constructed, and which of these have not yet been authorized?

Mr. MEISEN. Ten of the projects listed in the budget are planned for lease construction. With the exception of Fort Lincoln, none have been authorized and all are yet to be constructed. The projects are: Fresno, Calif., IRS Center Annex; Washington, D.C., Archives; Washington, D.C., Fort Lincoln; Boise, Idaho, SSA Computer Center; Boston, Mass., VA Outpatient Clinic; Brookhaven, N.Y., IRS Annex; Philadelphia, Pa., IRS Center Annex; Austin, Tex., IRS Annex; Memphis, Tenn., IRS Annex; Charlottesville, Va., Federal Executive Institute and Managerial Training Center.

Senator MORGAN. Charlottesville, Va.?

Mr. MEISEN. Yes, sir.

Senator MORGAN. What is the status of your program with respect to proposed deferrals or rescissions by the administration?

Mr. MEISEN. What is the status, sir?

Senator MORGAN. Yes.

Mr. MEISEN. I anticipate that by Friday the Congress will take no action and we will immediately proceed with those projects as soon as the money is restored.

Senator MORGAN. Mr. Meisen, do you or any of your colleagues have any other statements that you would like to make which will be helpful to the committee that you know of?

Mr. MEISEN. I hope I was clear in my answers. I would be very happy to clarify any I was not clear on.

I think it should be pointed out that I think there always will be a need for some leasing because of necessary flexibility that it gives us.

I don't see any way, in the near future, of approaching the amount of Government-owned spaces where we will not need leased space for that flexibility.

Senator MORGAN. Thank you very much, and thank you all for your presentation this morning.

Mr. Meisen, I think we may have some more questions on behalf of myself and other members of the committee. With your consent, we would like to submit them and get your response for the record.

Mr. MEISEN. Certainly.

[Additional questions follow:]

QUESTIONS FROM SENATOR MORGAN

Question 1. Do you not feel that retention of all SLUC revenue would be advantageous to the continuing federal building program?

Answer. The original concept of the Federal Buildings Fund was that all income to the fund would be available for obligation by GSA-PBS in carrying out its mission of providing space to and performing services for Federal agencies. Underlying that concept was program budgeting that agencies should pay for what they get, but that they receive what they pay for. This requires that all income be available to PBS rather than being deposited to miscellaneous receipts of the Treasury where it is no longer available for any purpose.

Question 2. If we retained all revenue would not a significant income in federal construction activity be possible?

Answer. An increase in construction would be possible, but the size of that increase is dependent on the amount Congress authorized GSA to use for the construction of facilities. Under present income projections as shown in the budget for FY 1976, up to an additional \$135 million could be made available by the Congress.

Question 3. Would this not then allow a reduction of the leasing requirements of the federal government?

Answer. Increasing the amount authorized for construction would not immediately affect the leasing program since Government-owned space to be constructed would not be completed for about three years. At that time, the amount of space to be leased would of course be lower since agency requests for space could be satisfied by assigning them to the new Federal buildings.

QUESTIONS FROM SENATOR BUCKLEY

Question 1. As I understand it, there are at least 30 GSA buildings now under construction across our nation. Most are Federal office buildings, with the remainder serving as Social Security payments centers. The total cost of these buildings is approximately \$600,000,000, not counting financing or other similar charges. Would you provide us with an updated list of the GSA structures now under construction, the current estimated cost of each together with a list of those buildings on which construction is expected to begin before the end of fiscal year 1976.

[The information requested follows:]

Under construction

San Diego, Calif.....	\$42,454,000
Santa Ana, Calif.....	11,586,000
Van Nuys, Calif.....	7,935,000
Santa Rosa, Calif.....	5,339,000
Orlando, Fla.....	10,394,000
Honolulu, Hawaii.....	32,486,000
Sandpoint, Idaho.....	2,410,000
Indianapolis, Ind.....	16,701,000
New Orleans, La.....	32,192,000
Baltimore, Md.....	21,503,000
Fitchburg, Mass.....	4,815,000
Detroit, Mich.....	59,842,000
Saginaw, Mich.....	6,244,000
Lincoln, Nebr.....	18,195,000
Manchester, N.H.....	8,505,000
Albany, N.Y.....	11,994,000
New York City, N.Y.....	59,369,000
Syracuse, N.Y.....	20,169,000
Winston-Salem, N.C.....	14,416,000
Akron, Ohio.....	16,332,000
Dayton, Ohio.....	9,022,000
Eugene, Oreg.....	7,993,000
Portland, Oreg.....	21,977,000
San Juan, Puerto Rico.....	20,882,000
Florence, S.C.....	4,859,000
Roanoke, Va.....	13,550,000
Charlotte Amalie, Virgin Islands.....	6,485,000
Richmond, Calif.—SSA.....	34,942,000
Chicago—SSA.....	46,318,000
Philadelphia—SSA.....	29,269,000

Question 2. In addition, GSA last summer prepared a table that shows the effect of the purchase-contract program on just 18 buildings. This shows that the estimated capital cost of \$672,000,000 will eventually cost the taxpayers about \$2.8 billion dollars between now and the end of the century.

I would ask that this payment schedule be supplied for the record.

[The information requested follows:]

Projections of payments of principal, interest, and taxes related to purchase contracts pursuant to the Public Buildings Purchase Contract Act of 1954 and the Public Buildings Amendments of 1972

<i>Fiscal year</i>	<i>Estimated amount</i>	<i>Estimated amount</i>
1973 (actual amount)-----	\$2,409,000	-----\$100,184,879
1974-----	7,300,000 1991-----	100,174,965
1975-----	26,244,000 1992-----	99,998,020
1976-----	59,925,194 1993-----	99,702,806
1977-----	91,749,564 1994-----	99,368,772
1978-----	98,237,972 1995-----	98,890,842
1979-----	102,135,604 1996-----	98,331,116
1980-----	101,542,313 1997-----	97,760,782
1981-----	101,162,476 1998-----	97,977,827
1982-----	100,627,095 1999-----	98,578,850
1983-----	100,958,795 2000-----	98,801,948
1984-----	100,280,454 2001-----	98,763,885
1985-----	100,468,191 2002-----	98,482,494
1986-----	101,021,109 2003-----	85,578,521
1987-----	100,054,843 2004-----	37,836,571
1988-----	100,428,016 2005-----	115,500
1989-----	100,657,224	

QUESTIONS FROM SENATOR STAFFORD

Question 1. How many jobs—and at what average wage rate—can be produced for a \$1,000,000 investment in renovation work, and how does that compare with \$1,000,000 of new Federal construction spending?

Answer. This question was answered on page 23 of testimony except for average wage rate which is assumed to be \$17,500.

Question 2. How much space will be leased under the 1976 request for \$452,000,000? How much space was leased in the present fiscal year under the current appropriation of \$364,000,000? Approximately how many Federal employees are currently located in leased space during FY 1975? How many during FY 1976? Approximately how many Federal employees are currently located in GSA-operated, Federally owned space?

Answer. The \$452,000,000 includes approximately \$29 million to reimburse the United States Postal Service for space occupied in those buildings by other Federal agencies and assigned by GSA. The \$424 million (452-28) reflects an estimated net increase of 7.9 million square feet of space in the lease space inventory and a year end inventory of approximately 88.2 million square feet. The \$364,000,000 composed of \$354,000,000 appropriation and a \$10,000,000 supplemental represents a net increase of 2.6 million square feet and a fiscal year 1975 year end inventory of 80.3 million square feet. It is estimated that as of June 30, 1975, approximately 385,123 employees will be housed in leased space and approximately 470,706 employees will be housed in Government-owned space. It is anticipated that 407,227 employees will be housed in leased space during fiscal year 1976. All figures are exclusive of outside parking.

Question 3. What renovation work is contemplated in the budget? How much renovation could be accomplished by GSA without any budget constraints? How would you assess the ability to improve Federal efficiency through renovation, compared with construction?

Answer. The first two questions are answered in the testimony, reference page 7 and 39.

It is generally conceded that renovated space is not as efficient as newly constructed space, but such space is often more cost-effective and also contributes to our energy conservation program.

Question 4. Assuming approval of \$161,000,000 in new purchase-contract spending this year, what is the estimated total annual purchase-contract payments that will be owed by GSA once those buildings, plus all previously authorized purchase-contract structures, are occupied by the Federal Government?

[The information requested follows:]

PROJECTED FUNDING REQUIREMENTS ON A FISCAL YEAR BASIS TO FINANCE PURCHASE CONTRACTS AWARDED UNDER THE 30-YEAR PROGRAM AUTHORIZED BY THE PUBLIC BUILDINGS AMENDMENTS OF 1972¹

Fiscal year	Estimated principal and interest	Estimated taxes and assessments	Estimated total payments
1975	\$6,421,229	\$7,405,305	\$13,826,534
1976	38,304,857	19,193,780	57,498,637
1976	15,989,030	10,434,879	26,423,909
Transition period	74,280,928	18,140,690	92,421,618
1977	94,654,418	23,447,580	118,101,998
1978	109,924,472	29,357,317	139,281,789
1979	124,090,502	29,270,471	153,360,973
1980	129,089,766	32,552,819	161,642,585
1981	124,704,713	33,529,063	158,233,781
1982	124,497,209	34,534,534	159,031,743
1983	124,168,554	35,570,571	159,739,125
1984	123,401,104	36,637,518	160,038,622
1985	124,347,864	37,736,733	162,084,597
1986	123,664,327	38,868,540	162,532,867
1987	124,015,364	40,034,447	164,049,811
1988	123,571,455	41,235,673	164,807,128
1989	123,306,698	42,472,751	165,779,449
1990	123,181,996	43,747,118	166,929,114
1991	122,906,802	45,059,014	167,965,816
1992	122,452,183	46,411,083	168,863,266
1993	122,057,772	47,803,675	169,861,447
1994	122,148,740	49,238,244	171,386,984
1995	120,233,240	50,715,348	170,948,588
1996	119,544,206	52,236,450	171,780,656
1997	120,072,884	53,803,919	173,876,803
1998	120,542,133	55,418,527	175,960,660
1999	120,701,502	57,080,652	177,782,154
2000	120,505,996	58,792,878	179,298,874
2001	119,955,609	60,556,793	180,512,402
2002	106,574,303	40,085,420	146,659,723
2003	55,203,638	23,520,133	78,723,771
2004	18,189,732	12,601,425	30,791,157
2005			

¹ Includes 4 unfunded projects.

Question 5. What are GSA's projections on the expected need for additional leased and purchase contract space during the coming five years?

Answer. Based upon an average increase in Federal employment of about 2½ percent annually for the past few years, it is estimated that space under GSA control will increase from an estimated 236.4 million square feet of space at the end of Fiscal Year 1975 to about 261 million square feet by the end of Fiscal Year 1980. Our purchase contract authority expires on June 30, 1975; however, if the purchase contract authority is extended, it would be used to the maximum extent possible to reduce GSA's leased inventory. At the present time this inventory is about 34 percent of the 236.4 million square feet estimated at the end of Fiscal Year 1975. All square foot figures are exclusive of outside parking.

Question 6. What is the average amount of office space available to a typical Federal employee? How does that compare with the average in industry? What are these averages for New York City?

Answer. The average amount of office space used by a typical Federal employee would be 130 to 150 square feet per person depending upon his responsibilities, amount of necessary equipment, and other factors. Although, industry averages are not readily available the amount of space used per person has been estimated to be approximately 165 square feet. In New York City GSA assignments approximate 150 square feet per person. The averages for industry in New York City are estimated to be slightly higher.

Question 7. How much does GSA include for "management and inspection" in its prospectuses? What does this category specifically pay for? How often, and under what circumstances, does GSA contract-out such work?

Answer. GSA includes an amount for management and inspection varying from 7½ percent for a \$1.0 million contract to 3½ percent for a \$20.0 million contract. This category pays for (1) inspection services at the site, (2) GSA's management of the project during construction, (3) travel to and from the site by GSA per-

sonnel, (4) testing services during construction and (5) estimating and negotiations of change orders. GSA's policy is to supervise new construction projects with its own staff to the maximum extent possible. We estimate that 50 percent of our inspection is done by Architect-Engineer contractor personnel for GSA projects where in-house personnel are not available.

Question 8. What improvement has GSA made in operating and servicing offices since the institution of the SLUC charges?

Answer. GSA has improved cleaning and protective services levels to tenant agencies and we have increased the level of our repair and alteration program including tenant alterations.

Question 9. What has been done to meet the recommendations of GAO report B-118623 dated February 28, 1972, particularly as they relate to preventative maintenance, cleaning, and painting?

Answer. With the implementation of the FBF, we were able to more readily achieve the recommendations of the GAO report B-118623 as it relates to providing services to occupants of Federal buildings on a uniform and equitable basis. Under the FBF, it was determined that GSA would provide all agencies a commercial equivalent level of service. This service has been provided on a uniform basis throughout fiscal year '75 as far as possible within the funds available for the operation and maintenance of real property. Our preventative maintenance program has been funded in accordance with our work measurement standards. The cleaning program was funded and operated in fiscal year '75 at an increased level. A common five year office painting cycle was established in December 1963, however curtailed A&MR funding has resulted in painting not being accomplished in accordance with this schedule. The energy crisis has also necessitated a re-evaluation of the practice of painting after normal duty hours which was recommended in the Report. Consequently, painting is now accomplished during daylight hours wherever possible.

In order to assure compliance with regulations on paint procurement from FSS, recommended in the Report, GSA has recently issued a directive freezing procurement of non-FSS paint. Further, our inspections indicate that there have been no further violations in this regard.

Questions 10 and 11. The series A through I of the Public Buildings Purchase Contract and Trust Indentures totaled \$691,000,000. What was the total sum raised from the issuance of GSA participation certificates to finance various purchase-contract projects? What rates of interest did these participation certificates carry?

[The information requested follows:]

	Percent	Amount
Series A: Detroit, Mich.....	7.40	\$65,300,000
Series B: San Diego, Calif.....	7.30	48,800,000
Series C: Lincoln, Nebr.....	7.25	25,100,000
Series D: Indianapolis, Ind.....	7.20	22,700,000
Series E: New Orleans, La.....	7.125	34,600,000
Series F: Honolulu, Hawaii, New York, N.Y., Syracuse, N.Y., Akron, Ohio, Portland, Oreg., San Juan, P.R.....	7.15	200,000,000
Series G: Richmond, Calif., Chicago, Ill., Philadelphia, Pa.....	7.50	126,000,000
Series H.....	8.10	71,000,000
Series I: Santa Rosa, Calif., Orlando, Fla., Atlanta, Ga., Baltimore, Md., New Bedford, Mass., Ann Arbor, Mich., Winston-Salem, N.C., Manchester, N.H., Columbus, Ohio, Dayton, Ohio, Oklahoma City, Okla., Eugene, Oreg., Williamsport, Pa., Florence, S.C., Roanoke, Va., Charlotte Amalie, V.I.....	8.125	98,000,000

Question 12. What organization is listed as the official owner of the buildings during the 30-year purchase-contract period?

Answer. Under the terms of each Indenture for Series A-I, the trustee holds title to the improvements as constructed. First National City Bank is our trustee for each of these Indentures.

Question 13. Who, specifically, pays the local property taxes as private owner during that 30-year period?

Answer. Under the terms of each Indenture, the Government (GSA) will pay or cause to be paid all real estate taxes on all improvements and the trustee's leasehold interest in the sites at all times until the purchase price has been paid in full.

Question 14. I understand that GSA has some 30,000 square feet of vacant space under lease in the Warner Building in Washington, D.C. Yet GSA says the space is "not suitable for occupying without extensive alterations." Could you please provide data on when GSA obtained this space, the annual cost, the length of the lease, past occupants of the space, and present costs of upkeep on the building. What is the estimated cost to renovate this property for the Treasury Department?

Answer. On February 2, 1973, the 6th through the 11th floors of the Warner Building being approximately 59,562 square feet were leased for the Treasury Department for a firm ten year period at an annual cost of \$330,500 fully serviced.

The Department of the Treasury has been the only occupant of parts of this space. Space layout plans for the entire area were delivered to owner on March 12, 1973. These space alterations were estimated to take nine months. However, on July 30, 1973 the Department of the Treasury informed GSA that they did not need about 30,000 square feet on floors 6, 7, and 8, in the building.

Attempts by GSA to assign this space to other activities were unsuccessful. Meanwhile, alterations on the upper three floors were completed and the space occupied by Treasury on January 7, 1974. GSA was contractually obligated to pay rental on all six floors at that time.

Subsequently, in February 1974, it was decided to house the newly created Federal Energy Office in the new Post Office Building in space planned for occupancy by Treasury. Treasury then agreed to house certain Internal Revenue Service elements in the Warner Building on its 6, 7, and 8th floors.

Final review of space layout plans were not completed by Treasury until August 1974. Renovation of these floors will be completed by March 30th and the space will be occupied by IRS at that time.

The cost of space alterations for the Department of the Treasury are a part of the lease agreement. The government has paid about \$16,000 for a special purpose laboratory not included in the lease and about \$53,000 due to the inflation resulting from delay in authorizing tenant alterations to floors 6, 7, and 8.

Approximately \$90,000 is included in the annual rental for utilities, janitorial services and maintenance.

Question 15. What is size of GSA guard force today? What was it in 1966? How does that percentage growth compare with the growth in space under GSA control?

Answer. The guard force increased from 2,917 on-board as of June 30, 1966 to an on-board strength of 3,841 as of June 30, 1974. Over the same time period space under GSA control increased from 194.4 million square feet to 231.4 million square feet. This represents an increase of 32 percent in the guard force while space under GSA control increased by 19 percent.

Question 16. What effects have occurred as a result of Executive Orders 11458 and 11625 relating to leasing of Federal space under the minority enterprise program?

Answer. Executive Orders 11458 and 11625, of March 5, 1969, and October 13, 1971, relating to the promotion of minority enterprise prescribe arrangements for developing and coordinating a national program for minority business enterprise. However, these issuances have had no discernable effect on our leasing programs.

The Secretary of Commerce is charged with carrying out the functions of the E.O.'s and the heads of other departments and agencies assist and participate in all ways appropriate in carrying out the objectives of the orders to the extent permitted by law and the availability of funds. GSA's authority to lease space under section 210h(1) of the Federal Property and Administrative Services Act of 1949, as amended, is on a competitive basis and has no set-aside provisions for leasing space from minority business enterprises. The outleasing of space is limited to those situations where government-owned space is temporarily surplus to its needs; however, the provision of Section 203 of the 1949 Act would control and require sealed bids. The exceptions to the sealed bid procedure under subsection (e) (3) would not permit a negotiated disposal to minority enterprises.

Question 17. How much of the SLUC revenue is scheduled to be returned to the Treasury in fiscal year 1975? How much does the Budget return to the Treasury in fiscal year 1976?

Answer. \$10 million of SLUC revenue is scheduled to be returned to the Treasury in fiscal year 1975. \$55 million of SLUC revenue is scheduled to be returned to the Treasury in fiscal year 1976.

Question 18. How much is set aside for Program Direction?

Answer. \$63 million is included for Program Direction in fiscal year 1975. \$67 million is included for Program Direction in fiscal year 1976.

Question 19. Does GSA have sufficient personnel?

Answer. In the area of our Construction Program we will require additional technical and administrative personnel with the advent of a sizable increase in our work-load. We understand that the House Appropriations Committee, in developing an unemployment program, may propose legislation that would make \$465 million available to GSA. This would be for GSA to undertake immediate construction and repair and alterations of public buildings in hundreds of locations across the country.

Question 19a. Is GSA forced to contract out any of its Program Direction or Management and Inspection on individual projects?

Answer. As a matter of policy and procedure, GSA will normally contract-out the management and inspection of projects when our staff is already assigned to capacity. This, again, is a function of the size of our construction program. Our contracting-out is usually in the area of the multi-million dollar projects.

Question 19b. Would GSA save money if it did any of this work in the agency?

Answer. The cost of management and inspection of projects is directly related to the quality, or level, of the work done. If GSA or the professional services contractor staff the project for acceptable management and inspection, there should be little difference in cost. The agency and the contractor would pay approximately the same rate for the services involved.

Question 20. You refer to the percentages of GSA's inventory that is leased. Does percentage include the space under the purchase-contract program? What are the square footage figures for 1980? What is the estimated annual cost of that leased, plus the purchase-contract space, in 1980?

Answer. The percentage does not include space under the purchase-contract program. Purchase-contract space is reported as government-owned. Our projection of square footage under GSA control in 1980, assuming expiration of purchase-contract authority June 30, 1975, and an annual average direct Construction program of \$300.0 million beginning in fiscal year 1977, is 160.1 million square feet of Government-owned space and 101.1 million square feet of leased space. The estimated annual cost of space leased and purchase-contract space will be \$822.4 million in 1980 (\$669.0 million—leased and \$153.4 million—purchase-contract).

All square foot figures are exclusive of outside parking.

Question 21. Please explain what departmental programs will require the major increases in space that you have outlined in your statement.

Answer. This question was answered in the testimony pages 15-16.

Question 22. What is the rationale for proposing purchase contract construction projects costing \$161,000,000 in fiscal year 1976—in effect a mortgage not reflected in the budget—then proposing to return \$55,000,000 in "surplus" to the miscellaneous receipts of the Treasury?

Answer. This question is answered in the testimony page 25.

Question 23. I understand that a recent prospectus approved by this Committee for FEA won't house FEA after all. Would you please explain? Would you also provide for the record the details on the cost of the lease and the actual space obtained.

Answer. On February 21, 1975, the Casimir Pulaski Building located at 20 Massachusetts Avenue was leased to house the Energy Research and Development Administration (ERDA). The rental rate is \$5.99 per square foot excluding utilities for a firm term of 5 years for approximately 270,000 square feet of space. Approximately 160,000 square feet of this space will be assigned initially

to the ERDA, with the balance of the space to be assigned to meet requirements on an interim basis of the SEC, GAO or others. At such time as expansion of ERDA takes place, these activities will be relocated and the vacated space assigned to ERDA.

The prospectus for the acquisition of approximately 300,000 square feet of leased space contemplated that the space would be acquired and assigned to FEA to effect a consolidation of that agency out of the New Post Office building and space leased at 2000 M Street, NW. Subsequent to the approval of the prospectus, Mr. Frank Zarb, the new head of the FEA, expressed a strong desire to remain in the New Post Office, and to have consolidation effected at the location. At about the same time the ERDA came into existence and established a requirement for a consolidation location susceptible for expansion. In these circumstances it was decided by the Administrator of General Services consistent with his authority to assign and reassign space, that the space at 20 Massachusetts Avenue would be assigned to ERDA, thus effecting the consolidation of ERDA and providing for its future growth, and that the FEA would be consolidated in the New Post Office—Old Labor Building Complex. The space vacated by FEA at 2000 M Street, NW., will be utilized to rehouse the Bureau of AT & F out of the New Post Office building.

Question 24. I noticed in the newspaper report of staggering cost overruns including some GSA buildings. Would you please provide us with figures on the final construction cost of those buildings among the 63 that were in the 1972 backlog and how that compared with the estimated cost in the prospectus.

Answer. This question is answered at page 12.

Question 25. I understand that your agency has been asked to participate in the Jobs Opportunities Program—title X of the Public Works and Economic Development Act. Could you outline any proposal you may have submitted?

Answer. Attached is a copy of our submission to the Secretary of Commerce for this program.

[Letter follows:]

February 10, 1975.

HON. FREDERICK B. DENT,
Secretary of Commerce,
Washington, D.C.

DEAR MR. SECRETARY: Pursuant to your request of January 21, 1975, we have conducted a survey of each of our programs for potential job creating opportunities during calendar year 1975, under the provisions of the Emergency Job and Unemployment Assistance Act.

As a result of this survey, we have identified the programs of this agency which could effectively utilize unemployed persons. Accordingly, the attached outlines our proposals in the form prescribed, the number of people that could be employed, and the expenditures required for wages and related costs. Since we have already utilized our programs to the maximum extent to create temporary employment within our existing resources, these proposals would require financing under the appropriation provided to your department for this purpose.

In summary, our proposals provide for hiring 6,719 people, resulting in expenditures of \$117,970,000. Of this total, it is planned that 5,036 people would be hired through contractual arrangements for calendar year 1975, and 1,259 would be hired by the agency as temporary employees to perform work for our Public Buildings Service programs, involving maintenance repairs to buildings operating equipment, repairs to Federally-owned buildings, and cleaning of GSA operated buildings, requiring expenditures of \$115,400,000. The remaining 424 would be hired as temporary employees to work in our Federal Supply Service warehouses and interagency motor pools, and the records centers of our National Archives and Records Service, requiring expenditures of \$2,570,000.

It is assumed that temporary employees hired under this type of program would be exempt from agency employment ceilings, similar to the youth opportunity programs.

We appreciate the opportunity to be of assistance in this very worthwhile program.

Sincerely,

ARTHUR F. SAMPSON,
Administrator.

[Enclosure.]

1. *Name of program.*—Repair and alteration Program.

2. *Brief description of project.*—The Repair and Alteration project includes painting both the interior and exterior of Federally owned buildings; exterior cleaning, painting and water proofing of these buildings and caulking and weather stripping of windows where required.

There are a significant number of Federal buildings throughout the United States that badly need this type of repair. GSA recommends that this program be accelerated in order to prevent further deterioration and damage to buildings.

This program would be distributed throughout the continental United States, and portions of the program could be activated in any area that had a high rate of unemployment.

3. *Breakdown of money.*—The program represents a possible total annual expenditure of \$69 million. The distribution of these funds would be:

	<i>Millions</i>
Wages -----	\$41
Supplies and materials, including construction materials -----	28
Total -----	69

4. *Estimated man-years of employment.*—It is estimated that 2,545 craftsmen would be working for 12 months. It is estimated that approximately 80% of this program would be accomplished by contract, with the balance performed by force account employees.

5. *Average duration of project.*—It is estimated that this project would run for a 12 month period.

6. *Estimated starting date.*—It is estimated that the project would start between 30 and 60 days after availability of funds.

7. *Estimated completion date.*—Within 12 months of start of project.

1. *Name of program.*—Mechanical operation and maintenance.

2. *Brief description of project.*—Maintenance repairs to building operating equipment represent a substantial continuing workload in the Public Buildings Service. The work is normally identified when regularly scheduled preventative maintenance is performed on the equipment, but the work is accomplished only on priority projects within our present resources. Performing these maintenance repairs on an accelerated basis would result in significantly better utilization of our energy resources.

GSA recommends that the following types of maintenance repair services be accomplished in Federal facilities to stimulate job opportunities in areas which are suffering from unusually high levels of unemployment:

- Replace defective valves in equipment.
- Repair and clean air-conditioning cooling towers.
- Clean coils in air handlers as well as other parts of ventilation systems.
- Replace broken insulation on pipes and insulate uninsulated areas.
- Repair or replace damaged floor coverings.
- Repair or replace damaged concrete surfaces.

This program would be distributed throughout the continental United States; therefore, portions of the program would be activated in any area that had a high rate of unemployment.

3. *Breakdown of money.*—Accelerating this program would generate on an annual basis an additional expenditure of approximately \$21 million. This breaks down as follows:

Wages -----	\$14, 700, 000
Supplies and materials including replacement parts -----	6, 300, 000
Total -----	21, 000, 000

4. *Estimated man-years of employment.*—This project is estimated at 1,450 craftsmen working for 12 months. It is estimated that approximately 80% of this program would be accomplished by contract with the balance performed by force account employees.

5. *Average duration of project.*—It is estimated that this project would run for a 12 month period.

6. *Estimated startup date.*—It is estimated that the project would start between 30 and 60 days after availability of funds.

7. *Estimated completion date.*—It is estimated that this project would be completed within 12 months of the starting date.

1. *Name of program.*—Upgrade the level of cleaning in GSA operated buildings.

2. *Brief description of project.*—The present level of cleaning provided in GSA operated public buildings does not permit the accomplishment of certain cleaning services, except on an exceptional basis. The accomplishment of cleaning services, such as those listed below should be performed on a periodic basis, and thus would serve to improve the working environment of the affected Federal facilities.

GSA recommends that the following types of periodic cleaning services be accomplished in order to stimulate job opportunities in areas which are suffering from unusually high levels of unemployment:

- a. Window washing.
- b. Light fixture cleaning.
- c. High cleaning of interior areas (over 6 feet).
- d. Floor scrubbing and waxing.
- e. Venetian blind washing.
- f. Furniture cleaning.
- g. Wall scrubbing.
- h. Glass cleaning (interior, doors, etc.).
- i. Exterior grounds and lawn maintenance and improvements.

This program would be distributed throughout the continental United States. Therefore, the program could be activated in any area that had a high rate of unemployment.

3. *Breakdown of money.*—

Amount for wages (approximately), \$22,860,000.

Amount for supplies and materials, \$2,540,000.

4. *Estimated man-months of employment.*—It is estimated that 2,300 laborers would be working for 12 months on this project. It is estimated that approximately 80% of this program would be accomplished by contract with the balance performed by force-account employees.

5. *Average duration of project.*—It is estimated that the project would run for a 12 month period.

6. *Estimated starting date.*—It is estimated that the project would start between 30 and 60 days after availability of funds.

7. *Estimated completion date.*—It is estimated the project would run for a 12 month period.

QUESTION FROM SENATOR McCURE

Question. We had problems this year about the levels of the SLUC charges. One of the most glaring problems occurred in Pocatello, Idaho. Would you tell us how you have overcome that problem this year?

Answer. In answering Senator McClure in April 1974, we had anticipated a rural reduction authorization from OMB. Therefore, we informed him that the original rates would be reduced by 25% in that area. The rates in the initial July estimate billing were: office space was \$6.08 sq. ft.; storage space was \$1.42 a sq. ft.; and special space was \$6.71 a sq. ft.

In addition, after a comprehensive review of space market in Pocatello, we concluded that the SLUC for that space was out of line with the commercial rates. We reviewed the quality rating of the building and took action to reduce it from a rating of 68 to 56. This resulted in a reduction of rural rental rates for the office space from \$4.56 to \$4.02 a sq. ft.; storage space from \$1.42 to .98, and special space from \$3.36 to \$2.94 a sq. ft.

Furthermore, the Postal Service in the interim, relinquished space. In the July budget estimate they were assigned a total of 10,647 sq. ft. of space; in the first quarter and rural correction billings, they were billed for a total 9,478 sq. ft. of space; and in the second quarter's billing, they were billed for a total 6,330 sq. ft. of space.

With the rural reduction, the quality rating reduction, and the relinquishment of space, the Postal Service annual bill was reduced from \$56,268 (July estimate) to \$23,204 (Rural Correction) to \$16,732 (Second Quarter's Billing).

Senator MORGAN. With regard to the hearing that was started yesterday, on the Social Security Buildings, and in light of the Senate schedule for the day, I just don't see how we can continue with that hearing today.

I have discussed this with Senator Randolph. I think we would do better by postponing it until we can at least set a day when we can reasonably foresee enough time to go through it thoroughly.

We will now conclude this hearing. Thank you very much.

[Whereupon, at 12 noon, the committee recessed, to reconvene Thursday, February 27, 1975.]

BUDGET REVIEW

FEDERAL HIGHWAY ADMINISTRATION

THURSDAY, FEBRUARY 27, 1975

U.S. SENATE,
COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The committee met at 10:05 a.m., pursuant to call, in room 4200, Dirksen Senate Office Building, Hon. Jennings Randolph (chairman of the committee) presiding.

Present: Senators Randolph, Montoya, Bentsen, Hart, Buckley, Stafford, and Domenici.

OPENING STATEMENT OF HON. JENNINGS RANDOLPH, U.S. SENATOR FROM THE STATE OF WEST VIRGINIA

The CHAIRMAN. Good morning to all of you, our witnesses and our guests.

Our hearing today has a dual purpose. It was originally scheduled to review the budget request of the Federal Highway Administration for fiscal year 1976. It has subsequently been broadened to include the issues addressed in Senate Resolution 69 which I introduced on February 7 with the cosponsorship of Senator Muskie and other Members of the Senate.

It would be difficult, in fact, to discuss planned spending for highways without taking into consideration the impoundment of highway obligational authority. Recent judicial action plus the President's release of \$2 billion in impounded highway money make this a very timely topic for review.

As our country's oldest grant-in-aid program, the Federal-aid highway program has more than a half-century of experience in meeting transportation needs. During that time it has reached a level of sophistication and diversity that enables it to respond not only to changing attitudes about transportation, but also to the new economic and energy realities that are on the minds of all of us.

This is an important year for the Federal-aid highway program. The Congress is initiating its new budgeting procedures, and this hearing is a part of that effort for us to look at Federal expenditures in a total entity rather than by individual programs. But 1975 also is a year in which there will be major legislation on the form and future of the highway program. The appropriate committees in both the Senate and House of Representatives also will consider how highway activi-

ties will be financed in the future. So it is perhaps fitting that we begin our formal examination of Federal highway activities this year with an examination of the budget for the coming fiscal year.

I do not want to limit our inquiries to the single year, however, for an ongoing program such as this one must be carried out on a long-range basis. What is done this year or next influences roadbuilding in the future.

For the short term, however, I am concerned with the effect of the Presidential release of \$2 billion on the program. Under existing conditions of recession, I believe the highway program has great potential for stimulating employment. The extent to which this is accomplished depends on the ability of the construction industry and the States to utilize additional funding.

For nearly 20 years the Interstate System has been our principal highway concern. Other highway needs have accumulated during that time, and these must be addressed. In this context, we will want to explore with the witness today the effect of the agency's spending plans on interstate and other highway construction.

Inflation continues to strongly influence our roadbuilding ability. Highway construction costs rose by 35 percent in the last year, meaning that we receive less and less road for every dollar. Rising costs, therefore, must receive our attention in establishing spending levels.

Governor Tiemann, I look forward to discussing these and other issues with you this morning. This committee has enjoyed a good working relationship with the Federal Highway Administration. I know that our new responsibility to review your spending requests will add a new dimension to our knowledge and our ability to work together on a program that effects the life and wellbeing of all Americans.

Now it is my desire to accommodate the Senator from New Mexico, because Senator Montoya has a commitment that he must keep at the same time we are meeting here today.

OPENING STATEMENT OF HON. JOSEPH M. MONTOYA, U.S. SENATOR FROM THE STATE OF NEW MEXICO

Senator MONTOYA. Thank you, Mr. Chairman. I appreciate this courtesy, and I want to say that I congratulate you for the leadership which you have demonstrated in evoking this hearing for the purposes which you indicated, and in the spirit of brevity, I would like to ask the Governor just one question. But I want to say by way of preface that in the State of New Mexico the Executive Director of the State Highway Department is hopeful that the New Mexico legislature can apportion funds to complete two portions of Interstate 10. But there is no final action at this time.

Interstate 10 has been a contention for about 15 or 20 years. Through your predecessor who visited with me and attended a hearing in New Mexico, we were able to resolve many of the disputes that were then prevalent, and now we have had the green light to do something about Interstate 10 from Tucumcari to Texas.

Now our Executive Director feels that it is quite doubtful we can make effective use of all apportioned funds. New Mexico could lose

many millions in released trust funds unless we find a way to offer relief.

I want to ask this question: What problems do you foresee, Governor, if any, from legislation which I intended to introduce which would permit States to borrow against future apportionments?

STATEMENT OF HON. NORBERT T. TIEMANN, ADMINISTRATOR, FEDERAL HIGHWAY ADMINISTRATION, ACCOMPANIED BY THEODORE C. LUTZ, DEPUTY UNDER SECRETARY OF TRANSPORTATION; LES LAMM, EXECUTIVE DIRECTOR; JOSEPH R. COUPAL, DEPUTY FEDERAL HIGHWAY ADMINISTRATOR AND PROFESSIONAL STAFF MEMBERS, FWHA

Mr. TIEMANN. Senator Montoya, we visualize a number of problems that would arise from the legislation that would relieve the States of the matching problem that they allege they have.

Senator MONTOYA. This was done as you recall, in the 1958 amendments.

Mr. TIEMANN. Yes; I am familiar with the 1958 amendments, the so-called Gore amendment. You recall the amount of \$400 million was authorized as a special release to help the economy, and that the specific relief to the States to aid in matching the authorization was very narrowly tied to an amount of \$115 million.

That amount of relief as I said, was about \$115 million, and most of it was utilized by the States and subsequently paid back. It was paid back by virtue of the Government retaining part of the apportioned funds over a 2-year period, but it was all paid back.

We see any number of inequities that would result from legislation of this type, whether it was something like the 1958 language, or anything like that.

First of all, we don't think the problem is as great as we were led to believe last week when the National Governors' Conference was in town.

As we went to the States to make the determination as to how much money they could obligate prior to the time the President released the money, we were informed by the States that, "Yes, we can obligate by the end of this fiscal year the whole \$2 billion, and we will have no problems."

Subsequently we have found eight States with problems, not necessarily matching problems. One State does not have matching problems, but it does have environmental problems that are holding up highway projects.

We think the inequities would be felt by those States, like this particular State, which happens to be New Jersey, which has no matching problem, but has environmental problems. If you did give them funds, they still couldn't use the money, because it is held up for another reason.

Senator MONTOYA. Why would the committee of the Governors come into this committee and tell us that the Governors unanimously suggested that this legislation would be very much in order?

Mr. TIEMANN. I met with that same committee, Senator, and they told me the same thing. Yet when I went around to the Governors on

an individual basis and asked, "Do you have matching problems?", most of them assured me they did not have matching problems.

Now having been on that side of the aisle and having to vote for regulations like this one, I can understand why they might say "Yes, we do have matching problems," when they might not be in existence.

Senator MONTROYA. If they didn't have matching fund problems, would they be eligible under this legislation?

Mr. TIEMANN. I suppose you discount equity if you declare a State not eligible, even if they are solving their own problems.

Senator MONTROYA. In view of the fact that the Government would not lose any of its money, but would recoup it against subsequent allocations, what inequity exists as far as the Government is concerned?

Mr. TIEMANN. Well, I guess I will go back to the Chairman of the Transportation Subcommittee's economic base for making the request of not requiring matching funds. That was that most States were not able to go to deficit financing, so that they would be precluded from borrowing to make up the matching funds, but because the Federal Government could in fact engage in deficit financing it could easily afford to give the States the money.

That is not my version of economics.

Senator MONTROYA. Mr. Chairman, that is the last question I had in mind at this time, and I want to thank the Chairman of the subcommittee for allowing me to ask these questions, and I want to thank you, Governor, for answering them.

[At this point Senator Bentsen assumes the Chair.]

Senator BENTSEN [presiding]. Governor, are you prepared to give a prepared statement?

Mr. TIEMANN. Yes. May I introduce the members of the staff at the table with me today? Mr. Ted Lutz, Deputy Under Secretary for Budget and Program Review, Mr. Joe Coupal, Deputy Administrator, and Mr. Les Lamm who is the Executive Director of the Federal Highway Administration.

Senator STAFFORD. Mr. Chairman, before the Governor begins, I have a small opening statement, and in the interests of time I would ask unanimous consent that it be made part of the record.

Senator BENTSEN. That will be fine, Senator Stafford, and I will introduce mine on the same basis and also a statement from Senator Birch Bayh.

[Senator Bentsen's, Senator Stafford's, and Senator Bayh's statements follow:]

OPENING STATEMENT OF HON. LLOYD BENTSEN, U.S. SENATOR FROM THE STATE OF TEXAS

The Public Works Committee will conduct a hearing this morning to fulfill its obligations under the Congressional Budget and Impoundment Control Act of 1974.

Under this legislation, the Senate Budget Committee must report the first concurrent resolution on the budget by April 15 of each year. For the Budget Committee to complete that function, the standing committees and joint committees must submit reports on estimates of budget outlays and new budget authority for each functional category in which the committee has legislative jurisdiction. We must submit these reports by March 15.

To meet the March 15 deadline, we are soliciting the views of the agencies over which we have jurisdiction concerning their anticipated levels of funding for proposed or continuing programs.

Today, we are pleased to have with us the Undersecretary of Transportation, Mr. Ted Lutz and Governor Norbert Tiemann, Administrator of the Federal Highway Administration.

Gentlemen, this Subcommittee has been concerned, as you know, about the billions of dollars impounded in highway funds at a time of high unemployment in this country. We are pleased that the President ordered the release of the \$2 billion, but we still have a number of questions about funds remaining impounded, about budget deferrals and rescissions and about the scope of the Federal aid highway program in the next several years, particularly at a time of economic uncertainty.

We welcome you here and look forward to your testimony.

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Governor Tiemann, it is a pleasure to welcome you to the second budget hearing ever to be held by the Senate Committee on Public Works. As you note in your written testimony, it is the first appearance by FHWA in such a forum and so is a joint exploratory venture.

This series of hearings—during which we will examine agencies under the jurisdiction of this Committee—is in the nature of a “shakedown cruise.” We hope to learn from them specific information which will help us in making our authorization and outlay recommendations to the Budget Committee in March.

We also hope to learn for future reference what kinds of questions we need to ask in order to get those answers which will be most useful to us.

We will be seeking a longer range view of programs than the annual oversight conducted by the Appropriations Committee.

At the same time we will be focusing on needs in specific program areas and budget categories. We will not attempt to structure comprehensive national economic overview which is the primary responsibility of the Budget Committee.

Finding the means to make our most significant contribution to the budget process will not be easy. We hope the hearing today and the others in this series will be especially educational.

We will be relying on your agency’s expertise, both today, throughout this year, and into the future, to assist us in a difficult task.

If past experience is any guide, I am sure you will not disappoint us.

STATEMENT OF HON. BIRCH BAYH, U.S. SENATOR FROM THE STATE OF INDIANA

Mr. Chairman, I wish to thank you and the members of the Subcommittee for giving me the opportunity to present this testimony. As a former member of the Public Works Committee, it has been my pleasure to witness the fine work of this Committee over a period of many years. And it is as a former Chairman of the Public Works Committee’s Subcommittee on Roads and current Chairman of the Transportation Subcommittee of the Appropriations Committee that I address you today to recommend action to increase federal aid to the states for highways.

Mr Chairman, every member of this Committee is acutely aware of the economic hardships which have befallen our nation. Last month we had over 7½ million citizens who could not find work, and that number is likely to increase in the months to come. We have heard that in January the rate of inflation subsided substantially, but one can hardly term this good news when the cause of the lower rate was our deepening recession.

In recent months Congress has taken the lead in combatting our economic problems and providing aid to those who have been the victims of recession. Our enactment of legislation to extend unemployment compensation and the public service employment bill, including the job opportunities program, are but two examples.

But there is much more to be done. Mr. Chairman, and an important step we can take now is to increase the federal aid highway funds available to the states.

As you know until a few weeks ago the President had impounded \$11 billion in highway funds. Mr. Chairman, when 22 percent of our construction work force is unemployed, and everyone in government is agreed upon the need to stimulate the economy, it makes little sense to withhold billions of dollars which could be

put to use in providing highway construction jobs. I believe it is imperative that we act to free funds for such use, and I believe that time is of the essence.

Earlier this month, President Ford announced that he would release \$2 billion of the impounded highway funds. This action was a step in the right direction, but many state officials maintain that much more money is needed and can be utilized. Further, there are many states which will find it difficult if not impossible to meet matching requirements and take advantage of the funds which have been released due to declining gasoline tax revenues and the recession.

Your investigation as well as that of my own Transportation Subcommittee will provide many of the hard facts regarding exactly how much money can be utilized by the states in relatively quick start projects and exactly which states are ready to begin work. We can now, however, commit ourselves to utilization of federal highway funds to the maximum extent possible and to helping the states meet matching requirements.

The Administration has estimated that the release of \$2 billion in federal aid highway funds will provide about 150,000 jobs in construction and related industries. This estimate will be quite hollow, however, if the bulk of the funds are not used by the states because they are unable to come up with the matching requirements.

Unfortunately, the Office of Management and Budget has announced that it opposes any further aid to the states to meet their matching problems. Thus, as has happened so often during the last few years, it is now up to Congress to provide the leadership necessary to take full advantage of our federal highway program. Mr. Chairman, I do not believe we can allow a large portion of those 150,000 jobs promised by the President, or additional jobs provided by the further release of impounded funds, to be lost due to a lack of matching money. It is up to us to take prompt and decisive action. The times require no less.

The jobs provided through the highway program will not be makework. They will not be just raking or sweeping. Instead, those jobs will result in extension of our highway system and improved road safety. The program will build needed railroad crossings and bridges. The benefits will be real and lasting.

In particular, I recommend that the federal government provide no interest loans to the states to meet 100% of their short-term matching needs. The loans could be made from unused highway funds and then be repaid by the states out of future apportionments. This approach would avoid any loss to the federal government, other than interest, and would insure that the highway funds would be put to quick use now when they are needed. It would also provide a simple mechanism for repayment of the loans, which would involve no out-of-pocket expense to the states. In my opinion it is the least costly and least inflationary approach available.

In order to implement this proposal, it will be, of course, necessary to enact legislation, and I urge the members of this Committee to give early consideration to my recommendation. Further, Congressional action will be required to free impounded funds for loans to the states as well as to meet normal apportionments.

It is quite clear, Mr. Chairman, that the people of this nation expect their elected officials to take all possible steps to halt the slide of our economy and spur the country forward again. It is also quite clear that while not a panacea for our economic ills, the federal aid highway program is a weapon which can be helpful in our battle against recession. I hope that this committee will take the action to insure that this weapon is used to maximum benefit.

I again thank you for providing me this opportunity to express my views. I wish the Committee the very best in its deliberations, and I pledge my full cooperation in making the highway program a viable and important anti-recessionary tool.

Senator BENTSEN. Do you have a statement, Mr. Domenici?

Senator DOMENICI. No statement.

Mr. TIEMANN. This hearing today is certainly somewhat of an historic event because it is our first appearance before the Public Works Committee under terms of the new "Congressional Budget and Impoundment Control Act of 1974."

My colleagues and I are pleased to join you in this endeavor to implement the procedures of that act and to aid the Congress in any way we can which will help achieve the desired results.

I would like to review three broad areas in which financing arrangements for the various highway programs have an impact upon both the progress of those programs and the national economy in general.

These broad areas are:

1. The Budget Estimate and outlook for fiscal year 1976.
2. The relative influence of highway construction programs as a generator of employment, and
3. The effect of the deferral message submitted last September under title X of the new act on highway programs.

First, I will address the fiscal year 1976 budget estimate which was transmitted to Congress by the President on February 3, 1975.

For fiscal year 1976, the estimate contemplates total obligations of \$5.4 billion for all programs administered by the Federal Highway Administration. This includes about 14 discrete appropriation accounts, the largest of which by far is "Federal-aid Highways" at \$5.2 billion.

By way of explanation, these various appropriation accounts are in fact our requests for financial resources with which to conduct the several programs during fiscal year 1976.

The estimates are based upon and are within the legislative authorizations previously made available by Congress and with which this committee is most familiar.

The fiscal year 1976 budget also anticipates outlays for these programs totaling \$5 billion.

In general, our budget requests take on two distinct and separate characteristics:

First are those accounts in which we are requesting the appropriation of cash to liquidate obligations incurred under the contract authority made available for several of our programs.

Second are those noncontract authority accounts in which we are requesting budget authority and in fact cannot incur any obligations until the appropriation is enacted.

Our largest single account, "Federal-aid Highway", is of the contractor authority and liquidating cash type. This is the account in which the bulk of our deferrals have occurred which I will discuss later.

The development of budget estimates within the executive branch usually starts about 15 months before the particular year at issue. They must be completed and submitted to Congress in January preceding that year.

Much of the work on the fiscal year 1976 budget was done during late fall and early winter and reflects efforts to curb inflation which was already at an unacceptable rate. Concurrently, however, recession and unemployment have also reached unacceptable levels, and it will be necessary to consider alternative program levels that are designed to balance Federal spending policies as they may impact upon each of the two problems.

It was in fact, consideration of this balanced approach toward solution of our economic problems which caused the President to release \$2 billion additional obligating authority to the States for highway construction.

At this time, however, it is not possible to speculate whether and to what extent our present budget estimate for fiscal year 1976 may be adjusted in the future. Much will depend, of course, on the economic impact of the recent release. I should also emphasize that the fiscal year 1976 budget does not reflect the financial implications of this release.

Next I will turn to the problem of unemployment and the impact which highway construction programs can have on it. Over the past 20 years the highway construction industry has experienced significant productivity gains with the introduction of massive earth moving, grading, and paving equipment. New methods and materials have also helped increase productivity. More recently it has also experienced inflation along with other sectors of the economy.

These two factors have tended to reduce the amount of labor generated per dollar of Federal investment in highways over the years. At the present time we estimate that each billion dollars of expenditures for highway construction will generate about 55,000 job opportunities: 26,000 onsite and 29,000 offsite.

In addition, we estimate that as many as 71,000 additional ancillary job opportunities may be induced for a total of 126,000.

The budget estimate before you proposes \$5.2 billion as the Federal investment in highways. We believe that this infusion of Federal spending will create job opportunities as follows:

Direct (onsite) employment.....	130,000
Indirect (offsite) employment.....	146,000
Induced employment.....	366,000
Total job opportunities.....	642,000

Our calculations show that the President's release of \$2 billion of additional released obligation authority above the level proposed for fiscal year 1975 of \$4.6 billion, will generate, among other benefits, at least 107,000 additional jobs.

About half of these jobs would be on construction sites and the other half would be in industries supplying equipment and materials needed for the projects. We estimate that this direct generation of employment will induce as many as 141,000 more job opportunities above the expected direct employment for a total of approximately 250,000.

It is clear that these additional Federal highway investments will achieve two desirable results:

1. Employment will have been generated and utilized.
2. A useful and needed long-term capital investment will have been made.

Finally, I will direct my remarks to the issue of impoundment.

As of September 20, 1974, the President submitted a deferral message on highway programs—among many others. In our case at that time, the executive branch had released obligating authority which left about \$10.7 billion of authorized funds impounded.

In the meanwhile, Congress enacted the Highway Amendments of 1974 which increased outstanding authorizations by some \$350 million.

Thus, the present impounded authority approximates \$11.1 billion. This, however, has been reduced by \$2 billion to \$9.1 billion as a result of the most recent release.

When fiscal year 1976 commences next July 1, this will further be reduced by \$5.2 billion to a level of \$3.9 billion. With the release of \$1.3 billion for the transition period to the new fiscal year, it will be reduced even further to a level of \$2.6 billion.

This completes my statement. My colleagues and myself are at your disposal in helping in any way that we can.

Senator BENTSEN. Thank you very much Governor. I well understand the Governors' position in preferring not to meet with matching funds. I know that some of the States are having difficulties. I also look at the situation, the projected \$52 billion deficit in the national budget, and I have some concern over that.

I think this problem of stimulating the economy is the obligation of all levels of government, and that they all have to participate in it.

I know that it has been kind of interesting at times, the things that we have done on revenue sharing to assist some of these States and Governors in that regard.

Then we hear some of the speeches that if Congress could only manage its affairs and its budget as well as we do in the States, it sticks in my throat just a little bit.

I think it is a burden for all of us to share. I have supported public service jobs, and I think it is an emergency measure that we have to do, but I really much prefer lasting investments in the future of this country, be it sewage plants to clean up the water, or be it permanent investment in the safety of our highways.

So when we talk about the President releasing \$2 billion, and I am very pleased to see that, if he would release the other \$2.6 billion, we are talking about another 300,000 jobs.

With unemployment at 8.2 and 7½ million unemployed, it seems a pretty persuasive argument that we stimulate the economy in that way.

If all of those funds were released, do you think that they would be absorbed by the States?

Mr. TIEMANN. I would guess, Senator, with respect to the timing of the release, they could. We feel if the additional impounded funds of \$2.6 billion were released in fiscal 1976, they could be obligated by the States.

Senator BENTSEN. Let me ask you a specific program question, and this involves something in my own State. We have demonstration projects, as in Brownsville, Tex. We have received already some \$522,000 in Federal funds.

The people down there have concluded an agreement with the Mexican Government to cooperate in eliminating a number of dangerous rail crossings.

You sent us a report in January indicating that the Department recommends no money for any of these demonstration programs. Where are those people supposed to get the money to finish those programs?

Mr. TIEMANN. Well, I think two points could be made on that, Mr. Chairman. One, we don't argue with the need for projects of that type.

At the time that you indicated that the report was made, we were looking at the program on the basis of the merits of each of the particular demonstration projects, and I guess at some point we—I have

to say in the interests of fighting inflation—somewhere we will have to start cutting.

Senator BENTSEN. That is a pretty unique one down there, Governor. We are having problems with Mexico in our relations and they are concerned that at times we don't fulfill our commitments.

Here is one where we started the projects, they are cooperating, and then it involves a cooperative effort of the two Governments. We put \$522,000 of taxpayers' money in it, and then we back off from it.

Mr. TIEMANN. Some of my colleagues may want to correct me if I am wrong on this thing, but I understand funds were advanced for preliminary engineering for those projects.

Senator BENTSEN. That is still money spent.

Mr. LUTZ. It is still money spent, sir. As the Governor indicated, in looking over the budget, this gets back again to where do you draw the line when you have massive deficits confronting you. We felt in the Department that there is a unique feature about the Brownsville project and we have tried to give them special assistance.

As you say, this involves international relationships that do concern us. Again, where do you draw the line effectively?

Senator BENTSEN. I would say about 20 miles north of the border.

Mr. LUTZ. There is another one in Texas as I recall, that may be affected of the 12, but again it comes to an issue of at what point was it fair to the rest of the country to single out 12 or so special projects?

We are recommending only preliminary engineering funds, and you and your colleagues will have a chance to act on that under the same act we are discussing today, the Budget Control Act.

The Congress may reject a proposal to free up money for Brownsville as well as the other 11 projects involved.

Senator BENTSEN. I have a deep interest in it, and I think that trying to work out our relations with President Echeverria of Mexico, just as with the salinity control on the Colorado River, this is important.

We shouldn't let this one fall through the cracks and not deliver on our commitments. Now let me ask you a question on the interstate. In 1972, as I recall, your estimated cost for the interstate was around \$76 billion. Now I understand those estimates have been—have gone to \$90 billion. Suppose we say the interstate is 85 percent complete. That is not really right, because we took in a lot of substandard roads, and if you bring those up to standard, you are talking about substantially more.

We might say we have at least \$30 billion to go. You are proposing \$3¼ billion for fiscal 1977 and \$3.7 billion for after that. How long is it going to take to complete the interstate at those levels with continued escalation of inflation?

Mr. TIEMANN. If we have authorizations at about the \$4 billion level, we could finish the interstate between 1982 and 1990.

Senator BENTSEN. Do you think at least at these levels you are going to do that, at the \$4 billion level?

Mr. TIEMANN. Yes.

Senator BENTSEN. What kind of inflation factor did you use?

Mr. TIEMANN. 7 percent.

Senator BENTSEN. I brought one of those pocket calculators with me, but I am not sure you will come out on that.

Mr. TIEMANN. I am sorry. My colleagues remind me that a zero inflation factor will result in a 1982 completion date and a 7 percent inflation factor will result in a 1990 date.

Senator BENTSEN. Oh. I have some question about the arithmetic there. Let me ask you about highway projects. Some of them seem to be more labor intensive than others. Would we be helping and trying to help unemployment if we eased the restrictions on some of the categories, some of the programs, so that there would be an easier flow of funds by the States in their administration from one category to the other if some of these categories were more labor intensive?

Would that be a plus? Would that be a help?

Mr. TIEMANN. Yes, I think without question, Mr. Chairman—that is exactly what we did with the \$2 billion that was recently released. We took the restrictions off the categories, and the States could use those funds in whatever projects they wanted to obligate them, with a couple of exceptions.

One, they could not use more than 20 percent of those funds for acquisition of right-of-way. We put a time limit from the time we gave project approval until the contract was let or work was begun, and that time limit was 45 days.

Other than those two restrictions, the States could do pretty much as they pleased. We are encouraging them, of course, to let projects that are labor intensive.

Senator BENTSEN. You are?

Mr. TIEMANN. Yes, sir.

Senator BENTSEN. Are you giving indications of what is more labor intensive? Do you have studies to show that?

Mr. TIEMANN. Projects such as safety projects are those that are labor intensive. Those are the ones that could be obligated. When you get into major projects, like interstate projects, they can't obligate the funds between now and the end of the fiscal year.

The projects are too large. The short range really lends itself to labor intensive projects.

Senator BENTSEN. Thank you. Senator Stafford?

Senator STAFFORD. Thank you, Mr. Chairman. Governor, I am a little puzzled by the last page of your statement when you referred to fiscal year 1976, which commences next July 1, and you said this will further be reduced by \$5.1 billion, and you are referring to the impounded funds.

Do you mean that you will be drawing down the funds and not looking for any new authorizations of obligated funds in 1976?

Mr. LUTZ. Sir, if I may answer that, the presently deferred funds of \$9.1 billion include the 1976 authorizations. In other words, as you know, we get the 1976 authorizations in advance of the beginning of the fiscal year, a procedure we propose to change in our new Highway Act which you will be considering.

In effect, the 1976 authorizations are included in the \$9.1 billion so that when we subtract the 1976 budget estimate of \$5.2 billion that in effect means that the real 1976, at the end of 1976, you would have a real impoundment of \$3.9 billion.

Senator STAFFORD. Thank you for clarifying that for me.

Governor, you answered Senator Bentsen's question about the release of the remaining \$2.6 billion in fiscal 1976. Did you mean the States could obligate the \$2.6 billion in addition to the full level of authorized funds for fiscal 1976, about \$6.3 billion?

Can the States carry on a \$9.3 billion highway program in 1976?

Mr. TIEMANN. The States have indicated that they could obligate about \$7.2 billion in 1976.

Senator STAFFORD. That is in total?

Mr. TIEMANN. In total, yes, sir.

Senator STAFFORD. I could go back to the 1974 Highway Needs Report. It states that the conclusion reached from this analysis of highway needs is at a current combined funding level for Federal, State, and local governments, is sufficient in constant dollars to maintain the level of performance of this Nation's highway plan.

I think that level was about \$8 billion. Can you translate this statement into what investment level would be required, taking into consideration varying rates of inflation, in order currently, to maintain levels of performance?

I might go on and add to that the Highway Needs Report compares with the Highway Users Federation estimate that instead of \$8 billion annually, \$17 billion annually is the required investment to maintain the status quo of the Nation's highway plan.

Mr. COUPAL. We have been estimating, Senator, to maintain the current service level that it would require about \$8 billion more a year than the total now being spent. That includes maintenance as well as construction, and administrative overhead.

As nearly as we can calculate, about \$8 billion more would be required, assuming the continuation of the present level of inflation.

Senator STAFFORD. I guess your answer would be that \$17 billion is an excessively high figure. That is the figure that the Highway Users Federation has proposed, and that \$8 billion is the correct figure?

Mr. COUPAL. I would assume that the \$17 billion includes meeting all needs, including the backlog needs, too. Of course, we are not prepared to say that \$8 billion would take care of upgrading the present system to what it ought to be.

We are talking about meeting the accruing needs.

Senator STAFFORD. Governor, could you or your associates comment on how soon segments of the interstate are likely to need restructuring? Have you any short term, that is, in the next 2 to 4 years, do you have a short-term estimate of the cost of reconstruction that you believe is necessary?

Mr. TIEMANN. We could develop those figures for the record, Senator. In fact, many segments of the original interstate require reconstruction right now, and some of those segments are—some are being rebuilt, but really, our priority presently is to finish those gaps that presently exist, especially intercity gaps, and we will be addressing ourselves to that problem in the 1975 legislative proposal that will be on its way up soon.

Senator STAFFORD. When you talk about restructuring, are you talking about resurfacing, or redesigning some of them?

Mr. TIEMANN. Both. In the past 20 years there have been advances in design and construction technology.

Senator STAFFORD. That would include access interchanges, where there aren't adequate acceleration lanes and deceleration lanes and things like that?

Mr. TIEMANN. That is correct.

Mr. LAMM. To supplement the Governor's response, Senator, the 1975 costs will break down the costs remaining to bring the entire Interstate System up to today's standards, and you will find there is a sizable increment in that cost relating to increments already open to traffic, to bring them up to an adequate level of performance.

Senator STAFFORD. Governor, your needs report that I mentioned earlier specifically addresses noninterstate capital needs highlighting arterial and collector highways eligible for inclusion.

Do your overall figures take into account safety hazards and bridge reconstruction and replacement of the Federal aid system?

Mr. TIEMANN. Of the Interstate System?

Senator STAFFORD. Of the whole Federal aid system.

Mr. TIEMANN. Yes, it does.

Senator STAFFORD. Could a statement with respect to what you just said be placed in the record, so we won't unduly take up the time of the committee? I would like a detailed statement.

Mr. TIEMANN. We will furnish the statement.

[The information requested follows:]

The 1975 Interstate Cost Estimate which is to be submitted to the Congress shortly indicates that the estimated total cost of the System, in Federal-aid and State matching funds, as of January 1, 1974, is \$89.2 billion. This figure includes \$32.275 billion, based on 1973 prices, for preliminary engineering, right-of-way and construction work yet to be undertaken to complete the System.

The estimated required Federal funds corresponding with the \$89.2 billion total cost of the System amount to \$79.52 billion. Of this amount \$57.220 billion has been apportioned to the States through fiscal year 1976 leaving a balance of \$22.3 billion of Federal funds yet to be apportioned from 1977 and beyond. The required \$22.3 billion authorization needs are based on 1973 prices without consideration of cost inflation. The actual needs for completing the System would be dependent on future inflation and authorization levels.

Included in the \$32.275 billion cost to complete is an approximate amount of \$7.9 billion for upgrading sections which are currently open to traffic. Minor improvements on these sections account for about \$4.6 billion while major improvements account for \$3.3 billion. The minor improvement cost is greater than the major cost because a substantially greater number of miles require minor improvement. Also included in the \$32.275 cost figure is \$1.6 billion for further work to be accomplished on segments currently under construction and \$22.8 billion for the sections which still need to be put under construction.

DETAILED STATEMENT ON HIGHWAY NEEDS

The basic approach to the needs calculation involved an actual field inventory and appraisal within each State of a representative sample of its highways in each functional classification. Two sets of standards are used in the appraisal process. The first is a set of conditions which defines the physical and operating characteristics of a highway deemed satisfactory from an engineering perspective to serve current traffic. Highway sections failing to meet these conditions at any time during the 20 years are considered in need of improvement.

The second set of standards is the design standards to which any highway section not fulfilling the reference condition would be upgraded. The estimated costs to improve these sections according to certain design standards for the

20-year period following improvement were defined as highway needs. The main purpose of having uniform nationwide design standards and engineering reference conditions was to facilitate a national assessment of needs on a uniform basis.

A representative sample of road sections from the 1990 functional classification was selected in each State and existing condition data for each selected section of roadway were obtained either from existing records or field inventory. The full description of the functional class designation procedure is contained in the National Highway Functional Classification and Needs Study Manual (1970-1990).

Comparison of the inventoried conditions with the appropriate operating and physical condition standards was then made. If a shortfall from the reference standard existed, based on present conditions, the highway section was placed in the "backlog" category of needs. If the section met the reference conditions, then traffic volume and pavement condition were forecasted into the future to see whether the section would fall short at some future time period. Future shortfalls were grouped into four time periods: 1 to 5 years, 6 to 10 years, 11 to 15 years, and 16 to 20 years. Six categories of shortfalls were identified:

1. Operating speed or volume-capacity ratio.
2. Lane width or roadway width.
3. Safe speed.
4. Pavement type and/or condition.
5. New location (no initial shortfall).
6. Structures only.

The type of shortfall provides a key to the appropriate type of improvement to be made. For example, an operating speed shortfall would indicate additional capacity costs. In order to obtain this, widening might be scheduled as the type of improvement; and if necessary right-of-way could not be obtained, the road may have been shown as being rebuilt on new location. Similarly, if the only shortfall during the study period was in pavement condition, the type of improvement would be resurfacing. Logic flow charts were provided to aid the States in determining the appropriate type of improvement based on indicated shortfalls and other key data. The charts merely served as guides and the instructions discouraged the reporting of sections not realistically anticipated to be constructed due to environmental or social effects, excessive rights-of-way required, or political unacceptability.

The following represent the improvement categories analyzed: new location, reconstruction, isolated reconstruction (less than full section length), widening, resurfacing and structures only.

Improvement costs were for the most part developed and applied on a cost-per-mile basis for roadway improvements and on a cost-per-square-foot basis for structures. Unit costs based on 1969 prices were broken down both by cost component and type of work. Also, a prorated allowance for preliminary and construction engineering was included in the costs.

The appraisal of needs on the Interstate System, while it involved no special techniques, was unique in a sense that deserves explanation. There were two specific types of needs considered in conjunction with the Interstate System: the first was the cost to complete the System, and the second was the additional needs which will accrue on the Systems between now and 1990 which are ineligible for Interstate System funding. The latter were estimated on the same basis as needs on other arterials using the existing conditions criteria and design standards. The needs reported represent the latter.

TABLE I.—ALTERNATIVES TO FULL HIGHWAY NEEDS

[Costs in billions]

	1970-90 needs in 1969 dollars	1973-90 needs in 1971 dollars	Backlog needs in 1971 dollars	1973-90 needs decrease in 1990 ADT by 20 percent 1971 dollars	1973-90 needs reduce HTC operation speed— 10 mph V/C to 1 1971 dollars	Combined reduction ADT, speed and V/C to 1
	(1)	(2)	(3)	(4)	(5)	(6)
Rural:						
Interstate.....	4.8	5.5	0.3	4.1	4.0	3.8
Other principal arterials.....	50.4	55.9	32.5	49.9	42.7	39.3
Minor arterials.....	48.6	55.0	33.5	49.3	40.0	42.8
Major collectors.....	38.4	41.4	28.2	40.1	40.5	39.7
Minor collectors.....	43.7	52.3	35.1	50.7	52.3	50.7
Locals.....	109.6					
Total on arterials.....	103.8	116.4	66.3	103.3	92.7	85.9
Total on FA eligible systems.....	142.2	157.8	94.5	143.4	133.2	125.6
Total nonlocal.....	185.9	210.1	129.6	194.1	185.5	176.3
Total.....	295.5					
Small urban:						
Interstate.....	.2	.3	(1)	.2	.2	.2
Other freeway-expressway.....	3.2	3.5	1.4	2.6	3.1	2.3
Other principal arterials.....	8.1	9.0	4.4	8.5	9.0	8.5
Minor arterials.....	6.6	7.5	3.6	7.3	7.3	7.2
Collectors.....	5.1	5.9	3.1	5.8	5.9	5.8
Locals.....	13.4					
Total on arterials.....	18.1	20.3	9.4	18.6	19.6	18.4
Total on FA eligible systems (nonlocal).....	23.2	26.2	12.5	24.4	25.5	24.2
Total.....	36.6					
Urbanized:						
Interstate.....	7.5	8.6	1.8	6.7	8.2	6.7
Other freeway-expressway.....	65.5	73.9	28.9	56.1	70.9	56.1
Other principal arterials.....	37.2	41.5	21.7	40.8	38.9	38.0
Minor arterials.....	40.0	45.4	20.2	43.1	43.7	42.3
Collectors.....	19.6	22.6	11.9	22.2	22.5	22.0
Locals.....	60.0					
Total on arterials.....	150.2	169.4	72.6	146.7	161.7	143.1
Total on FA eligible systems (nonlocal).....	169.8	192.0	84.5	168.9	184.2	165.1
Total.....	229.8					
Total:						
Total on arterials.....	272.1	306.1	148.3	268.6	274.0	247.4
Total on FA eligible systems.....	335.2	376.0	191.5	336.7	342.9	314.9
Total nonlocal.....	378.9	428.3	226.6	367.4	395.2	365.6
Total.....	561.9					

1 Less than 0.05B.

Note: All data excludes the cost of Interstate completion.

Table I illustrates the sensitivity of the total 1990 highway needs to changes in the assumed travel and criteria (minimum tolerable conditions) used for the 1970-1990 highway needs study. The column 2 total of \$428.3 billion represents the total non-local highway needs for a 18-year period (1973-1990) in 1971 dollars under criteria used in the 1970-1990 study. If travel were reduced 20 percent below the assumed study level of 1,863 billion VMT, total needs would be reduced by 10 percent to \$387.4 billion. This reduction in travel would represent a 2-percent annual growth in travel which is reasonable considering the mounting pressure for controls on the amount of private automobile travel to reduce petroleum consumption. The results of a 20-percent reduction in 1990 travel are illustrated in column 4. Column 5 represents the result of a lower level of service than for the minimum tolerable conditions used in the 1970-1990 needs study. These criteria represent a level below which no road or street in the country would be allowed to fall. Combining the reduced travel estimate with the modified base criteria would result in an estimated reduction in total 1973-1990 non-local needs of 15 percent or \$62.7 billion with a new needs of \$366 billion in 1971 dollars as shown in column 6.

Ever since the 1972 National Highway Needs Report was published, a misconception or misinterpretation of the needs data has arisen. There is a tendency to attempt to compare the total highway needs figure reported, with the present level of the total highway capital improvement program in the Nation, and conclude that the overall program level must somehow be increased to at least meet a majority of the needs. This, of course, is neither a logical nor a practical interpretation.

Referring to table I, a reexamination of highway needs for the period 1973-1990 shows that an estimated \$428.3 billion is required for all needs. Of this total, \$226.6 billion (column 3) is backlog (presently needing improvement) and the remainder will be generated by future travel. A result of modified minimum tolerable conditions and a possible reduction in the rate of future travel is that total 1973-1990 non-local highway needs could reasonably be estimated at \$365.6 billion (column 6). The anticipated needs then for future travel is approximately \$140 billion over a 18-year period.

The 1970-1990 National Highway Needs Study concluded that there existed \$200+ billion in backlog needs. This means that for all non-local highway mileage failing to meet minimum tolerable condition in 1970, \$200+ billion would be required to improve these facilities to accommodate traffic for a 20-year period. This figure was modified in the 1974 National Highway Needs Report to reflect 3 years of obligations, in 1971 unit costs, the results of which are illustrated in column 3.

It should be pointed out that backlog "deficiencies" can never be considered a static condition, one which will eventually be eliminated. There has always existed in this country as in all countries, a backlog of projects, be they highways, schools, or hospitals, which are to be financed in some order or priority. It cannot be assumed, nor was it implied in the 1972 National Highway Needs Report, that this backlog of highway needs be eliminated. In fact it is possible that the backlog as measured in 1970 was smaller than previous time periods, indicating that the overall program level was sufficient to reduce the backlog. This cannot be shown at this time since national backlog needs were never measured prior to the 1970-1990 Highway Needs Study.

The backlog should be thought of as the state or condition of the various functional systems at a particular point in time or as a measure of performance expressed in dollars. The performance represents a composite of all highway mileage, some in excellent condition, some in fair condition, and some in poor condition. The backlog is arranged in priority order by the various controlling jurisdictions with those sections requiring immediate improvement and/or having the highest benefit to cost ratio on top. As funds become available the backlog is decreased. However, continuous and/or increasing travel will create additions to the bottom of the backlog priorities. In this manner the backlog of highway needs is clearly dynamic through any period of time and to totally eliminate the backlog would essentially end the program until some new backlog was developed.

Since it is reasonable to expect a backlog of needs to exist at any point, the question becomes one of magnitude. Our roads and streets in this country are probably among the best in the world today. Of course there is congestion in our urban areas primarily during peak hours, but no one can expect to eliminate all congestion. There are also many miles of unsafe roads and our current programs are now geared to reduce this mileage. The point is that our current total system is in good condition and it is reasonable to make the performance of this system a standard of measurement. Assuming, then, that we wish to have, in 1990, a system of roads and streets functioning as they do today, our goal would be to at least maintain the backlog, or performance level, or possibly reduce it between now and 1990.

It was shown earlier that the program level needed to maintain the current backlog level was \$140 billion. The total combined Federal-State-local highway program is currently \$10 billion on non-local capital improvements. (See table II.) Between 1973-1990 this would generate \$180 billion in improvements in constant dollars. Subtract from this the estimated cost to complete the Interstate System of \$25 billion and we are left with \$155 billion. The conclusion reached from this analysis of highway needs is that the current combined funding level of the Federal, State and local governments is sufficient in constant dollars to maintain the current level of performance of the Nation's highway plant.

The Federal share of total highway capital expenditures has been substantial over the years. Historically, Federal funds, including Interstate, have on occasion, accounted for nearly one-half of all current highway capital expenditures (1963), but have declined to less than 40 percent today. However, focusing exclusively on only the ABCD systems, the Federal share is in the 26 percent to 30 percent range. This report specifically addresses non-Interstate capital needs thus highlighting arterial and collector highways eligible for inclusion in Federal-aid systems.

TABLE II.—ESTIMATED CAPITAL OUTLAY BY FUNCTIONAL SYSTEMS¹

[In millions of dollars]

Year	Interstate	Other arterials and collectors ²	Subtotal (nonlocal)	Local	Total
1974 ³	3,544	6,028	9,572	2,377	11,949
1973	3,910	5,817	9,727	2,205	11,932
1972	4,303	5,794	10,097	2,171	12,268
1971	4,182	5,925	10,107	2,192	12,299
1970	4,033	5,369	9,402	2,166	11,568
1969	3,742	4,611	8,353	2,055	10,408
1968	4,000	4,412	8,412	1,926	10,338
1967	3,835	3,953	7,788	1,865	9,653
1966	3,718	3,778	7,496	1,742	9,238
1965	3,474	3,410	6,884	1,488	8,372

¹ These data update expenditures reported in ch. II.

² These data correspond to the 1970-72 obligations mentioned in ch. III. By summing 3-yr. periods, e.g., 1970-72, 1971-73, or 1972-74, expenditures of \$17,100,000,000, \$17,500,000,000 and \$17,600,000,000 approximate total arterial and collector obligations of \$17,600,000,000.

³ Preliminary.

Senator STAFFORD. I guess you have already gone into this, but with respect to the States' ability to match Federal funds, have you a fairly accurate estimate now of how many States, if any, might be unable to match, if the Federal program level were maintained at the \$6.3 billion to \$6.6 billion level for 2 fiscal years?

Mr. TIEMANN. In our last survey of the States, as I indicated earlier, about eight States indicated problems. Most of those were matching problems, but not all matching problems.

As I indicated, we tend to believe that this matching problem has been blown out of proportion. Those States that have had, or presently do have a matching problem, indicated to us that they were willing to go to their legislatures and get additional funds.

I think the Governors indicated that, also. About 25 States presently have legislation which would increase the amount of funds that the States could use for matching.

Senator STAFFORD. Thank you.

Senator DOMENICI. Would the Senator yield?

The last survey you referred to says eight States. Was that survey rendered on the question that Senator Stafford asked, or with reference to the \$2 billion that was going to be released? His question was with reference to 2 successive years at the rate he indicated. Which was it?

Mr. TIEMANN. On the \$2 billion.

Senator DOMENICI. So that does not answer his question as to whether you have a survey indicating whether or not the States—

Mr. TIEMANN. Yes. The eight refers to the \$2 billion this year. There may be other States that may have difficulties in 1976.

Mr. LAMM. The number of States may rise to about 15 in fiscal 1976.

Senator STAFFORD. My question referred to the problems States might have in matching if the Federal program were conducted for 2 fiscal years at the level of \$6.3 billion to \$6.6 billion a year.

The differences in the question involved the \$2 billion released from the funds. Here, your answer would be that there might be 15 States.

Mr. LAMM. Yes, sir, Senator. We are already at the 6.6 program level for fiscal 1975, and our current estimate is that eight States do have funding problems in 1975. Assuming we were removing any additional obligation control restraint during 1976, the number of States that would have matching problems would be raised to about 15.

Senator STAFFORD. Would it be possible to supply the committee with a list of the States that you are referring to?

Mr. LAMM. Yes, sir.

Senator STAFFORD. For the record?

Mr. LAMM. Yes, sir.

[The information requested follows:]

Question. Supply a list of States with matching problems. Eight in 1975 and fifteen in 1976.

Answer. Following is a list of States with matching problems, broken down between 1975 and 1976:

STATES WITH MATCHING PROBLEMS, FISCAL YEAR 1975

- | | | |
|-------------|-----------------|--------------|
| 1. Delaware | 4. Maine | 7. Virginia |
| 2. Iowa | 5. New Mexico | 8. Wisconsin |
| 3. Kansas | 6. South Dakota | |

STATES WITH MATCHING PROBLEMS, FISCAL YEAR 1976

- | | | |
|-------------|------------------|------------------|
| 1. Colorado | 6. Minnesota | 11. South Dakota |
| 2. Delaware | 7. Ohio | 12. Tennessee |
| 3. Iowa | 8. Oregon | 13. Texas |
| 4. Kansas | 9. Pennsylvania | 14. Virginia |
| 5. Maine | 10. Rhode Island | 15. Wisconsin |

Senator STAFFORD. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator HART?

Senator HART. Thank you, Mr. Chairman.

Mr. Administrator, what studies have you done concerning the impact of the Interstate Highway System on driving patterns and particularly fuel consumption?

Mr. TIEMANN. If the Senator can be more specific with regard to the driving patterns—

Senator HART. That is, do people tend to drive more if they have highways of this sort?

Mr. TIEMANN. Are you asking in the context of the present energy crisis—or are you talking about in the long term, since the life of the Interstate?

Senator HART. Well, regardless of context—maybe I am assuming something that doesn't exist, and that is that you have conducted studies of driving patterns, and particularly as they relate to the Interstate System. Is that correct?

Mr. TIEMANN. I will ask Mr. Lamm to make a comment.

Mr. LAMM. Senator Hart, we have two different classes of study that are available. First, we have a review of the total implications of an Interstate System nationwide on travel.

For instance, the mileage of the Interstate System is only about 1.2 or 1.3 percent of roads and streets around the country, but we know

when the entire system is completed, it will carry about 25 percent of the vehicle miles traveled.

This would be one example, and we could show a pattern of interstate mileage open to traffic and the growth of travel on those highways.

You can also show a longer term growth in vehicular travel that preceded the Interstate System, and frankly, from my recollection, you cannot really visualize much of an increment that would be related strictly to the Interstate System. That would all be at the national level.

Then there is a second class of studies which we have available which deal with individual routes on the Interstate System, and they show in many cases a relocation of travel which would have taken place anyhow, but would be funneled and channeled into the Interstate, because it happened to be the best travel facility around.

In many cases, we find this facilitates traffic, and doesn't reduce fuel consumption, because there is no stopping and starting.

Senator HART. These same studies indicate that the system induces automobile transportation particularly? Do they indicate that or not? I think what you are suggesting is that people are going to drive their cars anyway, and they can get there faster this way, and perhaps more efficiently.

Mr. LAMM. Yes. We do not have any figures that would show that there is a large increment of travel which is created just because there is an interstate system there.

Looking at the individual segments, though, there may be traffic redirected to the Interstate System that would otherwise have located in a different corridor to go into town, say, on a different route.

Senator HART. I think you are extrapolating, also, that the same patterns would hold for fuel consumption. I think you have suggested that this may be fuel efficient.

Mr. LAMM. In many cases, yes, sir, particularly with the status of the system's completion that we have now.

Frequently, closing a gap in the Interstate System has great safety benefits and also avoids quite a bit of indirection of travel. You can drive from here to Florida, for example, on I-95. Considering yourself an individual traveler, you would waste a lot of time at the gaps when you had to leave I-95.

Senator HART. Have these or any other studies that you have had looked into the impact of the increased gasoline taxation on driving patterns?

Mr. LAMM. We have had some studies, both with our own forces, and in cooperation with the Federal Energy Administration of the price elasticity of demand for gasoline, and in the short term, it is fairly inelastic at low per-gallon charges.

You have to get up into very sizable tax increases to recognize a considerable impact on the purchase of fuel.

Senator HART. What range would that be?

Mr. LAMM. I might supply it for the record, if I may.

Senator HART. Would you? I think it would be very interesting.

[The information requested follows:]

Question. Economic elasticity of vehicle travel versus fuel costs.

Answer. Most estimates of the price elasticity of demand for gasoline indicate a very low elasticity, especially in the short run. A study by Data Resources.

Inc., *A Study of the Quarterly Demand for Gasoline and Impacts of Alternative Gasoline Taxes*, December 1973, prepared for the Environmental Protection Agency and the Council on Environmental Quality, estimates the short run price elasticity of gasoline to be -0.14 , meaning that a 10 percent increase in price would cut demand by only 1.4 percent. In the longer run, as motorists sell their old cars and buy smaller, more fuel efficient cars, Data Resources, Inc. estimates gasoline price elasticity to be -0.28 . Mr. Alan Greenspan, Chairman of the Council of Economic Advisers has stated "Although it is difficult to tell precisely, demand elasticity for gasoline looks to be about -0.2 ."¹

Senator HART. I think what I am trying to get at is what appears to more and more of us something of an anomaly, which, if we do not have an energy shortage now, that more and more people are convinced that we are going to face energy shortages in the long term, and that may be 15 or 20 years, but that these shortages will have an impact not only on our modes of transportation, but building, construction, and so on.

The question is whether it makes sense under those circumstances to continue expanding a system which was designed for the 1950's. and contemplated almost unlimited petroleum products for all transportation, when it now appears that those circumstances may not apply, and in all likelihood won't apply.

Mr. LAMM. That is a very valid question. Of course, Congress has responded to that in the provisions of the 1973 legislation, which would permit States to delete segments from the Interstate System and substitute another transportation facility which will better serve their needs.

I should point out that the highway program we are talking about is not by any means a complete new construction type of program. With regard to the interstate program, it is improving safety on existing segments that date back to the early portions of the system.

It is also a program of closing gaps which is a national goal, that is to achieve the eventual completion of the Interstate System. But, once you get beyond the Interstate System, we are dealing with a system of existing roads and streets that now is deteriorating.

Bridges are reaching their 50-year expected life, and the pavement is reaching its 20-year expected life. Our program level just provides a continuation of the Federal effort to keep the highway system functioning so that we do not perhaps have the same thing happen on the highway system that happened over the last 50 years with the railroad system.

Senator HART. I apologize if you have already testified on this, and maybe it is contained in the statements that have been made. What percentage of the funds that we are talking about here are maintenance as opposed to new construction?

Mr. LAMM. None would be maintenance, because maintenance as an activity is prohibited from any Federal funding. There is a very sizable portion, if you go below the interstate category that is used to prevent deterioration and obsolescence. It is in the range of 70 percent of the total dollars that would be tied up on improvements to highways which already carry traffic. There is little creation of new roads.

Senator HART. Maybe I am using the wrong term. You talked about preventing deterioration.

¹ Business Week : July 27, 1974, p. 58.

Mr. LUTZ. Senator, maintenance has been defined as sort of cutting the grass alongside the highways. The State highway departments have the responsibility. You are correct that the program is geared toward rehabilitation, overlay, and so forth.

We are trying to bring that more into the program to keep the infrastructure the same as it is now. So, you are correct. We are trying to shift the program into more of the prevention of deterioration, but we do not see Federal funds paying the salaries of people filling the potholes or those keeping the grass cut.

Senator HART. I am learning the terms of art. Could you give me ballpark percentages, then, of rehabilitation versus new construction?

Mr. LAMM. May we supply that for the record? I used a figure just recently in the vicinity of 70 percent of all dollars below the Interstate System, but I would like to check that.

Senator HART. I would appreciate that.

[The information follows:]

Question. Percent of Federal dollars spent on rehabilitation of highways versus construction.

Answer. It has been our experience over the years that approximately 70% of highway improvements consist of reconstruction.

In the past year almost 50% of Interstate construction costs have been spent for reconstruction.

Senator HART. Thank you, Mr. Chairman.

Senator BENTSEN. When you get over an inch of new surfacing—that is construction—don't you have a classification?

Mr. TIEMANN. I will ask my engineering and traffic operations man to be a little more specific. We have redefined construction in several instances, and loosened the interpretation on measurements of overlay and so forth.

Mr. LAMM. It used to be that we had an arbitrary figure that the pavement above 2 inches was worthwhile financing with Federal-aid funds. In recent years, particularly when the skid resistant quality of pavement became known to have significant safety implications, adjustments in the criteria have been made. There is no arbitrary figure.

We wouldn't say that if the State proposed an overlay 1-inch thick we would agree, and if they proposed seven-eighths inches, we would not; we do participate in overlays of about half an inch, if they are tied specifically to improving skid resistance.

Senator BENTSEN. Senator Domenici.

Senator DOMENICI. Thank you. I listened to you and I went back to your statement and reread the portion which said: "In addition, we estimate that as many as 71,000 additional ancillary job opportunities may be induced for a total of 126,000."

Now, Governor, it is my recollection that last year Congress, in title X of the public service job bill, for the first time in history required that each agency of the Federal Government having ongoing programs evaluate or inventory the job intensity of those ongoing programs. They were supposedly to report to the Secretary of Commerce and the Secretary of Labor. We are soon to get that report.

Now, are the figures that you gave us figures that you are going to give in response to that inquiry, or are you doing a more specific inquiry with reference to title X?

Mr. TIEMANN. The figures I gave in my testimony this morning will not be the figures we will supply as a result of the study on title X.

Senator DOMENICI. How do you propose to do the study for title X? What is your understanding of what you are to produce?

Mr. TIEMANN. The survey has already been completed and reported to the Department of Commerce.

Senator DOMENICI. Do you recall what it reveals in terms of the job intensity of the ongoing programs?

Mr. TIEMANN. Yes, sir. And we can supply that for the record.

Senator DOMENICI. Would you make it part of the record, please?

Mr. TIEMANN. Yes.

Senator DOMENICI. Could we have the summary now? I would like to see them while I continue my questioning.

Mr. TIEMANN. We can give you the résumé.

Mr. LAMM. What we have here is a summary of the report we submitted to the Commerce and Labor Departments through the Secretary's office. I think for the record it would be better if we provided you our entire submission.

Senator DOMENICI. Mr. Chairman, I would ask unanimous consent that their report and the summary be made part of the record as soon as the report is delivered.

[At this point Senator Hart assumed the Chair.]

Senator HART [presiding]. Without objection.

[The information requested follows:]

SUMMARY AND REPORT ON TITLE X INVENTORY STUDY

Attached is a copy of a summary statement and our submittal to the DOT Deputy Under Secretary for Budget and Program Review for consideration for proposals from DOT to the Department of Commerce for highway projects under the Job Opportunities Program.

We have been informed that only the \$26 million of direct Federal highway construction was recommended to the Department of Commerce by DOT for funding under the Job Opportunities Program, since almost all of the projects proposed by the States are eligible for Federal-aid funding and could be covered by the recent release of \$2 billion of additional Federal-aid highway funds.

SUMMARY STATEMENT

FHWA'S POSITION AND RESPONSE TO REQUESTS FOR PROPOSALS FROM DOT UNDER TITLE X OF THE JOB OPPORTUNITIES PROGRAM AS PROVIDED BY TITLE III OF THE EMERGENCY JOBS AND UNEMPLOYMENT ASSISTANCE ACT

A recent survey of 20 States that were identified as being in the high unemployment category stipulated for eligibility under Title III of the Emergency Jobs and Unemployment Assistance Act indicated that \$883 million worth of work could be put underway within 60 days. This amount of work would generate approximately 16,000 man-years of work on-site, 17,500 man-years of work off-site, and 44,000 man-years of work would be induced. Approximately \$50 million of this could be devoted to safety improvement projects. In addition, about \$50 million would qualify for funding under Title I of the Emergency Jobs and Unemployment Assistance Act and it is our understanding that requests for this funding should be made through the State Governor's office. This work involves maintenance type activities that are not currently eligible for Federal-aid funding.

The above estimates were made prior to the recent release of an additional \$2 billion of Federal funds for highway construction. Since the great majority of the \$883 million worth of projects identified by the States are eligible for normal Federal-aid funds, it is believed that most of this work will be accomplished by utilizing a portion of the \$2 billion of additional Federal-aid funds recently released.

A survey of our direct Federal highway program indicates that approximately \$26 million worth of construction would qualify for funding under Title III of the Emergency Jobs and Unemployment Assistance Act. This work would create approximately 475 man-years of on-site work, 515 man-years of off-site work, and 1,300 man-years of induced work. Almost all of these projects are constructed for other Federal agencies such as the National Park Service, the Bureau of Indian Affairs, and the Bureau of Land Management. Therefore these projects would not be included under the recent \$2 billion Federal-aid fund release.

As a result of the above considerations, only \$26 million of direct Federal highway construction was recommended by DOT for funding by the Department of Commerce under Title III of the Emergency Jobs and Unemployment Assistance Act.

FEBRUARY 7, 1975.

Hon. THEODORE C. LUTZ,
Deputy Under Secretary for Budget and Program Review.

Attached to this memorandum are listings of Federal-aid and Direct Federal Highway project activities which have the potential for stimulating the creation of jobs in high unemployment areas. We apologize for not providing you with all of this information in the format requested in your January 30, 1975, memorandum but because of a delay in receiving your memorandum this information was put together in only one day.

The American Association of State Highway and Transportation Officials has presented us with the attached rough estimate of highway work that could be undertaken within a short time period to provide increased employment opportunities. This consists of a sampling of 20 States that have been identified as being in the high unemployment category as stipulated for eligibility in the job opportunities program. This sampling indicates \$883 million worth of work could be put underway within 60 days on a nationwide basis. It is estimated that this amount of work would generate approximately 16,000 on-site jobs, 17,500 off-site jobs, and 44,000 induced jobs. The majority of these projects would be completed within a year's time. Either Title X funds of the Job Opportunity Program or an additional release of funds under the Federal-aid highway program could be used to finance this work.

23 U.S.C. 152, 153 and 405, and Sec. 203 of the Highway Safety Act of 1973 established categorical safety programs addressing elimination of high hazard locations, elimination of roadside obstacles, safer roads demonstration program and a rail-highway grade crossing program. The average cost per project is \$67,000 and most can be completed in a few months time and can be constructed with force account methods to expedite the improvement. Normally these projects are built within existing rights-of-way and do not require a long lead time to get underway. It is estimated that \$50 million worth of these projects over and above the presently apportioned \$250 million could be spent by the States. Either Title X funds of the Job Opportunity Program or an additional release of funds under the Federal-aid highway program could be used to fund these safety projects. It is estimated that approximately 1,000 on-site, 1,400 off-site, and 2,500 induced jobs would be created over a six-month period after start of work. These projects could almost all be completed in six months.

Our Region 15 Office estimates that they could put 20 Direct Federal projects, estimated to cost approximately \$26 million, under construction within the next six months utilizing Title X funds. Almost all of these projects are in the Appalachian area. Attached are the appropriate forms summarizing the project details.

If you would like further information concerning the above estimates we will be happy to furnish you more details.

L. P. LAMM.

AMERICAN ASSOCIATION OF STATE HIGHWAY
AND TRANSPORTATION OFFICIALS,
Washington, D.C., February 6, 1975.

Hon. JOHN BARNUM,
*Acting Secretary of Transportation,
Department of Transportation, Washington, D.C.*

DEAR MR. SECRETARY: You have asked us for a very rough-cut estimate of highway work that could be undertaken within a short period of time to provide increased employment opportunities.

All of the States could undertake immediately a high labor-intensive type of program which would be centered around such things as clean out and straight-

ening stream channels and waterway openings through culverts and bridges; doing hand ditching; riprapping, etc., and to do minor landscaping work of removal of dead trees and brush adjacent to the roadside, reconstructing and replacing damaged facilities at roadside rest areas, doing litter pickup. This type of program would provide one man year of employment for each \$7,500 expended, and we would estimate that the States could furnish supervisory personnel, small tools and equipment as part of their contribution to the program. Some States have already undertaken this type of approach. We would feel that there would be no difficulty in putting at least \$1 million per State into this type of program immediately.

Many of the States have already pulled projects from scheduled lettings for the 1975 fiscal year, due to cash flow or other difficulties. This obviously is having a detrimental effect on the contracting industry. Amounts deferred, as of January, by State were: Arizona, \$6-8M; Arkansas, \$30M; California, \$190M; Connecticut, \$15M; Georgia, \$42M; Illinois, \$70M; Iowa, \$250M; Louisiana, \$80M; Maine, \$10M; Massachusetts, \$88M; Nebraska, \$15M; New Mexico, \$5M; Oklahoma, \$20-30M; South Carolina, \$12M; Utah, \$3-5M; Virginia, \$200M; Washington, \$20-25M; and Hawaii, \$6M.

A quick sampling of various States also reveals the following information on projects that can be put to contract within a 30 to 60-day period. These are in addition to the million dollars per State projects listed above:

Alaska—Within the next 60 days, they can put to work \$1 million on boardwalks, local service roads and marking of snowmobile trails in remote villages where unemployment rates are quite high.

Arizona—14 jobs providing 1,400,000 man hours for 35 million, as follows: Gila County, \$5.7M; Mohave County, \$11.8M; Navajo County, \$0.8M; Yuma County, \$4.7M; Pima County, \$5.4M; Maricopa County, \$5.2 M; and Cochise County, \$1.3M.

This would provide bridge repairs and a new rest area.

Arkansas—Could put \$1 million to work in 30 days and \$16 million within 60 days on grading, safety improvements to structures in the Little Rock and West Memphis areas.

Iowa—Could place \$33 million under way in grading and resurfacing statewide.

Louisiana—Could put \$54 million under way in 30 days and \$18 million under way in 60 days on major and minor bridges.

Minnesota—Could put \$43 million to work on resurfacing and safety construction improvements.

Mississippi—Could put \$40 million to work immediately on Secondary system, on resurfacing and safety improvements, and \$87 million on an Interstate project in Jackson County by April 1st.

New Hampshire—Could immediately put to work \$10 million on minor reconstruction statewide, \$15 million on a toll road by April 1st, and \$18 million on an Interstate project in Hillsborough County by April 1st.

North Carolina—Could put \$5 million work of resurfacing to contract within 60 days in the following counties: Union, Wayne, Mecklenberg, Gaston, Rowan, Johnson and Cabarrus.

Oklahoma—Can put \$9½ million to contract within 60 days on bridges, safety improvements and resurfacing projects statewide.

Rhode Island—Can put to work almost immediately \$3½ million on safety, sidewalks, bridges, obstacle removal and drainage statewide.

South Carolina—Can put \$1½ million to work within 30 days on resurfacing and safety improvements, and \$11½ million within 60 days on bridge painting and shoulder widening. The above projects would be in Sumter and Marion Counties, and the cities of Greenville and Charleston.

Utah—Could put \$34 million of resurfacing underway statewide.

Washington—Could put \$40 million of resurfacing and \$30 million worth of bridge repairs under way.

North Dakota—Total of \$29 million worth ready to go within 60 days. \$12 million on an Interstate project in Richland County, and \$17 million for grading and resurfacing statewide.

New Mexico—\$14 million of new construction in the following counties: Bernalillo, Donna Ana, Rio Arriba, Otero, McKinley, Valencia and Union.

Tennessee—They could provide \$70 million of construction work statewide.

Michigan—Could provide \$147 million of highway construction, and in addition \$8 million for rehabilitation of railroad rights-of-way, \$2.3 million for upgrading

rail and bus terminals, and \$2.3 million for converting a dial-a-ride bus building for construction.

California—72 projects for a total value of \$19 million that could be put under way within the next 60 days. In 31 counties of the State, the majority of the projects would be safety, landscaping, and resurfacing projects.

Kentucky—\$37 million worth of construction statewide. \$25 million in areas of high unemployment.

Maine—Within 30 days, 15 construction projects worth \$5 million statewide. Within 60 days, 30 additional projects of \$15 million on resurfacing.

This sampling of 20 States indicates \$883 million worth of work that can be put under way within 60 days, nationwide. This should then represent a program in the approximate range of \$2 billion that the States are equipped to handle.

Over the years, data has been developed about the man-hours of work created by different types of construction. The following table was developed by officials of the Federal Highway Administration, based on data generated by the Bureau of Labor Statistics, concerning offsite and induced labor:

[Man-hours per million dollars]

Type of work	Estimated direct labor	Estimated offsite (1.4 times direct) indirect labor	Estimated induced labor (3.5 times direct)
Grade and drain.....	60,711	84,995	212,489
Bituminous paving.....	29,966	41,952	104,881
Concrete paving.....	30,917	43,294	108,210
Structures.....	40,238	56,333	140,833
Miscellaneous (safety, topics, etc.).....	28,846	40,384	100,961

We hope that this information will be of benefit to you. We would very strongly encourage the utilization of the highway program to provide jobs, and we would be pleased to develop more detailed information for you, should you consider this approach feasible.

Sincerely,

HENRIK E. STAFSETH, *Executive Director.*

PROPOSED DIRECT FEDERAL CONSTRUCTION PROJECTS UNDER THE JOB OPPORTUNITIES PROGRAM—SUMMARY

Priority	Total project cost	Total labor cost
1—Bicycle trails.....	\$1,500,000	\$650,000
2—Bridges.....	2,100,000	760,000
3—Grading and drainage.....	12,475,000	3,330,000
4—Paving.....	9,800,000	1,600,000
Total.....	25,875,000	6,390,000

Senator DOMENICI. If you were telling the President of the United States the effect of the highway program in the United States on unemployment, would you use 126,000 jobs per billion dollars as the impact on the economy, or not?

Mr. TIEMANN. Yes, sir, we would. May I point out that this is a rather elusive number. It is 126,000, and it is valid today, but it is continually eroded by the impact of inflation.

Senator DOMENICI. Yes. If my arithmetic is correct and if your assumptions are correct, you are telling us that each billion dollars of funds spent under present U.S. highway programs produces 126,000 jobs, more or less, and I divided that out and it seems to me you are talking about \$7,800 per employee. Now we understand many are

making 22 and many are making 18, but you are talking about a ripple effect.

The Congress in the interest of cutting unemployment passed the Public Employment Act, and we appropriated \$8,000 per employee as a maximum, with administrative costs to come out of that.

It appears to me if I were advising the President of the United States—as his economist—I could make a very good case for \$1 billion of highway funds being far more effective than \$1 billion worth of public service job money.

I ask if that kind of point is being made to the administration with reference to the impact of highway funds on the present recession?

Mr. TIEMANN. Yes, Senator, we have made that point with the administration, and evidence of that is the release of the \$2 billion on the 13th of this month.

Senator DOMENICI. I want to go back a little bit, this might precede your assuming your present office, but you were in office for part of it. Do you know, as the President impounded highway funds, obviously with the full concurrence of OMB, whether or not the job potential of each impoundment was considered, or was just the inflationary aspect considered?

Mr. TIEMANN. Maybe Mr. Lamm can answer that.

Mr. LAMM. Senator, each time we went through the budget cycle for the succeeding fiscal year, as those programs were developed, there was a full analysis. We have had figures for many years about the employment impact of highway construction, and we were able to advise the Department, the OMB, and the President's office that so and so many jobs would be created if the program level were at various points.

[Senator Randolph reassumes the Chair.]

Mr. LAMM. The impact on employment was a consideration.

Senator DOMENICI. With reference to the \$2 billion in impoundments that was released, you indicated that you were trying to build in flexibility for States to put it to work as soon as possible.

This is my first opportunity to ask you questions about it. I have read that you are talking about "first come, first served, let's get it all out there."

Is that the policy with reference to the \$2 billion, or are you going to allocate it to each State, giving them a reasonable time to come up with their match in accordance with the allocations heretofore established under the Highway Act?

Mr. TIEMANN. Senator Domenici, we have advised our States through our division offices that the money would be available on a first come, first serve basis and the State could use it for the programs most important at the time.

We will not go on an allocation basis as we have with the normal procedure. We felt we needed the flexibility. The States were under a rather severe time constraint by having to obligate the additional funds by the end of the fiscal year.

We thought that we would remove administratively as many barriers as we possibly could.

Senator DOMENICI. Governor, in our Budget Committee hearings on the impoundments, we found States that could not match—Rhode Island, New York, New Jersey, Connecticut, Maine, Virginia, New

Mexico, and the District of Columbia. Many of those are in the process of trying to find the money.

But we also found that there is a distinct difference between obligating the funds on your part and then going to work on a project, and that there is a significant difference between an obligation and a job, therefore making the figures of 126,000 potential jobs per million irrelevant, depending on whether the billion goes to work or is just obligated.

With reference to the \$2 billion, are you attempting to cut the time between obligation and putting it to work in any special way, and will it be put to work sooner than the normal sequence of events under obligation?

Mr. TIEMANN. Yes, sir. The constraints put on the States at the time we released the \$2 billion, were one that the States could not utilize more than 20 percent of the \$2 billion for acquisition of the right-of-way, and two the time span between which we give project approval and before construction actually starts, is limited to only 45 days.

Senator DOMENICI. I am not necessarily an opponent on the moratorium on the match at this point. I share the concerns that Senator Bentsen indicated, that everyone ought to be invited to put money where it will do the most good. But it does seem strange to me that we should, on the one hand, be terribly worried about waiving the match—when a billion dollars could be put to work quickly and could produce 126,000 jobs that are productive, while on the other hand we are appropriating \$3 or \$4 billion for public service jobs that are unproductive in many instances, and admittedly so.

It seems to me one might weigh the costs of the match versus the cost of public service jobs, and one might get a 9 to 1 ratio.

Now, you are more concerned, however, about setting a precedent of 100-percent financing. Is that correct?

Mr. TIEMANN. Yes. We understood the Governors to say they wanted 100-percent financing in perpetuity, including maintenance.

Senator DOMENICI. We met with them—Senator Randolph was also there. I didn't understand perpetuity. I thought they talked about 2 years.

The CHAIRMAN. That is correct.

Mr. LAMM. There is one other impact of the waiving of the matching requirement. If you mix in all of the Federal Aid programs together, the Interstate and the 70/30, there is an average Federal/State matching ratio of about 80/20.

If you waive the State match, then the actual program level goes down by 20 percent, because you are only dealing with 80-percent Federal funding which would influence the construction employment impact by 20 percent in the inflationary direction, the wrong direction as well.

Senator DOMENICI. I understand that you are saying if States come up with a match, each billion dollars of Federal money, using your 20-percent average, turns into \$1.2 billion in highway work. I was referring only to the effect of the 20 percent in terms of billions in job production versus a program where you are going to appropriate money for jobs.

I think you have made an excellent case, perhaps unintentionally, but certainly for me, for spending more money this way than the other way,

and we can probably prove that even on the per-person allocation of money that you produce more jobs with a billion dollars this way than you do with a billion dollars worth of public service jobs.

That is my point, and I understand yours.

Senator STAFFORD. Would the Senator yield there?

I think what the Governor was trying to say was that if the match is waived for 2 years, it would be helpful, and after 2 years, the States would resume matching.

Mr. TIEMANN. Yes. I think there are all sorts of problems in waiving a match, and admittedly our position is that the States simply have got to go back to their legislatures. Everybody is "biting the bullet" this year, and the States will have to do the same thing.

Now, I guess it is irrelevant whether we are talking about the States who came to us and said we want the money forever. The administrative nightmares are still there.

Senator DOMENICI. I certainly agree with you, and I listed New Mexico among those States, but I would also tell you that today New Mexico's Legislature is acting to provide the match. I think New Mexico will take care of it.

Let me ask you about conservation as it relates to the 55-mile-an-hour speed limit, although it is not terribly relevant to today's hearings. Senator Hart raised the question of conservation, however. The U.S. Congress has now set the 55-mile-an-hour speed limit on the Interstate Highways. What are you doing about enforcing it, or not enforcing it?

We have been very reluctant to put you in the policing business, but I think the last time Senator Randolph proposed the reduced speed, it passed rather handsomely in the Senate. There was real accord that we ought to get serious about the 55-mile-an-hour speed limit. What are you doing about that?

Mr. TIEMANN. We have had many deliberations within FHWA and within the Department of Transportation. Presently, we along with the National Highway Traffic Safety Administration, have come up with a proposed regulation as to how we could best monitor the enforcement of the 55-mile-an-hour limit. We are in complete agreement with you. We don't want to set up a Federal police force. We don't think that is the proper thing to do. Nor do we think the Federal Highway Administration people ought to be sitting on the side of the road with a stopwatch.

We are proposing that we develop a system under which we would monitor the procedures by which the States are enforcing the 55-mile-an-hour speed limit. When that monitoring system is finally put into effect, we would advise the States that we would have criteria by which we would or would not withhold Federal funds if they are not enforcing it.

It is a difficult area, and we don't want to take away the State's authority in this matter.

Senator DOMENICI. Governor, don't you feel rather seriously bound by the policies set by the Congress of the United States to see to it that the States come up with an enforceable 55-mile-an-hour speed limit?

Mr. TIEMANN. Absolutely. We are as serious about this as Congress was when it passed the law, but we want to avoid the establishment of a Federal police force.

Senator DOMENICI. Have you as a starter indicated to the Governors of States what authority you do have if they don't see this is enforced?

Mr. TIEMANN. That is what I was trying to make clear. When we have the monitoring system finally in place, which we don't yet have, then we can advise the governors. "Here is the system which will monitor your enforcement procedures, and if you are not enforcing properly, we will take sanctions."

Senator DOMENICI. I don't mean to be argumentative, but how long does it take to come up with the monitoring system? We have the problem now. The best conservation program that we know of on gasoline is this one. It has been stated over and over again how many millions of barrels of crude this would save in the United States while we are going through the transition. So might I ask you how long do you think it would take for you to have a monitoring program that you believe will respect the rights of the States, but will put into effect the law of the land?

Mr. LAMM. The regulations that Governor Tiemann was talking about, Senator Domenici, relate to the requirements in the 1974 Highway Amendments. This was an effort which we began after Congress passed the 1974 highway amendments, and this regulatory process, because it does involve a lot of the traveling public and everything, will go to the full public review and comment process through the Federal Register. Our draft is scheduled for publication in the Federal Register by, I would say—early March, if I am not mistaken—and I think we are on schedule for that.

The 1974 highway amendments, as you know, were passed late in 1974, and really little time has elapsed since. But on top of that, as far as promoting observance of the speed limits, we have had some actions underway well before enactment of this legislation, working through Governors' offices and through the individual highway departments and State DOT's. Mainly these have been jawboning, and demonstrating the value to be gained by speed enforcement. A State administration that permits its drivers to travel faster than the 55 miles an hour with no penalty is in effect sentencing a few of those drivers to suffer a fatality during the course of the year. That in itself ought to be sufficient grounds for the State to doggedly enforce the regulation of the speed limit as it is set up now. It is not anything that we are just beginning.

Senator STAFFORD. Would the Senator yield?

Senator DOMENICI. I would be delighted to yield to Senator Stafford.

Senator STAFFORD. Possibly you can't answer this question, but I remember reading statistics on a national basis that all speeds on highways in the United States excepting the Interstate System have been 57 miles an hour, and the average speed on the Interstate System has been 61 miles an hour.

Would either of you, or any of you, be able to comment on that?

Mr. LAMM. What we have seen frequently are the results of spot studies. One of the problems is that you can't put a clock on every motorist on every highway, every minute of the day and night. So we do statistically try to develop the proper locations and the proper timing for speed monitoring.

The figures normally relate to the flow of traffic observed at a point, or several points. For the speed study to be valid, you have to begin with freeflowing traffic. The percentage figure you often see neglects everybody that is driving in an urban area. It neglects everybody who is commuting during the morning and the afternoon peak hour. It neglects everybody who is traveling late at night or during rainstorms when speed is slowed down. Those are not suitable times to conduct speed studies.

So if you deal with the total vehicle miles traveled on the interstates, the actual percentage of people exceeding 55 miles an hour is much lower.

Senator STAFFORD. I got the impression that these figures, no matter how valid or invalid they might be, indicate a substantial lowering of the average speed across the country since the 55-mile-an-hour speed limit went in, and while many people get the impression that the average interstate traveler is still going 75 miles an hour, they apparently are going nearer to 60. Would that be your observation?

Mr. TIEMANN. Yes, that is correct.

Senator STAFFORD. Thank you.

Senator DOMENICI. I have taken far too much time.

The CHAIRMAN. I would be happy to have you continue, Senator Domenici.

Senator DOMENICI. I will yield to you, since Senator Buckley has arrived, as well as yourself, and I will try again later.

The CHAIRMAN. You will not only try; you will succeed.

Thank you. You have been having helpful colloquy in reference to the 55-mile-an-hour speed limit. I only want to express appreciation for Senator Hart's mentioning this earlier, and Senator Domenici and Senator Stafford have followed through on the subject.

I think it is important to know that there are some States that are making a special effort.

Just so the record may reflect it, I have written personally to the Governors on three occasions. It was to urge the Governors to see that the speed limit is enforced. I did that prior to our action making it a national statute, because we have felt that not enough was being done.

[The letter to the Governors, referred to above, follows:]

U.S. SENATE
COMMITTEE ON PUBLIC WORKS.
Washington, D.C., July 10, 1974.

DEAR GOVERNOR: On June 7 and October 2, 1973, I wrote to you concerning a "Sense of the Congress" resolution proposing that the States voluntarily reduce speed limits to save lives and conserve energy. I expressed the hope that you would join in encouraging activities that would assure adequate supplies of energy for all our people. Subsequently, as you know, Public Law 93-239, establishing a uniform nationwide energy conservation speed limit of 55 miles per hour, became effective on January 2, 1974. This measure has been of intense interest to me.

The responses from you and other governors has been gratifying. Through your cooperation and efforts, this law has resulted in a substantial reduction in traffic fatalities and great savings of fuel. The value of this measure and the strengthening of these crucial improvements will depend on the vigor with which the 55 miles per hour speed limit is enforced. I am writing now to urge continued strong enforcement of the nationwide 55 miles per hour speed limit.

With the coming of Summer weather and long holiday weekends, many of our citizens will be traveling on the Nation's highways. Yet, in recent weeks there

have been indications that our resolve to conserve energy was, indeed, short-lived. There are reports that traffic is returning to its pre-embargo levels, although the United States is far from resolving its fuel supply problems.

The original reason for the uniform speed limit was the conservation of scarce fuel, and the Federal Energy Administration now estimates that the 55 miles per hour speed limit is resulting in daily savings of as much as 200,000 barrels of fuel.

But there is a second and very substantial benefit to slower driving. Enactment of the uniform 55 miles per hour speed limit enables us for the first time to observe on a national basis the impact of slower speeds on highway safety. The result has been a dramatic drop in highway fatalities.

According to statistics from the National Highway Traffic Safety Administration, during the first five months of 1973, 20,843 persons died on our Nation's highways. During a comparable period in 1974, 15,930 persons died. Thus, during the five-month period since the passage of P.L. 93-239, nearly 5,000 fewer persons have been killed in traffic accidents than in 1973.

It is to save lives and conserve energy, then, that I earnestly ask for your continued vigorous enforcement of the nationwide 55 miles per hour speed limit. It is my belief that citizens generally desire to cooperate in this vital endeavor, as evidenced in a recent national poll showing that nearly 75 percent of those interviewed favor keeping the 55 miles per hour speed limit. In addition to the practical importance of this program, they recognize that less pressured driving means more pleasant driving.

With esteem and best wishes, I am

Truly,

JENNINGS RANDOLPH, *Chairman.*

The CHAIRMAN. I am not sure some of the officials realize the savings that can be achieved by the lowering of speed limits. We do know that 5 million gallons of gasoline can be saved every day if there is enforcement across the board of the speed limit.

Most States, I think, recognize that their police officers would not make an arrest if someone were going 56 or 57 or 58 miles an hour. That would vary.

I hope that it won't be necessary for you to withhold Federal funds for highway construction from States if they don't enforce the speed limit. Would you do that?

Mr. TIEMANN. Yes, Our plan is that when we have the monitoring process completed, and we find the State is not in compliance and not enforcing; that we will withhold funds.

The CHAIRMAN. The act provides for the withholding of funds for other purposes. What are those?

Mr. TIEMANN. Safety standards, beautification, and speed limit enforcement.

The CHAIRMAN. What about vehicle weights?

Mr. TIEMANN. Yes, weights and sizes.

The CHAIRMAN. So you have a mandate, do you not, from the Congress?

Mr. TIEMANN. Yes.

The CHAIRMAN. In the 1974 act?

Mr. TIEMANN. Right.

The CHAIRMAN. You have no hesitancy in using it?

Mr. TIEMANN. No. The last time we used it was in my own home State of Nebraska, for safety standards.

The CHAIRMAN. I must not continue to belabor the savings, but they are very substantial. The lessening of traffic fatalities also is a well-proven fact, not just an assumption.

In the year 1974, traffic fatalities in the United States declined about 9,400 from the total of the previous 12 months. The traffic death toll, therefore, was the lowest since 1963. This trend has continued through the first 3 months of 1975.

I would hope the President would respond to the request of the Senate in the passage of our energy conservation crusade. That was passed unanimously, and 67 Senators joined in cosponsoring the resolution I presented. It was strictly a bipartisan effort, and then we asked that the President designate a certain month as Energy Conservation Month. Then we could have the reports to the Congress beginning on a monthly basis, of what the administration, in your agency and other agencies, are doing in the important work of energy conservation.

Since that resolution passed, coming to our attention are many city and county energy conservation committees that have been formed. Senior citizens' groups have been formed to do something on the subject. Colleges and universities have taken positive steps. Individuals are writing saying what they are doing and what they have proposed in communities. There is no desire by me to polarize the thinking of the White House as opposed to the actions of the Congress, but I do hope the President will move to be the catalyst for this, and make a proclamation, which has not been done to date.

I do know he has it under active consideration at the White House, and I don't know whether you ever inject your thinking on a subject like this at the White House level, but I think it could well be done, and it would not be inappropriate to perhaps give your feelings.

Mr. TIEMANN. Yes. The Chairman makes a good point, and let the record show that the President has on numerous occasions indicated a very deep interest in the enforcement of the 55-mile-an-hour speed limit.

We are under direct orders from the White House to come up with this program that we attempted to outline this morning. Those things are being done and being done as rapidly as possible.

The CHAIRMAN. We know that the President, of course, is well-intentioned in the matter. Sometimes, we need not so much the blowing of the bugle and the ruffling of the drums, but we do need a leadership position on this, responding to the action of the Senate.

In your statement, Mr. Administrator, you refer to the possibility of adjusting your budget estimate for fiscal year 1976. That would mean a change in the present budget proposal. What factors might bring about an adjustment toward a higher or a lower figure.

Mr. TIEMANN. I will make a comment and ask Mr. Lutz to embellish if he would like.

This proposal, when the estimate was being finalized 3 months ago with development starting about 15 months ago, the concern was one of combating inflation, which was at an unacceptable rate.

Since that time, unemployment and economic recession have both gone to unacceptable levels. Therefore, it is reasonable to assume that because we are now combating inflation as well as recession and unemployment, if there is a change adjustment will be on the "up" side.

Mr. LAMM. One change that we know already will have to take place in 1976 is that because of the release of \$2 billion in fiscal 1975,

the outlay figure which is estimated in the 1976 budget will have to be increased by about \$1 billion.

Mr. LUTZ. Let me say that the Governor is entirely correct. Both the Secretary's recommendations and the ultimate reflections of the President in the 1976 budget were put together prior to the release of the \$2 billion.

As was said, some of the comparisons are naturally distorted. I do think certainly that the budget is not a static thing. I do feel we have to take into account potential additional highway spending, and, potential demands that might be placed upon the budget for such things as railroad spending and mass transit spending—all of these have to be looked at in the overall perspective. I certainly don't see the total level of \$5.2 billion being revised in a downward direction.

Of course, very soon that will be distributed among the States, and once distributed, as a practical matter, it becomes messy to withdraw. We, of course, will continually assess the economy of the country realizing we have funds in these areas, and we will take a look at possible adjustments in this direction, as well as in other transportation, railroads and mass transit and aviation programs.

The CHAIRMAN. That helps us in our thinking. We realize there is a transition in these matters, especially with the problems of release of funds, of unemployment figures, of the States and their participation, and we all look at it from the standpoint of Federal fiscal policy. The question is asked so that the record may show what you have said, which, frankly, I can understand, as you sit where you do today.

Now, there is apparently, Mr. Administrator, some confusion about the availability of the \$2 billion released to the States on a first come, first served basis.

If you can tell us in detail, maybe only for the record, the types of projects on which you anticipate the money will be used, and tell us how the States can obtain approval in the obligation of these funds, that would be useful.

Mr. TIEMANN. We will submit something for the record, Mr. Chairman.

[The following information was subsequently supplied:]

Question. Listing of types of projects and State's methods of getting approval of projects generated by the \$2 billion release.

Answer. A primary goal of the release is generating employment. On that basis, our instructions to the field have called for not less than 80 percent of obligations for new projects and additional work on existing projects to be for physical construction for which bids shall be opened or work started within 45 days after obligation of funds. Priority where possible is being given to projects in areas of particularly high unemployment, projects to close gaps in the Interstate system, safety improvement projects and Mass Transit projects. Where work involves major items of equipment or materials such as bus purchase projects or installation of railroad-highway grade crossing protection devices, reasonable assurance is to be provided that employment generating action (firm orders for purchase) will be taken within 45 days after obligation of funds. With regards to methods of approval, there has been no substantial change other than the elimination of the need to establish availability of obligational authority prior to project approval. Fiscal Control will be exercised at the Washington Headquarters. As the fiscal year progresses and we approach the \$6.6 billion total available for obligation, restraints will again be imposed as necessary. Special employment reports will be required from contractors.

[Telegraphic message]

To: Each Regional Federal Highway Administrator—Regions 1 and 3 thru 10 and each division engineer (no foreign).

Mr. K. C. KIPPLEY,
Federal Highway Administration, Department of Transportation,
Washington, D.C.

The President has released an additional \$2 billion of Federal-aid Highway funds for obligation in FY 1975. This action raises the total program level from \$4.6 billion to \$6.6 billion for FY 1975. Effective immediately States are authorized to proceed with new projects or additional work on existing projects financed with any of the funds covered by FHWA notice N4520.16 dated July 24, 1974, unrestrained except by the availability of apportioned or allocated funds provided that not less than 80 percent of the new and additional work shall be for construction, (work class 3, 6 or 8) and bids shall be opened or work started within 45 days after obligation of funds for the construction. In accordance with the President's desires, States should give priority where possible to projects in areas of particularly high unemployment, projects to close gaps in the interstate system, and safety improvement projects. Consideration should also be given to potential transit substitution projects in urbanized areas. All balances of FY 1975 obligation authority distributed by FHWA notice N4520.16 remaining unobligated are herewith withdrawn. Fiscal control will be exercised by the Washington office.

Further advice will follow.

Please advise State Highway Departments.

NORBERT T. TIEMANN,
Federal Highway Administrator.

Mr. TIEMANN. It was our intention to make the funds available as quickly and as easily as we could so that the States could obligate as quickly as they could, particularly in the high-labor-intensive projects. This, of necessity, would be smaller projects, safety improvements, and types of projects that we have had over the past years.

As I have indicated earlier, the large projects, the large Interstate projects, could not get obligated between now and the end of the fiscal year. We will submit something for the record, Mr. Chairman.

The CHAIRMAN. That will be helpful. This one further question, and then, Senator Buckley, I will ask you to inquire of Governor Tiemann and his associates.

I will not talk about the matching problems, because I think you have covered that, Senator Domenici, but I do come to the \$2 billion figure again. That is said to be generally the maximum amount which can be obligated by June 30; that is, in addition to the previous program that had been recommended.

Now, is that correct?

Mr. TIEMANN. That is correct, sir.

The CHAIRMAN. I believe we must look further down the road.

I think we have to look to the years ahead, and that is why I am asking for your estimate, Governor, of the ability of the States and the highway construction industry to use funds in the 6-month period following the first of July?

Mr. TIEMANN. We indicated earlier in our testimony the States could obligate for the full fiscal year 1976 about \$7.2 billion. We are talking, then, about \$3.6 billion for the half year.

The CHAIRMAN. Are you sure you have that available?

Mr. LAMM. We don't have a more detailed breakdown to split the figures into the first and second periods of 6 months each. You can speculate that the industry, after gearing up to use an additional \$2

billion for the remainder of fiscal year 1975 might slow down, but you could also speculate that once having attained this monthly program level, they might try to keep it up.

The CHAIRMAN. I can understand that. I think that supplies the answer for our record.

We are going to include, without objection from the members, statements that have been forwarded to the committee in reference to this subject matter, from the American Road Builders Association, the American Association of State Highway and Transportation officials, the Highway Users Federation for Safety and Mobility, and the National Crushed Stone Association. If there are other organizations, I extend to them the opportunity for their materials to be made a part of the record.

We want to have a record that will reflect the thinking of not only Government at various levels, but associations, and organizations and, of course, concerned individuals.

[The statements referred to follow:]

STATEMENT OF DANIEL J. HANSON, Sr., EXECUTIVE VICE PRESIDENT,
AMERICAN ROAD BUILDERS' ASSOCIATION

Mr. Chairman and Members of the Committee: The American Road Builders' Association very much appreciates the opportunity to comment on the Fiscal Year 1976 budget program of the Federal Highway Administration. With respect to the Federal-aid highway program, the Administration has proposed a budget ceiling of \$5.2 billion. With the recent release by President Ford of \$2 billion in previously impounded Federal-aid highway funds, the budget ceiling for Fiscal Year 1975 is now \$6.6 billion.

The budget ceiling for Fiscal Year 1974 was \$4.5 billion, increased in the last month of that fiscal year to \$5.0 billion. Percentage-wise, the proposed Fiscal Year 1976 budget ceiling is only 4 percent higher than the ceiling in Fiscal Year 1974. This obviously is not nearly enough to offset price inflation. Compared with the current Fiscal Year 1975 budget, the proposed Fiscal Year 1976 budget is down over 20 percent.

The "on-again-off-again" status of the highway program reflects the action taken by the Executive Branch of Government as it has attempted to alternately cool down and heat up the economy. The release of \$2 billion in new highway funding earlier this month was very heartening to the highway construction industry. We are confident that this release of funds will be extremely useful in creating thousands of new jobs. Nevertheless, the withholding from obligation of highway funds which have been previously authorized by Congress is an unjustifiable and extremely detrimental practice.

There are several valid reasons for this concern such as:

1. Long-range planning is essential to an efficient highway program. The uncertainty of funding makes long-range planning extremely difficult if not impossible.

2. Interruptions in the program work economic hardship within the contracting industry and all of the supporting industries. Contractors must withdraw from business or reduce their scale of operations when the program is reduced or shut down. The "on-again-off-again" contraction and expansion of the highway program is just not good economics.

3. The pay-as-you-go philosophy of the Highway Trust Fund provides a very positive and sound basis of financing. Deficit spending from the Trust Fund is not permitted. Likewise, the building of large surpluses, through the withholding of obligational authority, also violates the basic philosophy of the Trust Fund concept.

4. Impoundment only serves to distort the highway program originally intended by Congress. The several categorical authorizations are, in effect, lumped together for the purpose of allocating obligational authority among the States. When obligational authority is substantially less than the sum total of authorizations, certain programs obviously suffer disproportionately.

For example, the 1973 Federal-aid Highway Act included Title I authorizations of \$6.208 billion plus six safety construction authorizations in Title II amounting to \$475 million for Fiscal Year 1976. These authorizations were supplemented, in the 1974 Highway Act, by additional authorizations of about \$700 million. In all, Congress has authorized \$7.38 billion for the Fiscal Year 1976 highway program.

With a FY 1976 budget ceiling of \$5.2 billion, about \$2 billion of this authorized work cannot be undertaken. Obviously, certain authorized programs cannot be funded. Past experience has shown that the States will generally utilize Federal aid for the larger projects. Programs involving smaller projects, such as the safety construction programs, will generally suffer the most. Let me cite just a couple of examples as to why the suggested \$5.2 billion level of funding should be increased.

The program for completion of the Interstate System, as embodied in the 1956 Highway Act, called for the final authorization to be in Fiscal Year 1972, and that the Interstate program would be completed at that time.

Extensive delays have occurred, due partly to some route controversies and other requirements but, more importantly, to cutbacks in the funding. The inadequacy of current Interstate funding was vividly illustrated by Department of Transportation witnesses before the House Transportation Appropriations Subcommittee on April 29, 1974.

The following figures speak for themselves:

	<i>Billion</i>
Cost to complete the interstate system as of January 1, 1973-----	\$32.3
Subtract obligations during calendar year 1973-----	3.3
	<hr/> 29.0
Add 15 percent inflation-----	4.3
	<hr/> 33.3
Total cost to complete, as of January 1, 1974-----	33.3

These figures show a rate of negative progress. Assuming the same rate of inflation. With no increase in authorizations, the Interstate program would never be completed. Assuming even a low rate of inflation, DOT said the program would not be completed until the year 2007!!! This is obviously intolerable. It is essential to arrive at a prompt decision regarding those segments of the Interstate System which are still in controversy. We should also provide realistic authorizations and obligational authority for the remaining segments in order to complete the Interstate System as soon as possible.

In 1971, the Department of Transportation reported that 89,000 of the 563,500 highway bridges in the United States (16 percent or one out of six of all of our bridges) are critically deficient. At that time, the cost of replacing these bridges was estimated at \$16 billion.

Recognizing the seriousness of this problem, Congress has established a Special Bridge Replacement Program. The current authorization level for this program is \$125 million, which is made available at a 75-25 matching ratio. This generates a program of \$167 million annually.

Assuming *no* inflation, *no* additional bridge deterioration, and *no* impoundment, this level of authorization is sufficient to bring the critical bridge problem to a solution in only 96 years! Obviously, more funding is required to bring the bridge program to a conclusion at a much earlier date.

ARPA strongly supports S. Res. 69, introduced by Chairman Randolph and co-sponsored by numerous Members of this Committee. The Resolution would deny the deferral of \$10.7 billion in Federal-aid highway obligations, as proposed by the President in his deferral message of September 20, 1974. We recommend that the Senate pass this Resolution at the earliest possible date.

There could be no more appropriate time to put an end to the impoundment of highway funds. The President, by releasing \$2 billion of obligational authority, has signalled the Administration's interest in expanding job opportunities in the highway construction field. The Federal Highway Administration estimates that this recent release will be sufficient to fund all approvable projects submitted by the States during the remainder of this fiscal year.

There is no reason to believe that the release of all impounded funds would result in a sudden and inflationary increase in the highway program. All of the normal problems of bringing projects to a state of readiness for contract award take time. Likewise, raising State matching funds will obviously ensure an orderly expansion of the highway program in the years to come.

With the release of impounded funds, the program can be restored to its normal and intended status, with the rate of progress being controlled by Congress.

We appreciate this opportunity to present the views of the American Road Builders' Association on this critical issue.

AMERICAN ASSOCIATION OF STATE HIGHWAY
AND TRANSPORTATION OFFICIALS,
Washington, D.C., March 10, 1975.

HON. JENNINGS RANDOLPH,
*Chairman, Senate Public Works Committee, New Senate Office Building,
Washington, D.C.*

DEAR MR. CHAIRMAN: At your suggestion, we are pleased to take this opportunity to present comments on the highway budgetary matters which the Committee on Public Works was reviewing in its hearing on February 27, 1975.

AASHTO urges the immediate release of all impounded funds for highway construction.

The most critical need to release these funds is to alleviate severe unemployment problems, particularly in the construction industry. Unemployment in the construction industry is now estimated to be from 15% to 30%. The Department of Labor recently reported that there were 500,000 less jobs in the industry in February 1975 than there were in February 1974.

These unemployment statistics show that there is severe economic distress for workers in the construction industry and also reflect under utilized capacity in the industry.

As the Committee was advised by witnesses from FHWA, the expenditure of \$1 billion in highway construction generates approximately 126,000 jobs in on-site and off-site employment for the construction and in induced employment. Furthermore, State officials estimate that each additional \$1 billion of highway construction will require approximately 8,000 additional employees at various governmental levels for planning, designing, and supervising the contract work. This governmental employment should induce 28,000 additional jobs. Unlike some hastily created temporary public service jobs the employment will be used for needed construction to improve the efficiency and safety of highways and other transportation systems. By reducing transportation costs and by promoting development of under-utilized manpower and resources in rural areas with high unemployment, the highway improvements will enhance long-range economic development.

The release of funds for improvements in highways and transportation systems is consistent with other current programs to conserve energy, or to improve the environment. The availability of safer and more efficient highways may encourage a few people to travel who would not otherwise, but the vast majority of those using the safer and more efficient highways would have taken the trip over older, more dangerous, and less efficient highways. The present scarcity and high price of gasoline places severe limits on discretionary travel. More efficient highways which provide more direct routes and improve the flow of traffic can assist in the conservation of fuel, particularly with the imposition of a 55-mile an hour speed limit, which AASHTO strongly supports. It also should be noted that some States will use some of the released funds for improvements for mass transit.

The Member Departments of AASHTO have reported that they will be able to obligate all of the \$2 billion in impounded funds released in February by June 30 of this year. They also would be able to obligate all remaining impounded funds by the end of fiscal year 1976.

In terms of constant dollars and a percentage of the Federal budget, the Federal-aid highway program has been reduced significantly from 1957-58 levels. In those years, the amount of actual work placed under construction was approximately twice the amount that could be accomplished with the \$6.2 billion now available in fiscal year 1975.

The Federal Highway Administration has reported that in the past the average construction time for a highway project is 14 months, and that the average time between obligation and expenditure of funds is 18 months. These time periods can be reduced considerably if emphasis is placed on smaller projects as has

been done for projects to be funded with the \$2 billion of impounded funds released in February. Attached is a list of a sampling of such smaller projects which have been approved since February 12, 1975.

In response to a questionnaire circulated by AASHTO in December, 1974, 31 States reported that they were experiencing cash flow problems. (A summary of the responses is attached.) In many cases, the release of impounded funds would assist those States by making Federal funds available for needed projects which would be difficult to fund wholly from State funds.

Some States might, however, have difficulty in using newly-released impounded funds because of environmental litigation, or lack of matching funds. AASHTO supports appropriate measures, such as the easing of categorical restrictions or waiving of matching funds, to assist States which might have difficulties in utilizing funds.

The matching fund problem could become more serious if Federal tariffs or taxes increase the price of gasoline, so as to reduce consumption to a great extent. In this regard, we strongly urge that if Federal gasoline taxes should be increased, the States be given the opportunity to substitute new State gasoline taxes, in lieu of increased Federal taxes.

AASHTO also endorses legislation which would eliminate procedural road-blocks caused by environmental litigation, such as those which have arisen in three States because of a decision of one U.S. Court of Appeals, which differed from five other Circuits on the same issue, that FHWA could not accept environmental impact statements, subject to its supervision and approval.

One other situation we would like to discuss is the relationship between Congressional action and pending litigation over the impoundment of highway funds. As of this date, there have been nine decisions by U.S. District Courts ordering the release of impounded highway funds for a total of 20 States. All of these orders, with the exception of Missouri's, have been stayed pending review by the Courts of Appeal. The Court of Appeals in the 8th Circuit has affirmed the Missouri decision and its funds have been released, *State Highway Commission of Missouri v. Volpe* 479 F.2d 1099 (1973).

Although we believe the Courts will eventually order the release of impounded highway funds, particularly in view of the recent Supreme Court decision in the water pollution control cases, we believe that passage of a resolution to release impounded funds would expedite the release and clarify the existing situation. We support Senator Muskie's position that the Impoundment Control Act of 1974 (Title X of PL 93-349) did not give the President any additional substitutive authority to impound highway funds. Passage of a resolution to release deferred funds together with reaffirmation of Congressional intent that the Impoundment Control Act of 1974 did not create any new substantive authority to defer expenditures of funds, would expedite release of the funds and clarify the present situation.

We are pleased to have had this opportunity to respond to your request and hope you will feel free to call upon us for any additional assistance we might provide.

Sincerely,

HENRIK E. STAFSETH,
Executive Director.

Enclosure.

Alaska :

March 2—Advertising reconditioning approximately 1 mile of existing roadway and constructing two interchanges on Seward Highways. Bids opened 4/10/75—360 calendar days.

February 27—Advertising grading drainage in asphalt surface treatment of 12.9 miles of Richardson Highway S.E. of Fairbanks, including two new bridges : Bids opened 4/3/75—368 calendar days.

February 27—Advertising grading, drainage and aggregate surface plus bridge over Tonsina River N.W. of Chitina : Bids opened 4/3/75—360 calendar days.

February 13—Opened bids on 11.3 miles of grading, drainage and aggregate surface on Minto Road—45 miles N.W. of Fairbanks for \$1,550,000 work to be complete by 11/1/75.

February 20—Opened bids on Ward Creek Bridge in Ketchikan for \$500,000 work to be completed in 210 days.

California:

February 19—Authorized construction of maintenance station east of Portersville for \$284,000 to be complete this summer.

February 19—Authorized Rest Area construction South of Los Banos on I-5 for \$870,000 to be complete spring of 76.

February 19—Authorized Rest Area construction on Highway 99 South of Turlock for \$725,000 to be complete spring of 76.

February 19—Authorized Vidal junction maintenance station construction for \$321,000 no timetable.

February 19—Approved \$1,750,000 project for up grading rest stops at Donner Summit on I-80 to be complete fall of 76.

Colorado:

February 20—Awarded \$1,687,000 contract for I-25 project in Denver—180 days.

February 20—Awarded \$343,000 contract for new bridge on U.S. 36 at Byers—60 days.

February 13—Awarded \$319,000 contract for 2 Urban System projects in Colorado Springs—60 days.

Florida:

February 27—Opened bids on 26 road and bridge projects totaling \$12,459.

Iowa:

Bids to be opened March 19 on maintenance garages of West Burlington and at Spirit Lake.

Bids to be opened March 4 on nine bridge projects 10 portland cement concrete paving jobs 26 asphaltic concrete paving jobs 2 building demolition jobs, one lighting job and one guard rail job and 10 county road jobs.

Bids advertised on February 24 for 2 drainage structures, on February 25 for sewer improvements on February 26 for building demolition and grading projects.

Minnesota:

February 13—Advertised bids on highway and bridge projects in 24 counties estimated at \$18.4 million.

February 27—Awarded \$234,000 contract for 6.6 miles paving job in Pope Co.

March 19—Bids to be opened on two projects estimated at \$473,000 in Isanti and Watonwin counties.

March 21—Bids to be opened on I-35W project in Minneapolis on extension of surveillance system, paving, median barrier, lighting and bridge repair start June 10 to be completed by August 3.

March 11—Bids to be opened on 4 grading and surfacing projects in Steele Co.

Nevada:

March 6—Bids opened on Safety projects on I-80 in Washoe Co.

March 27—Bids opened on storm drainage project on Las Vegas.

New Hampshire:

February 26—Advertise for construction on 0.6 Mile of I-93 for new interchange in Hooksett.

February 26—Advertise for construction of new interchange on I-95 in Hampton.

February 26—Advertise for new interchange in I-95 in Portsmouth.

February 26—Advertise for 1.6 mile of new shoulders and new surface on Rte 125 in Lee.

March 5—Advertise new toll booths on I-95 in North Hampton.

March 5—Advertise 3.9 mile of new construction and bridges on I-93 in Hooksett.

March 12—Advertise new bridge over I-93 in Hooksett.

March 19—Advertise for signing and Lighting on I-93 in Hooksett—Massachusetts.

March 26—Advertise for construction of truck climbing lane on Rte 16 near Jackson and reconstruction and new bridge on Rte 25 at Haverhill.

New Jersey:

March 20—Open bids on Safety improvement project on Rte 79 in Marlboro plus project for lighting 1.8 mile of I-80 in Bergen Co. to be complete by October.

February 20—Allotted \$22,000 to Newark to investigate feasibility of Van Pool program for city employees.

- March 13—Open bids on drainage and resurfacing contract on I-78 in Warren and Hunterdon Counties—to be complete by September.
- New York:
 March 13—Bids opened on nine highway and bridge projects in Broome, Monroe, Montgomery, Niagara, St. Lawrence, Steuben and Suffolk Counties.
 March 20—Bids to be opened on 24 projects in 22 counties and the City of Albany.
- Pennsylvania:
 February 28—Opened bids on 20 projects totaling \$3,448,000 in 18 counties.
- South Dakota:
 February 21—Let 18 construction and gravel stockpile projects totaling \$2,900.
- Texas:
 February 25—Approved \$2,116,000 project for signing, lighting and delineation on I-45 in Dallas.
- Vermont:
 February 21—Opened bids for guardrail on 4.8 mile of I-91 in Guilford and Brattleboro and bridge repair job on Rt 23 in Morristown.
 March 14—Open bids on new bridge in Westminster to be completed 12/1/75.
 March 21—Open bids on bridge repairs job on Rte 31 in Poultney to be completed 11/1/75.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

QUESTIONNAIRE ON FISCAL CONCERNS

(Results as of January 15, 1975)

It has been brought to the attention of the AASHTO office that some States are experiencing financial difficulty because of a shortage in their cash flow that could be brought on by many factors. Additionally, there has been discussion within the Administration of a gas tax as high as 30c to be a penalty tax, in order to reduce the use of petroleum products.

There is little question that President Ford is working on a reduction of one million barrels of petroleum used per day as a national goal for the next year. It appears that most of this reduction will fall in the passenger car area, since it uses 52.5% of the transportation energy consumption.

Since the current daily use is 17 million barrels per day, and if you review the priorities of other consumption, it would appear that the passenger car is going to have to accept most of the reduction to attain the President's goal.

This would reflect at least a 6% reduction in passenger car use, and could go as high as 11%, if the total savings of petroleum was in this area. There are also indications that the goal in 1978 would probably be a reduction of three million barrels of oil per day. This would give strong indications of a needed reduction in the use of the passenger car of in the neighborhood of approximately 15% to 25%.

In light of the rather sober possibilities, how would this affect your Department? Would you please indicate your current situation by answering the following questions:

1. (a) Is your Department currently experiencing cash flow difficulties?
 Yes 19 No 24

(b) Has your Department had to make personnel reductions in order to stay within your budget? Yes 22 No 27

If yes, could you indicate the approximate *number* of personnel reductions in your Department's total employment, as a result of current financial problems.
 6700+

(c) Is your Department intending to ask for an increase in taxes, in order to offset the current anticipated reduction in gas tax revenues in 1975? Yes 17 No 23

(d) If yes, would you please indicate if the tax is a gas tax, a license tax, a weight tax, etc. Fuel, 12; weight, 4; license, 5; and sales, 1

(e) Are you deferring lettings previously scheduled because of these difficulties? Yes 23 No 25

(f) If yes, for what period of time? -----

(g) In what dollar amount? \$1,062 million
 (h) Are there any possibilities that you may have to curtail or cancel projects that are currently let? Yes 3 No 43

2. (a) Assuming the Administration's goal of a fuel reduction of one million barrels a day in 1975 is met, which could mean a reduction in automobile travel of 6% to 11%, would you indicate if this situation would cause financial difficulties in your Department? Yes 45 No 4

(b) Assuming that your Department would not be able to make an adjustment in State taxes, in order to adjust to the loss of revenues, would you please indicate if this would necessitate personnel reductions? Yes 42 No 4

(c) If yes, would you estimate the number of people that would be involved in a reduction of workforce. 13,000+

Assuming that the national goal in 1978 is a reduction of three million barrels of petroleum a day would cause a reduction of 15% to 25% in automobile use, would you please answer the following questions:

3. (a) Would this cause financial difficulties in your Department? Yes 48 No 1

(b) Assuming that a State tax adjustment is not possible, would this require personnel reductions within your Department? Yes 45 No 3

(c) If yes, estimate the number of employees that would be affected. 27,500
 4. Should the State matching ratio on Federal-aid highway projects be decreased for a period of time to help the cash flow problems? Yes 31 No 15

5. (a) Do you share a portion of your revenues with local units of government? Yes 41 No 7

(b) If yes, is this on a percentage of receipts basis ----, rate per mile ----, or other (explain) -----

6. As a result of decreased revenues, are local units of government having difficulty in providing their share of matching funds on transportation projects? Yes 15 No 32

7. In the development of the urban program to be used within the cities of your State, would you please indicate if the cities in your State are the cities having difficulties utilizing the funds because of their inability to provide advance funds to fund the program until they receive their payments after the work has been completed? Yes 7 No 37

8. (a) Are you having difficulty making the adjustment to the urban system concept of the 1973 Federal-aid Highway Act by virtue of previous departmental project commitments? Yes 28 No 21

(b) If yes, should there be a transitional period of adjustment as to how many years should be provided to adjust to the new urban system concept?

Less than 2 years, 1; 2 years, 6; 3 years, 11; 5 years, 5; and more than 5 years, 2.

 (Name) (Title)

 (Member department) (Date)

NOTE.—Please return one copy of the completed questionnaire to the AASHTO General Offices no later than *January 10, 1975*.

HIGHWAY USERS FEDERATION,
 Washington, D.C., February 24, 1975.

HON. JENNINGS RANDOLPH,
 Chairman, Committee on Public Works, U.S. Senate, Dirksen Senate Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: I am writing in regard to the Committee's February 27 hearing on S. Res. 69 and the proposed fiscal year 1976 budget for the Federal Highway Administration.

The Federation supports the intent of S. Res. 69—immediate release for obligation of remaining fiscal 1975 and previous year deferred highway funds and the full fiscal 1976 authorization, \$6.4 billion.

Administrative "stop and go" funding in recent years has considerably handicapped the orderly planning essential to the success of long-term public works

activities such as the highway program. We hope that passage of S. Res. 69 will discourage disruptive obligational ceilings in future years.

Statements from other organizations will deal with the direct and indirect benefits of releasing deferred funds in helping to provide jobs and stimulate the economy. We feel that the continuing benefits these funds can provide to the American people—through safety improvements, more energy efficient traffic flow, and more economical goods movement—offer equally persuasive reasons for passage of S. Res. 69.

Prompt completion of the Interstate System is a national goal of high priority, but impoundment and inflation have eaten away at the productivity of the Interstate dollar. We estimate that \$3.3 billion in authorized Interstate funds have been deferred, while highway construction costs have gone up at an average annual rate of 12 percent over the last five years. If inflation continues at a rate of only 10 percent, each year's delay in use of these deferred Interstate funds cuts the money's value in "work on the ground" by \$360 million. (see attached charts on price trends in Federal-aid highway construction and a comparison of current and constant highway dollars).

The most serious penalty that American society pays for further delays in completing the Interstate System is more traffic deaths. The older roads which connect the 3,600 miles of Interstate gaps have twice the fatality rate of completed Interstate routes.

The Interstate System is not the only feature of our nation's highway problems. As Federal Highway Administrator Norbert Tiemann said recently, our roads "are deteriorating at a rate about 50 percent faster than we are able to rebuild or reconstruct them."

Rural road and bridge needs are of particular concern, since rail abandonments are placing a strain on our rural road network. Agriculture, in particular, relies heavily on highway transportation. More than one truck in six is on a farm, and trucks haul all hogs to major markets, 99 percent of cattle and calves, 98 percent of sheep and lambs, and 73 percent of fruit and vegetables.

The U.S. Department of Agriculture's Economic Research Service, in a recent report, "Transportation in Rural America," noted that "well over half of the collector mileage in the United States was found (in 1970) to be unpaved or had low type pavement unsuited to continuing heavy truck traffic." In this regard, a Gallup Poll commissioned by the Federation indicated that 58 percent of the country's driving age population believes "there is a need for improved roads in rural parts" of their states.

Approval of S. Res. 69 would also provide additional funds for highway safety activities, including full funding of authorized safety construction programs. These programs, including bridge reconstruction, improvements at high-hazard accident locations and elimination of roadside obstacles, have proven life-saving potential. For example, a Federal Highway Administration study of 634 such projects one year after the improvement found that fatalities were reduced by 27 percent, injuries were down 26 percent and total accidents were cut 19 percent.

We would also like to call the Committee's attention to the need for complete funding of the state and community (section 402) safety grant program administered jointly by the FHWA and National Highway Traffic Safety Administration.

The fiscal 1976 budget calls for a program ceiling of \$108 million for the grant program—\$95 million for basic grants and \$13 million for incentive grants to states which reduce their traffic fatality rates. Authorized funding out of the Highway Trust Fund is \$204 million, nearly double the proposed ceiling.

We are confident that the "402" program is worthwhile, and has produced many positive results. With 18 national standards as guidance, state and local officials have shown that they can turn the seed money of Federal safety dollars into productive, accident reducing programs. In order to carry out these programs, states need the stimulus and commitment from the Federal government that have been reflected by Congress in authorizing acts, but are not reflected in the 1976 budget proposal. We urge your Committee to give full support to this important program.

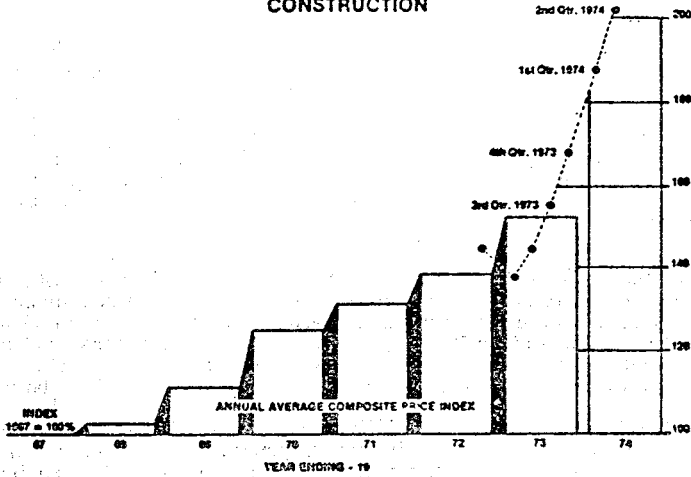
Thank you for the opportunity to express our views.

Sincerely,

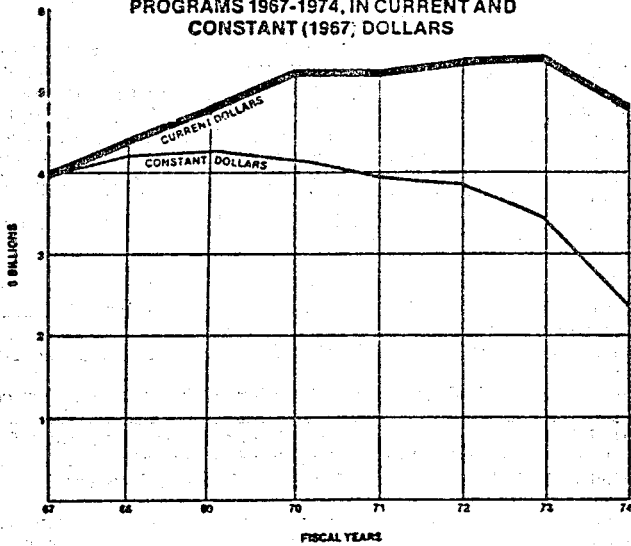
PETER G. KOLTNOW.

Attachment.

PRICE TRENDS FOR FEDERAL-AID HIGHWAY CONSTRUCTION



AUTHORIZATIONS OF FEDERAL-AID HIGHWAY FUNDS FOR INTERSTATE AND A-B-C-D PROGRAMS 1967-1974, IN CURRENT AND CONSTANT (1967) DOLLARS



NATIONAL CRUSHED STONE ASSOCIATION,
Washington, D.C., February 25, 1975.

HON. JENNINGS RANDOLPH,
Chairman, U.S. Senate,
Committee on Public Works, Washington, D.C.

DEAR SENATOR RANDOLPH: The purpose of this letter is to provide you and the members of your Senate Public Works Committee with background material on the hearings that you have scheduled starting February 27, 1975 on Impounded Federal Aid Highway Funds and on consideration of future Federal Aid Highway Programs. Since the supply of crushed stone construction aggregate represents one of the largest uses of materials in the highway program and since there is concern about the availability of materials to support an expanded highway program without inflationary impact, we felt it was our responsibility to provide pertinent information.

BACKGROUND

Crushed stone is an important mineral resource for the United States and its people. For many years, crushed stone has been used as a construction aggregate material for most public works programs, especially in highway transportation networks. The crushed stone industry produces this important material in modern, safe, and environmentally aware plants, capable of furnishing quality aggregates at an economical price for many construction applications, both public and private.

The National Crushed Stone Association (NCSA), a national trade association since 1918, represents those companies which quarry, mine, and process approximately 70 percent of the total national crushed stone production. Historically, the crushed stone industry has experienced a 4 to 4½ percent annual growth while maintaining a relatively stable price structure. (Table I illustrates this trend for the period 1967-1975.)

While the Federal Aid Highway Program has played and will continue to play a significant role with respect to industry sales, a comparison of Tables I and II lead to the obvious conclusion that the Highway Program is much less a factor of industry sales than it was 8 to 10 years ago. That is, industry production and productive capacity has continued to grow despite sharp reductions in the volume of aggregate required to sustain the Federal Aid Highway Program.

SALIENT STATISTICS

In order to develop current and accurate information relative to the productive capacity of the crushed stone industry, NCSA conducted a nationwide survey during the period of February 11-21, 1975. The response to that survey from 27 states represented an excellent cross-section of individual company and plant size, from the very smallest to the largest in the Nation. The results reported were remarkably consistent over the range in size and throughout the country. The figures developed represented 42 percent of the total 1974 crushed stone construction aggregate production, that is 314 million tons of the 751 million tons accounted for by the U.S. Bureau of Mines. Such a sample adds considerable credence to the estimates made below.

	<i>Million tons</i>
Fact:	
USBM 1974 reported crushed stone construction aggregate ¹ -----	751
NCSA survey response-----	314
Survey coverage, percent of production-----	42
Projections:	
Reported 1975 crushed stone construction aggregate, survey companies-----	300
Calculated 1975 crushed stone construction aggregate, total industry--	715
Potential increased available capacity, survey companies-----	118
Calculated total industry potential increased available capacity-----	280

¹Crushed stone construction aggregate includes base/subbase materials, concrete aggregate, bituminous aggregate, macadam and surface treatment aggregate, etc.

SUMMARY

While current dollar expenditures for highways have been increasing, rising construction costs and inflation have eroded the volume of construction as measured by aggregate usage per construction dollar. (See Table II and Figure 1). This erosion has been dramatic as can be evidenced by the estimated demand for highway construction aggregates in 1975 (as per FHWA prior to the release of any impounded funds) as compared to the volume used in 1967. The 1975 estimate (prior to consideration of impounded funds) will be 47.5 percent below actual 1967 consumption, while total 1975 expenditures will be 34.0 percent above 1967 levels, in current dollars—a considerable erosion of the volume of highway construction per dollar of expenditure.

Assuming that the 1975 crushed stone industry projection of 715 million tons of construction aggregates includes that which will be necessary to meet the FHWA projected \$11.5 billion highway expenditure, the 280 million tons of available noninflationary additional industry capacity could support an additional \$7.5 billion in highway construction. The total, \$19.0 billion (11.5 + 7.5), would still be below that required to consume the amount of construction aggregate consumed in 1967. A highway program of \$21.7 billion in current 1975 dollars would be required to support such a level.

In short, an adequate supply of construction aggregate, without inflationary impact, can be provided by the crushed stone industry to support levels of highway expenditures considerably in excess of those currently contemplated.

CONCLUSION

The Department of Transportation and its agencies have the responsibility of providing a biennial transportation needs study. This activity is undertaken in cooperation with the individual states so that the projection will be representative of current needs. It is very apparent that the needs of our Nation's total highway system, including ABC roads, major arterials, bridges and other structures, have deteriorated to the extent that they are no longer safe or adequate to carry our Nation's citizens, goods, or services. While the interstate system is nearing completion, the unmet needs of these other highway systems require immediate attention.

Crushed stone producers share your belief in regard to the effectiveness of public works programs in putting people back to work, as well as to spark other businesses and lines of endeavor. The public benefits additionally through the creation of facilities which have a long term use and add to public convenience and safety.

The level of future highway activities is a subject of concern to the Congress. As one of the industries upon which highway and all other construction depends, we want to assure you that our industry has the capacity to produce an additional 280 million tons of crushed stone aggregates during the calendar year 1975, and is in a position to supply the long range needs of Federal Highway and other Public Works programs, at an increased level of funding, without contributing to our Nation's current inflation.

We stand ready to supply additional information beyond that contained in this letter at the request of yourself, the Committee, or your staff.

Cordially,

W. L. CARTER, *President.*

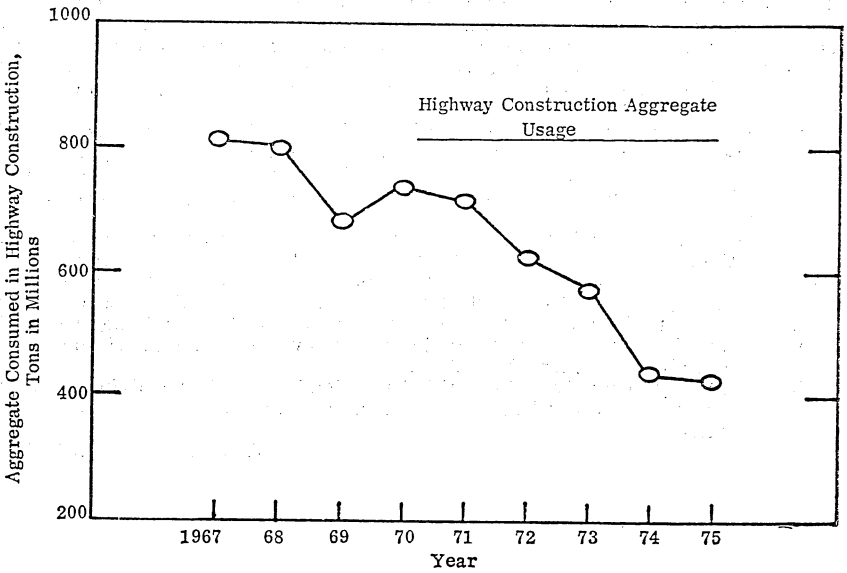
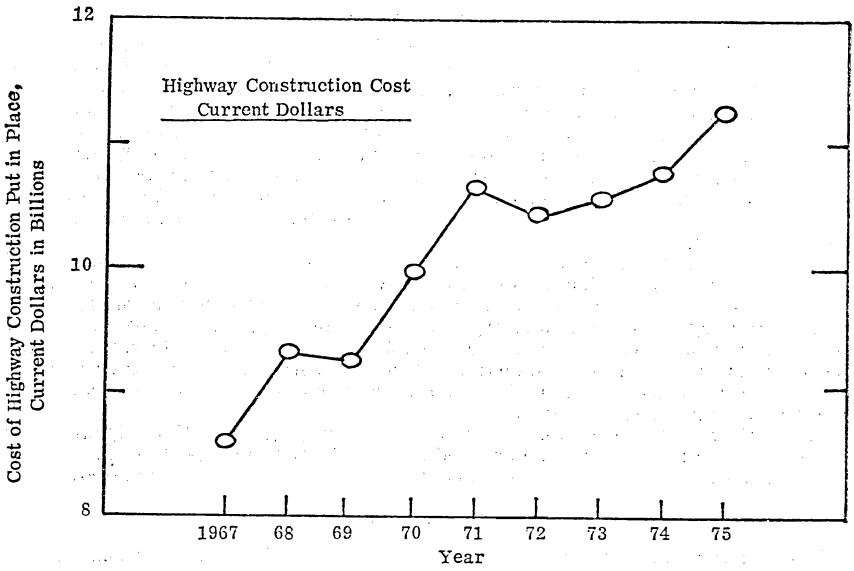


FIGURE 1.—Highway cost and aggregate usage.

TABLE I.—THE CRUSHED STONE INDUSTRY IN PROFILE (1967-75)

Calendar year	Total production, (tons multiplied by 1,000)	Crushed stone used as construction aggregate, (tons multiplied by 1000)	Current dollar value ¹ of stone construction aggregate (dollars multiplied by 1,000)	Unit value ¹ of stone construction aggregate (dollars per ton)
1967.....	783,581	569,551	793,662	1.39
1968.....	817,537	567,356	825,978	1.46
1969.....	861,021	628,929	942,656	1.50
1970.....	867,628	623,952	971,174	1.56
1971.....	874,497	626,681	1,047,008	1.67
1972.....	918,933	677,983	1,153,124	1.70
1973.....	1,058,541	798,287	1,423,752	1.78
1974 ²	2,979,000	2,751,000	2,140,000	3,1.86
1975 ⁴		4,717,696	NA	NA

¹ F.o.b. production site.

² Estimated by the U.S. Bureau of Mines in release "Stone in 1974", Division of Nonmetallic Minerals, Dec. 26, 1974.

³ The 1967 to 1974 price increase per ton was 33.8 percent compared to an increase of 53.8 percent in the wholesale index for industrial prices during the same period.

⁴ Based upon a National Crushed Stone Association survey in February 1975 which indicates 1975 production will be 4.3 percent below that for 1974.

TABLE II.—ESTIMATED TONNAGE OF AGGREGATE RESULTING FROM THE DOLLARS EXPENDED FOR CONSTRUCTION PUT-IN-PLACE ON HIGHWAYS AND STREETS 1967-75

	1967	1968	1969	1970	1971	1972	1973	1974	1975
Highway construction put-in-place, in current dollars (millions) ¹	8,591	9,321	9,250	9,981	10,658	10,429	10,559	10,764	11,509
Price trend for highway construction (1967=100) ²						138.2	152.4	203.6	222.7
Deflation factor (1972=100)						1.000	0.90680	0.67880	0.62060
Highway construction value in constant dollars (millions) (1972=100)						10,429	9,575	7,307	7,142
Highway construction usage factors: ³									
Tons of aggregate per \$1,000 construction, current dollars.....	95	86	74	74	67	60			
Tons of aggregate per \$1,000 construction, constant 1972 dollars.....							60	60	60
Estimated construction aggregate tonnage, (1,000 tons)	816,145	801,606	684,500	738,594	714,086	625,740	574,500	438,420	428,520

¹ Source: Construction review, table A-2. Forecasts for 1974 and 1975 based upon percentage increases revealed by FHWA release table HF21 (November 1974).

² Source: Based upon FHWA highway construction cost indices, such as FHWA "Price Trends for Federal Aid Highway Construction" which is released quarterly. 1975 prices are forecast conservatively to rise 9.4 percent.

³ Source: FHWA usage factors applicable to Federal aid highway construction.

The CHAIRMAN. Before I call on Senator Buckley, I want you to know that I continue to carry my thermometer, and this room is 68 degrees. We only wish the other rooms in the Capitol, including the Senate Office Buildings and the House Office Building, were at 68 degrees.

I can only say that I think when it is a little cooler witnesses are inclined to testify more promptly, and even Senators, perhaps, may not take as much time.

Seriously, I think we function better if we have a lower temperature. Jim?

Senator BUCKLEY. Thank you, Mr. Chairman. I notice the lights are on.

Mr. Chairman, I would just like to go into one subject. I am sorry that I couldn't have come here earlier to hear the initial presentation, but I was at another hearing upstairs.

I am concerned, Governor Tiemann, about the consequences of the decision that came out in December, from the second circuit court, and I gather from the way you are nodding your head that you are familiar with it.

My understanding of the consequences is that in effect the court of appeals has held with respect, at least to those States within the jurisdiction of the second circuit, that the highway environmental impact statements were faulty because they were prepared by the States and not by the Federal Highway Administration.

What I want to know is what are you doing about the court's decision?

Mr. TIEMANN. We are very familiar with the *Route 7* case in the second circuit decision. Initially, our regional administrator, indicated to the States that the circuit indicated they could not proceed with projects because of this decision.

We are now in process of modifying that, saying that this decision applied only to the projects on Route 7, not specifically to other projects that are in the second circuit, and we will give some degree of leeway as far as proceeding with those other projects.

The language is now being developed, and we should have something out to the States within a matter of a very few days.

Senator BUCKLEY. It was rumored, as you are probably aware, that this was going to be made a test case to try to get leverage on the Congress to change the NEPA requirements, but from what you say, I gather, you will administratively place as narrow a determination as possible on the decision so you may go forward with projects in other areas?

Mr. TIEMANN. Yes, that is right, Senator Buckley. Of course, the other aspect that was commented on is whether or not the Department of Justice is going to appeal this. It is our urgent request that they do.

Senator BUCKLEY. But you are not awaiting an appeal in order to process applications?

Mr. TIEMANN. No.

Senator BUCKLEY. I am relieved, because on a first come, first served basis, I would hate to see all the recently released highway money disappear.

Mr. TIEMANN. Of all the projects in the second circuit that were affected by the decision, most will not be involved in the \$2 billion, because they are not ready to go yet.

Senator BUCKLEY. But I was afraid the consequences of that decision would be applied to other projects which were ready to go. In the light of that second circuit decision, and while pending the outcome of a possible appeal, is there underway a modification of your approach to the NEPA statements? In other words, a greater involvement by FHWA?

Mr. TIEMANN. We are involved as much as we can be at the present time. While the States prepare the environmental impact statement, our input is at every level. I don't think we could get involved any more unless the court's decision is upheld and we are required to do the full preparation alone.

Senator BUCKLEY. I would hope that that decision is not sustained.

Mr. TIEMANN. If I might, I would ask counsel to make an additional comment.

Mr. WELLS. We have had several favorable circuit court decisions indicating that our involvement in preparation is sufficient, and therefore we wouldn't want, I don't think, to revise our procedures nationally just because of the second circuit. We would like to see that case appealed to the Supreme Court.

Mr. COUPAL. I think it is important to point out that this is not the only aspect of the case concerned. We are also concerned about having to write one for the whole 280 miles of highway when possibly only 20 miles or so is involved in the project.

The CHAIRMAN. Thank you.

Senator BUCKLEY. Mr. Chairman, not having had the opportunity to hear the testimony, I think that exhausts my questions. Thank you.

The CHAIRMAN. Jim, I do want you to know that there are points that have been brought out in the formal testimony and in the colloquy that have been very provocative and helpful.

I want certainly to have the opportunity to ask questions and have replies for the record if you feel you should raise them.

Senator BUCKLEY. I appreciate that, and I may avail myself of that.

The CHAIRMAN. Senator Domenici?

Senator DOMENICI. Just a couple of more questions, Mr. Tiemann, with reference to expediting projects.

As I understand it, the procedure you are following on the \$2 billion is a rather extraordinary one to take care of what is perceived as a rather extraordinary circumstance.

On the other hand, it appears to me that we are going to have rather extraordinary circumstances, even under the most optimistic view, for 3, or 4 years as concerns unemployment figures and recession.

We have frequently heard that the process of putting the money to work rather than just obligating it could be greatly expedited if there were not so many categorical limitations imposed upon you. Most of the time we think of categorical programs as involving social kinds of programs, but they have grown up in the Highway Act, also.

You have said that with reference to the \$2 billion, you are urging that they get on with the projects that are expeditious. Might I ask this: Could you give us, not today, necessarily, but as soon as possible, some detailed recommendations as to how we might help, even if it be only temporary, say for 2 years, or 3 years, by granting you some extraordinary authority to pass along the benefits of pooling of these grant funds or elimination of some of the categorical requirements in the interests of expediting the funding and getting the projects underway?

Now, I don't mean that with reference to the interstate. I think it remains the high priority item. I am talking about some legislative help during this emergency to permit you to do a bit more pooling of categorical grants. I do honestly believe that if the governors had some commitment of the kind we are talking about, as a 2- or 3-year expeditious approach to getting the money there, they would be as happy as in consideration of the moratorium on matching funds.

We have been told that if we could pool categorical grant programs, they would take a 10-percent cut. I am not asking for a cut, but that

is how serious they are on entanglements and delays. Could you give us some thoughts on that?

Mr. TIEMANN. Yes, and I think you will see when we have the 1975 legislative proposal before you that we are recommending reduction of those categories to something like four, or at the most six categories. That, rather than temporary relief, would be permanent relief for the States.

Senator DOMENICI. When will that package be ready?

Mr. TIEMANN. It is about ready now within the DOT, and after it goes to OMB for final approval, and it should be submitted to the Congress shortly.

Mr. LUTZ. It should be over within a week to 10 days, and we agree with your assertion between the analysis of what has happened in this account and in the other programs, that that is apt. We now have up to 30 or 31 specific allocations in the program. I think it is time to make a permanent reversal of this trend and get it down to interstate, rural, urban and safety—four broad categories within which the Governors have a great deal of latitude to put the funds to work both expeditiously and on their highest priorities.

We will recommend to you, say within the next 10 days, that we ought to get the individual categories from 31 to 4, and let's get on with it in terms of simplification.

Senator DOMENICI. Let me ask you a question on this regarding the 31 categories. Your proposals address themselves also to the highway trust fund and the whole gamut of problems.

Mr. LUTZ. That would have to be a separate bill, of course.

Senator DOMENICI. We are talking about this being a separate approach to the categorical grant dilemma that you say exists.

Mr. LUTZ. Yes. The Congress will have to deal with a separate bill that basically differentiate between program structure and revenues.

Senator DOMENICI. Thank you very much. I have no further questions Mr. Chairman.

The CHAIRMAN. Thank you, Senator Domenici.

This has been, I think, a good morning of testimony and colloquy, and we appreciate your coming, Governor Tiemann, and you, Mr. Lutz, Mr. Lamm, Mr. Coupal, and Mr. Wells, for your statements and for your response to questions.

We view the further development of our road systems as important in the strengthening of the economy. That would be said by me even if we were not in a period of recession, but certainly this is an added reason for developing highways to better serve the people of the United States.

I reiterate what I have said in the past, and that is that the strength of our economy is geared upon wheels and wings, the mobility of our people, the movement of the products from the farm and the factory to the ultimate consumers.

Highways are an important part of the network of transportation. But our country's railroads also are essential parts of the system.

I am very concerned with the condition of the rail beds. I have been doing what I can on the solution of that problem. We are moving coal at a very slow rate over certain segments of rail lines because the maintenance of the rails and the rail beds has deteriorated during recent years.

I think there is even some fear by those who are riding Amtrak, who move between Washington and New York, that they are reducing their travel because they feel that the roadbeds are not able to take the speed of the trains that are now operating.

I am not trying to be an alarmist in this field, but I do know that people are thinking about safety as they travel, and people are concerned about the movement of products by rail.

We thank the witness. We also thank those who sat with us this morning.

Mr. TIEMANN. May I make an additional comment? Earlier in the hearing, Senator Bentsen asked about the completion of the Interstate, and I gave him two answers. Both were correct, but let me clarify it. With regard to the percentage of inflation, the inflation factor, if we use the zero inflation factor at a \$4 billion annual level, we complete the Interstate in about 1985. If we use 7 percent as a factor, about 1990.

The CHAIRMAN. When the Interstate System was created in 1956, what was the estimate of the completion date?

Mr. TIEMANN. 1972.

The CHAIRMAN. Would you say that there have been several reasons why we haven't been able to do it, but one stands perhaps above all others, and that is the inflationary increase?

Mr. TIEMANN. No question.

The CHAIRMAN. I do feel that has been the major problem. There have been other factors; and we recognize that.

We might have you place in the record the situation percentage-wise of competition of the Interstate, State by State. Could you do that?

Mr. TIEMANN. Yes.

[The information requested follows:]

STATUS OF COMPLETION OF THE INTERSTATE SYSTEM (AS OF DEC. 31, 1974)

State	Percent of total miles open to traffic ¹	Percent of total cost obligated ²	State	Percent of total miles open to traffic ¹	Percent of total cost obligated ²
Alabama.....	78.5	65.7	New Hampshire.....	80.0	60.9
Arizona.....	87.4	51.1	New Jersey.....	77.5	62.7
Arkansas.....	96.6	72.6	New Mexico.....	93.0	71.9
California.....	91.6	79.8	New York.....	88.8	65.0
Colorado.....	84.5	53.2	North Carolina.....	73.5	53.6
Connecticut.....	80.1	43.6	North Dakota.....	91.6	90.7
Delaware.....	71.8	86.2	Ohio.....	92.1	78.4
Florida.....	74.4	69.5	Oklahoma.....	96.4	81.3
Georgia.....	79.6	62.3	Oregon.....	94.7	55.6
Idaho.....	90.6	74.6	Pennsylvania.....	91.3	71.2
Illinois.....	83.9	66.8	Rhode Island.....	69.0	57.1
Indiana.....	90.8	86.3	South Carolina.....	83.7	74.4
Iowa.....	85.2	76.0	South Dakota.....	83.6	83.5
Kansas.....	95.2	61.4	Tennessee.....	81.5	74.5
Kentucky.....	83.8	67.7	Texas.....	85.2	71.1
Louisiana.....	68.4	59.4	Utah.....	69.8	68.2
Maine.....	93.6	77.0	Vermont.....	89.0	79.9
Maryland.....	91.3	41.3	Virginia.....	79.1	58.0
Massachusetts.....	93.1	74.8	Washington.....	81.2	58.4
Michigan.....	87.8	73.7	West Virginia.....	82.5	68.7
Minnesota.....	75.7	61.9	Wisconsin.....	81.8	64.9
Mississippi.....	91.5	75.1	Wyoming.....	86.7	77.5
Missouri.....	86.2	75.3	District of Columbia.....	41.2	26.7
Montana.....	80.5	69.1	Hawaii.....	42.9	48.2
Nebraska.....	94.2	93.0			
Nevada.....	84.3	71.2	Total.....	85.3	66.4

¹ Includes toll facilities on the interstate system.

² Based on the 1975 interstate cost estimate total cost of the system.

[Additional questions follow:]

Question 1. With regard to your FY 1976 budget request, could you describe briefly the policy framework from which your program emphasis was developed?

The Federal budget process is designed to develop a fiscal plan that makes maximum use of limited financial resources in terms of programs which Executive leadership determines are of greatest national concern. This plan must be responsive to national economic policies, and aid in achieving the desired objectives for balance and growth. It is basically a process of synthesis and analysis. Many diverse and important programs, each with its advocate, must compete for the limited Federal resources.

In general, the President establishes a total level for the budget based on expected revenues and his economic policies. This, in turn, is subdivided among the various departments and agencies which are given target ceilings. The departments, meanwhile, have requested budget estimates from their constituent agencies and bureaus. The estimates include costs of program continuation; mandatory and uncontrollable costs; and costs for new starts, program expansion, or realignment.

The Department aggregates these estimates and compares the total to its target which invariably is exceeded. A Secretarial review is conducted, priorities established and applied, appropriate program emphasis determined, and an allowance is made within which each agency develops a detailed budget request to be sent to OMB.

At OMB the process repeats itself. Priorities are considered as are the present state of the economy, changes in objectives and goals, the current international political situation, and other elements important to the national fiscal plan. The final result is the President's budget. Each decision-point in its evolution has attempted to consider what should be done, when, and in what amount.

With the passage of time, circumstances change. Thus, the budget as submitted may later be modified. (This has recently been exemplified by the release of \$2 billion for Federal-aid Highways over the level originally proposed for FY 1975.)

With enactment of the "Congressional Budget and Impoundment Control Act of 1974," the Congress has now disciplined itself to review the same economic realities as the Executive has addressed. In short, both branches of government wish to achieve the same goal—constituency satisfaction and national economic balance.

Question 2. How did you allocate expenditures among the various programs?

Available contract authority for all Federal-aid Highway programs are either apportioned to the States utilizing a statutory formula or allocated to States utilizing other specific criteria.

Utilization of the available resources by each individual State is determined within the framework of priorities established by that State. Therefore, the allocation of resources among various programs as displayed in our budget is merely an estimate of how the States will utilize their available resources in the current and budget years.

Question 3. It would be helpful to the Committee if you could describe your budget submission to the Secretary of Transportation and his submission to OMB.

DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION
SUMMARY OF FISCAL YEAR 1976 BUDGET REQUESTS AND ALLOWANCES

[In thousands of dollars]

Program levels	Fiscal year 1975	OST request	OMB request (OST allowance)	Congressional request (OMB allowance)
Grant programs:				
Federal-aid highways.....	\$4,600.0	\$6,357.5	\$5,346.5	\$5,200.0
Off-system roads ¹	0	200.0	20	20
Highway beautification.....	45.0	61.0	56.0	56.0
Highway-related safety grants.....	14.7	34.5	15.0	15.0
Rail crossings—Demonstration projects.....	11.9	16.1	16.1	15.0
Railroad-highway crossings demonstration projects.....	4.8	26.7	5.0	1.4
Rural public transportation demonstration program.....	9.6	60.0	20.4	20.4
Territorial highways.....	4.6	10.0	5.5	4.6
Darien Gap highway.....	10.3	46.5	45.3	14.2
National scenic and recreational highway.....	0	20.0	0	0
Overseas highway ¹	0	15.0	0	0
Other programs:				
Alaska highway.....	4.8	12.0	12.0	8.0
Right-of-way revolving fund.....	45.0	32.0	32.0	15.0
Baltimore-Washington Parkway.....	1.5	4.0	2.5	2.5
Highway safety research and development.....	8.7	10.0	10.0	9.2
Motor carrier safety.....	6.1	6.6	6.8	6.8
General operating expenses.....	(136.8)	(155.5)	(153.3)	(147.3)
Other trust funds.....	38.8	62.7	54.0	45.1
Miscellaneous accounts.....	2.1	0	0	0
Salaries and expenses.....	2.5	0	0	0
Total.....	4,810.4	6,974.6	5,627.1	5,413.2
Outlays.....	4,670.0	5,351.0	5,080.0	5,020.0
Positions.....	5,065.0	5,070.0	5,070.0	5,035.0
End-of-year employment.....	4,786.0	4,896.0	4,896.0	4,855.0

¹ Authorized by Federal-Aid Highway Amendments of 1974.

² A liquidating cash appropriation of \$10,000,000 was allowed to cover possible use of this program by the States. Any obligations incurred under this program will be against the user State's regular Federal-aid obligational limitation.

³ \$20,350,000 was requested in regular OST budget submission. This amount was allowed. Following passage of 1974 Amendments Act, an increase to \$60,000,000 based upon the new authorization was requested but denied. A fiscal year 1975 supplemental for \$5,350,000 was also requested but denied. This proposal would have increased the fiscal year 1975 program level to \$15,000,000, the same as the new authorization contained in the 1974 Amendments Act.

⁴ A fiscal year 1975 supplemental of \$10,000,000 was requested but denied by OST.

Question 4. What process was used to arrive at your budget request for the "Transition Quarter" (July 1, 1976–September 30, 1976) to the new fiscal year?

FHWA estimates for the three-month transition period generally equal one-fourth or less of the F.Y. 1976 estimates. OMB instructions directed that budget requests for the transition period should only provide for the continuation of programs from F.Y. 1976. New program starts were to be deferred until F.Y. 1977. Therefore, FHWA first established program levels which were equivalent to one-fourth or less of the F.Y. 1976 levels: Appropriation requests for new obligational authorities and liquidating cash were then developed based upon the transition period program levels. In effect, the estimates for the transition period are similar to a continuing resolution.

Question 5. What are the long-range policies of FHWA to meet the changing transportation needs of this country? What type of framework has been established in which to develop such policies? What would be the expected costs of such long range policies?

The Department of Transportation recognizes that the need to conserve our remaining supplies of energy related raw materials will be a top national priority for many years. In this respect DOT policy is to reduce our dependence on the private automobile, especially in urban areas, by improving public transportation service as well as to improve the efficiency of the private auto through car-pooling and more fuel-efficient engines. The Department and FHWA also see a shift in long term policy away from programs which stimulate the construction of new highway facilities and toward programs which will emphasize improved management and use of existing roads and its upgrading of these existing roads.

Federal highway programs in the future will focus on providing a direct Federal role in a limited system of highways recognized as essential for connectivity throughout the Nation. Below this national system of roads the Federal role should be more supportive of State and local transportation programs by reducing the 30 plus categorical programs to more manageable, flexible assistance programs. Continuing and expanding the off-system eligibility authorized by the 1974 Highway Amendments is a good example of this program direction.

The CHAIRMAN. The next hearing of our committee will be in the continuing review of the Agency budget requests. That hearing will be held on Monday, March 3, 1975, beginning at 10 a.m., and at that time we will take up a very important part of this whole picture, and that is the report from the Environmental Protection Agency.

The hearing will, of course, be held in this room.

Thank you.

[Whereupon, at 11:55 a.m., the committee recessed, to reconvene on Monday, March 3, 1975, at 10 a.m.]

BUDGET REVIEW

ENVIRONMENTAL PROTECTION AGENCY

MONDAY, MARCH 3, 1975

U.S. SENATE,
COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The committee met at 10 a.m., pursuant to call, in room 4200, Dirksen Senate Office Building, Hon. Jennings Randolph (chairman of the committee) presiding.

Present: Senators Randolph, Muskie, Gravel, Morgan, Hart, Baker, Buckley, Stafford, McClure, and Domenici.

OPENING STATEMENT OF HON. EDMUND S. MUSKIE, U.S. SENATOR FROM THE STATE OF MAINE

Senator MUSKIE [presiding]. The committee will be in order.

We have a lot to do this morning and we ought to get started. I may have to leave. I know I will have to leave in the course of the hearing to testify on my own committee budget before another committee. So, we hope that there will be other members of the committee present to continue the hearing until we have completed it this morning.

I have a longer opening statement than usual, but I will read because it raises a number of issues which we will be probing.

This hearing marks our third annual review of EPA's budget. This review has familiarized us with the details of EPA's resource needs and has provided information useful in discussing these needs with the Senate Appropriations Committee.

This year there is a new perspective to this hearing. Congress has created a new budgetary process, and standing committees will be submitting their analyses of program needs to the Budget Committee.

A report from the Public Works Committee to the Senate Budget Committee will be made by March 15 outlining budget recommendations.

Last year in these hearings, I asked Administrator Train if his Agency ever submitted a budget to OMB, based only on the evaluation of the requirements of the law and the resources needed to implement those requirements.

His response was this: "No, sir, we do not submit budget recommendations along those lines, what you might call an optimum budget." As I said a month ago in our hearing on water pollution

construction funds, we hope to explore this kind of budget with you today.

The new budgetary process can aid Congress in analyzing the real needs of the Agency. Previous discussions have been constrained by the fact that the executive branch imposes arbitrary budgetary ceilings on such discussions.

The work of the Budget Committee has already produced some useful information. The period from 1965 to 1975 would be regarded by most of us as one of growing environmental awareness, greatly expanded environmental programs, and increased commitments to the protection of the environment. Yet, as a percentage of the Federal budget, a measurement which has been popularized by the Defense Department, funding of environmental programs has not changed at all.

In 1965, natural resources and environment received 2.5 percent of the Federal budget. That percentage is unchanged for 1975. Budgetary commitments have not matched rhetoric or the new programs.

Perspective must be regained. We are spending billions of dollars for cleanup, based on information from insufficient thousand dollar monitoring projects.

Last year in these hearings, the General Accounting Office reported that funding of water pollution R. & D. programs in EPA was declining at the same time that a major commitment to an enlarged construction program had been made. The imbalance is obvious.

Another measure is the expenditures analysis of the last 5 years. When inflation is deducted from EPA's budgets, we find that in 2 of the last 5 years, the programs have declined in constant dollars. The other 3 years have shown useful increases, but the analysis indicates that we have not been on a steady escalator for environmental programs. We have ridden an up and down funding cycle not geared to new laws.

Recent budgets illustrate the problems environmental programs have faced. Congress added 420 new positions and \$203 million to EPA's programs in the fiscal year 1975 appropriations bill. That bill was vetoed by President Nixon. These positions were for EPA's nonenergy programs.

Yet, while Congress was expressing its will on the subject, the Agency was receiving its target for the next fiscal year, fiscal year 1976, which is the budget we are now examining.

Incredible as this may seem, EPA was being asked to cut its non-energy programs \$2.2 million below the President's fiscal year 1975 request. This would have been \$205 million below the congressional level established at that time. On top of this, the Agency was being asked to drop 150 of its personnel positions.

With these cutbacks, OMB should have asked for a repeal of all or portions of EPA's statutory responsibilities. These cutbacks would have nullified substantial parts of those acts and that fact should have been acknowledged.

Restoration of OMB's proposed reductions required the year-long efforts of the Administrator of the Environmental Protection Agency. But that kind of holding battle does not allow the analysis we hope to engage in today. Instead, it forces a struggle for survival.

We hope that the task today is more pleasant. We would like to examine the priorities that ought to be established, not just levels that allow for survival.

One of the most crucial needs of the Environmental Protection Agency is increased personnel. Enforcement programs require people. Research and development programs require scientists. If someone is not checking the monitors, then abatement actions are likely to slip. These personnel needs are becoming more and more critical.

The Supreme Court has ruled against the impoundment of water pollution funds. We are finding that releasing the impoundment money is not enough. We must require the administration to release the impounded personnel levels as well. Congress provides increased personnel authorization in its appropriations, but the administration refuses to allow agencies to hire those people.

The administration proposed the Safe Drinking Water Act, which is now law, has proposed toxic substances legislation, Clean Air Act amendments, and may propose water pollution amendments.

All of these will make substantial new demands on the Agency. Many are designed to involve a great deal of administrative discretion, which requires manpower to conduct studies, make judgments, and issue case-by-case orders. Yet the administration does not propose or make available the manpower to manage existing programs.

The Senate report accompanying the 1970 Clean Air Act pointed out that money and manpower for clean air programs were running at half the authorized levels. It went on to say the following:

This pattern cannot continue if the Congress and the Federal Government are to retain credibility with the American people. The authorization figures contained in the bill represent the best estimate of the committee in consultation with the Administration of what would be required to implement the provisions.

The availability of manpower, with adequate funding, can provide effective implementation of this Act. The committee expects the past trends be reversed and that required manpower be made available to implement the program.

Regarding the manpower problem, the committee has received a statement from Dr. Dade Moeller, discussing air pollution manpower training problems. Dr. Moeller is chairman of the National Air Pollution Manpower Development Advisory Committee which was established under section 117 of the Clean Air Act.

His testimony highlights the fact that manpower problems are becoming a very significant restraint on environmental progress. We will include this statement in our hearing record.

[The statement of Dr. Dade Moeller appears at p. 203.]

Senator MUSKIE. The long-term budgetary needs of EPA are of concern to this committee. We realize that we must look 2 or 3 years ahead to have substantial influence on the budget.

In this respect it is disturbing to read in the January 31 letter from OMB Director Roy Ash, to Russell Train, that EPA will be asked to reduce its next year's budget by \$7 million.

More overwhelming to the statement in that same letter is that the Agency will be asked to reduce its 1978 budget by \$52 million from the present budget before us and in fiscal year 1979 and fiscal year 1980 reductions of \$62 million below the present level will be proposed.

The fact that the fiscal year 1976 request is the peak funding proposed by the Office of Management and Budget for environmental protection programs for the next 5 years is disturbing. In their view, we have hit the top, and from here on it will be downhill.

The record does not support such cuts and I do not believe that Congress will tolerate it. Instead, we will be looking to the resources needed to further environmental programs. That is the task that we had in mind when we requested EPA to testify this morning and I look forward to hearing Mr. Train's testimony.

May I say, in addition, that I appreciate the cooperation we have had from EPA operating, I understand, within the constraints of its role as a part of the administration to give us the information we need to analyze the personnel requirements of EPA, of the programs which you have been mandated to manage as well as the new proposals that we are asked to consider.

All of these new laws require people. As we move forward from the policymaking stage to the policy implementation stage, which means enforcement, R. & D., and all of the rest, the manpower requirements are going to grow.

I think that is as clear as clear can be. We appreciate the cooperation we have had from EPA undertaking to identify those needs.

Senator Baker, would you like to comment at this point?

**OPENING STATEMENT OF HON. HOWARD H. BAKER, JR., U.S.
SENATOR FROM THE STATE OF TENNESSEE**

Senator BAKER. Mr. Chairman, thank you very much. I have only this to say: that as Mr. Train understands, and this committee is keenly aware, we have a unique situation here. We have our first effort in the identification of the budgetary processes under the new act in the presence of the new chairman of that committee.

I will follow with great interest how we juggle both of those balls at the same time.

I am happy to have you here. This is an Agency that has been, I think, an outstanding example of governmental activity that has brought about an appropriate improvement.

The continuing question of how much it costs, of what the funding levels may be is something that I look forward to hearing from you on.

Senator MUSKIE. I think the way you juggle it, Howard, is in the words of Senator Hollings' definition of the Congress, the two-armed Congress, I will have to have two arms to manage these. One on the one hand, and one on the other hand.

Senator BAKER. You are about as good as any other hand I have seen.

Senator MUSKIE. Senator Morgan? Senator Hart?

I will have to go testify on my own budget in another subcommittee during the course of this hearing. I hope we can maintain some continuity of the membership on the committee.

STATEMENT OF HON. RUSSELL E. TRAIN, ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY AL ALM, ASSISTANT ADMINISTRATOR FOR PLANNING, JAMES AGEE, ASSISTANT ADMINISTRATOR FOR WATER AND HAZARDOUS MATERIALS, ROGER STRELOW, ASSISTANT ADMINISTRATOR FOR AIR AND WASTE MANAGEMENT, WILSON TALLEY, ASSISTANT ADMINISTRATOR FOR RESEARCH AND DEVELOPMENT, RICHARD JOHNSON, ACTING ASSISTANT ADMINISTRATOR FOR ENFORCEMENT, RICHARD REDENIUS, DEPUTY ASSISTANT ADMINISTRATOR FOR RESOURCES MANAGEMENT, ROBERT ZENER, GENERAL COUNSEL OF EPA, AND JACK RHETT, DEPUTY ASSISTANT ADMINISTRATOR

Mr. TRAIN. Mr. Chairman, members of the committee, I welcome the opportunity to be here today to discuss our budget plans for the coming fiscal year.

I think I should identify the other people at the table with me. We have a fairly full display of EPA top management here because I think when we do get into the budget, both from the authorizing standpoint and also from the appropriations standpoint, all the top people right across the board should be made available to you.

On my right, Mr. Al Alm, Assistant Administrator for Planning. On his right, Mr. James Agee, Assistant Administrator for Water and Hazardous Materials. On my left, Mr. Roger Strelow, Assistant Administrator for Air and Waste Management. On his left, Dr. Wilson Talley, Assistant Administrator for Research and Development. On his left, Richard Johnson, Acting Assistant Administrator for Enforcement.

Then we have behind us a second rank, although really no less important, and I would name particularly Dick Redenius, who is the Deputy Assistant Administrator for Resources Management, with very particular responsibility for development of the Agency budget. I think that is very important from your standpoint here.

Just to my left, Robert Zener, the new general counsel of the Agency. I am not sure you have met him as general counsel, a new independent office in the Agency responsible directly to the Administrator.

Of course, Jack Rhett, our Deputy Assistant Administrator, with particular responsibilities for the construction grants program.

I should make one other remark in the interest of any of those in the audience who may be here, hoping to hear my announcement on the decision of the automobile emissions suspension issue.

I do not plan to say anything further about it this morning. It is my expectation to announce the decision on Wednesday afternoon.

Senator BAKER. Mr. Chairman, if you would permit me to interrupt, that reminds me a little of the justice of the peace in Scott County, Tenn., who heard an extended lawsuit with extensive legal counsel.

When it was over, he said, "Gentleman, I will take this case under advisement until next Tuesday, at which time I will rule in favor of the plaintiff."

Mr. TRAIN. This committee—to proceed, Mr. Chairman—has contributed significantly to the design of the Environmental Protec-

tion Agency's programs. Therefore, I think it is both timely and important that your committee review EPA's resources this year.

Before getting into the details of our 1976 program, I would like to briefly address the process and the year-round analysis that was undertaken to develop the Agency's budget.

The formulation of a budget is a difficult procedure in the best circumstances. Rarely do program budget needs correlate with the fiscal realities. This year with the acute and closely related environmental, energy, and economic problems, it was particularly difficult.

Last spring, to begin the 1976 budget process, we developed estimates of our resource needs, and discussed them in some detail with the Office of Management and Budget. That was last May, approximately. These resource requirements were unconstrained by fiscal policy.

In other words, we were at that time, Mr. Chairman, discussing perhaps for the first time, I am not sure of past history, with OMB what I think you would describe as an optimum budget from the standpoint of the Agency.

We thought it important to develop total Agency needs and make them and their supporting rationale available to OMB. We also initiated an intensive internal review of major policy issues. The rigorous internal analysis undertaken by EPA resulted in a very substantial reallocation of resources.

For example, to meet high priority needs, EPA proposes to reallocate 451 positions to higher priority activities. While these reallocations are painful, they will provide us the ability to achieve our highest national priorities.

In addition to providing an analysis of EPA policy, this process provided a basis for our 1976 budget request to OMB and the essential framework for the budget you have before you today.

As a result of a long process, including a session with the President, I believe the budget we are presenting represents a balance among our important environmental objectives and other vital national concerns.

Clearly with the overall budget constraints, EPA cannot achieve everything that Congress envisaged. However, by judicious use of resources, I think we can achieve major statutory objectives that will bring about a high quality environment.

We believe the difficult choices we made are the right ones and welcome this opportunity to discuss them with this committee.

I would now like to highlight some of the more significant developments and priority adjustments which are reflected in our budget request.

These budget proposals serve to emphasize the increasing importance of our working relationships with State and local governments. As our programs have matured, individual States have assumed increased responsibility for their effective implementation.

We will continue to depend on the States to share our workload. The budget also reflects our policy of shifting EPA personnel from headquarters to the field whenever possible.

Let me now turn to the major program proposals. To highlight, we will concentrate resource increases in high priority areas such as air enforcement, construction grants, water supply, and pesticides.

In 1976 we will be confronted with significant challenges in implementing the Clean Air Act. We plan to have 85 percent of the major stationary sources in compliance with SIP emission limitations or compliance schedules by the end of this fiscal year.

We will, however, experience major challenges in achieving health related standards in problem air quality control regions. We have learned a great deal about the adverse effects on health caused by pollution, but realize there is much more which we must learn.

We will continue the air pollution research and development efforts to strengthen our knowledge of health effects on which to base air quality criteria. We also plan to continue study of the potential health impact of catalytic converter related emissions, especially sulfate emissions.

In addition, we will be increasing our knowledge of the health and ecological effects of synergistic combinations of air pollutants such as ozone and nitrogen oxides. Research on long-range transport of these pollutants will also be carried out.

The Clean Air Act relies on the achievement of primary and secondary national ambient air quality standards through the mechanism of State implementation plans. We are encouraging maximum participation of State and local agencies in the implementation of a number of programs, including increased enforcement of State plans, the development of vehicle inspection and maintenance programs, and air quality maintenance programs.

We realize, however, that State fiscal constraints will to some degree hinder their ability to adequately implement these programs.

We plan to step up the federally operated mobile source pollution control programs. To augment the vehicle certification program, we plan to implement a program to determine whether production vehicles conform to the standards.

This will include a Mobile Enforcement Test System to check and augment assembly line testing done by the manufacturers. We will add to the certification program the ability to certify vehicles operated at high altitudes and we will also implement a voluntary self-certification program for certain emission related aftermarket parts.

This will alleviate the potentially anticompetitive impact of the recall and warranty provisions on the aftermarket parts industry.

Our air program budget for State control agency support will remain at the \$51 million level in both 1975 and 1976. While the new obligatory authority shows a reduced level of funding, this level will be augmented by funds deferred from 1975.

Completion of the capital intensive equipment procurement and construction phases of several large-scale SO_x demonstration projects has allowed us to reduce the funding for our nonenergy related control technology research program by \$8 million.

The Federal Water Pollution Control Act Amendments of 1972 represent an extraordinarily complex and far-reaching piece of legislation. Striving toward the ambitious goals set forth in the act requires the combined efforts of Federal, State and local governments as well as other interested organizations.

The water pollution control program remains a top Agency priority and is an area within which we were able to accomplish major repro-

graming. While the program appears to have increased, the level of funding actually represents a modest reduction from last year's budget.

The apparent increase is the result of a change from contract authority for section 208 areawide planning in 1975 to budget authority in 1976.

While we intend to maintain a nearly constant level of effort in our water pollution control programs, we propose to alter program emphases and significantly reprogram resources to reflect changing priorities.

We are nearing completion of the initial issuance of National Pollutant Discharge Elimination System permits, and we expect to have delegated the program to about 30 States by the end of fiscal year 1975.

I am especially pleased to note that 94 percent of all major industrial discharge permits and 86 percent of the major municipal permits have been issued. And more significantly, I think, all major discharger—6,300—permits will have been issued by the end of fiscal year 1975.

The shifting program emphasis from permit issuance to compliance monitoring and enforcement has allowed us to reallocate \$2.8 million and 146 positions out of this program.

In our construction grants program, we expect to see a substantial increase in workload from 4,300 active projects last fiscal year to over 8,500 active projects in fiscal year 1976. To meet this demand, we propose to increase staffing through reprogramming of 161 positions and \$2.9 million. We have already reprogramed 54 positions. We expect, however, that this increase will not be sufficient to meet workload demands and, therefore, we are depending on significantly increasing the delegation of program responsibilities to the States.

Consequently, we have under consideration an amendment which will increase the role of local and State governments in the management of the construction grants program. Other amendments aimed at increasing the effectiveness of the construction grants program are also under consideration.

The President's budget reflects the obligation of \$4.2 billion in construction grant funds this fiscal year and \$5.2 billion in fiscal year 1976. With the release of the \$5 billion reserved funds pursuant to the Supreme Court ruling, we expect obligations to increase by an additional \$400 million in fiscal year 1976.

We expect that nearly all of the \$18 billion authorized by Public Law 92-500 can be obligated by the end of fiscal year 1977.

The recent release of the reserve funds will be more than enough to cover all projects which are currently ready to go to construction—including those which were previously too low on State priority lists to be eligible for Federal funding.

We estimate that over \$4 billion in construction activity can be initiated between now and the end of the calendar year and that direct on-site employment related to these projects will exceed 80,000 with at least an equal amount in off-site employment.

Let me add a brief word here. I am sure the committee will want to discuss this program in more detail later. I think we have made some substantial progress in expediting the obligation of funds and their movement into construction under this program.

But having said that, I will say that I am far from satisfied at the rate at which this is moving. We have been working hard within the Agency to identify the internal need for improved management which will assist this progress.

And I think we have succeeded in identifying a number of these areas. Likewise, there are going to be some places where we are going to need some help, both from OMB and from the Congress. We have identified these areas.

I just want to mention this in passing. As I say, we can get into this and doubtless will in more detail. But I do want the committee to be fully aware that while I do believe we have made substantial progress in speeding up these funds that we have got a long way to go.

It is my determination that we go that further distance not only from the standpoint of expediting the achievement of environmental goals, but also and in a complimentary sense to expedite the attainment of the economic goals which we all have in mind.

I see these two goals coming together as I suspect they very often will and should. To achieve this result will however require the very highest kind of priority on my part and the Agency's. I simply want to assure you that the program will be getting that attention.

We are continuing our policy in fiscal year 1976 to maximize the involvement of the States in implementing the Federal Water Pollution Control Act. In this respect we plan to continue the level of grant support to State control agencies. Support to the States in fiscal year 1976 will be maintained at a \$40 million funding level, in part through the use of funds deferred in fiscal year 1975.

The water quality research and development program will concentrate in fiscal year 1976 on determining the potential health effects of land disposal of effluent and sludge produced by waste water treatment.

Programs focusing on the environmental effects of ocean dumping of municipal wastes, the management of such nonpoint sources of water pollution as animal feedlots, and the development of improved systems to utilize and dispose of waste water sludges will also be funded.

We are requesting an increase of \$3.5 million in this program over 1975. Because of the 1975 Congressional add-on of \$5 million, the budget reflects a decrease of \$1.5 million for the water quality research effort.

With respect to section 208 areawide planning, we are proposing funding at the \$53 million level in 1976. This will provide support to an additional 66 areas. The funds will provide these areas with a means of comprehensively addressing both point and nonpoint water pollution problems within their geographic boundaries.

Section 208 area wide planning, which was provided as contract authority in 1975, will be carried as budget authority in 1976.

One of our most significant program developments in 1976 will be implementation of the recently enacted Safe Drinking Water Act which provides for the protection of drinking water supplies throughout the United States.

We have been anticipating the passage of this measure, and we are moving toward the establishment of national drinking water regulations which specify the standards required to protect the public health.

We will also provide the mechanism by which States may insure compliance with the primary drinking water regulations, the minimum requirements relating to underground injection of fluids, and the protection of groundwater sources.

In 1976, we will increase resources allocated to development of drinking water and underground injection regulations by \$6.8 million. A \$10-million-grant program will be initiated to help the States in developing and implementing their drinking water programs including underground injection control.

In addition, water supply research and development will be increased by \$7.6 million. These funds will support increased research on the health implications of suspected contaminants, allow initiation of studies of their impact on groundwater supplies, and permit expansion of the control technology program.

The solid waste budget reflects a \$3.9 million decrease due to the \$5 million added by the Congress for research and development in 1975 that we did not include in our budget this year.

Additional resources in the hazardous waste management program will allow us to define the types of hazardous materials whose disposal presents the most severe problems to identify potential health effects, and to assess various approaches to control hazardous waste pollution.

This data will be used to develop guidelines for the disposal, storage, treatment and transport of hazardous wastes.

The Federal Insecticide, Fungicide, and Rodenticide Act requires that all presently registered products (about 34,000 Federal and 15,000 State) be reregistered and classified for "general" or "restricted" use by October 21, 1976, and that by this date all applicators of "restricted use" pesticides be certified by the States.

The \$10.2 million increase which we have proposed for our pesticides program will aid the States in the development and implementation of their applicator certification and training programs.

In this effort we will be cooperating with the USDA Extension Service to utilize their existing resources as much as possible to establish and conduct training courses.

We estimate that over 2 million private and 100,000 commercial applicators may require certification, and many, perhaps most, will require some precertification training. The increase will also provide for some additional funding to assist in processing the reregistration and classification workload.

For our noise program, we are asking for an increase of \$4.7 million to step up the development of new product noise emission standards and labeling regulations. We intend to publish very shortly a second listing of major noise sources which should include 4 to 6 products.

Additional products will be named in subsequent lists during 1976. The requested funds will allow us to conduct technical studies necessary to provide information to permit us to proceed with standard setting on the listed products.

We also have action under way which should lead to labeling of devices for hearing protection in 1976. We intend to expand our labeling effort to include additional noise control devices.

The EPA Energy R. & D. program is an important part of the overall Federal effort to achieve greater energy self-sufficiency. The underlying thrust of the program is to provide adequate environmental

protection as the nation moves toward expanded use of domestic fuels. Particular emphasis will be placed on environmental problems associated with the following major areas:

- The extraction of coal, oil shale, oil, and natural gas and the reuse or proper disposal of wastes resulting from their extraction and processing;
- Fossil fuel combustion;
- Production and use of synthetic fuels; and
- Advanced energy systems and conservation.

With a total funding in 1975 and 1976 of \$246 million, the energy program constitutes one of the Agency's major efforts. In 1976 we expect to fund three interrelated energy activities:

- A processes and effects program to determine the environmental effects associated with energy extraction, transmission conversion and end use;
- A control technology program to identify, develop and demonstrate necessary pollution control techniques; and
- A policy and implementation program to evaluate the environmental, economic and social consequences of alternative strategies for pollution control of energy systems.

We also are requesting an increase of \$2 million for the operation of an inhalation toxicology facility at the National Center for Toxicological Research. This facility will permit studies of the health effects of chronic exposure to low levels of air pollutants.

We are requesting \$6 million for the scientific activities overseas program, which supports cooperative environmental research projects in other countries utilizing excess foreign currencies held by the Treasury.

No funds were appropriated for this activity in fiscal year 1975. The request will restore the program to the fiscal year 1974 level and provide support for EPA participation in a special Polish-American energy research program.

For our management and support activities, which cover program direction and administrative functions together with a wide variety of "overhead" costs, we are seeking an additional \$14.2 million.

The bulk of this increase will cover costs for items such as space rental, communications, utilities, building repairs and improvements and centralized ADP services. Other increases are directed at substantially expanding the effort which we are now giving to the preparation of environmental impact statements, improving our audit coverage of grants for waste treatment plant construction—I might add an area of very real concern with the expanded funding available to the program—and meeting the rapidly increasing workload faced by the legal staffs of our regional offices.

These increases, in large measure, relate to the increased emphasis we are placing on construction grants management.

You will note that the President's budget also includes estimates for the July–September 1976 transition period. These estimates provide for continuation of EPA programs through this period at their fiscal year 1976 levels. No new starts or other substantial changes are planned during that period.

While the foregoing discussion focuses on EPA-funded activities, I think it is important to note the major effort being made to reduce pollution from Federal installations.

As you know, Executive Order 11752 mandates the cleanup of all forms of pollution—air, water, solid wastes, noise, pesticides, and radiation—from Federal facilities. The 1976 budget estimates of other agencies include a total of \$415 million for reducing pollution at Federal installations; this is an increase of \$72 million over the 1975 level.

In closing, I wish to restate my belief that in this year of fiscal and economic constraints our budget represents an equitable balance among our important environmental objectives and other national concerns.

My colleagues and I are here to answer any questions you may have. I regard these hearings as an indication of the subcommittee's continued interest in our success, and I welcome the opportunity you have provided to us.

Thank you, Mr. Chairman.

Senator MUSKIE. Thank you very much, Mr. Train.

I would like to take about 10 minutes to ask some questions and then yield to my colleagues. But first, I might ask Senator Randolph, chairman of the full committee, who was not here before you gave your testimony, whether he would like to make a statement.

**OPENING STATEMENT OF HON. JENNINGS RANDOLPH, U.S. SENATOR
FROM THE STATE OF WEST VIRGINIA**

The CHAIRMAN. I want to cooperate with you, Mr. Chairman. I shall place in the record my opening statement to save time and permit us to move on. Then I do have some colloquy I would like to engage in.

[Senator Randolph's opening statement follows:]

**OPENING STATEMENT OF HON. JENNINGS RANDOLPH, U.S. SENATOR, FROM THE
STATE OF WEST VIRGINIA**

When the Environmental Protection Agency was created in December of 1970 it was assigned one of the most important tasks of any government agency. The responsibility of this infant agency was then and remains today the protection of the health of the American people.

In a sense, it might be said that we needed protection from ourselves. Man created pollution and only man can end pollution and the threat it poses to our well-being. If this sounds like a formidable undertaking, it is because the job is truly huge. In our successful pursuit of prosperity we neglected to properly care for the country that so generously provided us with the basis of our wealth. As a mature nation, however, we know that our prosperity was purchased at the price of contaminated water, smoke-filled air and mountains of garbage.

The Environmental Protection Agency was created as a focal point of our actions to correct past abuses and prevent their repetition in the future. The agency is the governmental reflection of the environmental ethic reshaping many of our traditional attitudes.

To carry out its responsibilities, the Environmental Protection Agency has been armed with a series of laws which can be effective in alleviating pollution but which I believe were fairly written by the Congress as to their impact of all segments of society. Fiscal support for this effort has been generous. Our purpose today is to review the spending proposals of the Environmental Protection Agency in the context of programmatic needs for fiscal year 1976.

The financing situation for the Environmental Protection Agency's programs has been altered somewhat in recent days by the Supreme Court and subsequent action by the President to release funds for water pollution control. This is a substantial amount of money—\$9 billion to be exact—but it is still only one area of the agency's activities.

The Environmental Protection Agency has important responsibilities in carrying out provisions of the Clean Air Act as well as other features of the water pollution program, solid waste disposal activities and noise pollution control. To fulfill these responsibilities, an adequate budget is, of course, necessary. We want to discuss with you, Mr. Train, the procedures by which the budget request for the Environmental Protection Agency was developed and the relationship of the proposed spending levels to the requirements of law and the expectations of the Congress.

With our country in the grips of an economic recession, there is a new dimension to all Federal activities. I refer specifically to their utilization for the creation of jobs and the stimulation of recovery.

Late last year Congress approved the Job Opportunities Program under the sponsorship of members of this Committee. Among its provisions is a procedure to determine the potential of Federal programs to create jobs. I believe that our inquiries today should include a review of the Environmental Protection Agency activities and the ways in which they can be used to provide jobs for unemployed Americans.

Mr. Train, the budget review procedure by the authorizing Committees is in general a new one for the Senate, resulting from the Congressional Budget Act of 1974. In our case, however, the Committee on Public Works has in the past conducted hearings on the spending plans of the Environmental Protection Agency. We have some experience, therefore, in analyzing the budget of your agency. I know that the members of the Committee look forward to continuing this dialogue today.

Senator MUSKIE. All right. We will try the 10-minute rule and see how that works.

Thank you very much, Mr. Chairman.

I would like to focus again on the water pollution construction grant program, not that there aren't a lot of other areas of importance, as I indicated in my opening statement and as you have indicated in your statement, but because of the current interest in this program and the possibilities for expanding it to meet our economic problems as well as our environmental objectives.

I would like to probe just a little bit more and get some information, if I could.

First of all, what is the current average monthly obligation level of the construction grant program?

Mr. TRAIN. The current average? We are hoping to obligate a total of about \$5 billion by the end of this calendar year which would give you some idea of the average. I would suppose the current average would not be much over \$200 million at the present time.

We do expect that it will rapidly climb in the months immediately ahead.

Senator MUSKIE. Does that represent a doubling of the monthly rate?

Mr. AGEE. Yes, sir, approximately.

Senator MUSKIE. I understand that OMB will allow for that greater obligation rate. Is that correct?

Mr. TRAIN. Absolutely. I have had no discussion of any kind to the contrary whatsoever with them. We are going to be obligating and moving these funds just as rapidly as we possibly can.

Senator MUSKIE. And there are no constraints established by OMB at all?

Mr. TRAIN. There are absolutely no constraints whatsoever from OMB on this program.

Senator MUSKIE. With respect to the Supreme Court decision, I take it from what you have just said that you regard that as com-

pletely unleashing the impounded funds without any mental reservations or purposes of evasion.

Mr. TRAIN. EPA is totally unleashed, there are no strings attached on these funds at all.

Senator MUSKIE. The reason I felt constrained to ask that question—

Mr. TRAIN. Other than those in the statute.

Senator MUSKIE. The deferral resolution is still pending and we have to decide what to do about that, if anything. Since there is a difference of opinion between GAO and the administration on the application of title X to the funds impounded prior to the effective date of the Budget Act I thought I had better put this question to make sure that we eliminate any cloud that may exist by virtue of the impoundments under title X of the Budget Act as well as under the authorities that President Nixon asserted when he invoked the impoundments.

Mr. TRAIN. If there is any way I can relieve the committee's mind on this I would be delighted to do it. I can assure you that there are absolutely no strings attached. I discussed this with Jim Lynn, the new Director of OMB, shortly after the Supreme Court decision and it was his personal view and his assurance to me that there should be absolutely no strings attached. I know he subsequently discussed this with the President. This was the policy that EPA was directed to pursue.

Senator MUSKIE. The policy is damn the torpedoes, full speed ahead. Is that right?

Mr. TRAIN. I do worry about some of the torpedoes. I think we had better talk about some of them before we are through. But full speed ahead is the policy.

Senator MUSKIE. I take it you probably, or someone on your staff, has examined testimony we received last Friday from several State water pollution control administrators, the president of AMSA and the National Utility Contractors Association.

They indicated in that testimony an ability to proceed at a much faster rate than the rate they understood to be the present policy.

But at the same time there appeared to be some difference in their ability to do so. The testimony from Maine, for example, was that Maine could put all of its share of \$9 billion into construction within 12 months. That is actually begin construction with its share of the total \$9 billion and could go beyond that. Some of the larger States indicated reservations about their ability to move that fast.

Is there any possibility to begin the objectives of meeting the abilities of various States to move at various rates of speed to obligate this money?

Mr. TRAIN. Yes. I think there are some very real possibilities. This is really a management problem. It is not related to our regulations of the statute. It is a matter of identifying State objectives and putting priority at the construction end which is where it should be right now. We should put major emphasis in the immediate near term on step 2 and step 3 grants. It is important that we don't abandon the step 1 planning because in the long run that is how you keep the pipeline filled.

At this particular juncture, I think it makes good economic and environmental sense to get on with the job of construction as rapidly

as possible. And we are going to be pushing at the regional level to do this.

I believe we can recognize and give effect to the different capabilities and the different situations of the various States.

We do know that there are a number of projects which are awaiting construction; I think a little over 600. I think if we put our full resources behind them right away we can help break that logjam, too.

Senator MUSKIE. The last time you were here we talked about the same subject. Do I gather correctly—I want to be sure that I understand—that the policy just announced here or explained represents a substantial acceleration of the program beyond that that you were prepared to commit yourself to the last time you testified?

At that time you were talking about \$4 billion that the President agrees to release, \$5 billion was still under wraps in the Supreme Court and it was your feeling at that time that the \$4 billion represented about the maximum obligation rate that you could conceive of handling.

What you are proposing now, what you have described now, is a substantial acceleration beyond that. Am I correct?

Mr. TRAIN. At the time I last testified, we expressed the hope that we could reach an actual obligation level of as much as \$5 billion, but that with the backlog of unobligated funds the new \$4 billion would give us more than ample obligational authority.

Since that last hearing we have continued making a very close and detailed analysis of the process within EPA and the States. We are probably in a better position now to identify areas where some improvement is needed.

I should note that the Office of Planning and Management under Mr. Alm has been conducting, as I believe the committee is aware, a very extensive review, in Washington but particularly in the field of the management of the construction grant program.

In cooperation with Mr. Agee's people, Jack Rhett's people in particular, have identified a number of areas where we think we really can make some very significant improvements.

I am optimistic that with some management changes, most particularly with the communication of my own sense of the urgency of this need through the agency and with some additional help, particularly on the personnel side, that we can make major progress and accelerate beyond the point which we had originally identified as the outside possibility.

Senator MUSKIE. Let me ask you this: As I understood your earlier testimony, it was that your obligation in a given State was limited by the \$4 billion released nationally.

Now does your policy admit of the possibility that obligations permitted in a given State could reach its share of the \$9 billion in this calendar year if the projects can be cleared that fast?

Mr. TRAIN. Conceivably, yes. There is no legal or technical constraint on it. There is no policy constraint on doing that.

Let me say that I did not intend to convey before that we were under a policy constraint not to obligate more than the \$4 billion which the President was allowing. It was our hope to obligate just as much as we possibly could.

Senator MUSKIE. At that time there was still \$5 billion impounded.

Mr. TRAIN. There was still \$5 billion impounded.

Senator MUSKIE. So that was a policy constraint.

Mr. TRAIN. To that extent, yes. But we were also carrying into the fiscal year 1976 something on the order of \$4 billion or \$5 billion obligated funds from previous years. Therefore, we actually had available under the new \$4 billion allotment substantially more than \$4 billion if we could have in fact obligated it.

Thus, there was no policy constraint as a ceiling on the amount of obligation.

Senator MUSKIE. I find that picture inconsistent with the one that I know to be true in my own State. With respect to the testimony from Maine, there were no unobligated balances available. So that when the \$4 billion was released that opened up the possibility of another \$40 million, \$38 million to \$40 million in projects for which no funds were onsite previously and the \$5 billion provides another \$40 million or so.

All of that \$80 million, that is representing Maine's share of \$9 billion could be obligated and put into beginning construction within 12 months.

Mr. TRAIN. That might well have been the case of Maine, Mr. Chairman. But I don't think that was typical of States generally.

I think that there were or are a few States who would have had allocated to them the full amount of available funds. But this was not true, in terms of obligation, around the country generally.

I would like to have Mr. Agee expand on that for a moment.

Mr. AGEE. Mr. Chairman, there are approximately a half dozen States that have a good chance of obligating this money by the end of the calendar year. But it would certainly not be more than that, according to our records and estimates.

Senator MUSKIE. With respect to those six, is it possible that they will be permitted to by the end of the calendar year?

Mr. AGEE. Yes. They will be permitted to. We encourage the system to do that.

Senator MUSKIE. Does that include Maine?

Mr. AGEE. I will have to check on Maine. Let's assume for the moment that it does.

Mr. TRAIN. I think we should assume that includes Maine.

Mr. AGEE. After looking at the additional \$5 billion just released, our revised estimate for obligations for fiscal 1976 rose from \$5.2 billion to \$5.6 billion.

In other words, from a release of at least \$5 billion our obligation increased in fiscal 1976 \$400 million. This will have a considerable impact in fiscal year 1977.

Senator MUSKIE. I have gone over my 10 minutes. I want to try to nail down this one point as much as I could before I yield to my colleagues. But let me ask this one last question at this point and maybe my colleagues will pursue it.

Do you really have a pretty good picture of the projects that States have ready to move, say, within a 12-month time frame into the construction phase? Do you have a pretty good picture of that? Is there a way for you to get that kind of a picture out of information that is available to you?

Mr. AGEE. Yes. Through our management information system we do have that data available to us.

Senator MUSKIE. Do you have such a number this morning?

Mr. AGEE. There is an additional \$5 billion that will be obligated by our estimate by the end of this calendar year. That is through calendar year 1975.

Senator MUSKIE. That represents the maximum potential from your point of view. Does it represent the maximum potential from the States' point of view because they have complaints about the slowness or they have had complaints about the slowness of the rate at which what they believe to be projects ready to go and obligated?

Mr. AGEE. Mr. Chairman, I think we are talking about the same data. Our regional offices work on a day-to-day basis with the States. I think we are fairly well in tune with the projects that can get to the obligation stage by the end of this calendar year.

Senator MUSKIE. I won't take more time to pursue it unless you want to say something, Mr. Train.

Mr. TRAIN. I don't want to take any more of your time. But I thought I would add one bit of information which I find is useful for perspective: In 1974 in this program we obligated \$2.6 billion, of which \$1.2 billion were reimbursements. So we were actually obligating new construction grant funds at the rate of \$1.4 billion in 1974.

In fiscal 1975, it is estimated to be \$4.2 billion, of which \$700 million will be reimbursables for a total of \$3.5 billion for new construction.

In 1976, \$5.6 billion will be obligated and all of this will go for construction grant activity. So the rate of obligation will go \$1.4, \$3.5, \$5.6. That is a fairly rapid acceleration in the rate of obligation in a program of this sort.

But as I said, I am still not at all satisfied with this. I am not indicating this by way of trying to relieve your concerns at all. You should be concerned about this program and we very definitely are.

Senator MUSKIE. Out of this colloquy I get these two points: One, that there is no policy constraint with respect to any part of the \$9 billion; that the only constraints of your ability at the national level and the States' ability at their level to actually go forward and do the planning and do the engineering and to get the projects ready for bid and construction.

Mr. TRAIN. That is correct, sir.

Senator MUSKIE. Practical limitations as you see it?

Mr. TRAIN. We have one very real concern which I am sure that you share and that is the problem of maintaining accountability and control over funds in a program of this size to protect it from fraud and other misuses of funds.

Obviously, the larger the program becomes and the more we try to accelerate the moving of these funds, the greater risks we run.

As you know, we do have substantial limitations in terms of personnel within this program which constrain our ability, frankly, to do everything that we otherwise would like to do in order to protect the program from that kind of abuse.

This is something that we have to keep in mind. I want to accelerate this program, but I am sensitive to the fact that you may get me in here a year to two hence and say look at all the mismanagement. I want to express this concern as frankly and as bluntly as I can to you. It worries us.

We don't want to sit on our hands because we are worried and just dribble the funds out to be on the safe side. We are not going to do that. But you had better be aware that we are going to be running some risks in terms of audit.

Senator MUSKIE. Thank you.

Mr. TRAIN. If you could give us any assurance of congressional intent that we move ahead and run a few risks, that would be very helpful.

Senator MUSKIE. We would like to give you the manpower if the administration would take it. I know you would, or at least I think you would.

Mr. TRAIN. We are as you know, shifting 161 new people into this program. Substantially all of them will go into the field. We are not going to build up Jack Rhett's headquarters staff. In point of fact this is merely a reallocation of personnel from within the agency.

Senator MUSKIE. Let me yield to Senator Baker.

Senator BAKER. Mr. Chairman, thank you very much. I have a commitment I have to keep on this subject but with a different person at 11 o'clock. I will postpone my questions.

Senator MUSKIE. Senator Randolph.

The CHAIRMAN. Thank you, Mr. Chairman.

I am not critical, Mr. Train, as I pose certain questions, but I know that you are here after giving us a very, I call it, thorough statement, to have colloquy that we may develop, hopefully, additional facts.

One fact as we start that I know people will not appreciate my calling attention to again is that this room is 78 degrees. We are going to talk about energy and research. That is why I am speaking of it. So I guess Barry Meyer, the chief counsel and chief clerk, will take notice, because it is 10 degrees higher than it should be.

Senator MUSKIE. I thought that had something to do with me.

The CHAIRMAN. But it is a very important matter. I continue to call attention to the Architect of the Capitol to the overheating of the rooms here in the Capitol itself and in the office buildings serving the Capitol Hill. It, of course, is practically the same in the rooms on the other side of the Capitol in the House buildings.

I do this for the reason even before asking the question—I will cut my time and stay within it, Mr. Chairman—I don't think the American people yet realize what we, Mr. Train, can do voluntarily in the field of energy conservation.

We know we can save upwards of 160,000 barrels of oil daily by observing the 55-mile an hour speed limit. In our Federal Aid Highway Act last year we placed the language necessary to withhold the highway funds to the States if they do not enforce this Federal measure which it now is.

Across the broad front we have the opportunity as individuals as well as units of government, including the Federal Government, to have the necessary conservation program which can, in a sense, lessen the problems of the importation of oil, which continue to plague us and even cause differences as we attempt to compromise the so-called package here on the Hill with that which is coming from the White House.

So it is not a minor matter that I bring to your attention for a couple of minutes this morning by an illustration of just in one room a temperature that is 10 degrees higher than it should be.

Last year when the budget estimates for fiscal 1975 were given to us you will recall, Mr. Train, that the administration had a particular appeal which it set forth to Congress, asking us to act expeditiously on those items that involved energy and research; \$134 million was the final figure for fiscal 1975.

This year the only new program initiatives that have been given the Presidential approval, as you know, are in the field of energy.

This committee responded to those appeals that I mentioned and we of the Congress enacted last June the energy research measure.

I was disappointed to follow through on this subject finding that many months later many, many of these energy funds had not been programmed or obligated. Maybe there is a reason.

The Environmental Protection Agency requested a specific program for research and development for the fuel cell program. The House and Senate directed special attention to this program and provided specific funds.

Now, after more than 7 months since the requested funds were provided, EPA, as I understand it, has not obligated those funds.

I have these three questions. If these energy research programs were critical, they were of course critical or the administration would not have acted to consider separately ahead of the other annual appropriation bills those matters that I have mentioned, why have we not followed up any funds obligated shortly after enactment of the bill early last year? Why were these not brought into focus?

Then a second question. Of all the R. & D. funds that were appropriated to date, how much has been obligated, how much remains unobligated as of today? What plans does the administration have for obligating the \$54 million provided in Public Law 93-322?

That was over 7 months ago, as I have indicated. I know that you will want to provide us with the specific justification for previous delays in obligating funds for each item as set forth in committee reports on Public Law 93-322.

I think you will want to tell us what specific steps will be taken within perhaps the next 30 days to change this situation.

Mr. TRAIN. You are quite correct, Chairman Randolph, that all the funds you described have not been obligated as yet. I am not sure that I am fully aware of the reasons for this.

Recently within the Agency, we asked each of our program administrators, all of whom are here today, to explain where they stand insofar as obligations are concerned with their programs.

Perhaps I can ask Dr. Talley to address this question.

The CHAIRMAN. Dr. Talley, would you follow the partial explanation of Mr. Train?

Mr. TALLEY. In terms of the base R. & D. budget, the commitments of the funds should be compared to a straight line plot—0 percent in the beginning of the fiscal year, 100 percent by the end—and they do fall on such a line. That is, we are on schedule with respect to our base program.

The energy moneys did not arrive until the late fall. The last of the moneys became available at the end of December.

Since the total amount of money authorized by Congress was less than that planned for the full program, we reprogrammed the dollars to fit a lower level and sent letters to the appropriation committees in both the House and the Senate, as we were required to do.

We have yet to receive permission to commit these funds.

Was the mention of the fuel cells a specific question or just an example?

The CHAIRMAN. There are a list of items, of course, in the committee report, which I have asked be placed in the record. But let's take development of commercial and practical fuel cell designs for both stationary and mobile energy storage and transmission application.

Mr. TALLEY. If I recall the history correctly at the time the proposal was originally made, it was a \$6 million item.

The CHAIRMAN. That is right. That is correct.

Mr. TALLEY. When that program was suggested by one of the staff people at one of our laboratories, there was no civilian agency capable of handling that sort of program.

EPA was the natural vehicle. Since that time, ERDA has been formed. We have determined that ERDA will undertake development of the program with no transfer of funds and we will reserve \$300,000 from our energy money to examine the environmental impact of the fuel cells.

ERDA has the responsibility for the development. We have the responsibility to make certain that, as that development proceeds, this new energy source or new method of packaging energy will be environmentally acceptable.

The CHAIRMAN. Dr. Talley, I think you are telling us what we in the Congress ought to recognize; that is, often we have overlapping agencies and we lose valuable time in the use of funds for the purposes that the Congress has set forth.

I think we deserve to censor ourselves oftentimes. But I know here that I don't want to speak of it in any explosive manner, but sometimes we have a hybrid-headed operation in carrying out these programs. We are not able to clearly set them into the channels where they can be moved forward. Is that correct?

Mr. TALLEY. It creates one more set of constraints on the operation of the program. I would like to add that in January the first inter-agency agreements were signed by ERDA and EPA. Within the last week we put forth the first \$400,000 for a study of uranium mine tailings which ERDA will carry out.

The CHAIRMAN. That is the Minnesota problem?

Mr. TRAIN. No, this is a uranium problem of mine tailing which has arisen in Colorado and throughout the Western United States. You are referring to the tailing problem in Lake Superior which was an asbestos problem.

If I may just make a general comment, Senator Randolph, your sense that this obligation has been moving pretty slowly is entirely correct. It is incumbent upon us to get into this problem and see if we can't move these funds more effectively.

I would mention that I suspect one of the constraints here has been the fact that while we have a substantial increase in funding, we have no additional personnel for this program.

The CHAIRMAN. I think that the explanation, plus your assurance of moving as realistically as you can, and that is what the Congress should want, nothing more, nothing less, personnel problem is one that I can understand is very real.

I will ask one question, Mr. Chairman, so that I trust I am within the 10 minutes. In your statement, I noted that you cited the completion of several demonstration projects for sulfur oxides control as a reason for reducing research on what I call control technology.

The sulfur oxide control program stayed in EPA, did it not?

Mr. TRAIN. That is correct, sir.

The CHAIRMAN. And it was not transferred to the Energy Research and Development Administration and the reason is perhaps because of assurances that the program would receive—I use this term—adequate and continued support in EPA.

I am a little bothered this morning when I am told that the Interior Committee is at this hour or earlier receiving testimony that additional funding is necessary for research in sulfur oxide control technology.

What is your thinking on this matter?

Mr. TRAIN. First, as I think you are well aware, I certainly share your sense of the very high priority which this research and development should receive. As I recall, the reason for the reduction in funding does not reflect any reduced priority being given to the program in the Agency.

The nature of particular projects, however, has changed as between the 2 budget years.

The two projects that I referred to in my statement had very substantial capital startup costs for hardware, investments which have now been made. The projects have now moved into the operational phase which will require a certain amount of funding and monitoring, but not substantial hardware costs.

Senator RANDOLPH. Mr. Chairman, are you keeping the watch? I am sure I am over the time. I want to cooperate with other committee members.

Mr. TRAIN. These two very important projects should complete their demonstration phase within the 1976 fiscal year.

Senator MUSKIE (presiding). Thank you very much, Mr. Chairman. Senator Buckley.

Senator BUCKLEY. Thank you, Mr. Chairman.

Mr. Train, among the recommendations to amend the Clean Air Act are extending automobile emission deadlines to avoid sulfate pollution and permitting intermittent control strategies as an alternative to continuous emission reduction in powerplants to avoid installing expensive scrubbers.

In view of these proposals, what is EPA doing in the area of toxicological studies on the effects of sulfates and what is EPA doing in the area of ecological studies to determine the instance and effect of acid rains?

Mr. TRAIN. I think I had better show my wisdom by asking Dr. Talley to answer that question in detail. On the problem of sulfates, we are maintaining not only a fairly high level of research activity, but the 1976 budget reflects an increased level of activity on health effects, control technology and on the question of the transport of these pollutants, an area in which a good deal of work still needs to be done, Wilson?

Mr. TALLEY. I would like to add one thing. In taking a look at the organization of the Office of Research and Development and in trying

to lay more emphasis on the health and ecological research side of the house, I must admit that I find that I am dipping into a small pool of manpower.

The number of people competent to perform health research, M.D.'s, pathologists, toxicologists and the like, is limited. Other Federal agencies are also interested in the same people.

Senator BUCKLEY. One of the problems that this committee specifically faces, and the Congress as a whole faces, has to do with the requests for modifications of the Clean Air Act on a rather pressing basis in light of our energy problems, economic problems and others.

What I really am groping for is to determine whether or not you will be having specific enough information, certain enough information in order to give us guidance or whether we still are groping for final answers or at least guides to action?

Dr. TALLEY. While I cannot say that in so many years we will have such and such numbers, each year our data base improves.

Senator BUCKLEY. Will we have the basis between now and June for some guide as to what we ought to be doing with respect to the Clean Air Act?

Mr. TRAIN. Yes.

Senator MUSKIE. The answer is political and not scientific.

Mr. TRAIN. As Dr. Talley said, you have to operate on the basis of the best available data at any given time. We do not have all of the answers in many areas. I could not assure you that by June we would. But I do believe that we have a very broad basis of information and scientific data sufficient to support effective and intelligent legislation by the Congress in terms of constant control technology and in terms of the sulfate problem.

We, of course, will be discussing these in detail.

Let me mention just a little short budget summary here in these areas. For 1976, the combined R. & D. program of the Agency dealing with both sulfates and sulfur oxides encompasses the following: Health effect studies, \$9.5 million; sulfate transport and transformation studies, including model development, \$3.7 million; development of sulfur oxide monitoring instrumentation, \$1 million; sulfur oxides emissions characterization, \$5.4 million; and sulfur oxide control technology, \$25.5 million; for a total of \$45.1 million in this one very important area.

Mr. STRELOW. Let me add that another perspective on this would be the question of how soon EPA would be prepared to implement an ambient air quality standard directed more specifically to the sulfate problem than the current sulfur dioxide standard.

The best proximation from our own scientists on this is 1979 or 1980. So although we can certainly give guidance, it is not going to be the definitive sort of guidance that we would want and expect ultimately to have in terms of a specific standard.

Senator BUCKLEY. Will you be in a position to provide guidance some time in the near term on the prudence of encouraging catalysts in automobiles?

Mr. TRAIN. Yes. We doubtless will be wanting to discuss this at length following the announcement of my auto emission decision. As I said at the outset of the hearing, I am not going to be able to announce that decision until Wednesday.

Senator BUCKLEY. Thank you, Mr. Train. I have a parochial interest in whether specifically you are conducting ecological studies on the incidence of acid rain. I understand there is a fair amount of acidity falling on New York State.

Dr. TALLEY. Not only is that true for New York State, but for some unexplained reason 2 years ago, the first acid rains were reported in California. We still don't know where they are coming from.

Senator BUCKLEY. We do know there is a trend.

Dr. TALLEY. Yes.

Senator BUCKLEY. I would appreciate some clarification or explanation of some information that comes in this cheerfully bound book called Special Analysis of the Budget of the U.S. Government for Fiscal 1976. On page 275, we have a listing of the various areas of environmental studies that are going on under 11 Federal agencies. One of them is characterized as "Understanding the Impact of Man on the Environment," another one, "Economical and Other Basic Environmental Research Involving the Supplement of Baseline Data, and Development of Plants, Animals, et cetera."

Then on the following page, table Q-5, on page 276, there is a list of a number of agencies under the category, "Understanding, Describing, and Predicting the Environment," for which millions of dollars are spent, a total of \$1.3 billion estimated for fiscal 1975.

Nowhere on that list is the EPA. It seems to suggest that in terms of the focusing of research efforts within the executive that EPA is somewhat of an orphan. Is this true? Is this desirable?

Mr. TRAIN. I don't have that table in front of me. I don't know that I can really address your point. There is a great deal of environmental work done in other agencies. Practically the entire NOAA budget falls within areas such as monitoring and understanding the environment, though it focuses primarily on mostly upper atmosphere, oceanographic work, and climatic studies. I don't know why you don't find EPA on your list.

Senator BUCKLEY. The Smithsonian is the least of the ones specifically listed. It has \$8.12 million, and underneath that is other agencies, \$22.7 million. EPA is presumably among the other agencies. Commerce has \$370 million.

Mr. TRAIN. We have in our research program in EPA over \$250 million. Exactly how this is described by OMB in the summary, I am just not sure.

Senator BUCKLEY. Are the efforts in the overall environmental research field scattered among these various agencies coordinated at some point? Are you aware of what is happening in these other programs?

Mr. TRAIN. Yes; broadly speaking. While we are probably not aware of everything, we do have a good deal of interagency coordination and interagency working groups.

When we had an Office of Science and Technology, of course, that was one of its functions. OMB provides a considerable coordinating function and so does the Science advisor through the National Science Foundation. Everybody is bursting to answer the question.

Mr. ALM. Let me just make one comment, Senator. In the category of pollutant identification measurement monitoring, we have \$6.3 million. Indeed, from the table you mentioned, we have about \$47

million covering those areas. I just wanted to make that point while we are here. We can supply it for the record.

Dr. TALLEY. To reemphasize what Mr. Train mentioned, EPA does not have the majority of the environment R. & D. dollar within the Federal Government, but the total amount of money spent for Federal environmental research is dwarfed by the private sector—the academic institutions and industry.

EPA must continue to rely on the other Federal agencies and the outside community to substantiate its base. One example, I think, of the excellent cooperation among the agencies is the energy R. & D. program. The so-called Gage committee and the King Committees worked for almost a year to produce comprehensive plans in the health and ecological effects, and the processes and controls.

It is under those plans that call for coordination of 14 Federal agencies that we are going forward with the fiscal 1975 and 1976 programs.

Senator BUCKLEY. What concerns me is that as the EPA has the power of decision affecting billions upon billions upon billions of dollars in this economy. I just want to be reassured that EPA has available to it the most up-to-date information necessary in order to make these decisions wisely.

Dr. TALLEY. Yes; that is our intention and we will continue to do so.

Senator BUCKLEY. Is it your intention or is it a fact?

Dr. TALLEY. In the main, yes.

Senator BUCKLEY. I think I have half a minute left in which I will pose a question.

Yesterday or the day before, I forget which, we had a number of representatives of State environmental offices testifying on the release of these funds. They expressed a tremendous feeling of support for the so-called Cleveland amendment that would transfer to the States an enormous amount of discretion in the setting of priorities, approval of plans, and so on.

No. 1. What is your attitude, Mr. Train, towards that amendment;

No. 2. Would shifting a burden on the States relieve you of some of your own special problems?

Mr. TRAIN. I think that the so-called Cleveland bill is a very useful approach to the problem. We support that legislation in principle. Whether we have reached agreement on every detail, I am not certain. We do have a policy of delegating as much of the review function to the States as we can at the present time.

One of the problems that the States have is one of resources. I think this is a very valuable part of the Cleveland bill approach. It does permit us to utilize up to 2 percent of construction grant funds to assist in providing the resources to the States to carry out this job.

Simply having a delegation authority is of very little benefit unless we can transfer some resources along with the authority. I think that over some period of time the implementation of this legislation, if enacted, and its approach would substantially improve the situation.

It would take time for the States to staff up and train personnel to be in the position to carry on these activities.

So that even with enactment, the effect of the Cleveland bill will be some little ways off.

Senator BUCKLEY. Thank you, Mr. Train.

Mr. Chairman, I don't want to digress my time, but I would suggest it would be useful to this committee, if the EPA, specifically Mr. Train, were to provide us with his own ideas as to what areas of responsibility ought to be clearly retained by EPA. Thank you.

Senator MUSKIE. Without objection, we appreciate that.

Senator GRAVEL?

Senator GRAVEL. Mr. Chairman, I would rather await my turn, as I came in late and I do want to talk to Mr. Train before 12 o'clock. I would really like to await my turn, provided that I am not precluded from talking to these gentlemen.

Senator MUSKIE. I don't think it will.

Senator GRAVEL. Before they go to lunch.

Senator MUSKIE. Senator Morgan?

Senator MORGAN. Mr. Chairman, I only have a couple of questions for Mr. Train.

Mr. Train, there has already been some conservation about concern for the health effects of sulfates as they are pollutants. As I recall reading yesterday in the paper, there were some news reports concerning the effect of the catalytic converters and the staff has had some reports that EPA's research and the sources and health effects of sulfates has been reduced or have been reduced.

Do you have any comment on it and if not, could you tell us what is being done to determine the effect of sulfates as air pollutants on the health of our people?

Mr. TRAIN. We are actually increasing the level of support for this program, both in terms of money and people. I don't know the basis for the report that we are reducing support. It has a very high priority with us. It is obviously a very difficult problem, both in terms of the catalytic converter and in terms of the question of fossil fuels generally.

I think we all recognize that sulfates in their various chemical configurations do represent substantial health hazards. We do need to maintain a strong research program here and we are.

Senator MORGAN. Then you are not reducing?

Mr. TRAIN. Absolutely not.

Senator MORGAN. Did you have an occasion to see the news story yesterday with regard to the effect of the catalytic converters?

Mr. TRAIN. No; I have been trying not to read any of the news stories on this subject for the last 2 or 3 days.

Senator MORGAN. I don't cite the news stories as authority but there was some question about the argument apparently that had taken place between Chrysler and EPA and others about the effects of them.

I just wondered if during the period of time that the argument has been going on, if EPA has really been trying to determine the effects of the catalytic converters.

Mr. TRAIN. We have had a very extensive program in this regard. First, we made a major effort to characterize the emissions themselves. In other words, to determine just what is coming out of the exhaust when a catalyst is used.

While we knew there were sulfates, we didn't know exactly which ones and what the quantities were. We have now succeeded, largely over the past year, in arriving at a quite accurate characterization of the nature of these emissions.

We have developed a much closer analysis of health effects as they relate to sulfate emissions. Because of the importance of the subject during the recent EPA hearings on the suspension issue, I scheduled a special additional 3 days simply on the sulfate question in order to get a real focus on that subject. At that time EPA studies were made available. We also heard a number of outside witnesses who addressed the subject—the motor companies and the oil industry.

So, I assure you that there are still things we would like to know, but we have maintained a very substantial level of activity and we are increasing that level.

Senator MORGAN. Thank you.

Senator MUSKIE. Senator McClure.

Senator McCLURE. Thank you, Mr. Chairman.

Just to follow on the question that was asked by Senator Morgan just a moment ago, on the effects of the catalytic converter, I think, some of the people at EPA will recall that I have raised that question with EPA in April of 1973, at which time I suggested, based upon the basic chemistry of the catalytic converter that there was going to be a sulfate and sulfuric acid problem and EPA at that time said there is no proof that that exists.

Therefore, we are going ahead with the catalytic converter, in support of the catalytic converter. I raised that again in the spring of 1974 and EPA again said we are going ahead with the catalytic converter. You have no evidence that there is any problem.

Late in 1974, EPA said we have made the discovery. There is a problem.

Well, I recite that only as an indication that EPA hasn't always been as farsighted as many of us would hope that they were and I welcome the great emphasis that is placed in your message today on the fact that you are doing basic research to make determinations to policy.

That is, I think, what many of us have been asking for a long while. Let's base the decisions on solid, scientific fact and leave the conjecture to the politicians who the public has long since decided are very fallible indeed.

Let's at least make the mistakes rest here, not with you. And the States have rested here on many of these decisions. But in some instances, EPA has fostered those mistakes by giving us inaccurate information or refusing to recognize that there were problems where problems did exist.

The other side of that is I have been one who has been very critical of the scrubber technology. EPA may yet prove to be right on that one. But what I say, may yet prove, because I think it is not yet proven, that the scrubbers are commercially feasible in operation on these large commercial plants.

Without spending a great deal of time going into specific examples like this, could you comment concerning your current status of scrubber technology in the removal of the oxide of sulfur from stack acids?

Mr. TRAIN. Let me make two comments. On the first subject, which is the catalyst question on sulfate emissions, I testified before this committee as I recall in November of 1973, and I stated that we recognized that a very real potential problem. We did not know the

extent of the problem. We did not know if there was a problem or at what point it was going to be serious enough as to require some control effort.

I don't believe there was any lack of recognition on the part of the Agency, but there was and still is a great deal of debate among people on the outside, as well as within the Agency as to exactly what all of this may mean.

As far as the catalyst itself was concerned, this technology basically was developed not by EPA but by the automotive industry in cooperation with catalyst manufacturers.

The industry's research went back into the late 1950's on the catalyst. And, as far as I know, at least some elements of the industry were aware that there were sulfate emissions. These findings were never mentioned publicly in any of the early discussions of catalyst technology.

Senator McCLURE. It was not mentioned by those who wanted to put catalysts on, surely.

Mr. TRAIN. I really am not familiar with all of that background. I am not avoiding the question, but I want to be fair to our own Agency in this. There was a great deal of concern among some of the scientists, particularly the health people, which was fully reflected here before the committee a year ago last November.

We were confronted at that time with the fact that to do anything else at that moment would have essentially involved abandoning the automobile emission control program.

I do have the suspension decision to make. It is hard for me to discuss this in further detail without getting into matters which may be overly sensitive.

Senator McCLURE. There were two things that were involved in my first question. Let me interrupt at this point. I don't want to go into the whole question of air quality standards at this time. My only point in raising it was I think there were certain predictable results of actions that were being taken, that EPA shared in the responsibility for choosing one course of action over the others and while doing so, in my judgment, failing to point with sufficient clarity to the consequences of those actions.

Even you indicate that a great deal was known about it and the scientists within the Agency pointed with alarm to those effects. But the burden of EPA testimony was that regardless of those effects we are going to go ahead with the catalytic converter.

Mr. TRAIN. I think that would have been the consensus of the scientists based upon information then current. There are calculated risks that you have to take in all of these things.

Senator McCLURE. There are burdens in those calculated risks that sometimes bear more heavily on other people than they do on the bureaucracies that make those decisions.

Senator MUSKIE. Would the Senator yield?

Senator McCLURE. I think we will get involved in a great big debate if I yield.

Senator MUSKIE. I think the other risk is also involved. If the decision had been to abandon auto emission standards because of this debate, the calculated risks involved, then those who share your point of view would have carried a heavy burden, too.

Senator McCLURE. As I indicated, we would probably get off on another subject if I yielded. I don't want to get off onto that other subject this morning.

Senator MUSKIE. Then I won't ask you to yield.

Senator McCLURE. I am grateful.

Mr. TRAIN. You did want me to comment on the scrubbers?

Senator McCLURE. Yes.

Mr. TRAIN. As far as the Agency is concerned, I don't expect to try to shift or avoid any burden of responsibility for any decision that I have participated in.

If anything ever turns out to be wrong, I am as much to blame as anybody else and maybe more so. So you do not need to worry about my being willing to share the responsibility or assume the full responsibility.

Senator McCLURE. I have never seen you duck that responsibility yet. I applaud that.

Mr. TRAIN. With respect to the scrubber issue, as discussed earlier, we have continued a very substantial research and demonstration program. More to the point, there has been a very substantial increase in the commitments within industry itself to this technology.

A year ago last September when we had administrative hearings on this subject there were some 10 systems actually installed. There are now 19 or more actually installed. There were a total of 44 under construction or committed to last year. The total is now over 100.

I think that there has been a very strong movement in this regard during a very short period of time. The argument over scrubbers, and Lord knows there is plenty of argument over scrubbers, has tended to shift from the reliability side of the question to the economic side of the question. They are obviously very expensive technologies.

We maintain that the reliability of this technology—and there are about six or so alternatives available—has been very rapidly improving. Looking toward the future, there should be no major problem on the reliability side.

Senator McCLURE. Looking toward the future. How about the present?

Mr. TRAIN. Now and in the future. Like any new technology, one would expect that it is going to improve as it becomes installed and people gain experience with it, unless it is so installed it is not going to improve.

Senator McCLURE. Again, I don't want to get into an extensive discussion of that. I would hope and expect that we will get back to that later.

There are a couple of general questions that I want to ask, one in regard to your testimony says you expect that there will be \$4 billion committed to the construction of treatment plants; that \$4 billion will create 80,000 jobs. My mathematics would indicate that that is an expenditure of \$50,000 per job created.

Could you give me some kind of a basis for those figures?

Mr. TRAIN. These figures are based on the analysis and estimates of the Bureau of Labor Statistics.

Senator McCLURE. I wonder if you could furnish that for the record, some supportive data for that. It also indicated that there would be an equivalent number of jobs created outside of the direct construction activities.

That would reduce it if you divide by that larger number to \$25,000 per job created.

The reason I ask the question is I think rather obvious, that Congress is involved in an evaluation of its programs in an effort to direct our resources towards those that create jobs in the high unemployment areas.

Mr. TRAIN. We would be happy to do that.

Senator McCLORE. There is a debate going on whether Public Works are relevant to job creation and figures like \$50,000 per job or even \$25,000 per job rather seriously threatens our ability to convince people that Public Works can create jobs.

So I would like to have the basis of the analysis so we can feed it into the other discussion.

[The following information was excerpted from the report entitled, "Manpower Implications of Alternative Levels of Sewer Works Construction," issued by the Bureau of Labor Statistics, December 1973:]

I. INTRODUCTION

Government expenditures, whether for direct purchases of goods and services or in the form of grants to State and local governments or transfers to individuals, generate requirements for manpower in specific industries and in specific occupations. Depending on the specific nature, magnitude, and timing of these expenditures, the resulting manpower impacts can cause dislocations in the economy.

Manpower supply-demand bottlenecks or imbalances can develop resulting in unacceptable price increases and/or the draining away of manpower from other, equally socially desirable activities. Recognizing the potential manpower impacts of Federal funds for sewage plant construction activities, the Environmental Protection Agency provided financial support to the Bureau of Labor Statistics to undertake a study to assess the manpower implications of alternative levels of Federal funds for sewage works construction activity.

This report or working document presents the results of that study for use by the Environmental Protection Agency in developing a plan of action to meet sewer works construction needs. It shows estimated manpower requirements—expressed in terms of on-site year long jobs—associated with alternative levels of Federal funds for sewage works construction. The analysis was limited to the direct on-site construction manpower requirements and does not include estimates of the off-site manpower required to produce or transport the materials and equipment used in the actual construction phase. Data are presented showing the manpower required in sewage works construction consistent with the Bureau's high services or basic model of the economy in 1980;¹ the manpower requirements associated with the funding levels and timing of the Federal Water Pollution Control Act Amendments of 1972; and the manpower requirements resulting from the Administration's plans to "spread out" the actual spending of the funds appropriated under the 1972 Amendments. Also presented are a general analysis of manpower supply in the construction trade and the manpower implications of the alternative "growth paths" or levels of Federal funding.

¹ See the U.S. Economy in 1950, BLS Bulletin 1963, and Patterns of U.S. Economic Growth, BLS Bulletin 1678.

The estimates of job requirements associated with various levels of expenditures should be viewed only as rough "orders of magnitude" and not as precise estimates. This primarily is due to the data gathering and analytical studies of several divisions within the Bureau of Labor Statistics that comprise much of the input to this study were not specifically designed to yield the exact types of data and analytical techniques needed to fully assess the manpower implications of projected levels of waste treatment facilities construction.

This report was prepared in the Bureau's Division of Manpower and Occupational Outlook by Michael R. Crowley and Michael J. Pilot. Donald Eldridge and Marybeth MacNamee of the Division of Economic Growth developed the various expenditure models underlying this report, and contributed significantly to the analysis of the data. Joseph T. Finn of the Division of Technological Studies provided information on manpower requirement per unit of output. Within the Environmental Protection Agency, Arnold Hoffman of the Office of Planning and Evaluation provided general guidance.

II. SUMMARY AND CONCLUSIONS

The level of expeditures for sewage works construction activity implied or consistent with the Bureau's basic manpower and economic projections, or economic model, to 1980 is projected to increase by more than 150 percent over 1971 levels—from more than \$2.7 billion (in 1971 prices) to nearly \$6.9 billion in 1980.² An alternative model was developed to reflect the goals set forth in the Water Pollution Control Act Amendments of 1972.³ Expenditures for construction of sewer plants and lines under this model were projected to rise sharply between 1972 and 1976 from \$3.8 billion to \$7.0 billion, dropping afterwards to a level of \$5.7 billion by 1980. Under another alternative model that reflects the Administration's desires regarding the release of appropriated monies for sewage works construction, sewer works construction expenditures are projected to rise slowly from \$3.6 billion in 1972 to a level of \$4.5 billion in 1976, and then accelerate thereafter to nearly \$9.3 billion by 1980.

In terms of manpower requirements (taking into account replacement as well as growth needs), the "Legislation" model would generate nearly 9,000 openings annually over the 1971-76 period for construction craftsmen, two-fifths more than implied in the basic model and one and one-half times more than projected under the "Administration" model. Over the 1976-80 period, the number of openings would decline. In contrast, under the "Administration" model, about 45 percent fewer openings would be generated over the 1971-76 period than implied in the basic model. However, between 1976 and 1980, openings under the "Administration" model would be more than four times greater than implied under the basic model.

The four construction craftsmen occupations affected most by an increase in the level of sewage construction are operating engineers, iron workers, cement and concrete finishers, and plumbers and pipefitters. The estimates of projected job openings for construction craftsmen derived from the basic and alternative models of sewer works construction activity have essentially the same implications for training, i.e., output from formal training programs must be expanded if constraints on supply are to be avoided. From the standpoint of expanding supply, however, the "Administration" model is likely to be least disruptive of the alternative models since it would permit training authorities additional time to gear up whereas the "Legislation" model implies a need for a crash training effort during the earlier-period to meet peak 1976 needs which is followed by a severe relaxation in manpower requirements.

² Details concerning the Bureau's "basic model" are presented in Section IX.

³ Although four alternative models were developed—two which follow the legislative intent and two which reflect the Administration's viewpoints—only two, one under each of these cases, were used however, in assessing manpower requirements.

Focusing on apprenticeship training, it is apparent that significant expansion in apprenticeship output in the plumbing and pipefitting trades must take place in order to maintain current ratios of apprenticeship completions to annual openings. Required apprenticeship expansion for operating engineers, iron workers, and cement finishers falls within a more attainable range.

Fluctuations in demand for sewer systems appear to have had little impact on the movement of costs in this sector of construction. Costs, on the contrary, have tended to rise independently on changes in demand. An examination of selected other types of construction activity was made with the hope of providing some clues as to whether the anticipated sharply rising levels of demand for sewage works construction might result in an acceleration of cost increases. The results of this analysis were inconclusive and point up the need for additional study.

The study also addressed another question posed by EPA, i.e., whether the construction industry is capable of meeting sewage works construction goals from a capacity standpoint. However, a general lack of data prohibited all but a very cursory examination—the results of which also were inconclusive. It is felt that a proper study of this aspect of concern to EPA would need to be preceded by a survey of individual contractors in order to (1) identify those who either specialize in or are capable of adapting all or part of their operations to sewer works construction, and (2) eliciting information from those who do not specialize as to their capability to shift as well as to the conditions or inducements that would precipitate such a transfer.

Senator McCLURE. The second question is——

Senator DOMENICI. Would the Senator yield?

Senator McCLURE. Yes.

Senator DOMENICI. Where did the labor intensity figures come from?

Mr. TRAIN. The Bureau of Labor Statistics. I would point out that these projects, waste treatment projects, are very capital intensive as you know.

Senator McCLURE. One final question. A year ago, a little less, dealing with the problems of safe water in this country, a report indicated that chlorination of water supplies produced carcinogenic compounds which would indicate that the majority of our people, as a result of the treatment of water, are being exposed to carcinogenic compounds.

Is there any further information that you can shed on that and is further work being done in that field?

Mr. TRAIN. There is a great deal of work being done in this field. I think that we have about a \$7.8 million new program research in this overall area. Obviously we have had some ongoing research for a number of years.

The matter to which you refer, while it requires a good deal more work, does not mean that wherever chlorination is being used there is the exposure to carcinogens. Chlorine does combine with certain organic synthetic chemicals derived from industrial wastes to produce some carcinogens.

These have been identified in some areas at very low levels. It is impossible at this point to draw any conclusions about health effects other than that any exposure to a carcinogen is to be avoided if it is feasible.

Senator McCLURE. The amendment says specifically any must be prohibited.

Mr. TRAIN. I couldn't hear that.

Senator McCLURE. The amendment says any must be prohibited, if there are any carcinogens present that cannot be cleared for ingestion for human consumption. I am already over my time. I will not pursue it any further.

Thank you, Mr. Chairman.

Senator GRAVEL [presiding]. Senator HART.

Senator HART. Thank you, Mr. Chairman.

I will direct my questions and be as brief as I can to all members of the table. So anyone feel free to jump in. Senator Muskie asked a number of questions with regard to the rate of construction authorization and whether you would agree that it can be absorbed in the various States and administered by your agency.

I would like a general observation along the same line with regard to the rate of outlays, actual expenditures and beyond that perhaps you would want to submit a more detailed statement later on.

Do your same observations and statements apply to that as well in terms of the administration?

Mr. TRAIN. Yes. I think that is generally true. Could you give those outlays, Mr. Alm?

Mr. ALM. In fiscal year 1976 our total outlays for this program would be \$2.3 billion.

Senator HART. But in terms of the efficiency of the administration your ability to administer those and the States to absorb them, I take it that you are equally confident as you were with Senator Muskie's question about authorization?

Mr. TRAIN. Yes. That is correct. Our main control is over the rate of obligation and, of course, the rate of outlay is ultimately dependent upon those obligations.

We are endeavoring through our regional offices to expedite the movement of funds that have been granted into the construction phase.

It is our intention to put a very high priority on this. This should in turn affect the rate of outlay.

Senator HART. Do you feel that you have at the present time the manpower and resources or would you need additional manpower and resources to begin to develop, promulgate regulatory standards with regard to trucks and heavy duty vehicles in urban areas which I

understand are also significant polluters and haven't been at the present time regulated sufficiently?

Mr. ALM. We have asked for additional funding—a little over \$4 million and for some additional personnel for the noise program specifically to expedite the issuance of these regulations.

Senator HART. It is not only noise, but emissions as well, engine emissions?

Mr. ALM. That is correct.

Senator HART. So you feel that you have the adequate resources for that now?

Mr. ALM. I think that we are probably in good shape on this.

Senator HART. Let me ask a brief question about your progress on the high-altitude emission standards which is a fairly parochial concern of mine and my region. How are you progressing on those? What is your timetable?

Mr. STRELOW. Those have been issued. Those standards will actually take effect in model year 1977.

Senator HART. That was my understanding as well, but Mr. Train said we will add to the program the ability to certify automobiles. This is certification—

Mr. STRELOW. That is the actual certification program itself, people who will test those specially designed vehicles now.

Senator HART. What will be the progress on that certification capability? The same 1978-79?

Mr. STRELOW. With the funds we expect in fiscal 1976 we will have the capability to do that additional somewhat special certification workload. So that by either the 1978 or 1979 model year—

Senator HART. You will have the certification?

Mr. STRELOW. The cars on the road being sold new in that year will be specially certified at high altitudes.

Senator HART. Mr. Train, I continually get, and perhaps some of my colleagues as well, complaints from some rural areas when I meet with farmers and ranchers and so forth, that they constantly complain and moan about the EPA. I wish I could be more specific about their concerns.

I suppose that the general complaint is that the standards applying to their operations in water pollution is perhaps the main area. I just put that observation in for the record because I intend to try to track down specifically what regulations they think are unrealistic in terms of their operations.

But I just wanted to make that observation because I continually get it from back home.

Mr. TRAIN. I am aware of this concern, Senator. I think it is a legitimate one under many circumstances. There are many small farming operations and regulatory requirements tend to be complex. These requirements often represent a Federal intrusion and for various reasons are not looked upon very warmly.

I think we do have to be sensitive to this. It is important that we take the concerns, particularly of the small farmers—and I would add the small business man—very much into account when we develop our regulations.

Insofar as the agricultural communities are concerned, I have recently added a consultant in my immediate staff, Mr. Gilford

Thornton, who was the Commissioner of Agriculture for the State of Tennessee until recently, to have the full-time responsibility of improving communications between EPA and the agricultural community.

We are working at this problem as best we can. If you could identify a specific problem, we would be glad to address them.

Senator HART. I think it is the complexity of the regulations, the feeling of harassment, and they have to hire lawyers to figure out what the regulations are, and that sort of thing. I am talking about the individual farmers and ranchers, not the big operators.

Thank you very much, Mr. Chairman.

Senator GRAVEL. Senator Domenici.

Senator DOMENICI. To follow on with a couple of specifics in that regard and then to change subjects, we forwarded complaints to your office regarding requirements that certain dairy farmers measure rainfall and turn it in on some kind of forms. There is an airport that measures it within 2 or 3 miles and turns it in every day to the weather bureau.

We have told you that we thought it was rather ridiculous to be repetitious in that respect. I don't want to complain. I think those are the kind of things—

Mr. TRAIN. You should.

Senator DOMENICI. If you got that complaint and someone will be answering it like they answer it in my office.

I want to ask you the question about the agricultural problem. I think when you were here for confirmation hearings, we asked you about your policy with reference to irrigation water going back into the water system and how you were going to develop the regulations.

I understand that at that point you told us it was being discussed. There would be no changes in the policy until you had gone through and had hearings and found out more information. Is that correct? We are still at that point?

Mr. AGEE. Senator, you are referring to our irrigation permit program.

Senator DOMENICI. Yes.

Mr. AGEE. Yes. Our people have held a number of discussions on irrigation return with the agricultural community. As such we have not pursued permitting irrigation return waters up to this point in time. We still do not have the mechanism or, excuse me, the requirements well established within our policies as to how we should write irrigation return permits. But we do have a continuing dialog with the irrigative agricultural community.

Senator DOMENICI. So it is a fair summary that you have not changed any policy from the last time you appeared regarding the issuance of permits, gathering information?

Mr. AGEE. Our policy is not changed; it is primarily an emphasis on gaining information about the pollution aspects and the control measures necessary.

Senator DOMENICI. I want to change over for a minute with reference to the catalytic converter, Mr. Train, and especially as to Senator McClure's questions.

First of all, by way of clarifying the record, I think the record would clearly reflect that in November of the year prior to going with

the change in the standards so that the catalytic converter would go onstream you testified that you already knew about the sulfate problem. I think that we should further clarify the record that the National Academy of Sciences followed you and indicated that they were aware of the problem.

I think it is fair to say that both you and they said that they recommended it being permitted to be installed while the problem was studied because it could not have—considering the entire fleet of automobiles and the fact that we were going 1 year at a time with it—it could not have any effect that you could see that would counter-balance the cleanup of the air on the other side. I think it was not only you, but I think the record will reflect that the Academy did confirm that.

It came more as a shock to me to find the stories very recently writing about it as if no one knew clear back then that it existed. You knew about it. I have two specific questions regarding it.

It appears to me that the most important areas to study forthwith are the effect in closed areas, in the tunnels of this country where automobiles may be in large numbers, and inside of garages and buildings where automobiles are going through with converters on them and with motors running, with high concentrations of the sulfates.

Is some specific study being made of that kind of an effect?

Mr. TRAIN. I am certainly aware of that kind of exposure, assuming there is a problem, that would be a higher risk situation than exposure out in the open. I don't know that we have any direct research on the specific problem. We obviously do have laboratory work going on with animals directly exposed to high concentrations of catalytic exhausts which presumably would provide some extrapolation to the conditions you are describing.

Senator DOMENICI. Is it safe to say then that the system you are developing to study that would certainly include these higher risk areas such as the ones I have described?

Mr. TRAIN. The results of our research certainly would be highly relevant to these other situations.

Senator DOMENICI. On scrubbers, we continue to talk about it, but who is responsible to give the final report on the scrubbers in the total R. & D. effort?

Is it your department or someone else? If so, to whom are you going to give it and when?

Mr. TRAIN. The specific responsibility within the executive branch would lie with the Environmental Protection Agency. I don't know to whom, if to anyone, we are supposed to report. I would think this committee and your counterpart on the other side of the Hill would be the most appropriate focal points.

Senator DOMENICI. When is it going to be put together, Mr. Train, in final form, and evaluation?

Mr. TRAIN. I think that we will be fully prepared to discuss this matter with the committee at the hearings which you scheduled starting March 18.

Senator DOMENICI. One last question, and I appreciate the chairman's indulgence. With reference to the department that has been doing the monitoring work on the miles per gallon of gasoline for the internal combustion engine and the various contentions of the auto-

mobile industry, I assume you are still even under the reorganization and sending some of your R. & D. to ERDA, you are still going to monitor the truthfulness of the miles per gallon of the automobile industry; is that correct?

Mr. TRAIN. Very definitely. We have our own program operated out of our Ann Arbor laboratory for determining the fuel economy characteristics of all of the models that we test for certification purposes under the emissions program.

Senator DOMENICI. Mr. Train, it has been my contention—

Mr. TRAIN. The Federal Energy Administration has been handling the publication and distribution of these reports, but it has been our program in the sense of the testing, monitoring, and the development of the data.

Senator DOMENICI. Have you not had a rather small effort in your department with reference to not checking the contentions—you described that to me—but checking into to see whether or not maximum conservation effort is being made with reference to changes in the engine and its related systems?

You have had something to do with that heretofore; is that correct?

Mr. TRAIN. We have no very specific authority in this field. In our recent suspension hearings, we did include specifically fuel economy as one of the areas in which testimony was invited. We received testimony on the subject of fuel economy from all of the manufacturers and others.

We feel a very strong responsibility to include in the range of factors to be considered in making judgments the issue of fuel economy.

Senator DOMENICI. I am just going to close with one statement. I hope you will consider it. But I think we find ourselves somewhat in the clean air dilemma, that we find ourselves in today because we did not set up a significantly strong scientific and technological resource to objectively evaluate. You were given pittance to do scientific evaluation with reference to the Clean Air Act.

I submit that if you are part of making the decision with the administration with reference to the automobile manufacturers saying that they will create a more conservation-minded automobile on a voluntary basis with a suspension of certain rules, I submit we will be back in the same muddle unless the Federal Government insists on creating the laboratory, technological and scientific expertise, to monitor their progress on a partnership basis much as NASA does with the aerospace industry, so that 18 months into it when they say we have made these kinds of engineering changes, they can submit them to an equally competent, technologically sound entity that says yes, you have done all you can or you haven't.

I think without it we are going to go through the 4 or 5 years and we are going to get contentions from the automobile industry that are objective because they did them with scientists and technologists, and we are going to have a rather meager effort on the part of Government to objectively analyze whether or not they have done what they said or could have done more.

We will find ourselves with people who don't know yelling and hollering on both sides and no objective analysis forthcoming.

I hope that someone in your department is looking into that. There are a few people around Congress saying the Government ought to

get into it much as NASA did with jet engines so that we can analyze as people partners, technologically speaking and engineeringwise their progress, lack of it, or the truthfulness of their contentions.

Mr. TRAIN. Let me just make one quick comment. Obviously, we don't have the kind of facilities or resources which would in any way match those of industry in this area. But insofar as the voluntary fuel economy commitment by industry to the President is concerned, the Department of Transportation has set up a monitoring program to at least avoid some of the concerns you mentioned.

This monitoring program is now in effect. At least that aspect of your concern, I think, is recognized.

Senator DOMENICI. I don't want to keep Mr. Train or the chairman. But I am aware of that monitoring system. They, too, are subject to our jurisdiction. I have seen the amount of money that they intend to spend. It is going to be a monitoring system in the loosest sense of the word. It certainly is not going to have a laboratory capacity like Lewis Laboratory has in the aerospace industry where Rolls Royce and GE and Westinghouse come in there and lay the cards on the table and let engineers evaluate without any fear or trepidation of proprietary thievery and the like, and they also analyze the economics with them.

That is why we haven't had much confusion about changes in the jet engines. When they say this is all we can do, nobody has been coming over screaming and hollering that they ought to do more because Lewis Labs and Langley Labs have the same capacity as Rolls Royce, Westinghouse and GE have. They come to a meeting of the minds on an equality basis, not with \$200 million resources on the private sector and I think DOT's is less than \$4½ million that they are going to use to monitor this 4-percent voluntary program.

So I am kind of aware of it, but I am not talking about four scientists in a room talking about engineering capacity, scientific expertise, in a rather significant program.

Senator GRAVEL. Thank you very much, Senator.

Mr. Train, I will be very brief. I do appreciate your staying on.

It was reported in the Anchorage Daily Times on the 5th of February that the Environmental Protection Agency is opposed to accelerated offshore lease sales for oil and gas and has come out in total opposition to leases in the Gulf of Alaska.

Is this an accurate report and, if so, what is the basis of this determination by EPA?

Mr. TRAIN. I think they must be referring to the Agency's comments with respect to the Department of Interior's Environmental Impact Statement on the overall Outer Continental Shelf leasing program.

The comments were that the time should be taken to insure that a good job is done. That is an oversimplification of the comments, obviously; they were very extensive.

Senator GRAVEL. Could I interrupt you? What you are saying is you are not in total opposition? I think taking time to study and total opposition are two different things.

Mr. TRAIN. We have never opposed Outer Continental Shelf development as a matter of principle. It is my very strong view that we are going to have to utilize resources on the Outer Continental Shelf, but we ought to do a decent job. That is the basic thrust of our approach. In those comments we referred to the fact that the Council

on Environmental Quality in its set of comparative priorities placed the Gulf of Alaska at the bottom because they felt it was the highest environmental risk at this time.

We did not feel that this comment had been adequately addressed in the Interior analysis.

Senator GRAVEL. Could I ask you to make public the specificity of those comments? I read the CEQ report and I was astounded to find out that before going with the Outer Continental Shelf these technicians were telling us we ought to have a national oil company, a Government-owned oil company. I found that to be totally inconsequential to the technical problems involved. You are essentially saying that CEQ said this, and now you have said this, and some of us would like to know publicly what the reasons are for the opposition.

I don't know if you have had anybody from EPA fly over the North Sea. Has anybody from the Environmental Protection Agency been over the North Sea?

Mr. TRAIN. Yes. We have been in touch with the North Sea developments. We have also been in touch with the deepwater port development.

Senator GRAVEL. Does EPA have any knowledge of any disasters, leakage or excessive pollutions in the North Sea?

Mr. TRAIN. That I can't answer. I just don't know.

Senator GRAVEL. I think it would be a pretty fundamental question. After 3 years of experience in waters that are severe such as the Atlantic Coast or the Gulf of Alaska, with no disasters, what would be so difficult to transfer that technology to the Gulf of Alaska? I just ask this as a layman—when I read reports that we have agencies of Government that may be shooting from the hip and may not have the substance.

So I am asking you, Mr. Train, to provide myself and the public with some specificity as to this kind of a statement. This may have been erroneously reported in the press. I don't question that. If that is the case, I apologize ahead of time. But if it is not, I would like some specificity as to why these views are held and upon what experience and some technology, so this can be made public.

Would that be an unfair request?

Mr. TRAIN. Let me say the CEQ report was published some months ago. I certainly will see to it that you have a copy. Our comments were published, as all of our comments are, and are available to the public. I certainly will see that you have a copy. (See p. 163.)

Senator GRAVEL. Take it as my oversight for not reading it before.

One other matter very briefly: The third largest community in the State of Alaska is the community of Ketchikan. The pulp mill there says it is going to close down its operation on the 1st of July if it has to comply with the standards of the 1972 Clean Water Standards Amendments and the regulations of EPA. This will put about 2,000 people directly and indirectly out of work.

I think you know enough of economics to recognize that putting 2,000 people out of a population of 12,000 out of work would absolutely decimate the entire community.

The consultants that were hired by Ketchikan Pulp indicate to them that the company's treatment seems adequate. It is a question of degrees of clean water. They already spent \$10 million to try to

meet standards. Now an additional \$26 million is required. That changes the entire economics of the situation and so for that extra degree of water quality we would absolutely wipe out the third largest community in the State of Alaska.

Obviously, I have great concern since I represent these people. I am sure that EPA has some concern. I would like to know if you could tell me why this community has had a gun put to its head in this regard and what steps are being taken to try to mitigate and work out a solution.

Mr. TRAIN. Mr. Johnson.

Mr. JOHNSON. I would be glad to answer that, Mr. Chairman. The Ketchikan Paper Co. was issued a permit under the 1972 act about 1 year ago, which required the same level of treatment as all other paper companies in the United States, to achieve secondary treatment levels.

The company appealed that permit on the ground that it did not believe that level of treatment was warranted for its location and for its size.

The appeal took approximately 1 year to resolve; and following an adjudicatory hearing up in Alaska, it was resolved about 3 months ago. The company agreed to install a level of treatment which was somewhat less than had originally been asked of it by the agency, but which was within the ball park of the level of treatment being carried out at other mills in the United States.

The company then proceeded to implement the construction schedule or begin to implement the construction schedule that was laid out. I believe it was only about a week ago that the company announced that due to changed financial circumstances which I don't question, but evidently as a result of some recent change they now found that they would be unable to accept the terms of the permit that had been issued to them.

We have just recently learned after over a year of protracted litigation and apparent settlement that they are now going to be unable to carry out this level of treatment which for papermills would be the most lenient level of treatment that we have issued to any mill in the United States.

They have the right to come back and ask for a permit modification and to submit the information that they believe would warrant some even further exemption in their case.

We will certainly listen to that. We are not shutting the door. It is an unfortunate situation, but as I say, there may be good reasons why the new facts caused them to change their mind.

Senator GRAVEL. But prior to enactment of the 1972 act, did they not install \$10 million worth of equipment?

Mr. JOHNSON. Sir, I believe that they did install some form of treatment prior to the passage of the 1972 law. But basically, the treatment they installed was very minimal. It did not even reach the levels of primary treatment. When the 1972 law was passed, of course, many, many other plants around the United States found themselves in the situation where they had expended some moneys, but they were being asked to go to the much higher level of treatment as called for under the law.

Senator GRAVEL. Do you know of any other communities that have been wiped out because plants have had to close, or is this just an

unusual example? Is this a disaster that is unique to Alaska, or are there other similar situations resulting from implementation of the 1972 act in other parts of the country?

Mr. JOHNSON. Senator, I don't know of any towns, to use your phrase, that have been wiped out. As we proceed through this economic crunch, we may find more plants like Ketchikan coming back, I am sure in the best of faith, and saying times have changed, now I can't do what I said I was going to do.

To take papermills as an example, we have issued something in the order of 200 permits to major papermills. I am talking about the kind of company like Ketchikan which is the employer for that town.

To the best of my knowledge, Ketchikan is the first case where this kind of wipeout of the entire employment has been raised. There were several plants which raised it originally but then dropped it at one point or another.

Senator GRAVEL. We don't want to set a precedent in the nation of having such an economic disaster. I wonder if EPA could sit down with the company and ascertain the economics in question and the uniqueness of their location and try to develop a solution.

Mr. JOHNSON. We will certainly sit down with them, Senator. As I indicated, they still have a right to come back and present the data.

Senator GRAVEL. Would you report to me as a result of these negotiations directly, make sure that my office is aware?

Mr. JOHNSON. Yes, sir. I will certainly do so.

Senator GRAVEL. Thank you very much, Mr. Administrator. I apologize. Your luncheon crowd is probably still waiting for you.

Mr. TRAIN. I would make one comment on this last question. The law doesn't permit a great deal of flexibility in terms of plant-by-plant economic differences.

Senator GRAVEL. Mr. Administrator, I appreciate that statement. I wonder if you would be kind enough to help me serve my constituency. If there is a need to make a change in the law, I would appreciate your counsel as to what the change should be. We must at least give human justice to these people.

I know you don't want to just wipe out a town overnight. We want clean water. I voted for the Water Pollution Control Act Amendments. I think it is a fine law. I think you have a fine agency. But I think by the same token we don't want to go out with the gun and just wipe out a whole town and all the economics surrounding it.

Mr. TRAIN. I can assure you we don't want to do that either.

Senator GRAVEL. Thank you very much.

[Comments from EPA relative to Outer Continental Shelf drilling and excerpts from the report of the Council on Environmental Quality entitled, "OCS Oil and Gas—An Environmental Assessment" follows:]

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Washington, D.C., February 11, 1975.

HON. ROGERS C. B. MORTON,
Secretary of the Interior,
Washington, D.C.

DEAR ROG.: This is to clarify certain portions of the Environmental Protection Agency's (EPA) comments on January 10, 1975, concerning the Bureau of Land Management's draft environmental impact statement entitled, "Proposed Increase in Acreage to be Offered for Oil and Gas Leasing on the Outer Continental Shelf." Specifically, I would like to address page 7, paragraph 3 of the detailed comments.

EPA does not recommend a two year delay in leasing tracts in the frontier

areas on the Outer Continental Shelf. Our concern is with the development of the tracts after the leases have been let. Unfortunately, the drafting of this section of our comments failed to convey our intended meaning. The correct interpretation of the comments has been transmitted to the Director, Bureau of Land Management (copy enclosed).

If you have any questions concerning our clarification of these comments, please contact me.

Sincerely yours,

RUSSELL E. TRAIN.

Enclosure.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Washington, D.C., February 7, 1975.

Mr. CURTIS J. BERKLUND,
*Director, Bureau of Land Management, U.S. Department of the Interior,
Washington, D.C.*

DEAR MR. BERKLUND: This is to clarify certain portions of the Environmental Protection Agency's (EPA) comments on January 10, 1975, concerning the Bureau of Land Management's draft environmental impact statement entitled, "Proposed Increase in Acreage to be Offered for Oil and Gas Leasing on the Outer Continental Shelf." Specifically, we would like to address page 7, paragraph 3 of the detailed comments.

EPA does not recommend a two year delay in leasing tracts in the frontier areas on the Outer Continental Shelf. Our concern is with the development of the tracts after the leases have been let. Unfortunately, the drafting of this section of our comments failed to convey our intended meaning. The correct interpretation of the paragraph should be as follows:

3. Since eventual development of the subject leases may result in adverse secondary environmental impacts from the onshore facilities and their attendant support complexes, it is important to have the thinking of the affected states incorporated into the DOI plans. Therefore, coastal states should be given a reasonable time to formulate their management programs to accommodate the demands of offshore development. The DOI should consider delaying its approval of oil *development plans* in frontier areas until states have completed and implemented their coastal zone plans. Within two years most of the coastal states will have completed their plans, baseline studies of virgin areas will be completed and the development of frontier tracts could proceed with a reduced risk to the environment.

EPA's recommendation, which has been discussed with members of your staff, is that Interior should increase its efforts to coordinate the Federal review of oil and gas development plans with the states which this development will affect. The states' coastal zone management plans are a particularly relevant mechanism for assessing the impacts in coastal waters and immediate onshore areas of oil and gas development. The Interior Department can be of real assistance to the states in terms of providing data developed through its environmental and resource review processes on the location and extent of offshore resources and probable location and extent of onshore facilities to develop those resources.

We understand that plans in some states are in advanced stages of development. With the cooperation and help of the affected Federal agencies (including the Interior Department and ourselves), all coastal states should have their plans implemented in time to be of assistance in reviewing offshore oil and gas development and its related onshore impacts.

If you have any questions concerning these comments, please contact me.

Sincerely yours,

SHELDON MEYERS,
Director, Office of Federal Activities.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Washington, D.C., January 10, 1975.

Mr. CURTIS J. BERKLUND,
*Director, Bureau of Land Management, U.S. Department of the Interior, Wash-
ington, D.C.*

DEAR MR. BERKLUND: The Environmental Protection Agency has reviewed the draft environmental statement on the Proposed Increase in Acreage to be Offered for Oil and Gas Leasing on the Outer Continental Shelf. We acknowledge the

need to expand domestic energy supplies, and especially OCS oil and gas resources, however, the protection of the environment is of equal concern. The increase in OCS leasing and the means by which the OCS development is managed may be among the most critical energy decisions to be made in this decade, and while offering the possibility of significantly augmenting energy supplies, will likely bring profound social and economic changes to the coastal zone as well as serious long term impacts to the ocean environment.

The evaluation of this proposal in an impact statement should be comprehensive, thorough, and documented if it is to serve as a decision making document and a means of advising the public of the consequences of the action. While we are cognizant of the immensity of the task of examining the programmatic options relative to this proposal, we do not feel the statement succeeded in the analysis. Therefore, in accordance with the EPA rating system for environmental statements, we have classified this statement as Category 3, Inadequate. This statement has described the environmental consequences of OCS operations in general, but has not addressed key policy options and managerial issues pertaining to an accelerated OCS oil and gas leasing program.

Of primary concern is the proposed increased figure of 10 million acres to be leased in 1975. (This, of course, implies a much larger offering than 10 million acres.) The impact statement fails to evaluate or justify the necessity for this size offering, and the need to simultaneously enter Atlantic and Alaskan virgin areas. Nor is any consideration given to data derived from Project Independence studies which seem to clearly refute the expediency of this size offering. There is no objective analysis given to the option of reducing the proposed acreage to be leased, or deferring the offering of various virgin areas. It is, furthermore, unclear what role accelerated OCS leasing will play in the larger context of a national energy policy, especially in relation to predicted oil and gas shortages that may occur in the next few years.

The assumed necessity for such a large sale necessitates immediately offering sizable acreage in all of the frontier areas. The Council on Environmental Quality recommended in their April 1974 Assessment of OCS Oil and Gas Development that great care be taken in the development of frontier areas, and that the location and phasing of OCS leasing be designed to achieve energy supply objectives while minimizing environmental damage. This study documented the need for caution in development and assessed frontier areas in order of environmental risk. Some of these areas, especially the Gulf of Alaska, contain unique and vulnerable natural resources combined with significant natural hazards that would make precipitous development highly undesirable from an environmental standpoint. The accelerated development plan, as presented in the proposed schedule of 10 million acres, takes no cognizance of this assessment and further disregards the recommendations of the CEQ study. We feel that every effort should be made to phase leasing activity in frontier areas so that the most highly vulnerable areas will be protected from possibly irreversible adverse impacts of oil and gas development. This end would be well served by having the statement provide the rationale and environmental factors utilized in the selection of leasing areas. It would also be appropriate to provide the rationale for tract selection within specific areas. Clearly, such a scrutiny of areas could delay the need to prematurely enter environmentally sensitive or hazardous areas. This strategy would also allow more leasing in areas that are better ecologically known, and thereby allow more adequate time for biological baseline studies in frontier areas.

In this connection, we feel the environmental baseline work being done on various OCS areas should be completed and analyzed before development is permitted. It is impossible to adequately evaluate the total environmental scenario of any of the proposed leasing areas at this time, and the prediction of environmental consequences depends upon the compilation and analysis of adequate baseline data. The final statement should detail the environmental studies to develop the baseline on virgin areas. Likewise coastal management planning should be accelerated to prepare for the smooth integration of OCS induced coastal development. States adjacent to existing offshore development activity have incurred significant environmental, economic and social costs, with no mechanism for remuneration other than possible expansion of their own tax base. These direct costs, along with indirect effects of population shifts, employment pattern alternation, increased demand on public services, and changes in land use should be thoroughly considered in advance of any future leasing deci-

sions. This was a concern also expressed by the Senate Committee on Commerce in their study of the Outer Continental Shelf Oil and Gas Development and the Coastal Zone. The statement should adequately address the critical interface of State and Federal planning that must precede OCS and OCS induced development.

Finally, there seems to be substantial doubt as to the ability of the offshore industries to absorb the proposed accelerated schedule from the standpoint of available capital and available equipment. It is most unlikely considering current shortages of drilling rigs, manpower, and tubular goods, that the oil and gas industry could promptly develop all of the tracts leased, if in fact, there is sufficient industry interest and capital to lease 10 million acres. In the face of enormous capital requirements, the increased acreage may only serve to lower the level of competition in the bidding process and thereby lessen the opportunity of the public to achieve a fair market value. Further, discovery could be impeded because of the need to fragment exploratory efforts in leased areas. The attached material will provide further analysis of these issues and will offer for your consideration some related policy options.

We recommend this statement be revised to address the above issues and reflect recent policy developments. The statement should also be coordinated with and include a justification for the anticipated order of lease offerings as depicted in the November 1974 proposed schedule for leasing. We also recommend that the Department consider the preparation of area EIS's for all virgin areas to facilitate the selection of areas amenable to resource development and to protect other environmentally sensitive areas. Such an EIS could be prepared independently or in conjunction with an EIS for the first lease sale in a virgin area.

We appreciate the opportunity to have reviewed this statement and hope our comments will be of assistance to you. We will be happy to meet with you to discuss any of the issues raised in these comments.

Sincerely yours,

SHELDON MEYERS,
Director, Office of Federal Activities.

Attachment.

SPECIFIC COMMENTS ON PROPOSED INCREASE IN ACREAGE TO BE OFFERED FOR OIL
AND GAS LEASING ON THE OUTER CONTINENTAL SHELF

A. PRACTICABILITY OF LEASING TEN MILLION ACRES IN 1975

1. Data from the Project Independence Blueprint (PIB) Task Force on Oil and Gas do not support the necessity for leasing ten million acres in one year under any scenario. Since the PIB Task Force on oil was led by DOI and used DOI data and personnel, there should be consistency between the conclusions reached by PIB, and those by DOI relative to the proposed action. In fact, it appears that the analysis and data in PIB did not in any way affect the policy decision to accelerate leasing. Furthermore, PIB data, both published and unpublished, show clearly that even under the most optimistic scenarios, insurmountable shortages of materials will constrain OCS development until at least 1980, since this is the earliest date by which exploration could be completed in any area. The following projections are based on data from the Oil Task Force and assume accelerated activity and high exploratory efficiency (40% greater than present exploration efficiency).

Area	Acres leased (millions)	Year when exploration is complete
Gulf of Mexico.....	3.5	1980
South California.....	.9	1980
Atlantic.....	2.1	1985
Alaska.....	3.5	(1)
Total.....	10.0	

¹ After 1988.

Source: Project Independence Oil Task Force, computer run T. II. b.

2. The immediate and most important constraint on exploration will be availability of mobile marine substructures for drilling rigs. Their production and use will pace exploration for the next several years, depending on their luck in finding oil and the efficiency of their use. At present there are 102 mobile substructures available. In addition, if the government allocates materials to construct mobile substructures as quickly as possible and ensures that facilities are not exported, the demand for facilities and the number available will approximate the following:

DEMAND AND SUPPLY FOR MOBILE STRUCTURES

	Rig years—							
	1975	1976	1977	1978	1979	1980	1981	1982
Assuming:								
Low exploratory efficiency:								
Demand.....	3,296	3,194	3,017	2,755	2,427	1,921	1,415	798
Supply.....	102	177	262	328	409	506	617	749
High exploratory efficiency:								
Demand.....	2,075	1,973	1,796	1,534	1,206	797	291	-----
Supply.....	102	177	262	328	409	506	617	-----

Million acres explored per year

3. THE MAXIMUM AMOUNT OF LAND PER YEAR THAT CAN BE EXPLORED IS:

Assuming:								
1. Low exploratory efficiency and business as usual supply of material.....	0.3	0.4	0.6	0.8	1.0	1.3	-----	
2. High exploratory efficiency and business as usual supply of material.....	.5	.7	.9	1.2	1.6	2.0	-----	
3. Low exploratory efficiency and accelerated supply of material.....	.3	.5	.7	1.0	1.2	1.5	-----	
4. High exploratory efficiency and accelerated supply of material.....	.5	.8	1.3	1.6	2.0	2.4	-----	

Sources: PIB MEC task force. PIB oil and gas task force, T. II. b-h. PIB computer run T. IV. a-e.

Further data and the backup for these tables are available.

In summary, the PIB data clearly refutes the underlying precepts of the programmatic decision to lease OCS lands very rapidly. The justification for rapid leasing assumed that leasing was a constraint on resource exploitation; while PIB indicates that materials are the constraint. Furthermore, it was assumed that rapid leasing could target materials to the first major discoveries. PIB, however, shows that development cannot be substantially accelerated even with the most fortuitous and efficient allocation of materials.

EPA's position is, therefore, that DOI has not only failed to demonstrate that rapid leasing will free constraints, but on the contrary, the PIB data prove that the leasing rate has little bearing on the rate of development.

B. INCLUSION OF ALASKAN OCS AREAS IN THE LEASING SCHEDULE

1. The CEQ Task Force on the OCS, in which DOI participated, states that the petroleum industry would encounter a higher environmental risk in the development of the Gulf of Alaska than in any other area. DOI has not been able to demonstrate that the benefit in oil development outweighs the environmental cost. In fact, DOI's own data, used by PIB, show conclusively that because of material constraints, there is no relative advantage to leasing Alaskan OCS areas at this time despite the magnitude of Alaska's reserves. EPA's position is therefore that leasing in Alaskan waters should not be considered at this time and that substantial technical and biological research is required. Although we expect that as a result of that research, exploration and subsequent production will be feasible at some point in the future. EPA believes that the point cannot be predicted at this time. In our opinion, it is therefore neither necessary nor prudent for Alaskan OCS areas to be placed on the leasing schedule at this time. We think that the future decision should be based on (1) baseline and biological effects research, most of which has not been funded or planned at this time, (2) coastal zone planning, and (3) assessment of operating experiences with advanced technologies which can be tested in other OCS areas.

2. Exploration of the Gulf of Alaska is environmentally separable from resource development. The programmatic EIS should be specific on this option in the case of the Gulf of Alaska because it may well be that the Gulf should be explored to some extent but that development should await the results of biological and technical research, and detailed land use planning.

3. Analysis of PIB data shows that although the estimated reserves in the Gulf of Alaska exceed those remaining in the Gulf of Mexico by a factor of 2.5, productivity of drilling equipment and investment is much lower than in the Gulf of Mexico. Barrels of oil recovered per foot drilled are high in Alaska but because of extensive expected down-time, primarily because of weather, productivity in terms of oil produced per rig year, was estimated to be only 59% of the productivity of the Gulf of Mexico. (Source: PIB Oil and Gas Task Force Computer Runs T. IV. and T. III)

Issue A in this document used PIB data to show that the binding equipment constraint during the next few years would be mobile substructures for exploratory drilling. In view of this constraint, it would be difficult to justify that early exploration of the Gulf of Alaska would be in the nation's best interest.

4. The PIB scenarios concluded that under some assumptions, extensive and/or rapid OCS development would result in a short period of time when there would be more oil produced than necessary to eliminate imports. For example, in 1985, at \$11 per barrel prices, with accelerated development of resources and without an energy conservation policy, PIB calculated that: (1) the nation would not require *any* imports of crude oil or refined products, (2) that enough oil would be produced to permit *exports* of 1.5 million barrels per day if there was no mandatory conservation program, (3) that exports would be much higher with conservation, and (4) that Alaska and the West Coast would be producing almost three times as much oil as they consume (7,366,200 bbl of oil per day produced compared to 2,672,300 bbl of oil per day consumed).

Clearly these estimates by PIB show that domestic production responds quite briskly to stimulation by prices at their present level for new oil, unless there are constraints in materials. The point is not that we don't need the oil but that an immoderate acceleration policy will be economically and environmentally costly, and will produce a brief spurt of self-sufficiency followed by another period of dependency. An assessment should be made of price effects and economic dislocations due to this leasing schedule.

5. Under these conditions, DOI must demonstrate why production in the Gulf of Alaska is a wise policy in view of (1) CEQ's determination that production in the Gulf of Alaska is environmentally undesirable, (2) that use of critical materials, primarily mobile substructures, is comparatively inefficient in terms of daily barrels recovered in the Gulf of Alaska compared to the Gulf of Mexico, (3) that production in the Gulf of Alaska is economically more expensive than in the lower 48 OCS areas, and (4) that production by 1985 in the Gulf of Alaska can be surplus to the nation's need and should, at a minimum, be preserved for future years.

6. EPA realizes that Alaskan OCS reserves will and ought to be produced sometime in the future. The key point is that a few years' delay is required by material constraints, and ought to be taken advantage of by DOI. Some baseline inventory studies have been initiated but DOI has no biological effects or technology studies under way. EPA believes that the economic cost of having a lease sale delayed because of inadequate environmental information far outweighs the costs of all pertinent studies.

7. Choices of technologies and operating procedures can substantially improve the viability of Alaskan OCS production. DOI should make an intensive study of technical alternatives which would reduce risks of Alaskan production and plan to test those technologies so that their reliability can be assessed in other less severe areas. Only after advanced technologies and biological studies have proven that the risk is worth the benefit should a sale be held.

The program outlined below is aimed at understanding the effects of OCS development with the end result of providing mitigatory measures. These are research needs of a generic sense: they are not site specific.

(1) There is some controversy over the persistence of oil in the marine environment. Periodic release of hydrocarbons could have severe consequences; therefore, a high priority research need is to undertake a careful and intensive investigation to resolve this controversy.

(2) The toxicity of crude oil is not well understood. Most studies have been conducted in the laboratory. Toxicity studies need to be undertaken which analyze toxicity over a wide range of variation in environmental parameters.

(3) Studies need to be undertaken to understand how ecosystems recover from catastrophic damage, and how the new system differs from the original one.

(4) Many parameters affect the functional dynamics of natural ecosystems. The interrelationships and interdependence between the open water of an estuary and the associated wetland are complicated and can vary in different parts of the country. *Basic* research should be undertaken to expand our knowledge of both the physical and biological parameters of estuaries and wetlands and their interrelationship in areas likely to be affected by OCS leasing.

(5) Research should be undertaken to determine methods of spoil placement to improve the productivity of marshes and estuarine areas. Work is presently underway by the Corps of Engineers, but their work is only a beginning and needs to be expanded, preferably in cooperation with other Federal agencies.

(6) Since most accidents are a result of human error, it might be worth considering psychological studies of personnel who operate OCS rigs, in order to develop recommendations for the improvement of accident prevention training programs.

D. COASTAL ZONE PLANNING

1. A major administrative problem has been the absence of consultation and coordination between DOI and the coastal states over the nomination, location, and siting of specific areas for lease. The DOI should encourage and support the early development of effective coastal zone management programs in states likely to be affected by OCS activities. All development of the OCS should be paced to minimize the risks of environmental damage and the disruption of the infrastructure of the impacted coastal areas. Adequate lead times between planning and implementation are essential to appropriately deal with onshore impacts. DOI has not demonstrated consideration of staging development for comprehensive coastal zone planning.

The only major role played by States prior to OCS leasing is to exercise the right to comment on environmental impact statements. This means that the State's participation doesn't begin until after the DOI has decided when, where, and how much OCS acreage will be offered for sale. State officials are deeply concerned that the decision to lease 10 million acres was made without the benefit of public input from those who would be most affected.

2. The present pre-lease procedures do not provide adequate and timely acquisition of the necessary information for comprehensive state and local planning. DOI should accept the responsibility for adequately informing state and local governments as to coastal facilities and services likely to be needed in connection with OCS activities. DOI should provide the coastal states with the following information to ensure responsible and timely planning efforts:

A. Data regarding the location and magnitude of potential offshore oil and gas resources.

B. Data and plans for OCS development, including estimates of the number of types of facilities needed for production, refining and transportation.

C. A projection of types and numbers of municipal facilities which will be required to service the population and industry to be impacted by OCS development.

3. Coastal states should be given a reasonable time to formulate their management programs to accommodate the demands of offshore development. The DOI should delay its leasing for oil development in frontier areas until states have completed and implemented their coastal zone plans. Within two years most of the coastal states will have completed their plans, baseline studies of virgin areas will be completed and the leasing of frontier tracts could proceed with a reduced risk to the environment.

4. Studies have shown that the states have incurred significant environmental, economic and social costs in the development of their offshore resources. While some costs and benefits should be examined on a national basis, coastal states would clearly realize a more equitable share of the benefits if they received additional revenues from the offshore petroleum industry. Federal OCS royalties are an appropriate source for funding aid to coastal states and alleviating onshore impacts. Such a plan, rather than outright grants of fixed proportions of

royalties to coastal states, is an appropriate method of dealing with this problem.

The kinds of analysis expected to be undertaken under the Coastal Zone Management Act of 1972 are precisely the kind of analysis which must be made if intelligent decisions are to be reached regarding OCS leasing. Realizing that such analysis will be forthcoming in two years, the burden of proof for immediate leasing in virgin areas must rest on those who would proceed with the present leasing schedule without the benefit of such analysis.

E. QUALITY AND USEFULNESS OF EIS PREPARATION AND REVIEW

As noted earlier, every effort should be made to design the OCS leasing program so that energy supply objectives are met with minimum environmental risk, and so that the most environmentally vulnerable areas will be protected from possible irreversible adverse impacts of oil and gas development. To this end, this programmatic environmental statement should:

1. provide the rationale and environmental factors utilized in the selection of OCS areas to be leased (and in the selection of tracts within areas), and
2. detail the environmental studies to develop baseline information on virgin areas, and the means by which these studies will be used in the decision-making process on area and tract selection.

EPA strongly encourages DOI to consider the preparation of environmental statements for each of the proposed OCS areas to be leased in order to assess the full impacts of oil and gas development within these areas. These statements would include the cumulative primary and secondary impacts of individual lease sales, including onshore impacts, identify those tracts where oil and gas development would have significant detrimental environmental impacts, and identify those tracts of resource potential conducive to safe development. Such statements could be prepared in conjunction with developing a leasing schedule for the area or accompany the first leasing sale in the area.

The present programmatic environmental statement should also assess administrative alternatives to the present EIS preparation system that would improve the usefulness of EIS preparation and review with respect to OCS oil and gas development. At present, tract nomination and selection are determined primarily by industry interest and hydrocarbon potential. It is our view that environmental considerations are not as yet a meaningful part of the area and tract selection processes.

Further, impact statements prepared in connection with lease sales can often do little more than project very general consequences of operating plans. There is little information to predict cumulative impacts, location of pipeline corridors or onshore development. The present system, which ties exploration and development to a single leasing system, with the EIS process generally applied to the lease sale, can lead to the undesirable consequences that exploration is held up while development issues are debated, or the government's commitment to exploration (and subsequent development) proceeds through the leasing system with inadequate consideration of environmental consequences and mitigating alternatives.

We request that consideration be given to the benefits of a dual EIS system and to the separation of exploration and development decision processes (to the extent that this is possible under existing law) in order to facilitate reasoned decision-making about oil and gas development and the means to avoid or mitigate adverse environmental effects. For example, an EIS prepared after tract nomination but before tract selection in finalized would focus on marine biological aspects and accomplish the early examination and screening of tracts that can be safely and profitably developed. To the extent possible within knowledge constraints, this statement would also evaluate development impacts.

Subsequently, EPA, State and public review of development plans and operating orders would be afforded and, if there were environmentally significant developments which had not been analyzed in the previous EIS, a developmental EIS would be submitted (perhaps on a development unit basis). This second review process would allow fuller consideration of pipeline corridors, coastal development, induced development and related environmental effects than is presently possible.

Finally, we believe that legislative alternatives which would facilitate consideration of environmental factors in selecting and developing areas should be addressed in the final statement. Several of these alternatives are listed below:

1. *Two Title System*: Frontier OCS regions would be divided into large blocks. Companies would bid for exploration permits for one or more blocks. At two-year intervals, the permit holder would be required to forfeit a percentage of the block to government control. The permittee would retain sole production rights to the remaining acreage.

2. *Exploratory Leases with Preference Rights*: Government would sell large areas to consortiums for exploration. Only exploratory lease holders would have the right to bid on developmental leases. Before production rights are granted, there would be a mandatory environmental analysis to determine if, and under what conditions, the leases could be produced.

3. *Full Scale Governmental Exploration*: The government would contract with private companies to explore the OCS. Oil discoveries would be sold competitively as reserves in the ground, if an environmental analysis determines that energy benefits outweigh environmental costs.

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
722 JACKSON PLACE, N. W.
WASHINGTON, D. C. 20006

April 18, 1974

Dear Mr. President:

In your Energy Message of April 18, 1973, you announced your decision to defer any drilling on the Atlantic Outer Continental Shelf and in the Gulf of Alaska until a study of the environmental impact of oil and gas production in these areas could be carried out. You asked the Council on Environmental Quality to make this study in consultation with the Environmental Protection Agency, the National Academy of Sciences, other Federal agencies, and the Governors, legislators and citizens of the coastal states involved. The attached report, OCS Oil and Gas - An Environmental Assessment, presents our findings.

In carrying out your directive, we have reviewed environmental impacts in broad terms. The study focuses on a number of hypothetical drilling sites in areas considered by geologists to be particularly promising for oil and gas discovery. We have analyzed the potential impact on the marine environment of developing these sites, as well as the likely onshore impacts of industrialization and growth related to processing oil and gas. The report includes chapters assessing the technology of oil and gas production and the institutional and legal mechanisms for managing OCS development.

The Council concluded that leasing and development undertaken in the Atlantic OCS or in the Gulf of Alaska should be guided by a set of essential principles stipulated in Chapter I of our report. By following these principles, and a number of specific recommendations, the Council believes that environmental risks can be minimized. We stand ready to work with the appropriate Federal agencies in implementing these recommendations.

The philosophy underlying our report is that the benefits of potential oil development must be balanced against the risks of environmental damage. When this balance is favorable, development should proceed with caution and with a commitment to minimize damage. When the balance is unfavorable, the Council believes that development should not move ahead until environmental risks can be lowered to an acceptable level.

The Council's study found that the risk of environmental damage varies from area to area. Development of the Georges Bank and the Southern and Central Baltimore Canyon would involve relatively lower environmental risk than development in the Northern Baltimore Canyon, the Southeast Georgia Embayment, and the Gulf of Alaska -- all higher risk areas.

The offshore oil and gas industry has made substantial progress in technology and work practices since the 1969 Santa Barbara blowout. In addition, more stringent Federal regulations for OCS operations have been issued and enforcement of these regulations has been strengthened. Over 17,000 wells have now been drilled in waters off the United States coast. However, our report has found that operations in both frontier OCS regions would confront harsher conditions than have been previously faced in other United States offshore areas and that conditions in the Gulf of Alaska are more severe than the industry has yet experienced anywhere in the world.

Potentially discoverable economically recoverable oil has been estimated from United States Geological Survey data to be 10 to 20 billion barrels in the Atlantic OCS and 3 to 6 billion barrels in the Gulf of Alaska. The figures for gas are 55 to 110 trillion cubic feet in the Atlantic and 15 to 30 trillion cubic feet in the Gulf of Alaska. Last year, from all sources, the United States consumed about 7 billion barrels of oil and about 24 trillion cubic feet of gas.

A decision to move ahead with oil and gas development on the Atlantic OCS and in the Gulf of Alaska will call for close coordination of planning among Federal, state, and local governments. The creation of strong and expert coastal zone

management agencies in the states involved and thorough implementation of the National Environmental Policy Act will help to insure that the interests of the State governments and their citizens will be appropriately represented.

In conducting this study the Council held public hearings in Washington, D. C., Alaska, and at various cities on the Atlantic coast. Representatives of environmental groups and of industry were consulted and kept advised of the study's progress. An advisory committee representing the Governors of each Atlantic coast state and Alaska was established and met on three occasions with the Council to review progress. Much of the research and information contained in the report was developed through contracts with universities and private consulting firms working with the Council and a number of Federal interagency working groups. Finally, a special panel of the National Academy of Sciences (NAS) performed a critique of our study which is attached to this report.

The NAS panel's critique generally endorses the findings and recommendations of CEQ's report. Specifically, the panel commends the report as a useful first step toward the development of new Federal policies for resource development in these two OCS areas. The panel also concurs with the Council's recommendations for decreasing the risk of OCS operations and for minimizing onshore impacts through strengthened regulations for OCS technology and through improved coordination among governmental agencies.

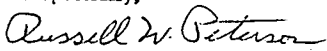
The panel agreed with the assessment that OCS operations in the Gulf of Alaska would present the highest environmental risk, but took exception to the Council's ranking of regions in the Atlantic OCS. The panel expressed the belief that the criteria used in making the rankings were inadequate and incomplete and that other criteria should be considered. The Council believes that consideration of the other criteria mentioned by the NAS panel would not have changed the relative order of ranking. In fact, the effect of oil on the offshore marine environment was considered to the extent possible, as were the alternative uses of the OCS.

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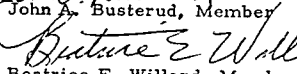
Other issues raised by the NAS critique, such as an expanded involvement of the Federal Government in oil and gas exploration, the relationship of this study to Project Independence, and national policy on annual energy growth rates, are clearly outside of the scope of the assignment covered by this study. The Council will continue, of course, to work with the Department of the Interior, the Federal Energy Office and other Federal agencies on the role of OCS oil and gas resources and other factors in our national energy policy.

We hope that our report satisfactorily provides the study of environmental impact you requested to help assess the future course of action on the OCS.

Respectfully,


Russell W. Peterson, Chairman


John A. Busterud, Member


Beatrice E. Willard, Member

The President
The White House
Washington, D. C. 20500

PREFACE

On April 18, 1973, the President asked the Council on Environmental Quality to work with the Environmental Protection Agency, in consultation with the National Academy of Sciences and other Federal agencies, to study the environmental impact of oil and gas production on the Atlantic outer continental shelf and in the Gulf of Alaska. The President also specified that Governors, legislators, and citizens of these areas should be consulted.

This report summarizes information and analyses provided to the Council by many sources over the year of study.

Federal interagency working groups were formed to develop the scope of work and to monitor the progress of the study. Federal agency representatives who contributed to the study are listed in Appendix A. Contracts were awarded to consultants and universities to study specific subject areas (they are listed in Appendix B). A Governors' Advisory Committee, consisting of one designee from each Atlantic coast state and from Alaska, served in a consultative and review capacity (see Appendix C for members' names).

In accord with the President's request, the National Academy of Sciences independently analyzed the Council report. The Academy's critique is attached.

The Council involved the public directly in this study. In September and October of 1973, the Council held public hearings and briefings to gather information from citizens, environmental groups, industry, and government officials. Hearings were held in Washington, D.C.; Boston, Mass.; Mineola, Long Island, N.Y.; Philadelphia, Pa.; Ocean City, Md.; Jacksonville, Fla.; and Anchorage, Alaska. A summary of these hearings and a transcript of the Washington, D.C., hearing are being published separately.

The Council gratefully acknowledges the efforts of Federal agencies, state and local governments, contractors, industry representatives, and members of environmental and public interest organizations who have contributed to this report. Special thanks go to the members of the Governors' Advisory Committee and the National Academy of Sciences review committee who generously contributed their advice and time.

Washington, D.C.
April 1974

CHAPTER 1

SUMMARY OF FINDINGS AND RECOMMENDATIONS

This is a report about energy development and the environment. It was prepared by the Council on Environmental Quality in response to the President's April 18, 1973, request to "study the environmental impact of oil and gas production on the Atlantic Outer Continental Shelf and in the Gulf of Alaska." [1]

This report, and the studies that contribute to it, take on great importance in view of the pressures of the energy crisis and the drive toward self-sufficiency. In his January 23, 1974, Energy Message, for example, the President directed the Secretary of the Interior to triple leasing originally planned on the OCS to 10 million acres in 1975. However, recognizing the complex environmental issues involved, he reiterated his commitment that leasing on the Atlantic OCS and in the Gulf of Alaska would not go forward pending the results of this study.

This report presents the results. It squarely faces the issues of energy development and environmental protection. And it concludes that these objectives are not mutually exclusive. It does not give the drillers a green light. Nor does it call for a freeze on development. Instead, it assesses the relative environmental vulnerabilities of the areas studied and recommends procedures, requirements, and stipulations for protection and for development. The recommendations attempt to provide environmental guidance on alternative OCS development decisions.

The report establishes an agenda for action to improve OCS technology, tighten regulation and enforcement of OCS operations, and untangle the bewildering web of institutional interests between the states and the Federal Government and among the Federal agencies. It provides information and methods of analysis that should be useful to the Department of the Interior and other Federal agencies in considering environmental aspects when determining those sites to hold back from lease sale and those to offer for lease and in integrating environmental factors into the design of an optimum leasing schedule. The data and methodology provided here will also help states and localities to anticipate and plan for the onshore impacts of OCS development. And, of course, it will aid in preparing environmental impact statements for individual lease sales.

Scope of the Study

This study assesses the potential environmental impacts of oil and gas development on the Atlantic and Gulf of Alaska outer continental shelves:

- Chapter 2, Oil and Gas Resources, examines estimates of potential oil and gas resources in the Atlantic and Gulf of Alaska.
- Chapter 3, Perspectives on Energy Growth, projects potential energy needs and evaluates the environmental impacts of fuels that can be used to meet these needs.
- Chapter 4, Technology for Developing Oil and Gas Resources Offshore, reviews the basic steps of offshore oil and gas exploration and presents estimates of oil spill probabilities.

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- Chapter 5, Natural Phenomena and OCS Development, explores the unusual physical conditions facing operations in the Atlantic and in Alaska.
- Chapter 6, Offshore Effects of OCS Development, concentrates on the environmental impact of operations in the ocean, on the shelf, and along the coast resulting from the exploration, production, and transportation of oil and gas.
- Chapter 7, Onshore Effects of OCS Development, analyzes the economic, social, and environmental impacts of onshore development -- oil refining, gas processing, petrochemical manufacturing, and support services -- induced by development offshore.
- Chapter 8, Technology and Environmental Protection, examines the extent to which oil and gas exploration and production technology and practices protect the environment.
- Chapter 9, Institutional and Legal Mechanisms for Managing OCS Development, looks into the effectiveness of Federal regulatory and enforcement processes and the broader issues of government coordination and planning.

Witnesses at the Council's public hearings on OCS development suggested many areas of study oriented toward modifying the current OCS management system. Proposals ranged from fundamentally changing the roles of government and industry in developing resources on public lands to alternative methods of bidding on OCS leases. They included suggestions to set up a public corporation for oil and gas exploration and development in new OCS areas, to authorize the U.S. Geological Survey or a public corporation to conduct all exploratory drilling, to adopt a new leasing system based on royalty bidding rather than on bonus bidding, and to establish an exploration leasing system which would precede issuance of development leases.

While these and other such proposals merit consideration within the context of an evolving national energy policy, they involve extremely complex technical and financial issues not directly related to the environmental impacts of OCS oil and gas operations and thus do not fall within the scope of this study. For similar reasons, this report does not include economic analyses of alternative OCS management arrangements or of alternative energy supplies.

Background

The Outer Continental Shelf Lands Act of 1953 [2] is the basic charter governing exploration for the development of the minerals and other resources under the OCS. In essence, it is a statute designed to promote development, enacted well before the major environmental legislation of the past few years: the National Environmental Policy Act of 1969 (NEPA) [3] and three 1972 laws -- the Coastal Zone Management Act, [4] the Federal Water Pollution Control Act Amendments, [5] and the Marine Protection, Research and Sanctuaries Act. [6] This new legislation has in effect "amended" the OCS Lands Act by requiring incorporation of more stringent environmental values and needs in its administration.

Oil and gas development on the Gulf of Mexico and California OCS began with exploration in shallow state waters nearshore. The first offshore platform was constructed in 1897 off Santa Barbara. Fifty years later, the first platform out of sight of land began operating off Louisiana. Today's multibillion dollar offshore oil industry was well established before the Federal Government began selling leases on the Gulf of Mexico OCS nearly 20 years ago. Since then the industry has grown dramatically, advancing into deeper waters. Until recently Federal supervision was

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primarily concerned with volume of resources produced and operation of leases; from 1954 to 1968, over 7,300 wells were started on the OCS. In 1969, however, the blowout of a Union Oil Company platform in the Santa Barbara Channel focused national attention on the hazards of offshore operations. Subsequent accidents accompanied by fires in the Gulf of Mexico underscored questions about the adequacy of OCS technology and practices.

Since then, more stringent Federal regulations for OCS operations have been issued and the Federal enforcement effort has been strengthened. However, environmental groups and individual citizens continue to express concern, not only about massive oil spills and fires, but also about discharges of oily water, drilling mud, and drill cuttings -- the "housekeeping" operations of an offshore facility -- and about the changes that result on land from industrial and other development generated to support offshore drilling operations. As CEQ heard time and again at the public hearings, particularly along the Atlantic, the public is concerned about the overall impact of offshore oil production on the oceans, beaches, and wetlands and on the shoreside communities where the oil is landed and processed or which serve as bases for servicing offshore operations.

Statement of Principles

Whether to open specific frontier areas in the Atlantic and Gulf of Alaska OCS is a critical public policy issue because of the importance of these resources to our Nation's energy needs, the possible risk of damage to the environment, and the potential impact on the economy and social structure of communities onshore resulting from construction of refineries and other support facilities. Such an issue must be approached with caution, intelligence, and judgment.

On the basis of its year-long study, the Council on Environmental Quality has concluded that leasing undertaken in these waters must be conducted under

carefully stipulated and controlled conditions, and that the Federal Government must be guided by and committed to the following principles in choosing areas to lease and in administering environmentally safe offshore operations:

- Exploration and development of the OCS must take place under a policy which puts very high priority on environmental protection.
- The location and phasing of OCS leasing should be designed to achieve the energy supply objectives of the leasing program at minimum environmental risk.
- The best commercially available technology must be used to minimize environmental risks in new OCS areas.
- Regulatory authorities available to Federal agencies must be fully implemented and requirements strictly enforced to minimize environmental risks in new OCS areas.
- Planning at all phases of OCS oil and gas operations must respect the dynamic relationship between initial Federal leasing decisions and subsequent state and local community action. The states and the communities affected must be given complete information as early as possible so that planning can precede and channel the inevitable development pressures. Experience must be continuously integrated into the management process.
- The interested public must be given the opportunity to participate and play a major advisory role in the Federal management and regulation of the OCS.

These principles, if applied consistently by responsible government and industry decisionmakers at all stages of the development of new OCS areas

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for oil and gas, will provide the basis for policies and programs that can significantly reduce risk to every element of the environment.

Development of OCS oil and gas in accordance with these principles poses major challenges to Federal management and regulatory agencies, to the states affected by the offshore activities, and to the oil industry. Risk of damage to the human and natural environment is an inseparable part of almost any development, including the OCS. The guiding principles must be to keep risks at an acceptable level and to balance risks with benefits. When a risk -- based on the current state of knowledge and technology -- appears to outweigh that of an available alternative for meeting the same objectives, we should not move ahead until we know more and can do better. When the risk is acceptable, we should proceed with caution and with a commitment to prevent or minimize damage. This means that the oil industry must have adequate technology and must use it safely, that Federal agencies must exercise their management and regulatory responsibilities to ensure that the oil industry meets its obligations, and that Federal, state, and local agencies must coordinate their efforts to minimize disruption of coastal communities and environments by those facilities and other development required to support offshore operations.

Major Findings and Recommendations

This section presents the major findings and recommendations of the Council study.

Relative Ranking of Environmental Risk of OCS Areas

In the April 18, 1973, Energy Message announcing this study, the President said that "[n]o drilling will be undertaken...until its environmental impact is determined." Thus the major questions that the Council attempts to answer

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here are: What are the relative risks of development in these OCS areas? What can be done to reduce these risks? In what ways is our knowledge too little to answer these questions?

To provide a framework for answering these questions, CEQ identified 23 hypothetical locations of potential oil and gas accumulations in the Atlantic OCS and in the Gulf of Alaska and 8 sample onshore areas where the induced industrial development from oil and gas production could occur. For the Atlantic, four resource locations were identified in the Georges Bank Trough off New England, five locations in the Baltimore Canyon Trough off the Middle Atlantic, and five locations in the Southeast Georgia Embayment off the coast from northern Florida to South Carolina. The sample onshore sites studied were Bristol County, Mass.; Cumberland/Cape May Counties, N.J.; Charleston, S.C.; and Jacksonville, Fla. (see Figure 1-1). For the Gulf of Alaska, nine resource locations were identified, and potential onshore effects were examined at Cordova and Valdez and in the Puget Sound and San Francisco Bay areas (see Figure 1-2). Chapter 2 discusses in detail the methodology for selecting these hypothetical resource locations, and Chapter 7 deals with the sample onshore site selections.

The Council believes that the following order of relative environmental risk applies to development of the Atlantic and Alaskan outer continental shelves:

<u>Lowest Risk</u>	<ul style="list-style-type: none"> ° Eastern Georges Bank (East of 68° W; EDS 1 and 2) ° Southern Baltimore Canyon (South of 37° N; EDS 9)
↓	<ul style="list-style-type: none"> ° Western Georges Bank (West of 68° W; EDS 3 and 4) ° Central Baltimore Canyon (Between 37° and 39.5° N; EDS 6, 7, and 8)
↓	<ul style="list-style-type: none"> ° Northern Baltimore Canyon (North of 39.5° N; EDS 5) ° Southeast Georgia Embayment (EDS 10, 11, 12, 13, and 14)
↓	<ul style="list-style-type: none"> ° Western Gulf of Alaska (West of 150° W; ADS 7, 8, and 9) ° Eastern Gulf of Alaska (East of 150° W; ADS 1, 2, 3, 4, 5, and 6).
<u>Highest Risk</u>	

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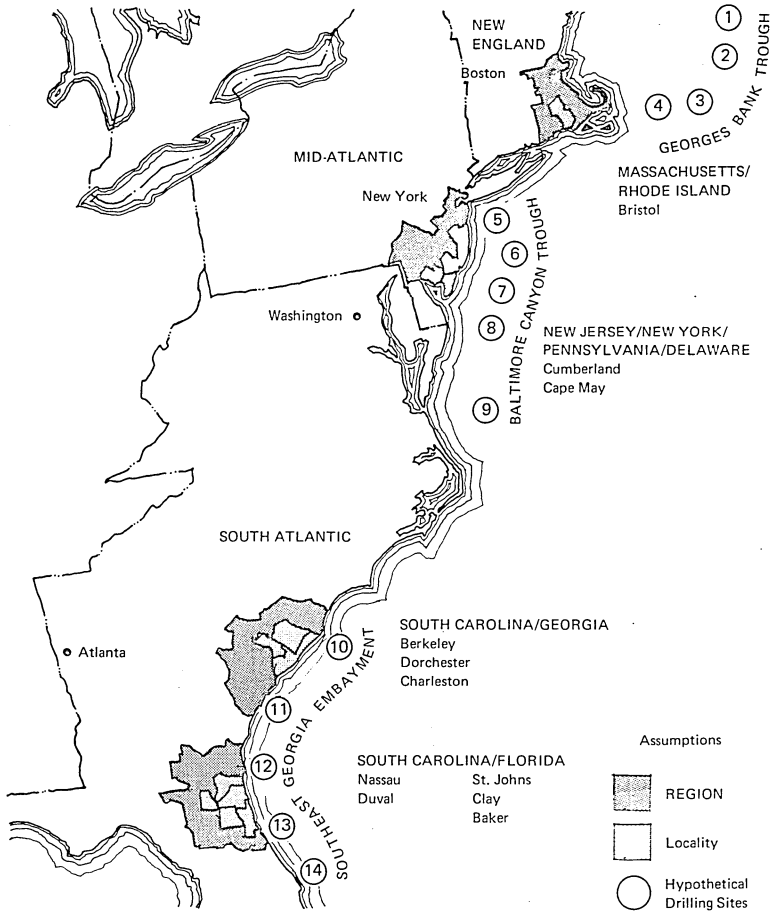


Figure 1-1. Atlantic Hypothetical Drilling Sites and Hypothetical Onshore Development Areas

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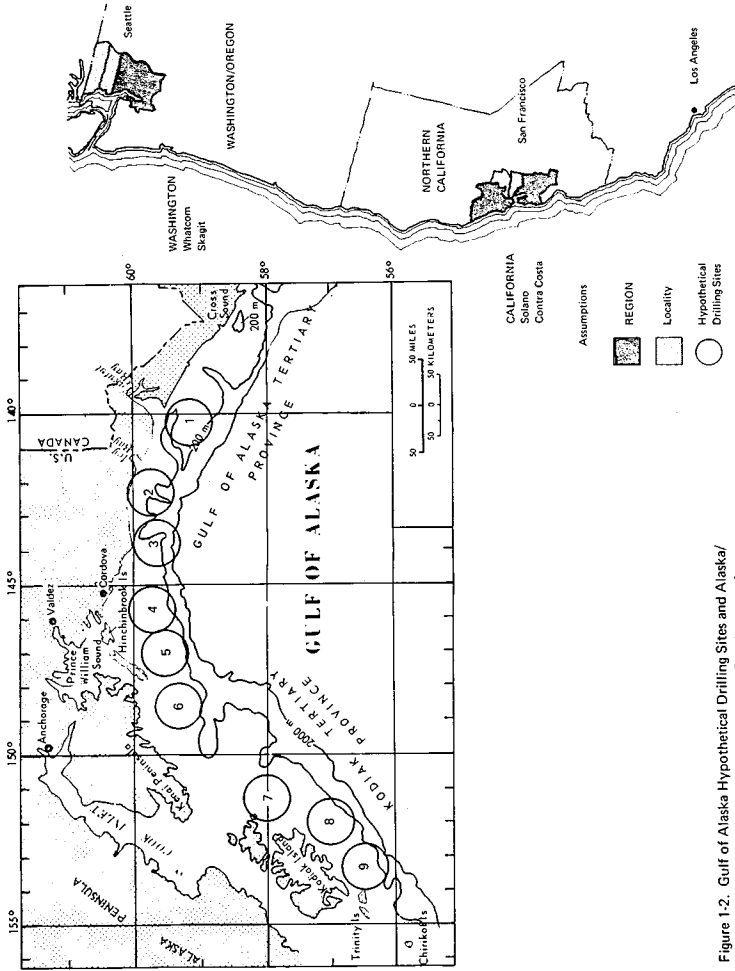


Figure 1-2. Gulf of Alaska Hypothetical Drilling Sites and Alaska/ West Coast Hypothetical Onshore Development Areas

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This ranking represents CEQ's best estimate of the overall relative degree of risk to the marine, coastal, and human environment resulting from OCS oil and gas development. Of course, the risk must be balanced against the value and benefits of the oil and gas to be recovered. The ranking is based on an assessment and integration of the findings of this study with respect to the effects of development onshore as well as of oil spills offshore, the incidence of unusual phenomena in potential development areas, the state of technology, and projections of regional energy needs.

CEQ believes that high environmental risk is involved in the development of the Northern Baltimore Canyon, the Southeast Georgia Embayment, and the Gulf of Alaska. Less risk would face development of the Central and Southern Baltimore Canyon and Georges Bank. The risk of damage from offshore operations can be decreased by strict requirements for environmentally protective technology and improved practices. The timing, magnitude, and location of onshore development must be controlled by state and local land use plans and regulations.

Studies of oil spill probabilities show that the size range of individual spills is extremely large, from a fraction of a barrel to over 150,000 barrels, although most spills are at the low end of the range. For example, three spills each year accounted for two-thirds of all the oil spilled from 1970 and 1972. Amounts can vary by a factor of 1 million, and a single large spill distorts the statistical distribution of spill magnitudes. For an oil field find of medium size (2 billion barrels in place), there is about a 76 percent chance that at least one platform spill over 1,000 barrels will occur during the life of the field; for a small oil field find (500 million barrels in place), the chance is about 25 percent. If a large platform spill does occur, there is an 80 percent chance that it will exceed 2,380 barrels and a 35 percent chance that it will exceed 23,800 barrels.

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It should be noted that in view of the lack of scientific data on the effects of oil spills and discharges on offshore fisheries, the Council's ranking of offshore damages relies heavily on the probability of oil spills impacting biologically productive coastal wetlands and estuaries and intensively used recreational beaches. This does not mean that oil spills do not cause damage enroute to shore or at sea. It simply reflects the fact that we know something about the effects of oil on wetlands and beaches but considerably less about its effect on the offshore marine environment. Indeed, for many Atlantic areas and particularly for Gulf of Alaska areas, there is a scarcity of information on which to base projections of the impacts of oil on most marine life.

Carefully designed baseline environmental studies should be initiated immediately in potential leasing areas and should be an essential and continuing part of OCS management. Such studies should be closely monitored and coordinated so that information can be integrated into ongoing operations and the results applied to decisions on leasing and regulating new areas. Special attention should be focused on determining long-term or synergistic effects of oil and other pollutants, if any, on marine organisms so that corrective actions can be taken as soon as possible.

Georges Bank. In the Georges Bank, the thick section of sediments with the greater likelihood of oil and gas accumulation lies farther from shore than in any of the other OCS areas considered. Should oil spills occur, the probabilities of oil reaching shore from hypothetical drilling sites located in the eastern part of the Bank (EDS 1 and 2) are generally low -- a maximum of 15 to 20 percent in the spring and near zero in the winter (see Table 1-1). The average time required for the oil to reach shore from these sites ranges from 80 to 150 days, with oil from the more remote site (EDS 1) taking the longest time. This is important because oil that has been exposed to long periods at sea, i.e., that is weathered, is less toxic than freshly spilled oil. Even if such oil should come ashore, it is less likely to damage organisms severely in the biologically fragile nearshore and estuarine areas.

TABLE 1-1
 Probabilities of Oil Spills Coming Ashore from Hypothetical Drilling Sites

Hypothetical spill site	Percent ashore worst season	Percent ashore best season
Atlantic Coast		
EDS 1	15	Near 0
EDS 2	20	Near 0
EDS 3	35	Near 0
EDS 4	50	5-10
EDS 5	10	Near 0
EDS 6	20	0-5
EDS 7	20	5
EDS 8	20	0-5
EDS 9	Near 0	Near 0
EDS 10	95	Near 0
EDS 11	95-100	5
EDS 12	90	15
EDS 13	50	Near 0
Gulf of Alaska		
ADS 1	95	40
ADS 2	95-100	75
ADS 3	95-100	55
ADS 4	95-100	55
ADS 5	95	60
ADS 6	95-100	60
ADS 7	45	5
ADS 8	5	0-5
ADS 9	5-10	Near 0

Source: The Massachusetts Institute of Technology Department of Ocean Engineering, 1974, "Oil Spill Trajectory Studies for Atlantic Coast and Gulf of Alaska," prepared for the Council on Environmental Quality under contract No. EQC330.

In the western part of the Bank (EDS 3 and 4), where the probability of a significant oil spill or discharge reaching shore is 35 to 50 percent and the average time to shore ranges from 40 to 120 days, the physical persistence of oil on the rocky shores of New England would, in general, be less damaging than in the salt marshes and wetlands of the Middle and South Atlantic.

Little is known about the potential biological impacts of oil spills and discharges to fisheries on the Bank itself. These fisheries, however, are valuable and must be protected by stringent controls on discharges.

Analysis of the onshore effects of OCS development in the Georges Bank indicates that there would be significant net economic benefits to New England. Heavily dependent on oil and natural gas, New England could possibly obtain 30 percent of its crude oil and 70 percent of its natural gas requirements from the Bank by 1985, assuming medium energy demand growth and average Georges Bank production estimates.

The Council believes that economic activity induced onshore by offshore oil and gas operations would not unmanageably burden the socioeconomic structure or the natural environment. Locally, up to 19,000 new jobs could be created by 1985 (see Table 1-2); regionally, employment could increase 1 to 3 percent and economic output, largely from refining, could increase 1 to 5 percent. Local impacts on land use and social and physical systems due to refinery siting could be severe, although regional impacts would be slight. Adverse impacts could be lessened by directing onshore development activities toward the older cities, like Fall River and New Bedford which need economic stimulants, and away from smaller towns whose social and physical structure could be overwhelmed by large-scale development. Increases in both air and water pollutants can be expected in local areas, even assuming best available control technology, and care must be taken that ambient standards are not violated. The time required for oil to come ashore from these central sites is from 2 to 3 months on the average, with minimum times in the range of 46 days. There appears to be little seasonal dependence in the time to shore, although the probability of impacting ashore is strongly season dependent.

TABLE 1-2
Summary of Onshore Impacts, East Coast: High Development¹

Key impacts	New England				Mid-Atlantic			
	1985		2000		1985		2000	
	Local	Region	Local	Region	Local	Region	Local	Region
Primary impacts								
Number of offshore platforms (25,000 barrels per day)	38	38	68	68	38	38	68	68
Number of refinery equivalents (200,000 barrels per day)	1.4	2.8	2.8	5.6	1.9	4.2	2.8	7.2
Number of gas processing plants (500 million cubic feet per day)	2	2	4	8	2	2	4	8
Number of petrochemical complex equivalents (1 billion pounds per year olefins)	0	0.5	0.8	2.4	1.0	2.2	1.9	6.0
Value of incremental construction (millions of 1970 dollars)	196	387	79	155	118	332	7	84
Aggregate impacts								
Employment (thousands)	19.0 (9)	76.7 (3)	17.3 (7)	83.1 (3)	28.8 (19-30)	100.2 (2)	31.9 (20-20)	120.8 (2)
Population (thousands)	43.6 (9)	188.8 (3)	38.8 (7)	191.7 (3)	45.6 (19-27)	227.0 (2)	66.0 (19-26)	268.6 (2)
Acresage required (thousands)	7.0 (8-9)	24.3 (3)	8.0 (9)	26.9 (3)	8.0 (18-26)	49.3 (4)	35.5 (18-25)	57.0 (4)
Hydrocarbon loadings (thousand tons per year)	16.6 (592)	36.6 (6-8)	34.6 (1116)	71.9 (87-134)	27.3 (41-273)	57.3 (7-14)	40.2 (41-338)	103.6 (11-27)
Biological oxygen demand (million tons per year)	0.9 (14)	3.2 (5)	1.8 (23)	5.7 (6)	1.6 (29-88)	4.3 (4)	2.4 (30-104)	7.8 (6)

See footnote at end of table.

TABLE 1.2—Continued
 Summary of Onshore Impacts, East Coast: High Development¹

Key impacts	South Atlantic/Charleston				South Atlantic/Jacksonville			
	1985		2000		1985		2000	
	Local	Region	Local	Region	Local	Region	Local	Region
Primary impacts								
Number of offshore platforms (25,000 barrels per day)	38	38	68	68	38	38	68	68
Number of refinery equivalents (200,000 barrels per day)	1.4	2.8	2.8	5.6	1.4	1.4	2.8	4.2
Number of gas processing plants	2	2	4	8	2	2	4	8
Number of petrochemical complex equivalents (1 billion pounds per year olefins)	1.2	2.4	4.2	7.4	0	0	4.2	5.8
Value of incremental construction (millions of 1970 dollars)	228	405	91	162	271	434	108	174
Aggregate impacts								
Employment (thousands)	59.2 (29.41)	87.9 (19.24)	75.8 (28.38)	109.9 (20.25)	37.0 (9.10)	53.9 (11.12)	58.7 (12.13)	84.6 (14.16)
Population (thousands)	137.5 (27.34)	250.8 (20.25)	145.4 (24.31)	272.9 (20.25)	82.3 (9)	142.8 (12.13)	111.2 (10)	202.4 (15.16)
Acres required (thousands)	26.0 (24.29)	64.6 (16.18)	29.6 (23.29)	75.4 (17.20)	25.4 (7.8)	43.2 (9.10)	33.3 (8.9)	64.9 (11.14)
Hydrocarbon loadings (thousand tons per year)	24.5 (75.150)	48.4 (44.111)	47.6 (11.24)	94.9 (62.175)	17.6 (73.149)	21.2 (43.64)	43.2 (111.294)	71.8 (73.156)
Biological oxygen demand (million tons per year)	2.1 (63.78)	5.6 (28.44)	4.3 (81.120)	10.8 (37.60)	2.8 (13.15)	3.8 (15.17)	8.1 (25.31)	11.7 (28.98)

¹ All imports are over base case conditions. The numbers in parentheses represent percentage over base case conditions, the first over Base Case 2 and the second over Base Case 1, where there is only one number, the percentage increase is the same for either base case. See Chapter 7 for a detailed description of cases and impacts. The source for the employment and population data is the U.S. Bureau of Economic Analysis, "The U.S. Energy Outlook: Projections of Oil and Gas Production on the Atlantic and Gulf of Alaska Outer Continental Shelf," prepared for the Council on Environmental Quality under contract No. EQ4AC002.

1-17

Baltimore Canyon. In the Baltimore Canyon, the thickest sections of sediments parallel the coast 50 to 75 miles out. Should oil spills occur, the probability of their reaching shore from hypothetical drilling sites in the central part of the region (EDS 6 to 8) is generally small, although slightly higher than from EDS 1 and 2 in the Georges Bank. The maximum probability for EDS 6 to 8 is 20 to 25 percent in the spring; during the winter the probability is 0 to 5 percent.

At the northern end of the Baltimore Canyon, the movement of oil spills from hypothetical drilling sites is markedly different. Although there is only a 10 percent chance that oil spilled 50 miles south of Long Island (EDS 5) would come ashore on Long Island during the spring, this probability increases dramatically as the hypothetical oil release point moves north toward Long Island. Oil released 25 miles south of Long Island in the spring would come ashore 75 percent of the time; oil released 10 miles south would come ashore 95 to 100 percent of the time during that season. The probabilities are considerably lower in winter.

The potential sites in the Baltimore Canyon are near coastal wetlands and salt marshes which are biologically valuable and serve as prime nesting and feeding areas for waterfowl. Oil reaching these salt marshes would persist in marsh biota and fine sediments for a number of years. In addition, oil spills in the northern part of Baltimore Canyon would tend to beach in northern New Jersey and Long Island, impacting some of the Nation's most intensively used recreational areas.

The northern part of the Middle Atlantic region is one of the most densely populated and industrialized areas in the country. This region contains nearly all of the 1.6 million barrels per day refining capacity now located on the east coast. Because of the larger population and existing industrial base, the regional economic benefits from OCS oil and gas development would be less significant than in New England. Potential oil and gas production from the Baltimore Canyon would provide about 10 percent of regional oil and natural gas requirements by 1985 (assuming medium demand and average production). This production would represent an important contribution to the region's energy needs but would not substantially offset the expanded need for supplemental energy supplies in the region.

As in New England, economic activity induced by OCS development would not appear to cause unacceptable socioeconomic or environmental pressures provided that development is directed to appropriate locations, is adequately planned well in advance, and is controlled. Adverse impacts would be more significant in the southern part of the region, less so in already industrialized areas, but minor in the region as a whole.

If production from the Baltimore Canyon is low, then the oil is likely to be transported by tanker and processed in existing or expanded refineries in the industrial belt between Wilmington and New York City. Although local environmental impacts may result from refinery expansion, the onshore impacts of low Baltimore Canyon production would be little noticed either positively or negatively. However, if oil production is high, it is likely that new refinery capacity would be required and much of the oil piped to new refineries which are likely to be sited in relatively rural areas in the southern part of the region, such as Cumberland and Cape May Counties in New Jersey. By 1985, up to 30,000 new jobs could be created,

increasing local employment 30 percent. Local economic output could increase 56 percent, but only 3 to 4 percent in the region. The associated population growth could place great stress on public facilities such as schools, hospitals, and water supplies in the local area. Induced industrial development might cause significant pressures on available unused land.

The southern part of the region could also experience major socioeconomic impacts. Resort industries, agriculture, and light manufacturing are the primary sources of employment now. OCS development could significantly transform the economic structure of the southern part of the region to a petroleum industry base, thus substantially changing the lifestyle and environment of the area.

Southeast Georgia Embayment. The Southeast Georgia Embayment area with the greatest potential for OCS oil and gas accumulation is very near shore, and the probabilities are high that oil spills from this area would come ashore in a very short time. In the spring and summer months, should a spill occur from EDS 10, 11, or 12, there is a 90 to 100 percent probability of its coming ashore, but the probability diminishes to 15 percent or lower during the fall. Spills at these sites appear more sensitive to distance from shore than at any other OCS location considered in this study. From EDS 11 a spill occurring in April could come ashore in as little as 6 days (spring average, 36 days). A spill occurring at EDS 12 during summer could come ashore in only 18 days (summer average, 60 days). This site is the one farthest from shore.

The South Atlantic experiences more severe storm conditions than those prevalent in either the Gulf of Alaska or the North Sea.

1-20

Hurricanes are frequent and the highest waves in any of the OCS areas are found here; a wave of 87 feet was recorded off Georgia, and 60 to 70 foot waves are common off Cape Hatteras.

The South Atlantic coastline, particularly from Myrtle Beach nearly to Jacksonville, is unusually diverse and is largely undeveloped. Large estuaries alternate with beautiful sandy beaches and highly productive grass flats. Any OCS development affecting this exceptional section of coast must be carefully integrated with existing ecosystems. Onshore industrial sites should be directed inland -- away from the biologically fragile coastal wetlands. Resort and recreational uses of beaches are also of prime importance; a spill at EDS 12, for example, would probably come ashore at St. Augustine.

Onshore effects of OCS development could be of greater magnitude in the Southeast Georgia Embayment region than in any other OCS area. However, the potential production of oil and gas from the Southeast Georgia Embayment could provide approximately 15 percent of the South Atlantic region's needs (assuming medium demand and average production).

Economic and social changes will be particularly significant in this region but will differ in magnitude between the Charleston and Jacksonville areas. For the Charleston region, most industrial and commercial activity in support of the refining and petrochemical industry would be expected to locate in or near the city because it is the only major metropolitan area within the surrounding region. As such, under high impact conditions the population of the immediate Charleston area could as much as double by 1985 and 59,000 new jobs could be created. This expansion can be equated with development of a new city: up to 37,000 new dwellings (demanding over \$1 billion in mortgage financing) along with schools, public services, and utilities. Cultural, natural, and historic resources could be threatened. The surrounding region could experience a similar employment growth rate -- up to 88,000 new jobs by 1985 and 110,000 by 2000.

1-21

The region comprising Jacksonville and its surroundings could accommodate high OCS impacts more readily than Charleston. Jacksonville is already undergoing extensive growth, and the existing infrastructure is better equipped to plan for and assimilate population increases. With OCS development, employment could increase by up to 37,000 by 1985 and 57,000 in 2000. Population could increase by up to 50 percent in 1985. Impacts on regional growth would be about the same as those for the local area.

Air and water pollution could be a significant problem. BOD could double in both the Charleston and Jacksonville areas, and hydrocarbon emissions would rise as a result of refinery and petrochemical development. Care must be taken to avoid violating ambient air and water quality standards.

Land requirements could easily be met in both areas, but the many swamps, salt marshes, and wetlands would require careful industrial, commercial, and residential siting.

Gulf of Alaska. The Gulf of Alaska hypothetical drilling sites are dispersed along the coastline, but they can be separated into eastern and western areas at 150°W longitude. Should a spill occur, it would have a lower probability of coming ashore in the western than in the eastern area (see Table 1-1). For instance, the maximum probability from the ADS 7 is 45 percent in summer but less than 10 percent in all other seasons, and the probabilities of a spill coming ashore from ADS 8 to 9 are no greater than 10 percent in any season. The situation is considerably worse in the eastern Gulf area where the probabilities for a spill coming ashore from all sites (ADS 1 through 6) are no lower than 40 percent in winter and exceed 95 percent in the summer. In the eastern area, the minimum time to reach shore could be as little as 3 days from ADS 3, but more representative is the 7 or 8 days from the other sites. The average times to shore are typically in the 20- to 30-day range, with seasonal variation. A critical factor is the retardation of oil weathering in northern regions due to cold water. Further, due to the reduced sunlight in winter, weathering can be expected to be slowest in the Gulf of Alaska.

Biological data are scant on the Gulf of Alaska, but fish spawning and bird nesting in coastal areas are known to be of vital ecological importance, particularly in the eastern Gulf area. If an oil spill should occur, there is a high probability of its coming ashore in the eastern Gulf in the summer months. This is the time of prime nesting for migratory birds and of the early larval life of newly spawned fish.

Storms are more frequent in the Gulf of Alaska than anywhere else in the Northern Hemisphere. The storms generally move west to southwest and then southeast. Icing could be a problem in February. The impact of earthquakes and tsunamis is another matter -- major earthquakes of Richter 7 magnitude are common every 3 to 5 years, and severe Richter 8 earthquakes can be expected every 25 years. Tsunamis also are frequent and would not only create damage at fixed berth tanker sites, but in conjunction with earthquakes they can severely stress underwater storage facilities.

The OCS production of oil and gas from the Gulf of Alaska would provide more supplemental supplies of oil and gas than are needed on the west coast and in Alaska itself. This would probably mean that present patterns of oil distribution would be changed, with more oil being shifted to the Midwest and east coast.

Onshore impacts are considered for Alaska and the west coast together because no significant new refining or petrochemical development is expected in Alaska (see Table 1-3). There a significant proportion of the economic and social effects would be felt in Anchorage, the center of present Alaskan development and the likely base for much of the commerce servicing offshore operations. However, a number of coastal communities could feel the effects of OCS development in addition to the impacts of Trans-Alaska Pipeline construction and operation. These

TABLE 1-3
Summary of Onshore Impacts, West Coast: High Development¹

Key impacts	Alaska				Washington/Oregon				Northern California				
	1985		2000		1985		2000		1985		2000		
	Local	Region	Local	Region	Local	Region	Local	Region	Local	Region	Local	Region	
Primary impacts													
Number of offshore platforms (25,000 barrels per day)	19	19	60	60	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Number of refinery equivalents (200,000 barrels per day)	0	0	0	0	0.1	0.1	1.3	1.3	1.3	1.3	3.5	3.5	3.5
Number of gas processing plants (500 million cubic feet per day)	1	2	5	16	0	0	0	0	0	0	0	0	0
Number of petrochemical complex equivalents (1 billion pounds per year olefins)	0	0	0	0	0	0	3.0	3.0	0.5	0.5	2.9	2.9	2.9
Value of incremental construction (millions of 1970 dollars)	16	55	6	21	214	214	86	86	194	194	78	78	78
Aggregate impacts													
Employment (thousands)	1.1 (36)	4.4 (2)	0.8 (12)	3.7 (1)	11.0 (17)	17.3 (2)	16.5 (19)	32.2 (2)	16.4 (6)	28.3 (11)	22.0 (5)	42.7 (1)	42.7 (1)
Population (thousands)	4.2 (43)	16.0 (4)	3.4 (13)	12.9 (2)	22.0 (19)	35.0 (2)	31.4 (17)	71.0 (12)	33.7 (3)	67.3 (11)	42.4 (3)	97.0 (1)	97.0 (1)
Acres required (thousands)	n.a.	n.a.	n.a.	n.a.	8.1 (12)	0.8 (2)	13.2 (16)	18.5 (3)	5.2 (3)	7.3 (1)	7.8 (4)	10.9 (2)	10.9 (2)
Hydrocarbon loadings (thousand tons per year)	n.a.	n.a.	n.a.	n.a.	1.7 (3)	1.8 (2)	23.4 (42)	23.6 (18)	15.1 (21)	15.5 (11)	43.3 (48)	43.7 (25)	43.7 (25)
Biological oxygen demand (million tons per year)	n.a.	n.a.	n.a.	n.a.	0.2 (7)	0.7 (1)	2.2 (53)	3.7 (8)	1.3 (16)	1.8 (2)	3.8 (12)	4.6 (3)	4.6 (3)

¹ All imports are over base case conditions. The numbers in parentheses represent percentages over base case conditions, the first over Base Case 2 and the second over Base Case 1; where there is only one number, the percentage increase is the same for either base case.
Source: Resource Planning Associates, Inc., and David M. Dornbusch & Co., 1974, "Potential Onshore Effects of Oil and Gas Production on the Atlantic and Gulf of Alaska Outer Continental Shelf," prepared for the Council on Environmental Quality under contract No. EQ4AC002.

sparsely populated towns and villages could expect to undergo boomtown conditions with multifold increases in employment and population as early as 1985. OCS-related employment increases in Alaska as a whole could grow 20 percent by 1985.

The Puget Sound and San Francisco Bay areas can be expected to be focal points of economic and social impacts related to refining Alaskan OCS oil on the west coast. Puget Sound now has refining capacity; under OCS development, employment in this region could increase up to 20 percent by 1985 and the population up to 15 percent. Land availability will be restricted by the mountainous terrain. Air and water pollution, however, is not expected to be critical.

The San Francisco Bay area also has refining capacity. With OCS development, employment in the region could increase up to 6 percent and population to 3 percent. Land availability is restricted due to the vast amounts of wetlands and marsh along the Bay. Air pollutant emissions could increase up to 40 percent, and care must be taken to avoid violating ambient standards. Water pollution is not expected to be a problem.

The West Coast analyses assume that all Gulf of Alaska OCS crude oil going to the Puget Sound and San Francisco regions would require additional refining capacity beyond that constructed for North Slope or imported crude -- construction that is likely to take place earlier than Alaskan OCS development. Thus, to the extent that Gulf of Alaska crude is not needed to meet west coast demand and is shifted to other parts of the country, the impacts described above are over-estimated.

OCS Technology and Practices

The technology and practices used in locating and exploiting OCS oil and gas resources continue to evolve. Past experience must be balanced with future expectations in judging the adequacy of OCS technology and the ability

of industry to use it safely in new OCS areas. Following the Santa Barbara blowout, the U.S. Geological Survey modified OCS regulations in several significant ways. Further, industry appears to be responding in other areas not directly covered by changes in the OCS orders.

In general, the Council believes that OCS oil and gas technology can operate safely under conditions similar to those in the Gulf of Mexico and the North Sea. However, storm conditions in the Atlantic and storm and seismic conditions in the Gulf of Alaska present more severe threats to personnel safety and environmental protection than the petroleum industry has faced before. Industry's ability to use technology safely is an essential element in minimizing environmental damage from oil and gas operations in new OCS areas. Careful attention to human factors, systems analysis, and personnel training are very important.

Chapter 8 assesses OCS technology and practices in detail. The following recommendations for improvement are based on that assessment:

- The continuing search for better technology must build upon an improved understanding of the role of human factors in equipment design and must be coupled with thorough training of the equipment operators. The Council recommends that human factors engineering be employed to the fullest extent in the design of OCS oil and gas equipment. The Department of the Interior should review proposed designs for facilities to be used in new OCS areas and encourage the incorporation of man-machine engineering principles.
- Training programs may not be required for all types of jobs, but certainly for the most critical, curriculum standardization and personnel certification should be required. The Council recommends that the Department of the Interior establish minimum Federal standards for critical OCS operator personnel and certify or provide for appropriate accreditation of the training programs.

- Rapid, accurate measurement of downhole pressure appears important in improving the ability to maintain well control and to reduce the possibility of blowouts. The Council recommends that the Department of the Interior determine which technologies could improve the measurement of the formation pressure near the drill bit and incorporate them into the OCS orders.
- Serious consideration must be given to postponing leasing in an OCS region where oil cannot be safely produced and safely transported to markets because of significant threats of earthquakes, tsunamis, and severe storms. The Council recommends that the Departments of the Interior and Transportation coordinate their evaluation and approval procedures for drilling platforms for new OCS areas. They should prepare detailed performance requirements for such platforms, considering fully the natural hazards in these areas.
- The Council recommends that the Department of the Interior, in coordination with the Environmental Protection Agency, develop more detailed guidelines for the disposal of drilling muds, drill cuttings, and other materials, considering fully the results of the Bureau of Land Management monitoring studies of ocean disposal of these materials in new OCS areas.
- The Council recommends that the Department of the Interior develop and incorporate in OCS orders detailed performance requirements for production platforms and associated equipment to be used in new OCS areas, with full consideration of natural hazards. The Department should develop in-house capability, or should contract with a qualified independent firm, to evaluate the adequacy of the proposed designs to guarantee structural integrity subject to natural and manmade forces.
- The Council recommends that subsea production equipment be used in new OCS areas where it would provide a higher degree of environmental protection and reduce conflict between oil and gas operations and competing uses of the ocean.

- The Council recommends that the Department of the Interior develop detailed performance requirements for surface-actuated subsurface safety valves and require their use on all production wells in new OCS areas where technically feasible. The Department should encourage the development of such valves with higher pressure ratings and with improved reliability of operation over the life of the devices.
- In undeveloped areas like the Atlantic and Gulf of Alaska OCS, environmental loadings of oil and other materials should be kept at the lowest levels possible at least until environmental baseline studies such as those recently initiated by the Bureau of Land Management determine the environmental risk from such materials. The Council recommends that the Department of the Interior and the Environmental Protection Agency, in cooperation, establish effluent standards for waste water discharge from OCS drilling, production, and associated operations. Strong consideration should be given to requiring installation of the best commercially available control technology for oil-water separation in new OCS areas.
- The Council recommends that the Department of the Interior develop detailed performance requirements for safety practices for well workover and servicing operations on production platforms and incorporate them in OCS orders for the new areas. The Department should consider regulations encouraging the use of improved technology to minimize the threat of blowouts during workover and service operations.
- The Council recommends that the Departments of the Interior and Transportation and the Environmental Protection Agency develop and implement a common reporting system for all accidents associated with OCS operations. This improved system should provide complete unambiguous reporting, with special attention to the analysis of cause-effect relationships.