BY THE COMPTROLLER GENERAL

Report To The Committee On Environment And Public Works United States Senate

OF THE UNITED STATES

Effective Planning And Budgeting Practices Can Help Arrest The Nation's Deteriorating Public Infrastructure

Despite billions of dollars invested in State and local highways, bridges, and water supply and sanitation plants, many of these facilities are becoming seriously deteriorated and need attention.

GAO concludes that four elements--assessing, planning, selecting, and controlling--are necessary for public organizations to successfully manage their physical capital assets. State and local governments should be encouraged to develop infrastructure policies and adopt sound infrastructure management practices. Federal funds for public infrastructure should be put to the best use in either acquiring or maintaining the existing public infrastructure.

GAO/PAD-83-2
NOVEMBER 18, 1982

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

B-209267

The Honorable Robert T. Stafford
Chairman, Committee on Environment
and Public Works
United States Senate

The Honorable Jennings Randolph
Ranking Minority Member
Committee on Environment and
Public Works
United States Senate

This report is in response to your June 2, 1981, request. The report discusses the condition of and trends in State and local physical capital (roads, bridges, sewage treatment plants, and the like), the interaction of Federal and State and local capital budgeting practices, and how State and local governments can improve their management of physical capital.

The Nation's deteriorating infrastructure and problems in financing its repair, restoration, and replacement are issues that are currently receiving increasing public attention. Many questions are being raised, but little comprehensive work has been done on the subject. This report represents an initial contribution to debates on potential solutions that are sure to follow. It contains conclusions and observations rather than recommendations for congressional action. Additional research and debate are needed on specific infrastructure needs. We are available to assist your Committee in addressing this matter.

We did not obtain agency comments on the matters discussed in this report.

We are sending copies of this report, as arranged with your office, to the House Committee on Public Works and Transportation; House and Senate Committees on the Budget; Joint Economic Committee; Director, Congressional Budget Office; Director, Office of Management and Budget; and other interested parties.

Charles A. Bowsher

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

EFFECTIVE PLANNING AND BUDGETING PRACTICES CAN HELP ARREST THE NATION's DETERIORATING INFRASTRUCTURE

D I G E S T

Federal, State, and local governments have invested hundreds of billions of dollars in physical capital assets--highways, bridges, sewage treatment plants, airports, buildings, and the like. Despite this huge investment, many of our physical capital items are deteriorating. Billions more are needed to repair or replace these assets, causing widespread concern about ways to finance their repair and rehabilitation. With the increased pressure on the Federal budget and the ongoing debate about the Federal Government's relationships with other public sectors and the private sector, how well States and localities plan, budget, and protect the public capital assets needed for the future takes on added significance.

OBJECTIVES, SCOPE, AND METHODOLOGY

GAO previously conducted a broad study of how organizations plan, budget, and control physical capital and reported on the Federal Government practices (see appendix III). This prompted the Chairman and Ranking Minority Member of the Senate Committee on Environment and Public Works to ask GAO to also report on

--the condition of State and local physical capital (see pp. 11 through 20),

--State and local capital budgeting as it affects Federal investment in capital assets (see pp. 21 through 28), and

--State and local capital management practices (see pp. 29 through 58).

To meet these objectives, GAO used the information it had obtained on the experiences of 14 organizations (4 cities, 5 counties, 4 states, and 1 regional authority). (See p. 5 and appendix II.)

GAO did not obtain agency comments on this report.

GAO/PAD-83-2
NOVEMBER 18, 1982

CONDITION OF STATE AND LOCAL INFRASTRUCTURES

Capital investment by State and local governments has declined about 34 percent in the last 13 years. Much of this reduction is attributable to decreases in capital outlays for highways and school construction, the two largest functional components of capital investment by State and local governments. Highway construction outlays have dropped because the interstate highway system is nearly completed. School construction outlays have dropped because of a decline in the school age population. However, declines in these two categories do not fully explain the overall decline in public capital investment.

What appears to be happening is that State and local governments have been re-allocating expenditures to meet increased demands for services, such as health and welfare programs. Capital investment, relative to total expenditures, has dropped from about 25 percent in 1960 to about 14 percent in 1980. This re-allocation takes the form of deferring the acquisition, replacement, and repair of capital assets. As a result, many States and local governments have deteriorating structures and equipment. (See pp. 11 through 14.)

For the 14 organizations GAO examined, the financial problems of large cities were generally more severe than States or counties. These cities often have large low-income populations and are confronted by declining tax bases and voter reluctance to increase taxes. At the same time, they face demands for increased services and a growing maintenance and replacement burden because their infrastructures are old and often poorly maintained. (See pp. 14 and 15.)

Although the States GAO studied were generally in better physical and financial condition than the troubled cities, the States also had problems managing their physical capital. (See p. 18.) Four of the counties GAO visited were in good financial shape, but one county was experiencing serious financial difficulties that affected its ability to acquire and maintain capital assets. (See p. 19.)

THE FEDERAL GOVERNMENT AFFECTS STATE AND LOCAL CAPITAL DEVELOPMENT

The Federal Government has provided about 40 percent of the funds spent in recent years by State and local governments for physical capital. Virtually all of the States, counties, and cities GAO studied use Federal aid for some capital projects. Each of them has specific needs for capital-related assistance depending upon whether they have growing, stable, or declining populations, tax bases, and tax revenues. Thus, their needs could vary from promoting growth, maintaining a stable infrastructure, or alleviating decline. However, the Federal aid they receive may not necessarily be directed to the particular needs or cycle of infrastructure the communities are in. (See p. 21.)

Federal grants-in-aid to State and local governments steadily increased from about $2.3 billion in 1950 to about $94.8 billion in 1981. The Administration's 1983 budget estimates show declines in the future outlays devoted to grants. (See pp. 22 and 23.)

The Administration's "New Federalism" proposal, as outlined in the 1983 budget, suggests that more than 40 Federal programs, including infrastructure programs, be turned back to the States along with the sources of funding. Such a proposal might enable State and local governments to address their infrastructure needs more directly and alleviate some of the investment decision biases in Federal capital programs. (See p. 23.)

In addition to the reductions and changes in grants, Federal tax reductions can reduce State tax revenues for those States that have tied their tax laws to those of the Federal Government. Unless the economy responds enough to offset these revenue losses, the States will have to revise their tax laws if they wish to recoup the lost revenues. (See p. 23.)

Besides financial influence, Federal programs and policies can and often do significantly influence State and local governments' capital investment decisions. Federal actions can intentionally or unintentionally cause State and local governments to shift their priorities from those projects they believe important to those for which they can receive Federal aid.

(See p. 24.) Federal capital grants often have a built-in bias toward new construction since, generally, such funds are not permitted to be used for maintenance or rehabilitation. This often encourages expansion of the infrastructure through new construction rather than maintenance of useful existing facilities (see p. 26). As GAO stated, the Administration's "New Federalism" proposal might alleviate some of these capital investment decision biases (see p. 23).

LEGISLATIVE AND VOTER ACTIONS AFFECT PHYSICAL CAPITAL FINANCING

Physical capital is financed either from current revenues or long-term debt, or a combination thereof. The use of debt to finance capital investments is often dictated by legislation, voters, and other factors. Many organizations are limited in the amount of debt they can issue in a single year or the total amount outstanding at any time. Some local organizations must have State approval before bonds can be issued. In addition to limits on amounts of bonds, voters must approve general obligation bonds before they can be issued. Another factor determining the use of bonds is the organization's ability to assume additional debt. The general condition of the current bond market and the current level of interest rates also often influence whether or not an organization issues bonds to finance its projects. (See pp. 29 and 30.) Specific actions include constitutional amendments, such as those in California and Michigan that limit taxes and put spending limitations on State and local governments, (see p. 31) and legislative actions to encourage investments in facilities outside the normal control processes, including

--autonomous building authorities authorized to issue bonds that are exempt from general obligation bond limits, (see p. 35)

--downtown development authorities with tax revenues reserved for use in special districts, (see p. 36)

--earmarked revenue sources such as the highway trust funds whose revenues are used to build and maintain highways, (see p. 37)

CONCLUSIONS

GAO made specific recommendations for improving the Federal Government's management practices, principally the establishment of a process for setting and overseeing Federal policies, in its earlier companion report, "Federal Capital Budgeting: A Collection of Haphazard Practices" (PAD-81-19, February 26, 1981). (See app. III.) In this report, GAO concludes that Federal funds for State and local government capital assets should be put to the best possible use in arresting the deterioration of public infrastructure. One option for meeting this could be to prescribe procedures for capital infrastructure programs that allow varying uses according to the needs of the recipient organizations. Such procedures might include flexibility to use Federal aid either for new construction or for rehabilitation of existing assets. GAO also concludes that incentives and disincentives should be created to encourage improved infrastructure policy and management at the State and local levels.

Because numerous capital-type grant programs are directed to different purposes and are allocated and administered in various ways, GAO's observations are limited to broad policy issues rather than specific programs or procedures. GAO will continue to work with congressional committees to make these changes program-by-program and to make the governmentwide policy level changes described in its earlier report. (See p. 60.)

--shifting the financial burden for infrastructure to independent regional authorities or the private sector, (see p. 41) and

--annexing surrounding areas to increase the tax base (see p. 40).

HOW STATE AND LOCAL GOVERNMENTS CAN BETTER MANAGE OUR NATION'S INFRASTRUCTURE

Many problems face State and local governments as they attempt to rebuild or maintain their infrastructure. GAO found that many, but not all, of the State and local governments studied lack a broad perspective on capital investment. Some organizations are successful at managing their infrastructures. Although many varying situations, such as political climate and availability of funds, affect an organization's ability to manage its infrastructure, GAO found that organizations that have maintained their infrastructures place a high priority on four elements:

--Assessing. Obtaining important information needed to determine requirements for repair, renovation, and replacement. (See p. 43.)

--Planning. Identifying and setting program objectives and priorities, considering an organization's current and future infrastructure needs, and relating these to the budget. (See p. 46.)

--Selecting. Choosing the individual projects from the plans that best meet the organization's current and future infrastructure needs. (See p. 53.)

--Controlling. Maximizing benefits from the resources designated for infrastructure use. (See p. 56.)

Based on the management practices GAO learned while doing this study, GAO developed a self-analysis guide to help officials evaluate their organizations' approach to planning, budgeting, and controlling physical capital. The guide is designed to be used by an analyst to identify the basic strengths and weaknesses of his or her organization's capital budgeting and management system and determine some strategies for improving the system. (See app. I and pp. 29 through 58.)

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TABLES

ABBREVIATIONS

CDBG	Community development block grants
GAO	General Accounting Office
UDAG	Urban development action grants

CHAPTER 1

INTRODUCTION

Highways, bridges, water and sewage systems, schools, and recreational facilities are some of our State and local governments' investments in capital assets. They constitute the infrastructures that society needs for a smoothly functioning and healthy economy. Hundreds of billions of dollars have been invested in these public assets, much of it with the aid of the Federal Government.

Despite this high national investment in the public infrastructure, considerable portions of it are crumbling before our eyes. Rarely can we read a newspaper or a news magazine without noticing reports about streets riddled with potholes, bridges that cannot be traversed because they are unsafe, and sewage systems incapable of handling our waste. Estimates to repair or replace these assets run into the billions. We also read about the fiscal crises of some of our cities, whose governments are laying off public employees and deferring outlays for the construction of new items and the repair and maintenance of existing ones. At the same time, Federal aid to cities and States is being cut, and shifts in responsibility are being made. The fiscal future, and thus the future of the public capital stock for many local governments, looks serious--particularly those in the Northeast and Midwest that are experiencing declines in population, shrinking tax bases, loss of industry, and rising unemployment.

Yet not all State and local governments are faced with seriously deteriorating public infrastructure and a bleak fiscal outlook. Governmental units in the South and West are growing and, for the present at least, are generally able to finance public capital assets. Some of the older industrial cities, while not growing, have been able to arrest the decay of their infrastructures through careful planning for the future.

THE FEDERAL GOVERNMENT PARTICIPATES IN STATE AND LOCAL PHYSICAL CAPITAL DEVELOPMENT

The Federal Government is an active financial partner in the development of State and local government physical capital, and its financial backing has increased sharply in recent years. In 1957, Federal grants to States and localities for capital projects were $1.2 billion, or less than 10 percent of total State and local capital outlays. By 1980, Federal grants had reached $22.3 billion, about 40 percent of the total outlays for State and local capital investments.

Many Federal departments and agencies are involved in this grant activity. The Department of Transportation, through its Highway Trust Fund, provides grants to States for the Federal-Aid Highway System. This department also subsidizes State mass

transit planning and the acquisition, operation, and maintenance of mass transit equipment by localities. The Department of Housing and Urban Development distributes urban development action grants (UDAG) and community development block grants (CDBG) to localities. UDAG funds are matched with private and other public funds to create jobs and thereby increase the tax bases of distressed cities and counties. CDBG funds are given to cities to be used at their discretion for both operating and capital expenditures.

The Department of the Interior provides funds for State and community park development. Its Water and Power Reserves Service helps States and special districts to develop irrigation and flood control projects. The U.S. Army Corps of Engineers also works with States and communities to develop flood control projects.

The Environmental Protection Agency provides 75 percent 1/ of the funds municipal governments use to construct waste water treatment plants. Localities receive general revenue sharing funds, which they can use for physical capital acquisition, from the Treasury Department, and the Department of Commerce encourages physical capital acquisition through its economic development assistance program. Other agencies also provide grants and loans to State and local government units.

Despite the magnitude of Federal programs and billions of dollars of Federal funds invested, no broad Federal management process or plan deals with the problem of deteriorating capital assets in State and local areas. As we stated in our prior report on Federal capital budgeting,

> Presently no broad Federal plan exists that sets out a national strategy for keeping the nation's infrastructure intact and healthy. No single Federal agency is responsible for assessing new infrastructure needs or for preserving and maintaining existing capital assets, and there is little recognition at the Federal level that capital investment is a vital component of a vigorous economy. In short, the Federal Government does not take a cross-cutting look at capital programs to see how they fit into the realization of national priorities. 2/

The digest of that report is reproduced in appendix III.

1/ P.L. 97-117, December 29, 1981, reduces the Federal share to 55 percent effective October 1, 1984.

2/U.S. General Accounting Office, "Federal Capital Budgeting: A Collection of Haphazard Practices," (PAD-81-19, February 26, 1981).

OBJECTIVES

On February 26, 1981, we issued a report 1/ on Federal Government practices for planning, budgeting, and controlling physical capital assets. Subsequent to the issuance of that report, the Chairman of the Joint Economic Committee and the Chairman and Ranking Minority Member of the Senate Environment and Public Works Committee asked us to report to them the results of our work on State and local capital budgeting. Specifically, the Senate Environment and Public Works Committee asked us to discuss

--the condition of State and local physical capital (see ch. 3),

--State and local capital budgeting as it affects the Federal investment in capital assets (see ch. 4), and

--State and local capital management practices (see chs. 5 and 6).

This report complements two previous reports that examine the capital budgeting activities of the three levels of government--Federal, State, and local. 2/

Our specific objectives were to determine

--the trends, condition, and problems of physical capital investment that State and local governments are experiencing;

--the interaction between Federal and State and local capital budgeting practices;

--what improvements States and localities can make in the management of their public physical capital;

--what kind of legislative and voter actions either encourage or inhibit public physical capital investment; and

--what alternative approaches are used by our study population of 14 non-Federal governments to acquire and maintain public physical capital.

1/Ibid.

2/Prior GAO reports on capital budgeting are "Foresighted Planning and Budgeting Needed for Public Buildings Program," (PAD-80-95, September 9, 1980) and "Federal Capital Budgeting: A Collection of Haphazard Practices."

Drawing from our experience with this study and our previous ones, we have developed a working definition of capital budgeting: it is the way organizations decide to buy, construct, renovate, maintain, control, and dispose of capital assets. We define capital assets as physical items that generally have a life expectancy over one year. In the locations we visited, these decisions combine to produce a capital budget, a document containing management's recommendations for acquiring, expanding, or modernizing capital items at a given point in time.

CHAPTER 2

SCOPE AND APPROACH

METHODOLOGY

To determine how State and local governments do and should plan, budget, and control physical capital and its operation and maintenance, we used the information we had obtained on the experiences of 14 organizations: 4 cities, 5 counties, 4 States, and 1 regional authority. 1/ We selected the organizations according to the following criteria, with primary emphasis on the first two: (1) growing, sustaining, or declining tax bases and tax revenues, (2) current and past infrastructure conditions, (3) geographical locations, (4) current and past cash positions, and (5) population composition and trends. Capital budgeting and the ways infrastructures are assessed can be studied in various ways. For our research, we chose a blend of survey and field study techniques. We also reviewed current literature on Federal and private capital budgeting.

OUR FRAMEWORK FOR STUDYING CAPITAL BUDGETING

Literature on capital budgeting covers several points of view. Business journals generally discuss the analytical techniques used to help determine the most cost-effective choices. Public sector literature focuses on three themes: (1) the procedures used to prepare a capital budget document, (2) whether a separate capital budget (using the traditional accounting definition) is practical, and more recently (3) the condition of cities' infrastructures.

The literature is sparse in terms of comprehensive, precise discussions of the critical elements of a capital budgeting process. Thus, we devised an analytical framework of our own, and based on it, we developed and designed this study's data collection methods. Our framework consists of four parts, all of which we judge necessary for a successful approach to capital budgeting and infrastructure policy.

(1) Assess the condition of the infrastructure and identify its short- and long-term physical needs.

(2) Plan alternatives to satisfy the organization's short- and long-term needs.

(3) Select alternatives and set priorities among the various short- and long-term needs and establish short-term funding allocations.

1/Actual locations visited are listed in appendix II.

(4) Monitor and control work schedules and financing.

To analyze our survey and field data, we ranked the study organizations along a spectrum, ranging from very successful to very unsuccessful. We defined a successful organization as one that can, even under adverse conditions, acquire, and/or maintain essential physical capital without jeopardizing its mission or its clientele. By adverse conditions, we mean declining resources, political instability, or severe conflict among interest groups.

OUR CRITERIA FOR PREPARING THE SELF-ANALYSIS GUIDE

As we analyzed our data, we were able to identify elements that consistently characterized the capital budgeting practices of the 14 organizations we studied. We used these elements, and what we learned about management practices in doing this study, to prepare a self-analysis guide. The guide is composed of a set of weighted statements designed to help an official evaluate his or her orgainzation's approach to planning, budgeting, and controlling physical capital. The statements are not all-inclusive, but they do represent important steps in assessing, planning, selecting, and controlling physical capital. The guide was developed based on the discussions held with organization personnel and our review of how the various organizations approach capital budgeting.

The guide was tested by participants at the June 1980 western regional meeting of the National Association of State Budget Officers and the Council of State Planning Agencies. Following that test, we used the guide to see if it agreed with our evaluation of all the organizations examined in this study. We asked policy officials from some of our study organizations to complete the self analysis. We compared their analyses with ours, identified ambiguities and other problems, and then revised the statements and values assigned to them. The specific weights assigned to the questionnaire answers were devised taking into consideration the relative importance of each element and the number of questions assigned to each element. The weights were finally revised based on the results of testing the questions on the organizations reviewed in this study and the comments of budget experts. A perforated copy of the self-analysis guide is attached as appendix I. It can be used in conjunction with chapters 5 and 6 of this report, which describe desirable and undesirable capital budgeting and management practices.

SURVEY AND FIELDWORK METHODS

Our criteria for selecting the cities

We chose Baltimore, Maryland; Cleveland, Ohio; Detroit, Michigan; and San Jose, California. They represent a mix of

geographical locations, population composition and trends, and growing, sustaining, and declining tax bases and tax revenues. Three of them have declining populations and tax bases combined with aging and deteriorating infrastructures that need increasing revenues for rehabilitation and replacement.

Baltimore carries out all the responsibilities of a city and a county. Today, it is known as a turn-around city. Once a declining urban area, Baltimore is now vigorously repairing and rebuilding its infrastructure and its image. It is old and its population is declining, but its financial condition is strong. Baltimore voters are noted for their support of bond issues for capital investment.

Cleveland (on December 15, 1978) was the first major American city to default since the Great Depression. It has defaulted three times since then and faces $700 million in needed improvements to its basic capital plant.

Detroit, like Michigan, is susceptible to the fortunes of the automobile industry and, consequently, is suffering large revenue losses (State and local). It has received media coverage for actively trying to rebuild its image and infrastructure.

San Jose--located in the "silicon valley" south of San Francisco--is one of the Nation's major growth areas. The value of its building permits ranks in the national top ten. Revenues and funding operations are considered generally sound. San Jose has weathered the storm of California's Proposition 13.

Our criteria for selecting the counties

Our selection of the five counties was based on geographical location, various organizational structures, and current and past cash positions. They were Howard County, Maryland; Arlington County, Virginia; Maricopa County, Arizona; Oakland County, Michigan; and Wayne County, Michigan.

Three counties enjoy growing populations and tax bases and relatively new infrastructures. Their strong tax bases and sound infrastructures have enabled them to fund a large portion of their capital and maintenance needs.

Howard County, which contains the model planned city of Columbia, must balance competition between its urban and rural elements. The county is growing steadily and has not suffered severe cash problems.

Arlington County is an urban county that has no cities within its boundaries and, therefore, has the combined responsibilities of a city and a county. It has a constant revenue base and is handling a rapidly declining school population and a large requirement for subway funding.

Oakland County has a completely decentralized government and an increasing revenue base. It has had a strong cash position and has been able to generate the money needed to build and maintain its infrastructure.

Maricopa County is located in the rapidly growing area of Phoenix, Arizona. It has an expanding revenue base and a strong cash position. Maricopa has been able to generate the cash needed to build and maintain its physical capital.

Wayne County contains Detroit, Michigan, the sixth largest U.S. city. Like the city, the county is experiencing financial difficulties in both providing services and sustaining an adequate infrastructure.

Our criteria for selecting the States

All four States in our survey have had growing populations. However, in three of them (Michigan, Ohio, and Pennsylvania), growth has lagged behind that of most of the counties in our sample. Moreover, these three States have serious infrastructure deterioration and/or financial problems that could worsen infrastructure conditions.

We visited California, Michigan, Ohio, and Pennsylvania because they represent a cross-section of current and past cash positions, types of assets, current and past infrastructure conditions, and geographical locations.

We selected California primarily because in the past it has had a cash surplus and because it is experienced in building, maintaining, and operating a very large capital project. The California State Water Project (initial phase was completed in 1973) includes 18 reservoirs, 15 pumping plants, 5 power plants, and 580 miles of aqueducts. Pennsylvania has recently had serious financial problems, and its roads and bridges are in very sad shape.

Michigan has had experience handling quick swings in cash positions and currently is having its resources severely strained. It is characterized as a one-industry State because its cash position is closely tied to the health of the automobile industry.

Ohio has a record of operating with relatively limited resources, and its resources are also currently being strained. Its voters and legislators emphasize limited government and revenues.

Our criteria for selecting the regional authority

Comments by various officials prompted us to select the special authority, the Port Authority of New York and New Jersey. The Port Authority has a long history of experience in building and maintaining a transportation infrastructure and believes

that its experience can help solve the broader infrastructure problems of the region. The Port Authority of New York and New Jersey (created by State compact in 1921) plans, develops, and operates terminals and other facilties of transportation and commerce. It is financially self-sustaining and obtains funds on the basis of its own credit. It has a sound financial position and builds, maintains, and operates an extensive capital plant. Over a period of years, it has expanded its responsibility for infrastructure in the New York/New Jersey area.

Interviews and documents

In the 4 cities, 5 counties, 4 States, and 1 regional authority studied. we conducted 164 structured, face-to-face interviews with

--legislators

--top managers

--program managers

--budget officers and comptrollers

--capital plant managers, planners, builders, and operators.

In addition, we conducted structured telephone interviews with budget officers and comptrollers in seven additional States. We also examined

--policies, procedures, instructions, budgets, and forms;

--documents on capital and its maintenance as they relate to the organizations contacted;

--documents concerning the availability of different types of funds; and

--enabling legislation and other laws.

STUDY LIMITATIONS

This report is intended to be used as a tool by Federal, State, and local governments and not as the solution to all the problems they face in managing infrastructures. We do not present a detailed discussion of the capital budgeting programs of Federal agencies here, nor do we discuss private industry capital budgeting programs. 1/ Instead, we have incorporated

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1/In "Federal Capital Budgeting: A Collection of Haphazard Practices," we discussed the capital budgeting practice of seven Federal agencies.

many of the features of the organizations we examined into the factors that we consider necessary for successfully managing physical capital (see ch. 4).

Furthermore, we did not attempt to examine the capital budgeting programs of all States or an extensive number of local governments. As discussed earlier, our analysis was directed at four States, nine local governments, and one special authority. The selection of the States and local governments was judgmental, using the criteria identified earlier in this chapter. We do not attempt to statistically project our findings, but we believe our coverage is sufficient to make a worthwhile contribution to physical capital management by all State and local governments.

We are continuing our studies of capital budgeting and infrastructure assessment practices. An ongoing project addresses the following questions: should the Federal Government have a separate capital budget? If not, what alternatives are there for making Federal capital investment policy?

CHAPTER 3

THE TREND AND STATUS OF PHYSICAL CAPITAL INVESTMENT IN STATE AND LOCAL GOVERNMENTS

State and local government investment in capital infrastructure is declining. Many factors at the Federal, State, and local levels have contributed to this decline in public investment and to the deterioration of public infrastructure:

--State and local revenue losses from reduced Federal aid and possible future revenue losses from tax structures that are tied to the revised Federal tax structure (see ch. 4),

--a high rate of inflation and sharply increased interest rates for long-term borrowing (see ch. 5),

--a pervasive reluctance of voters to approve tax increases (see ch. 5), and

--a shortsighted view of management toward capital assets (see ch. 6).

Individually, these factors could hinder an organization's ability to effectively plan, acquire, and manage its capital infrastructure: collectively, they could be devastating.

CAPITAL INVESTMENTS BY STATES AND LOCALITIES HAVE DECREASED IN THE LAST DECADE

In the last 13 years, State and local capital investment has declined about 34 percent, from a high of $35.9 billion in 1968 to $23.6 billion (in constant 1972 dollars) in 1981 (see table 1). Much of this reduction is attributable to decreases in capital outlays for highway and school construction, the two largest functional components of capital investment by State and local governments (see table 2). Outlays for highways have dropped because the national interstate highway network is nearly completed. (From the late 1950s to the mid-1960s, construction of the Nation's interstate highways was a significant contributor to the rise in capital investment.) Outlays for building educational facilities have dropped because the Nation's school-age population has declined.

Drops in these two categories, however, do not sufficiently explain the almost steady decline in total capital investment by States and localities since 1968. 1/ What appears to be

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1/Outlays for some functional areas (sewer systems and transit, for example) have actually risen.

Table 1

Capital Investment by States and Local Governments

Year	Millions of Dollars a/		Per Capita b/	
	Current Dollars	Constant (1972) Dollars	Current Dollars	Constant (1972) Dollars
1960	13,127	21,164	72.66	117.14
1961	14,112	22,664	76.82	123.38
1962	14,688	23,102	78.74	123.85
1963	16,587	25,670	87.65	135.65
1964	17,892	27,380	93.24	142.69
1965	19,570	28,999	100.74	149.25
1966	21,815	31,338	110.98	159.43
1967	24,451	33,916	123.05	170.68
1968	26,898	35,896	134.02	178.85
1969	27,357	34,016	134.98	167.83
1970	27,773	31,844	135.56	155.43
1971	29,153	30,867	140.39	148.64
1972	30,247	30,483	144.10	145.23
1973	32,824	30,789	154.90	145.29
1974	39,939	31,840	186.76	148.89
1975	41,326	30,078	191.35	139.27
1976	39,354	27,947	180.49	128.18
1977	38,336	25,710	174.07	116.74
1978	45,753	27,642	205.55	124.19
1979	49,727	26,758	220.95	118.90
1980	54,919	26,572	241.23	116.72
1981	54,280	23,626	236.20	102.81

a/ U.S. Department of Commerce, Bureau of Economic Analysis unpublished data.

b/ Population data from U.S. Bureau of Census, Current Population Reports, Series P-25.

Table 2

State and Local Investment in Educational Buildings and Highways and Streets
(millions of 1972 dollars)

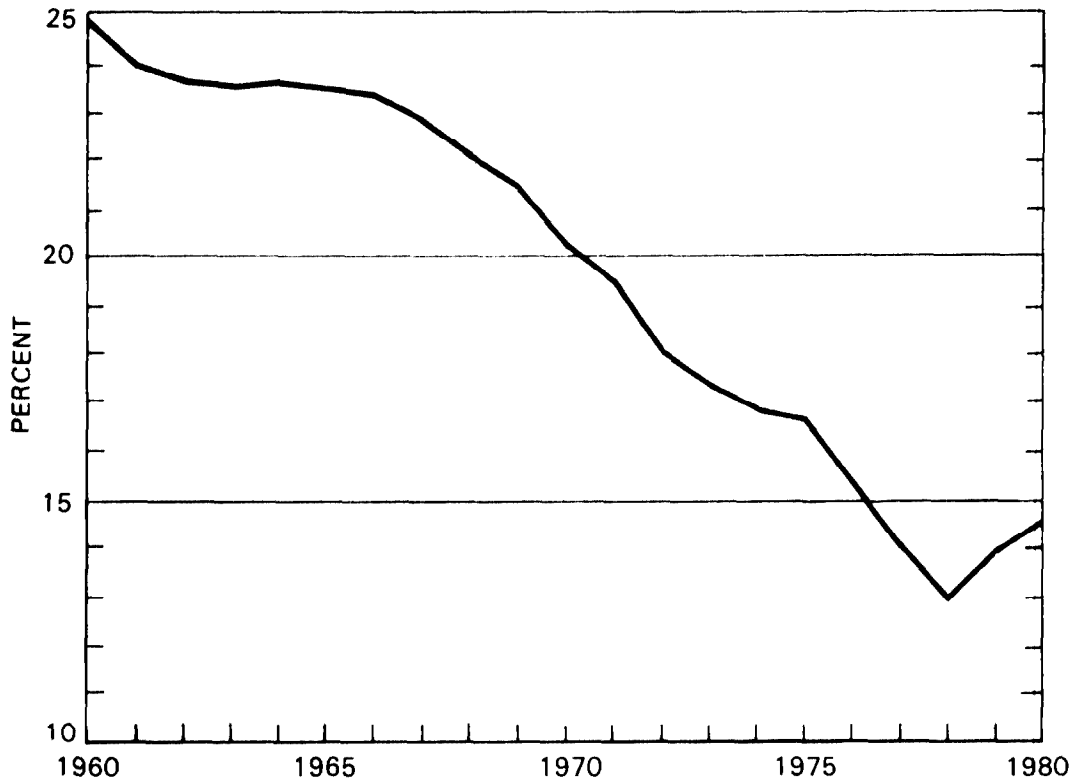
Year	Educational Buildings	Highways and Streets
1960	4,553	8,924
1961	4,939	9,597
1962	4,819	10,106
1963	5,510	10,937
1964	5,951	10,909
1965	6,553	11,217
1966	7,900	11,754
1967	8,522	11,642
1968	8,266	12,150
1969	7,396	11,356
1970	6,528	11,042
1971	5,977	10,847
1972	5,717	10,130
1973	6,123	9,585
1974	6,041	8,526
1975	5,923	7,098
1976	4,704	6,428
1977	3,714	5,934
1978	3,811	5,850
1979	3,690	5,762
1980	3,644	6,178
1981	3,013	5,800

Source: Bureau of Economic Analysis unpublished data.

happening is that State and local governments have been reallocating expenditures to meet the increased demand for services (police and fire protection and health and welfare programs, for example). In short, capital investment relative to total expenditures has dropped from about 25 percent in 1960 to about 14 percent in 1980 (see figure 1). Based on our study population, we found that this reallocation often takes the form of deferring the acquisition, replacement, and maintenance of capital. The result of persistent deferral is that States and localities are having trouble sustaining healthy capital infrastructures.

FIGURE 1

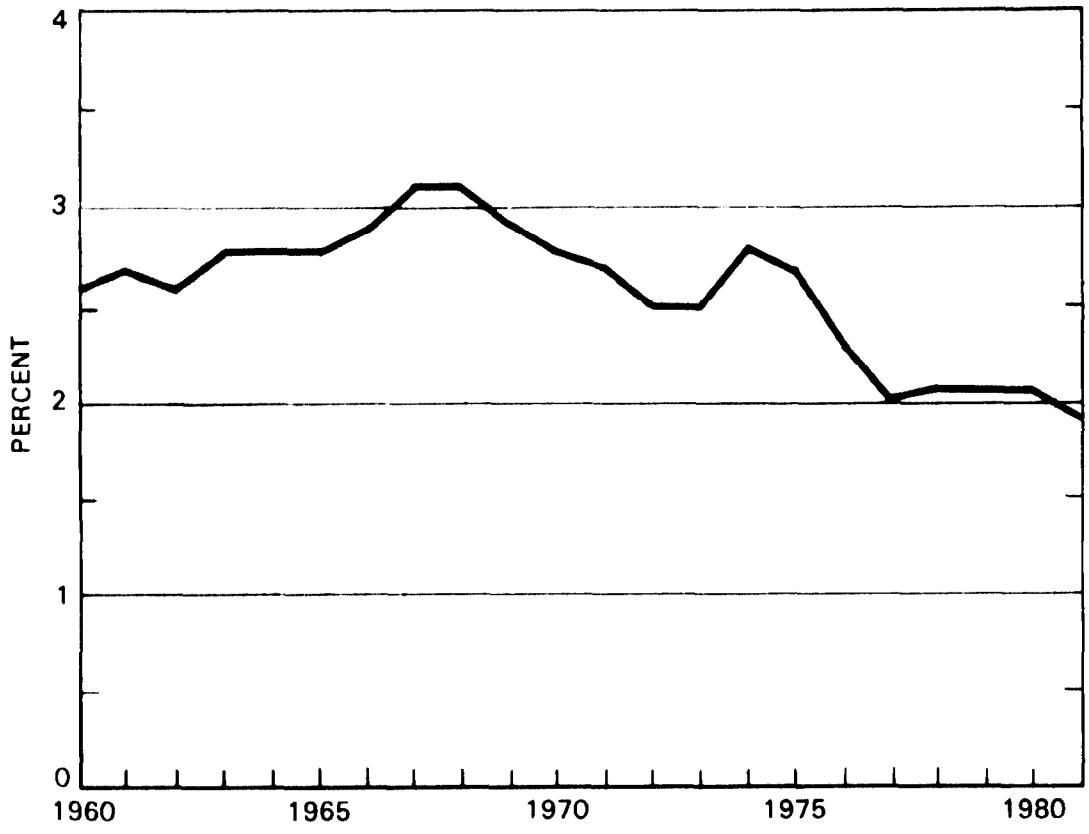
STATE AND LOCAL CAPITAL INVESTMENT AS A PERCENT OF TOTAL OUTLAYS



In addition, as can be seen in figure 2, State and local capital investment as a percent of the Gross National Product reached its peak in 1967 and has been steadily decreasing since that time. While what the proper percentage of the Gross National Product devoted to capital investment items should be is subject to debate, we can deduce that the State and local governments are devoting less resources to capital assets now than they have in the past. It is this fact, when coupled with the deteriorating condition of State and local physical capital, that causes concern.

FIGURE 2

STATE AND LOCAL CAPITAL INVESTMENT AS A PERCENT OF GROSS NATIONAL PRODUCT



INFRASTRUCTURE PROBLEMS SELECTED STATE AND LOCAL GOVERNMENTS ARE EXPERIENCING

Most of the problems faced by States and localities center on the lack of revenue for acquiring new capital and past deferrals of physical capital replacement and maintenance. Although most of the counties we visited were in good financial shape, one county was experiencing serious financial difficulty that has affected its ability to acquire and maintain capital assets.

Some cities maintain and rehabilitate their infrastructures while others do not--a case study of three cities

The financial problems of large cities are generally more severe than States or counties. These cities have large low-income populations and are confronted by declining tax bases and voter reluctance to increase taxes. At the same time, they face demands for increased services and a growing maintenance and replacement burden because their infrastructures are old and often poorly maintained. Not surprisingly, this mismatch of revenues

and service and replacement needs causes financial stress and deficits. The cities that have maintained and replaced their infrastructures have kept an eye on the future and have given a high priority to maintenance and replacement. The cities that allowed their infrastructures to deteriorate are experiencing breakdowns and declines in service. They are also deferring huge replacement and repair burdens.

Our comparison here is limited to the three cities we studied that had aging infrastructures. These cities--Baltimore, Cleveland, and Detroit--share similar circumstances but cope with their problems differently.

According to the Urban Institute 1/, Cleveland, Ohio is a classic case of poor urban management aggravated by a short-term political response. The most newsworthy and obvious symptom of Cleveland's economic decline occurred on December 15, 1978, when it became the first major American city to default since the Great Depression. Cleveland's economic decline, however, started much earlier. The Urban Institute attributes the decline to voters' continued refusal to increase taxes, Cleveland receiving very little financial assistance from the State, Cleveland's political leaders failing to act on and to educate the public about the need to preserve the city's financial condition and infrastructure, not raising utility rates to meet maintenance and physical capital needs, and the city's tendency to finance daily operations with funds designated for physical capital and other borrowed monies.

Cleveland's financial problems and its pattern of favoring current expenditures over maintenance and capital investment needs have reduced maintenance and capital investment spending on its basic capital plant, such as its water system, sewer system, streets, and bridges. The Urban Institute report shows that from 1972 to 1977 Cleveland's maintenance expenditures grew only 89 percent while its current expenditures grew 151 percent. During the same period, capital investment spending grew only 37 percent while total expenditures grew 162 percent. 2/ The cutback in bridge maintenance is an example of Cleveland's dwindling maintenance effort during the 1970s. The number of maintenance personnel was halved between 1973 and 1978, and preventive maintenance activities, such as painting, were eliminated after 1973 because of these staff reductions.

Cleveland clearly has favored current operations over its maintenance and physical capital needs. In a February 1981 special election, Cleveland voters passed a 33 percent increase (from

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1/ Nancy Humphrey, George E. Peterson, and Peter Wilson, America's Urban Capital Stock, Vol. 2: The Future of Cleveland's Capital Plant. (Washington, D.C.: The Urban Institute, 1979).

2/ Op. cit.

1.5 percent to 2 percent) in the city income tax to prevent further cutbacks in city services.

Detroit's infrastructure is also deteriorating for the same reasons as Cleveland's. Largely because of age, poor maintenance, and a lack of rehabilitation and replacement, a Detroit official said that the infrastructure is in worse condition now than 10 years ago. The city has not increased expenditures for maintenance or replacement, even though many of the facilities are old. Most of its police and fire stations are 40 to 50 years old, and a few still in use were built in the last century.

Following are some factors that have aggravated Detroit's problems.

--Detroit voters are reluctant to approve property tax renewals. In August 1980, voters turned down four out of six proposed tax renewals. The four rejected renewals were turned down again in November 1980.

--Detroit has kept sewage rates low by neglecting its sewers and waste water treatment plant. Substantial rate increases are now occurring to improve maintenance and to purchase replacement and additional equipment.

--Detroit has relied heavily on bonds to influence its capital improvements and is now deeply in debt. This reliance, combined with a vulnerable local economy, has caused Detroit bonds to receive a low bond rating.

--Detroit's present and future tax revenues are limited by the Headlee Amendment approved by Michigan voters on November 7, 1978. This State constitutional amendment limits local property tax increases, requires voter approval of local tax-supported debt, and limits the amount of money that can be raised by State income tax.

Baltimore is an example of an older manufacturing city that is losing population and employment but has done a much better job of maintaining, replacing, and rehabilitating its facilities and equipment. It operates with an eye on the future and has resisted the easy budget solution of deferring maintenance and suspending capital replacement. 1/

1/In its study, America's Urban Capital Stock, Vol. 3: The Future of Cincinnati's Capital Plant, (Washington D.C.: 1979), the Urban Institute describes how Cincinnati, an older industrial city much like Baltimore, Cleveland, and Detroit, has coped with its infrastructure problems. According to the Urban Institute, the present good condition of Cincinnati's infrastructure results from a past of giving maintenance and capital replacement needs a high priority. This parallels the case of Baltimore that we describe.

Baltimore has had the foresight to increase its capital expenditures, a rare occurrence for an older industrial city. The city's capital expenditures, as a ratio to total expenditures, actually increased, from $58.7 million (14 percent) in FY 1968 to $258.7 million (23 percent) in FY 1977. 1/ In addition to these large capital outlays, Baltimore has been able to increase its maintenance outlays (in constant 1972 dollars) for its water and sewer systems because it has made sure that the rates charged to users have outpaced inflation. At the same time, however, the city decreased constant dollar maintenance expenditures for streets and bridges.

Some States face problems in sustaining adequate infrastructures

Although the States we studied were generally in better physical and financial condition than the troubled cities in our study, the States also had problems managing their physical capital. Pennsylvania finds it difficult to maintain and rehabilitate its roads, highways, and bridges. Because of the severe recession in the automobile industry, Michigan and Ohio have cut back on budgeted outlays to balance their budgets. Some of these cuts have directly affected capital and maintenance outlays.

Extensive capital expansion in the 1960s and 1970s has left Pennsylvania seriously in debt. According to a Pennsylvania Department of Transportation official, because of the estimated $200 million in annual debt service charges on over $2 billion of outstanding bonded debt and decreasing highway revenues, the State stopped new construction financed from bonds and began financing all capital, operations, and maintenance costs out of current revenues.

How serious is the situation regarding Pennsylvania's roads and bridges? Years of emphasizing road construction and giving low priority to maintenance have left the roads and bridge system in poor condition. Some bridges are a safety hazard; children have been directed to leave their school buses and walk across them so as to lessen the possibility of accident In the past, new construction was undertaken without considering future maintenance costs. Today, the interstate highways are falling apart, bridges are unsafe, gaps exist in freeways, and State roads are in need of major safety renovation.

Michigan in recent years has suffered financially because of the recession in the automobile industry. Michigan wiped out its $273 million budget stabilization fund and cut $427 million to meet a $700 million shortfall in its 1979-1980 budget.

1/Department of Commerce, "A Study of Public Works Investment in the United States," Vol. 2, April 1980, p. 43.

Fiscal 1980-1981 outlays of $4.5 billion represented cuts of $1 billion from the Governor's original budget proposal. The State's approved budget for 1981-1982, including supplementals, was $5.4 billion. This budget was cut by $270 million in October 1981 and by $308 million in April 1982.

The automobile industry recession has also hit Ohio hard. Like Michigan, Ohio is required to maintain a balanced budget. After adopting the 1979-1981 budget, the State cut the budget by 2 percent in fiscal 1980 and by 9 percent in fiscal 1981. After adopting the 1981-1983 budget, it made a 5.5 percent cut during fiscal 1982. These cuts affected all programs, including capital and operations and maintenance outlays.

Infrastructures in some counties are in good shape but problems exist

In four (Arlington, Howard, Maricopa, and Oakland) of the five counties we studied, the infrastructures were in good condition. In the fifth county (Wayne), the physical capital was in fair to good condition. One county had not funded new construction from general county funds for the last 5 years and has been deferring maintenance on buildings, roads, and culverts for the past several years. Although the other counties have been acquiring and maintaining physical capital, they have not funded all existing capital needs. This is particularly true in the roads and highways category where the counties' revenues from State highway fuel taxes and fees have been declining in recent years.

Wayne County, Michigan, has been experiencing severe fiscal problems for the past 5 to 6 years. Because of these problems, capital financed from general funds has not been acquired, and maintenance has been minimal or deferred on the general administration buildings; county and local roads and bridges, drains, and culverts; and the county hospital. The condition of these assets is rated by county officials as "fair." The only exception to this are the two buildings built and maintained by the Detroit-Wayne County Building Authority, which are given top maintenance priority and are in good condition.

In contrast to assets financed from general funds, capital investments financed and maintained by enterprise funds (funds whose collections are generated by and used for providing specific services to the general public, such as water and sewers) or user charges are in better shape. Wayne County officials rated as "good" the condition of the sewer lines and waste facilities, the State roads maintained by the county, and the Detroit Metropolitan Wayne County Airport.

How bad is the situation in Wayne County? A county official said that 50 percent of the County's bridges should be replaced. Another official said that most buildings are 50 or more years old, yet they receive only regularly scheduled custodial

maintenance. Other building maintenance is deferred until a "crisis" happens. County and local roads are not maintained because the county has neither the personnel nor the money to maintain them. The State reimburses the county to maintain the State roads. Even so, sufficient funds are not available for these State roads to be adequately maintained.

CHAPTER 4

THE FEDERAL GOVERNMENT AFFECTS STATE AND LOCAL CAPITAL DEVELOPMENT

THE FEDERAL GOVERNMENT INFLUENCES THE AMOUNT OF STATE AND LOCAL REVENUES FOR CAPITAL INVESTMENT

The recent levels of State and local government capital investment would not have existed without financial support from the Federal overnment. About 40 percent of the total capital outlays by State and local governments in recent years has come from Federal funds.

Although the relative importance of Federal capital investment aid varies in the States, cities, and counties we visited, virtually all of them use Federal aid for some capital projects. As we stated in chapter 2, the conditions of the infrastructures in the jurisdictions we studied cover a broad range. This is caused, in part, by where in the infrastructure cycle the city, county, or State is. The infrastructure cycle is composed of periods, each lasting several years, of growth, stability, and decline. Jurisdictions' specific needs for capital-related assistance are tied to whether their population, tax bases, and tax revenues are growing, stable, or declining. Thus, their needs could vary considerably: from new construction to promote growth, to rehabilitation and reconstruction to alleviate decline, to maintenance to sustain a stable infrastructure.

While the seven declining, three stable, and four growing jurisdictions we studied are likely to use the aid in different ways, all of them use Federal dollars as support, if not the only support, for the development of their infrastructures. 1/ However, the Federal aid they receive is not necessarily tied to the particular cycle the community is in.

The amount of intergovernmental aid is currently being reduced by recent Federal actions and proposals

How much Federal aid should be distributed, and when, how, and to whom it should go are some of the questions that have been discussed by the Congress, the executive branch, and State and local officials over the years.

Federal grants-in-aid to State and local governments steadily and greatly increased from 1950 to 1981. However, as table 3 shows, such aid as a percentage of Federal budget outlays reached

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1/A further discussion of the condition of these jurisdictions is contained in chapters 2 and 3.

Table 3

Historical Trend of Federal Grants to State and Local Governments

	Total grants-in-aid (millions)	Federal grants as a percent of Total Federal Budget Outlays	Federal grants as a percent of State and Local Expenditures
Five-year intervals:			
1950	$ 2,253	5.3%	10.4%
1955	3,207	4.7	10.1
1960	7,020	7.6	14.7
1965	10,904	9.2	15.3
1970	24,014	12.3	19.2
1975	49,834	15.4	23.0
Annually:			
1976	59,093	16.2	24.2
1977	68,414	17.1	25.9
1978	77,889	17.4	26.8
1979	82,858	16.9	26.1
1980	91,472	15.9	26.3
1981	94,762	14.4	25.3
1982 estimate	91,220	12.6	NA
1983 estimate	81,418	10.7	NA
1984 estimate	81,853	10.2	NA
1985 estimate	83,517	9.6	NA

NA = Not available
Source: Adapted from Table H-6, Special Analysis H, 1983 Budget.

a peak of 17.4 percent in 1978 and has declined since. Federal grants as a percentage of State and local expenditures have remained relatively stable over the last few years. The Administration's estimates (as contained in the 1983 budget) for grants-in-aid to State and local governments over the next few years show a substantial decline from the 1981 levels in both total funds available and as a percentage of Federal budget outlays.

In its Program for Economic Recovery (February 18, 1981), the Administration proposed that current and future Federal aid be redirected from categorical (specific purpose) grants to broad-based "let the States and local governments decide their use" grants. In 1972, broad-based or general-purpose grants amounted to less than 10 percent of the total amount of grants-in-aid. By 1983, these grants are estimated to be one-fourth of the total. The Omnibus Budget Reconciliation Act of 1981 consolidated many service-type categorical grants into block grants but basically left the large physical capital programs, such as wastewater treatment construction and mass transit grants, as "categorical." However, large reductions in authorized funding were enacted in these major physical capital categories.

The Administration's recent "New Federalism" proposal outlined in the 1983 Budget suggests that more than 40 Federal programs, including mass transit, Federal-aid highways (except the Interstate system), and community development, be turned back to the States. These programs will total about $30.2 billion in FY 1984, the year the proposal is to go into effect.

The New Federalism proposal calls for earmarking certain existing Federal taxes for a new federalism trust fund that would belong to the States. The States would then have the option of using the trust fund revenues either (1) to continue the Federal programs covered under the turnback or (2) as "super revenue sharing," covering these or other programs. Each State's share in the trust fund would be based on its 1979-81 share of the Federal grants slated for turnback. Beginning in 1988, these Federal programs would cease to exist (they would belong to the States), and the trust fund would start to be phased out. After 1991, the trust fund would cease to operate, and the States would then have the option of continuing, changing, or terminating all of the 40 or more programs. The States could choose to impose the same excise taxes that made up the trust fund or they could use other revenues should they wish to continue the programs. Such a proposal might enable State and local governments to address more directly their needs depending upon their own priorities.

Other recent Federal actions could reduce State and local revenues

In addition to reductions in Federal grants-in-aid, Federal tax reductions contained in the Economic Recovery Tax Act of 1981 (P.L. 97-34, August 13, 1981) are, under current conditions, likely to decrease revenues for State and local governments.

Many State tax structures are directly linked to the Federal tax code. Thus, unless the States change their tax codes, the decrease in Federal taxes could erode State revenues. For example, three States have "piggy back" systems in which personal tax liability is calculated as a percentage of Federal tax liability. Some other States use the Federal definition of taxable income to compute taxpayer liability. Such recent Federal actions as the exclusion of certain interest income, the reduction of the "marriage penalty," and the exclusion of reinvested dividends are likely to reduce many States' revenues.

The reductions in the corporate income tax that came out of the 1981 tax bill are also likely to result in revenue losses for the States. Thirty-five States have a corporate income tax that uses Federal taxable income as its base, and the States that have their own definition of taxable corporate income have adopted the Federal depreciation schedules. The National Governors' Association has estimated that in FY 1982 Federal tax legislation could cost the States about $2 billion in lost corporate tax revenues, primarily because of the link between Federal and State depreciation schedules.

Two factors could offset these estimated tax revenue losses. First, the Administration's program for economic recovery could stimulate the economy enough to offset the tax losses. Second, the State and local governments with income tax structures tied to the Federal tax structure could revise their tax structures to recoup the lost revenues.

FEDERAL PROGRAMS AND POLICIES AFFECT STATE AND LOCAL CAPITAL INVESTMENT DECISIONS

Besides providing financial support, Federal programs and policies can and often do significantly influence the capital investment decisions made by State and local governments. Federal grants can cause State and local governments to shift their priorities by encouraging new construction rather than maintaining existing useful assets. While shifting State and local priorities seems detrimental in some instances, it may be necessary when national priorities are considered to be more important than those of State and local governments.

Federal actions affect State and local priorities

Federal programs "may bias a community's project selection toward those that can obtain grants and away from otherwise equal or more attractive projects that are not eligible for grants." 1/

1/Marnie S. Shaul, "Capital Financing Options for Local Government." (A discussion paper prepared for the National Urban Policy Roundtable, February 27, 1981.)

During the course of this study and our earlier study of Federal capital budgeting, 1/ several State and local officials we spoke with expressed concern about the Federal influence on local capital budgeting priorities. Several State and local governments we visited set their priorities according to the percentage of Federal monies available. When Federal priorities shift, State and local governments are affected. This may or may not be the intention of Federal policy. One State official told us that Federal aid is often the difference between a project "going or not going," because the legislature is more likely to approve a capital program if it includes Federal funds.

Many State officials believe that they must get and spend all the Federal highway dollars for which they are eligible. Thus, they tend to plan highway programs around the Federal-aid categories from which they can receive funds. As a result, what often happens is that a State, which may need to replace bridges, may instead build another section of interstate road because it has already spent all its money in the bridge replacement category and funds may still be available to build a new section of interstate. Four State officials in our follow-up telephone survey also said that

--Federal highway programs take away much of the State's flexibility with regard to where Federal highway dollars are used;

--More highways are built and at a higher quality of construction than usage dictates simply because the Federal funds are available; and

--There is a mismatch between Federal highway funds and the States' needs.

A study published by the Department of Housing and Urban Development pointed out that the availability of Federal or State funds may influence a community's decision to request a particular project. The study noted

> The grant formula and local share requirements will influence the decision to propose eligible projects for Federal funds that otherwise might not have been considered for inclusion in the capital improvement program if the city relied exclusively on its own sources of revenue. 2/

1/ Federal Capital Budgeting: A Collection of Haphazard Practices."

2/American Society of Planning Officials, "Local Capital Improvements and Development Management: A Literature Synthesis," (Washington, D.C. Department of Housing and Urban Development; National Science Foundation, July 1977, p. 3).

The study cited specific examples such as

--a city that awards points in its capital improvement rating system for the use of outside sources,

--a city that gives the second of seven priorities to projects that must be financed to meet the provisions of Federal or State grants, and

-another city that plans projects so that full utilization is made of intergovernmental revenues.

State and local officials in our study were also critical of water pollution standards, airport standards, and Federal legislation for the handicapped. They said these requirements affect local capital budgeting priorities. The HUD study also discussed programs where localities must develop capital facilities to meet Federal requirements. The study said that local priorities are often strongly affected by Federal and State policies In some cases, the local community has little alternative but to comply. 1/

Federal aid tends to encourage new construction rather than maintenance of existing capital assets

Federal capital grants have a general, built-in bias towards new construction. These grants, such as Federal-aid highways and waste water treatment, provide incentives for the replacement or new construction of capital facilities, but seldom contain incentives for rehabilitation and maintenance of existing infrastructure Many believe that States and cities are therefore more likely to build new capital facilities rather than maintain or rehabilitate existing structures. On the other hand, many believe that it is the proper role of the Federal Government to provide only the funds necessary to build capital assets and that State and local governments should operate and maintain them. Those who hold this view also point out that Federal funds, such as general revenue sharing, are available to help defray operation and maintenance costs.

The Federal-aid highway grants pay 90 percent of the costs for the construction of interstate highways, 75 percent for primary, secondary, and urban road construction, and 80 percent for bridge replacement and major rehabilitation. Waste water treatment grants provide 75 percent of the construction costs of eligible projects. Neither of these programs allow Federal funds to be used for operation and maintenance, although the highway program does permit the use of Federal funds for interstate highway rehabilitation.

1/Ibid.

In one State we studied we were told that there are no incentives for the State to maintain its Federal-aid roads. We were also told of the possibility of States intentionally allowing their roads to deteriorate until they reach a point where Federal funds would be available for major rehabilitation. However, the State governments would have to respond to the political pressure exerted by the voters and taxpayers because of deteriorated roads.

A Department of Commerce study discusses this highway program bias against maintenance:

> The Federal-aid highway programs may have set the stage for deterioration of the nation's highways by effectively subsidizing state and local construction, but not maintenance. 1/

Since maintenance of interstate and all Federal-aid highways is ineligible for Federal funds, the highway program provides a potential financial incentive to finance new construction and reconstruction.

Waste water construction grants have many of the same incentives as the Federal-aid highway programs. With a 75 percent Federal matching share (Public Law 97-117, enacted December 29, 1981, will reduce this share to 55 percent by October 1, 1984), there is again an incentive to build new plants rather than rebuild or maintain the existing ones or to seek less costly means of meeting the objectives. "Local governments are frequently faced with the option of constructing a new interceptor sewer that requires a maximum of 25 percent local funds or funding sewer line replacement projects that typically require 100 percent local funding." 2/

A study published by the Environmental Protection Agency 3/ states that certain elements of treatment costs, such as operation and maintenance and land acquisitions, are not eligible for Federal cost-sharing and that certain types of abatement techniques are not eligible for a Federal grant. The study concludes that, as a result of these restrictions, communities may be "financially biased" towards choosing a mode of treatment that achieves

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1/U.S. Department of Commerce, "A Study of Public Works Investment in the United States," April 1980, p. III.25.

2/Harry P. Hatry, "Maintaining the Existing Infrastructure," (Washington, D. C.: The Urban Institute, 1981, p. 50).

3/Marshall Rose, "Economic Analysis of Selected Features of Municipal Wastewater Construction Grant Legislation," (Washington, D.C.: Environmental Protection Agency, August 1977).

Federal standards at least cost to themselves, but which is not the least costly alternative to society.

In 1981, an American Public Works Association task force issued a report 1/ on the growing problems of financing public works operations, maintenance, and capital improvements in today's budgetary climate. The report included a survey in which local public works administrators were asked to assess their own local program budgets and revenue problems. Out of the more than 300 questionnaires distributed, 108 responded (9 counties and 99 cities and towns). One of the questions dealt with how the availability of Federal funds for capital improvements affects local priorities in a number of infrastructure categories. More than 90 percent of the responses to this question indicated that Federal capital funds tended to cause them to lower their priorities for maintenance and/or rehabilitation of existing structures for which each of the entities was responsible. Although the statistical validity of the questionnaire may be suspect, the responses to the survey question are in concert with the other evidence we present on the new construction versus maintenance bias.

1/American Public Works Association, Revenue Shortfall, The Public Works Challenge of the 1980's (Chicago, Illinois: American Public Works Association, 1981).

CHAPTER 5

LEGISLATIVE AND VOTER ACTIONS AFFECT PHYSICAL CAPITAL FINANCING

Federal programs and policies are not the only factors affecting State and local capital development. Although the importance of Federal grants has grown markedly in the last 20 years, they still account for less than half of State and local capital outlays. Within the State and local government sector, legislative and voter actions have a significant effect on the financing of capital assets.

Physical capital is basically financed in two ways--current revenues or long-term debt. The action of voters and legislatures dictate how extensively each method is used, but generally a mix of both is used. How much one or the other is relied on is dictated by interest rates, the financial ability of the organization to generate revenues and assume more debt, the willingness of voters to approve more debt, and the inventiveness of managers to get around road blocks to financing physical capital.

Recently some State constitutional amendments have reduced capital outlays. Restricted debt limits and voter rejection of bonding and tax rate issues have also limited capital replacement and growth in some places. However, in other locations, voter approval of bond referendums has resulted in a sustained growth in capital outlays. In addition, some State and local governments have devised alternative funding methods--methods outside the normal constitutional limits and voter approval process--to encourage public and private capital investment. In two States, special legislative actions also provide an advantage to selected State departments in funding capital investments. They are able to fund their capital investments in ways that relieve them from the competition for funds with other State agencies.

HOW TO FINANCE PHYSICAL CAPITAL

Advocates of intergenerational equity (spreading the costs fairly among the generations receiving benefits) argue that current items, consumed usually within a year, should be financed by current (annual) revenues, but that capital items, which are used for many years, should be financed by borrowing. The term of the borrowing should coincide with the life of the capital asset, and the current budget should show charges equal to the interest on the debt and the depreciation on the asset. The debt principal would be paid off as the benefits of the initial capital outlay accrue. These advocates believe that only by financing public capital assets with loans will intergenerational equity be attained. As a project generates services over several years, the services will be paid for by the people who use them, which means that an elderly person pays less of the cost of a new project than a younger person.

In practice, however, some capital projects are financed by current revenues and others are funded by debt financing. Debt financing usually consists of long-term general obligation bonds or special revenue bonds. Most organizations use a combination of current revenues and debt to finance capital investments, much like a person who buys a house with a down payment and a 30-year mortgage.

The amount of debt used to finance capital investments is often dictated by legislation, voters, and other factors. Many organizations are limited in the amount of debt they can issue in a single year or the total amount outstanding at any time. Some local organizations must have State approval before bonds can be issued. In addition to limits on amounts of bonds, voters must approve general obligation bonds before they can be issued. Another factor determining the use of bonds is the ability of the organization to assume additional debt. This ability is reflected in its bond rating and affects the rate of interest an organization pays on the bonds. Bond ratings are based upon analyses of a number of variables such as debt burden, history, and trends; financial operations; government organization and performance; and economic performance and prospects.

The general condition of the current bond market and the current level of interest rates also often influence whether or not an organization issues bonds to finance its projects. The current high cost of financing has caused many organizations to delay or cancel some capital projects.

Sources for financing State and local physical capital have changed markedly over the last 20 years. In 1957, debt financing provided about 49 percent of State and local outlays for capital investment. By 1977, debt provided about 34 percent of these outlays. Despite this relative decline, outlays from borrowing have increased from about $6.3 billion in 1957 to about $12.8 billion in 1977. Current revenue financing has also increased, but its composition has changed dramatically. n 1957, Federal grants-in-aid represented about 9 percent of State and local capital outlays. By 1977, Federal grants constituted about 47 percent of these outlays. Other current revenue sources of financing (tax and non-tax receipts, short-term debt, and accumulated reserves) declined from about 42 percent of State and local capital outlays in 1957 to 19 percent in 1977. 1/

1/ U.S. Department of Commerce, "A Study of Public Works Investment in the United States," April 1980. These percentages may vary somewhat with others used in this report because these include estimates for General Revenue Sharing applied to capital investment. This is the latest data available since financing data are not routinely collected.

VOTERS' ACTIONS AFFECT PHYSICAL CAPITAL DEVELOPMENT

The growth in government expenditures has been alarming voters in recent years. Consequently, the public has been critically reviewing, and in some cases limiting, the ability of State and local governments to fund both operating programs and capital projects. In 1978, for example, voters in California and Michigan passed constitutional amendments that, according to public officials, severely limits their ability to fund capital projects. Citizens in some large cities have also expressed concern about rising taxes and have either rejected tax rate increases or renewals or have limited the amount of future tax increases. Citizens in other cities, however, have continued to approve bond proposals for physical capital development.

Recent constitutional amendments indirectly restrict future physical capital development

Since 1978, voters in several States have passed ballot issues that could indirectly restrict future physical capital development. The first initiative enacted was Proposition 13 in California. This June 1978 proposal, which set the stage for later referendums in other States, sweepingly cut property taxes by more than half, set limits on future property tax growth, established more stringent requirements for legislative or voter approval of future tax increases, and forbade any future increases in property tax rates. Inspired by the success of Proposition 13, voters in ten other States passed referendums in November 1978 that either rolled back taxes, set limits on tax increases and spending, or restricted the ability of State legislatures to increase or enact new taxes. These initiatives are shown in table 4.

This trend continued during the November 1980 elections. Massachusetts voters approved a referendum limiting property taxes to 2.5 percent of full and fair cash value. Missouri voters passed a proposition similar to Michigan's "Headlee" amendment. (The Headlee amendment limits State revenue to the percentage increase in personal income for the previous year. Taxes imposed for payment of principal and interest on voter-approved bonds are exempt.)

What has been the effect of these ballot proposals? Two States where ballot proposals passed were among the four States we examined. In both California and Michigan, the successful referendums have restricted the amount of funds available for all types of budget outlays--operating, maintenance, and capital.

Because of large surpluses at the State level and some surpluses at the local level, the effect of Proposition 13 on

Table 4

Ballot Initiatives Passed
by Voters in November 1978

State	Type of Action
Alabama	Set limit on property taxes.
Arizona	Set State spending lid; can be exceeded by 2/3 vote of legislature.
Hawaii	Set State spending lid; can be exceeded by 2/3 vote of legislature.
Idaho	Proposition 13-type property tax reduction. New local taxes need 2/3 vote of people; new State taxes need 2/3 vote of legislature.
Michigan	Set State and local spending lid; can be exceeded by majority of voters.
Missouri	Gives legislature authority to roll-back property taxes.
Nevada	Proposition 13-type property tax roll-back. New local taxes need 2/3 vote of the people; new State taxes need 2/3 vote of the legislature. Voters rejected the same proposal in 1980, and it is no longer in effect.
North Dakota	Reduced income taxes.
South Dakota	Any increase in State taxes must have 2/3 vote of legislature or majority of people.
Texas	Set State spending lid; can be exceeded if legislature declares an emergency.

both operating programs and capital projects did not have an immediate effect. However, when the 1980-1981 fiscal year ended June 30, 1981, State surpluses were reduced to about $26 million, from an amount that was once almost $4 billion. Since States use a large portion of their surpluses to help local governments, local governments will now have to reassess their budget outlays. As we discussed in our earlier report on capital budgeting, 1/ in times of financial constraints, physical capital is usually the first item cut from budgets, followed by maintenance, and last by outlays for operations.

Michigan also had a surplus in recent years; however, the Headlee amendment, and more importantly the severe economic recession suffered in the State, evaporated the surplus. The result has been severe budget cutbacks in both operating programs and capital outlays.

Voter approval or rejection of bond issues can help or hinder physical capital

Citizen support of general obligation bonds is crucial to a viable physical capital program at the local level. Both the City of Baltimore and Arlington County have been relatively successful in persuading voters to accept bond issues. In Cleveland and Detroit, voter approval in recent years has been the exception rather than the rule. A major factor for the success of Baltimore and Arlington County has been the management of the physical capital program by city and county officials.

From 1951 to 1979, voters in Arlington County, Virginia, approved 74 percent of the general obligation bonds referred to them. Since 1977, Arlington voters have approved six of eight bond proposals. These approved referendums provided for water, sewer, street, and neighborhood conservation projects. The two defeated issues were for capital projects in county parks. A County official believes a major reason for the high success rate is that the county only puts bond issues on the ballot every 2 years. We believe there are broader reasons for Arlington's success, such as voter confidence in county officials and the effective management practices of these officials.

Baltimore, Maryland, has also been very successful in getting voters to approve bond proposals. In recent years, Baltimore voters have not turned down any bond proposals. One reason for this success is that since 1960, Baltimore has had a self-imposed annual debt limit of $35 million in new general obligation bonds. In the past 6 years, the city has annually retired more bond dollars

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1/"Federal Capital Budgeting: A Collection of Haphazard Practices."

than it has issued. Another reason is that the city government has maintained a credible relationship with its citizens. The city has a 6-year capital plan and for the most part has been able to fund its capital projects according to this plan.

Detroit officials explained that their city cannot generate local tax revenues for capital projects without first getting voter approval for general obligation bonds. In August 1980, city voters rejected four of six proposals. The rejected proposals would have provided $41 million to replace and improve police stations, park facilities, and museums; acquire property; and improve streets. The two successful proposals, totaling $20.3 million, provided funding for replacing and remodeling fire stations, improving street and alley lighting, and converting a power station from oil to oil/gas. The mayor requested--and was given approval by the city council--that the four rejected proposals be placed on the November 1980 ballot, whereupon they were again turned down by the voters in the November 1980 elections. A city official said that approval of all six proposals would not have increased city debt, as the city is retiring previously issued bonds.

Cleveland also has been experiencing problems in getting voters to approve funds for capital projects. In the early 1970s, Cleveland voters repeatedly rejected proposed tax increases. City officials did not try to raise taxes until after the city defaulted on its short-term debt in December 1978. In February 1979, Cleveland voters approved a 50 percent income tax increase. A city official estimated that the additional tax revenues in 1979 and 1980 would not be enough to cover the existing debt and operating deficits. Another increase (33 percent) was passed by voters in 1981, raising city taxes from 1.5 to 2 percent.

CERTAIN LEGISLATIVE ACTIONS ENCOURAGE CAPITAL INVESTMENTS OUTSIDE THE NORMAL CONTROL PROCESS

The constitutions and by-laws of the State and local governments we examined restrict unlimited general obligation debt for physical capital without voter approval. The State constitutions have set general obligation debt limits that State government agencies cannot exceed without a voter referendum to change the constitutions. The city charters or by-laws also require voter approval for physical capital outlays financed by general obligation bonds.

Generally, State and local governments have had only limited success in getting voters to approve increases in debt limits. Consequently, State and local governments have taken legislative actions, which are not subject to these controls, to encourage investment in both public and private facilties. These actions illustrate how organizations have acquired needed capital projects.

Use of State building authorities to provide facilities for State government use

In two of the States we studied, the legislatures created autonomous building authorities to build facilities and lease them back to the States for public use. The only significant difference between the two authorities lies with the eventual ownership of the facilities after the debt is retired. In Michigan, the property remains with the building authority; in Ohio, the State acquires title to the property.

In August 1976, the Michigan legislature created the State Building Authority and empowered it to construct, acquire, improve, enlarge, and lease facilities for use by the State and institutions of higher education of the State. In May 1979, the authority sold $89.5 million in bonds to build seven higher education facilities and one correctional facility. In all cases, the State of Michigan leases the facilities from the authority and pays a rent that covers bond redemption and interest as well as estimated expenses for operation, maintenance, and repair of each facility.

Although the Michigan constitution requires voter approval for general obligation bonds, special authorities--such as the State Building Authority--are exempt from this control inasmuch as the bonds they issue are considered revenue bonds. In the case of Michigan, the authority is supported by revenue in the form of rent received from the State.

The State of Ohio operates a similar building authority. Since the Ohio Building Authority was created in 1963, it has constructed two large buildings--one in Columbus and one in Cleveland--at a cost totaling $125 million. Additional government centers in Akron and Toledo are in the planning phase. The authority borrows monies from the Ohio Workmen's Compensation Fund to build the facilities. After completion, the authority issues bonds and uses their proceeds to repay the Fund. The authority then enters into a lease/purchase arrangement with the State to cover debt, operation, and maintenance costs. After the debt is retired, the buildings become the property of the State.

An authority official said that the authority was established to avoid the red tape and controls associated with State agencies. He said that State agencies usually cannot hold large sums of money for more than the 2-year State budget cycle, but the authority can tie up large sums of money for longer periods.

Use of short-term notes to fund physical capital without voter approval

Another means of avoiding special voter approval is by using short-term notes to acquire physical capital. The notes, usually 6 months or less, have been used instead of voter-approved bonds to buy or construct physical capital.

Until the city defaulted in December 1978, Cleveland had been using short-term notes to finance its operating and capital expenditures. As we discussed in chapter 3, during the 1971-1978 period, Cleveland was reluctant to ask voters to approve general obligation bonded debt. By using short-term notes, Cleveland circumvented the voter approval process. When the short-term notes matured, the city was left with three options:

--It could pay off the notes using current revenues.

--It could reissue or rollover the notes. (This can be done for a period not to exceed 5 years.)

--It could issue general obligation bonds to pay off the notes. These bonds, unlike other general obligation bonds, do not require voter approval.

In Cleveland's case, the city rolled over the notes for as long as it could and then issued general obligation bonds to pay off the notes. It was Cleveland's repeated rolling over of short-term debt that contributed to its default in December 1978.

Use of special assessment districts to redevelop property for private use

State legislatures have allowed cities to establish downtown development authorities to manage special assessment districts. A portion of the property tax revenue collected from these districts is used to upgrade utilities, streets, and other parts of the local infrastructure. Areas are selected for development in the hopes of encouraging reinvestment by private industry and commerce. The Michigan and California legislatures have authorized two of the cities we examined--Detroit and San Jose--to set up downtown development authorities.

In 1975, the Michigan legislature authorized the Detroit Downtown Development Authority as a means by which the city could designate sections of its downtown area for revitalization. Since 1977, all tax increases for the area have been put into a special fund that is to be used for land purchases, utility relocations, and operation of the authority. An authority official said that the incremental taxes can be collected for an indefinite period (the length of time is left up to the city council). The authority is currently considering three projects that would provide additional apartments, garage space, and commercial space in the downtown area. These projects are estimated to cost $198.2 million, $68.3 million of which will be provided by the authority, $111.5 million from private investment, and $18.4 million from other sources. No voter approval is necessary for use of the tax revenue.

The City of San Jose, California, has a similar development authority called the San Jose Redevelopment Agency, established

in 1973. Under California law, 1/ once a redevelopment area is designated, all incremental taxes collected from that area--for a period of 30 years--as the result of increased assessment goes to the redevelopment agency. The revenue pays for a variety of of improvements--streets, utilities, landscaping, and the like. San Jose has already placed four areas (totaling about 3.75 square miles) within the jurisdiction of the redevelopment agency. As in the case of Detroit, voter approval is not required for use of the incremental taxes.

LEGISLATIVELY MANDATED SPECIAL PURPOSE FUNDS CAN PROTECT OR RESTRICT CAPITAL INVESTMENT

At all levels of government, special revenue sources have been directed to fund the construction, operation, and maintenance of specific physical capital. These actions have isolated a large portion of the capital from the constraints associated with funding from general revenue sources. We discuss three special purpose funds--one each at the State, county, and city level--to identify how these funds are used to promote physical capital development.

State highway trust funds are used for highways, bridges, and mass transit

Perhaps the largest and most common special purpose funds at the State level are the highway trust funds. These funds, consisting of fuel excise taxes and license fees, supplement the Federal highway tax revenues and are earmarked to build and maintain highways, roads, and bridges, and obtain and operate urban mass transit systems. Earmarking frees the State transportation departments from competing with other State agencies for capital and operating funds.

In the past, State highway trust funds were an advantage for transportation departments. However, now that less fuel is consumed, less revenue is generated. The decreased revenue, combined with rising costs to maintain and operate State transportation networks, has put transportation departments at a financial disadvantage. The highway trust fund arrangement, which formerly provided an adequate and protected revenue source, is now an inadequate source of revenues.

County property title transfer tax used to acquire selected properties

Another mechanism used as a source of funds for physical capital is the title transfer tax. This tax is generally imposed

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1/This option is also available to other California cities.

on the selling price of property sold within a specific community. Various adaptations of this taxing method are used to generate monies for special uses.

To acquire and/or lease property for public use, Howard County uses a 1 percent assessment on the sale of commercial property and on leases over 7 years. It apportions the assessment as follows:

--twenty-five percent for school site acquisition and construction;

--twenty-five percent for county parks;

--twenty-five percent for agricultural land preservation;

--twelve and one-half percent for urban renewal; and

--twelve and one-half percent for acquiring or leasing land for new fire house sites and training facilities, constructing and maintaining fire house and training facilities. acquiring and maintaining fire equipment, and supplementing the financial needs of fire companies.

The county's 1979-1980 capital budget estimated newly authorized capital outlays at $24.5 million, $4.5 million or 18.5 percent of which would be funded by its title transfer tax for the following functional areas:

Board of Education	$2,889,000
General County	700,000
Department of Recreation & Parks	549,836
Fire Service Equipment	291,200
Construction	68,700
Housing and Renewal	36,000
Total	$4,534,736

By designating these proceeds from the title transfer tax, the county provides some assurance that capital outlays will be available for these functional areas. This contrasts with the capital outlays in other functional areas--police departments; libraries; sewer, water, and storm drainage projects; and transportation improvements--that are not protected and must compete for funds from other funding sources, such as bonds and general revenues.

City construction and conveyance tax used to fund selected physical capital outlays

San Jose uses a construction and conveyance tax to fund physical capital outlays for specific functional areas within its boundaries. In early 1972, the city imposed a construction tax on residential, commercial, and industrial building permits and adopted a property transfer tax (also known as a real property conveyance tax) based on the transfer or sale of all residential property. Subsequent ordinance and policy actions by the city council have directed 48 percent of the revenues for capital outlays back to the areas where the revenue originated. The remaining 52 percent is available for city-wide use. By setting aside monies for designated locations within its boundaries, San Jose has ensured that monies will be used for capital outlays that are needed by expanding sections of the city. The city also has designated funds for areas where little construction is taking place.

The city's 1979-80 capital budget estimated capital outlays at $126.5 million, of which $14.3 million (11.3 percent) would be funded from construction and conveyance tax receipts to pay for capital improvements of parks and playgrounds, fire protection, library, public works yards, and communications. Capital outlays for traffic improvements, off-street parking, airport, storm and sanitary sewers, water pollution control facilities, water utility systems, municipal improvements, and economic development cannot be funded by the construction and conveyance tax and are paid for by other revenue sources.

LEGISLATIVE ACTIONS PROVIDE FINANCING ADVANTAGES TO SELECTED AGENCIES

When legislative actions provide funding advantages to selected agencies or projects, these agencies no longer have to compete for their slice of the budget pie each year. This can weigh in their favor and against the other contenders.

California Water Project

The California Water Project is unique among the capital-oriented organizations under the auspices of the California State government. Water users pay for debt retirement and the costs for collecting and distributing the water. This frees the project from competing with other State agencies for general funds. What makes this project unique is its size. The initial facilities, completed in 1973, include 18 reservoirs, 15 pumping plants, 5 power plants, and 540 miles of aqueduct. Although parts of the project have been in service since 1962, the project is not expected to reach full capacity until after the year 2010.

In 1951, the California legislature authorized what is now the State Water Project. In 1959, the legislature passed the Burns-Porter Act, which authorized general obligation bonds subject to voter approval to provide the major financing for the project's initial facilities. In 1960, California voters approved a $1.75 billion bond issue to begin to build dams, reservoirs, and aqueducts. As of December 1980, $1.57 billion worth of bonds have been issued. Future needs will use the balance of the $1.75 billion authorization. The repayment of these bonds is assured through long-term contracts with 31 water agencies. The California Department of Water Resources, which designed, built, and operates the project, has also issued revenue bonds to finance certain features such as hydroelectric plants. The electricity generated by these plants is sold to utilities. Other project funding includes $73 million in Federal funds for reservior construction allocated to flood control and general funds for recreation facilities associated with the project.

Selected Ohio agencies have bonding authority

Within the Ohio State government, four departments--the Ohio Board of Regents and the Departments of Mental Health and Mental Retardation, Natural Resources, and Transportation--are permitted to raise money by issuing bonds. The first three agencies can issue revenue bonds up to the limits of their revenues. The Ohio Department of Transportation has a constitutional limit on bond debt of $500 million. As it retires bonds, it can reissue them up to that limit.

The ability to issue general obligation or revenue bonds is not available to the other State of Ohio departments. They must compete for the discretionary general funds that are available for physical capital after other programs within the operating budget have been funded. Ohio State officials pointed out to us that this means that the four bond-issuing departments enjoy a funding advantage over the State's other departments.

ALTERNATIVES LOCAL GOVERNMENTS USE TO ALLEVIATE THE PROBLEMS OF INFRASTRUCTURE FINANCING

To loosen the constraints on funding capital improvements, local governments can, and do, shift the financial burden to regional authorities or to the private sector. They can also annex adjacent land areas, which, by virtue of enlarging their geographical boundaries, increases their population and hence their tax base. Annexation is a viable way of improving a local economy in the growing South and West, but it is largely unavailable to the older cities in the northeastern and central States because they are surrounded by incorporated suburbs that do not wish to become part of a central city.

Some cities that cannot annex are handling the problems of declining services and maintenance and replacement of capital assets by shifting responsibility for these functions to special regional authorities. Cleveland's sewage treatment and mass transit systems are now managed by independent regional authorities. Both were empowered to develop a substantial capital improvement program. The results have been greatly improved equipment and facilities. Baltimore has been relieved from the financial burden of providing services or replacing worn-out capital items in a manner different from that of Cleveland. In Baltimore's situation, the State of Maryland has taken over certain responsibilities that were traditionally carried out by the city. Maryland now owns and operates Baltimore's transit system. Between 1970 and 1977, the State incurred more than $9.6 million in bond obligations on behalf of the city and contributed more than $28.3 million to the city's transit system for operating expenses. Maryland also owns and operates the Baltimore-Washington International Airport and pays for 50 percent of Baltimore's jail construction and 90 percent of its school construction.

A clear example of shifting responsibility to the private sector is the development of subdivided land by private builders. For the past 20 years, local governments have shifted more and more of the costs of public facilities for new residences from the community to the private enterprise that builds and sells the homes. By the mid-1970s, because of increasing regulation of home builders, it was commonplace for developers of subdivisions to pay for local streets, water and sewer lines, storm drains, gas and telephone lines, and landscaping. Today, many localities require developers to provide or pay for public facilities that serve older residences in addition to the new ones the developer has constructed. The regulations that have shifted these costs take several forms: mandatory dedication of land for parks or schools, fees in lieu of land dedication, requirements for streets or utility lines that go beyond the needs of a new subdivision, development charges levied on each new home, and tap-in fees for utility connections that exceed the actual cost of hook-ups.

CHAPTER 6

HOW CAN STATE AND LOCAL GOVERNMENTS BETTER MANAGE OUR NATION'S INFRASTRUCTURE?

Clearly, many problems face State and local governments as they attempt to rebuild or maintain their infrastructures. Some of them have been detailed in this study. Dealing with these may be difficult, but with good management strategy, the problems can be handled--not necessarily solved, but certainly lessened.

In our earlier report on capital budgeting, we stated that no policy level approach to capital investment currently exists in the Federal Government. As a result, it is very difficult to ascertain how different capital programs can together help realize national priorities. Given the number of State and local governments across the country, we cannot make the same statement about the lack of policy approaches to capital budgeting in States and localities. However, some State and local governments in our study population did not take a policy approach to capital budgeting. Addressing infrastructure problems on a policy, rather than on a project, basis is an important aspect of capital budgeting, and all levels of government--Federal, State, and local--must take a cross-cutting look at capital programs if an effective priority system for capital needs is to be established. The three levels of government share the responsibility for the present deterioration of the Nation's infrastructure; all three levels must address the problem from a management perspective that takes a broad, not a limited, view of capital investment. Having a policy, rather than a project, orientation is an essential part of this broad view.

Not all State and local governments in our study lack a broad perspective on physical capital investment. Many of them successfully manage their infrastructures. Although many variables affect an organization's ability to manage capital assets, our survey results show that timely and accurate assessment, planning, selecting, and controlling of physical capital characterize all the successful organizations. Conversely, those organizations that lack these elements are less than successful. In our judgment, these elements constitute good management and are applicable to any organization--Federal, State, local, or private--that acquires and maintains capital stock. By using these elements in their infrastructure management practices, the possiblilty of having a policy perspective on capital investment is much improved.

To compensate for the subjective nature of measuring success, we classified the experiences of the organizations in our study and ranked their relative success in managing physical capital. We judged an organization successful if it could, even under adverse conditions, acquire and/or maintain physical capital without jeopardizing its mission or its clientele (see ch. 2). We

recognize that there are no absolute measures for these elements, and our assessment of the organizations against them must be interpreted with this subjectivity in mind.

To help us evaluate the organizations, we devised a self-analysis guide (see appendix I) composed of a series of weighted statements about assessing, planning, selecting, and controlling. This guide is designed to be used in conjunction with this chapter and the preceding chapter as a self-assessment tool. The guide helps the user to assess the practices of his or her organization. Chapters 5 and 6 describe desirable and undesirable capital budgeting and management practices. Used together, an analyst can detect the basic strengths and weaknesses of his or her organization's capital budgeting and management system and determine some strategies for alleviating the weaknesses.

ASSESSING--THE FIRST STEP IN INFRASTRUCTURE MANAGEMENT

The degree of success or lack of it depends in part upon an organization's ability to know the condition of its existing capital infrastructure. Assessments yield important information without which it is almost impossible to determine the requirements for repair, renovation, and replacement. Successful organizations collect information on the condition of their capital and use it to identify capital and maintenance needs, to maintain current inventories of capital assets, and to prepare guidelines that are updated periodically to assess conditions of capital.

Successful organizations collect information about their infrastructures

Information is an essential component of decisionmaking. This holds true whether the decision is to purchase a $500 typewriter or to construct a $100 million office complex. In both cases, the process of decisionmaking is similar, albeit more complex for the latter situation. Successful organizations acknowledge the relationship between information and decisionmaking and understand that information permits the decisionmaker to test the merits of a decision before action is taken.

To make decisions on capital investments, successful organizations know they must have up-to-date information on a variety of categories, such as inventory of assets, condition of assets, needs and wants, fund availability, operating costs, and available alternatives. The information gathered and the resultant data base generated are then used in the planning process and ultimately fed into the organization's budget.

The International City Management Association (ICMA) has identified 36 indicators that local government decisionmakers

can use to analyze, monitor, and quantify short- and long-term financial trends. 1/

The 36 indicators evolve from 12 "factors" that affect the financial condition of cities. The factors are classified as either environmental, organizational, or financial. For example, intergovernmental constraints and political culture would be environmental factors. Management practice would be an organizational factor. Revenues, expenditures, and the condition of the capital plant are considered financial factors. Each factor has its own set of indicators.

Three specific, direct indicators for the condition of the capital plant can be used by government officials to gather information about their communities' infrastructure: (1) maintenance effort, (2) level of capital outlay, and (3) percent of depreciation in the value of fixed assets. The important concept to remember in using any of these indicators is to look at them over a period of time, that is, the trends in maintenance effort, level of capital outlay or depreciation. If any or all are steadily declining over a 5- or 10- year time-frame, then the indicators can serve as a warning to officials on the deteriorating condition of their capital plant. Comparisons to other organizations are not advised due to the difficulty of controlling for exogenous factors.

ICMA uses other indicators in its financial condition analysis that do not directly address capital, but which may nevertheless be useful in gathering information and assessing communities' infrastructure. Examples are percentage of intergovernmental revenues, percentage of fixed costs, debt service, property value, residential development, and business activity. The same principle applies to these indicators as to those that touch capital directly. The short- and long-term trends should be analyzed, instead of just looking at the annual measures.

Since the specific indicators ICMA describes have just recently become part of the infrastructure management literature, officials in most of the organizations we visited do not specifically use these tools in their information gathering. However, officials in most of the organizations we classified as successful do believe that the condition of their capital infrastructures is very important. Most of these organizations gather information periodically on the condition of their capital assets and use it to identify maintenance needs and requirements for new items in their capital budgets.

Important categories for decisionmaking are established and information feeds into these categories. The Maricopa County

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1/Sanford M. Groves, Evaluating Local Government Financial Condition, Handbook 2: Financial Trend Monitoring System, (Washington, D.C. International City Management Association, 1980).

Highways Department, for example, tries to inspect every road in the county at least twice a year. The condition of roads, street signs, and other physical aspects of the county's more than 3,800 miles of roads is put into a computerized inventory. The data gathered from these inspections help determine maintenance and capital investment needs.

Although few organizations maintain a comprehensive up-to-date inventory of their assets and current condition, most have some type of inventory for parts of their organizations. In addition to Maricopa's computerized inventory of roads, the county's Central Services Department, at the time of our study, was also compiling a building inventory. A county official said the new system will include an annual analysis of the structures' physical and cosmetic condition. The City of Baltimore maintains ledgers on capital assets that show such things as the type of asset, cost, and the number of units of the asset. If feasible, these ledgers also include pictures of the asset.

Successful organizations develop and apply guidelines or standards as one of the techniques of assessing the physical condition of their capital items. The guidelines may be formal or informal, but the key is that they are updated regularly to reflect changes in technology and other factors. The Port Authority, for example, has formed a group to help operating divisions set up standards. After the standards are put into effect, this group conducts an audit to find out if the standards have been adhered to and if they are correct--that is, not too lax or too strict. Complaints from users serve as a barometer to help determine if the standards are appropriate.

Some organizations are limited by inadequate information for decisionmaking

Some organizations included in our study neither fully understand the long-term implications of a capital investment decision nor have the appropriate information needed to make or to assess the merits of a decision. Many of them do not consistently feed information on their physical capital into their determinations for maintenance or capital investment needs. Thus, decisionmakers cannot adequately ascertain needs or evaluate alternatives because information on the condition of the physical capital is not routinely generated. When assessments are not conducted routinely the capital budgeting process suffers.

Several of the organizations we surveyed react to problems only when there is a crisis, for example, a break in a water main. Some of them, such as Cleveland and Detroit, depend almost solely on complaints from users to assess the condition of their infrastructures. This method of assessment carries two implications. The flow of information into decisionmaking is choppy and disconnected, and the information is limited. This is the situation at

an organization where an official was prompted to say, "There is a total lack of management information."

We do not mean to imply that user complaints are not a valid assessment method, but for the more successful organizations, it is only one of many methods. Some parts of infrastructures can be adequately assessed based on user complaints (such as street lights), but others (water and sewer systems) need more elaborate assessment methods.

Some organizations, besides not performing regular assessments, do not keep an inventory of capital assets from which they can determine infrastructure conditions. The Detroit Inspection System staff has no inventory of city owned and occupied property. The staff conducts inspections of city buildings only when asked to by various departments or in response to complaints by occupants. Even if they wanted to schedule an inspection of all buildings, it would be difficult, since they have no complete inventory of them.

PLANNING--THE LINK BETWEEN AN ORGANIZATION'S GOALS AND ITS BUDGET OUTLAYS

Planning what an organization's physical capital needs will be for the future promotes careful consideration of trends and desires and mitigates against the long term being traded away for short-term advantages. Systematic planning is the key to sound budget formulation. Without extensive planning, budget formulation may become a haphazard exercise that directs funds to areas of lesser need and to programs of lesser effectiveness. The planning process must, therefore, develop plans that can be and are used to formulate budgets. These plans, when properly prepared, identify for multi-year periods annual program priorities and budget objectives.

Extensive planning characterizes successful organizations

Successful organizations prepare master (long-range) plans; link these master plans and mid-range (multi-year) plans with annual capital and operating budgets; and consider the long-term effects of planning on operations, maintenance, and capital assets. All of these aspects are evaluated in terms of the organization's mission and objectives.

Managers of successful organizations formulate basic overall ideas of the future direction of their organizations. Their ideas for the future may be expressed in the form of a comprehensive or master plan that looks 10, 20, or more years ahead. Such plans may range from detailed lists of projects and costs to very general guides about future areas of development. From these long-range plans are developed mid-range, multi-year capital

improvement plans suited to an organization's individual needs and purposes. Multi-year capital plans serve as the critical link between an organization's goals, objectives, and outputs, and its anticipated revenues or resources. Figure 3 illustrates how organizational goals become mid-range capital plans and how, ultimately, they are incorporated into annual budgets.

Multi-year capital plans are not in themselves budgets; they are merely guides for identifying current and future fiscal year requirements. Since these plans extend beyond the immediate budget year, they offer decisionmakers a longer range perspective, without which they cannot readily see the implications of their decisions. Many other benefits accrue from multi-year capital planning, including developing a preferred scenario for the future, working out priorities among wants and needs, determining what part of the existing capital infrastructure it would be wise to save, developing long-range financial requirements, and providing a vehicle for presenting the organization's direction to its members and interested parties.

As table 5 shows, all the organizations we classified as successful prepare multi-year capital plans covering at least 5 years. These plans are updated regularly to reflect changes in priorities, policies, goals, and objectives and to maintain comparability with short-range plans and budgets that implement the multi-year plans. Officials from five of the eight successful organizations in our study said that multi-year planning is of "very great use" in managing their physical capital resources.

Table 5

Duration of Multi-Year Capital Plans

Category	Number of Organizations	Duration of Plans		
		5 Years	6 Years	10 Years
Very successful	1	-	-	1
Successful	3	1	2	-
Moderately successful	4	3	1	-
Total	8	4	3	1

Short-term plans generally consist of detailed descriptions of projects that form the basis of the budget and set in motion the organization's day-to-day operations. Short-term plans also provide the link between long-term plans and the budget. Successful organizations usually put together their short-term and multi-year capital plans simultaneously or prepare short-term plans from recently prepared multi-year plans. The preparation of short-term plans result in an annual update of multi-year plans.

Figure 3
Illustration of Planning Process

Comprehensive Plan

Public Safety Facilities

Goals	Policies
To protect citizens and property from harm caused by fire, criminal activity, and other emergency situations.	Construct new police and fire facilities in communities not now adquately served.
To deploy facilities and apparatus so that the Police and Fire Departments will be able to respond quickly to emergency situations anywhere in the city.	Replace or consolidate obsolete police and fire facilities.
	Build a series of "superstations" on the downtown periphery to meet the special fire protection needs of the MetroCenter area.
	Extend sodium vapor lighting to secondary streets and appropriate local streets.
	Install sufficient lighting at park and recreation facilities to deter vandalism and promote safety.
	Provide modern facilities for the training of fire and police personnel.

Capital Investment Program

FIRE DEPARTMENT	BUDGET 1979	PROGRAM 1980	PROGRAM 1981	PROGRAM 1982	PROGRAM 1983	PROGRAM 1984
Engine Company No. 43 Replacement				1,000,000		
Engine Company No. 47 Replacement					700,000	
Engine Company No. 50 Replacement		1,020,000				
Engine Company No. 53 Replacement						1,200,000
Fire communications and Dispatch System Replacement		1,300,000	1,300,000			
DEPARTMENT OF RECREATION AND PARKS						
Playgrounds-lighting and resurfacing	50,000	50,000	50,000	50,000	50,000	50,000

Capital Budget (1979)

DEPARTMENT OF RECREATION AND PARKS	BUDGET
Playgrounds-lighting and resurfacing	50,000

Each year, the City of Baltimore prepares a 6-year capital improvement plan. Proposed projects are reviewed to determine their relationship to the city's comprehensive plan, the availability of financing from city sources and from non-city sources, and other criteria. After review, the proposed 6-year plan is submitted to the Board of Estimates, composed of the mayor, the city comptroller, and the president of the city council.

The first year of the 6-year program approved by the Board of Estimates represents the proposed capital budget, which, along with the recommended operating budget, is sent to the city council. The 6-year program is also forwarded to the city council to assist in its review of the capital budget by showing anticipated future projects. The capital budget adopted by the city council and the remainder of the 6-year program adopted by the Board of Estimates together constitute Baltimore's official capital improvement program.

Managers of seven out of the eight successful organizations said that short-term planning is of very great use in managing physical capital; one manager thinks it is of moderate use. Managers of all eight said they have direct links between physical capital planning and their organization's budget. Five think these links greatly facilitate planning, and three said the links facilitate planning somewhat.

All of our successful organizations plan. Officials in these organizations say they plan because it provides a framework for measuring progress, minimizes underutilization of resources, and gives management a blueprint for accomplishing its mission. Planning is important during a growth cycle because that is the time when an organization has the greatest opportunity to shape its future. During times of decline, planning is important too, because an organization can ill afford mistakes.

Thus, when an organization plans for physical capital, it is important for it to consider whether future needs and resources will grow, remain relatively stable, or decline. This helps the organization determine the best mix of its capital investments. An organization in a declining cycle would probably choose mainly to maintain, preserve, and replace existing capital stock rather than add to its current inventory. A growing organization would tend to add new capital items, while a stable one would concentrate on balancing preservation and acquisition.

For example, the Port Authority of New York and New Jersey, after experiencing a decline in gross operating income from 1977 to 1978, convened a forum of leaders to consider issues that might become critical during the 1980s. These leaders agreed that the emphasis in the 1980s should be on maintenance, improvement, and rehabilitation of existing systems as opposed

to the "expansionist goals of the 1950s and 1960s." They recommended that investment should be directed at existing systems and structures rather than at new ones. Preservation and/or rehabilitation of the region's physical assets, many of them in disrepair, should, where practical, take precedence over new starts in marginally populated or underdeveloped areas.

A common characteristic of successful organizations is a view to the future. They recognize and consider the effects of today's decisions on tomorrow's capital assets. These organizations realize that a healthy infrastructure is important to the health of the organization. Because they are aware of and concerned about future needs, successful organizations do not allow their budgets to totally drive their decisionmaking.

One element held in common by successful organizations is the recognition of the long-term effects of deferred maintenance on capital assets. These organizations realize that maintaining that part of their capital stock that is needed today and will be needed in the future is very important to their ability to function efficiently. Maintenance protects their large investment in capital. Without proper maintenance, an organization's capital stock that will be needed in the future will deteriorate until only extensive investment can restore or replace it.

Officials in all organizations have told us that deferring maintenance results in increased future costs for rehabilitation, replacement, or renovation. Many have reached this conclusion even though they do not know the precise cost of deferred maintenance. While certain types of maintenance can be deferred for a time without serious consequences (window washing, floor waxing, painting), the maintenance of assets, such as transit buses, boilers, elevators, and the like, cannot be deferred without sacrificing reliability and safety.

Organizations that recognize the future cost implications of deferred maintenance emphasize preservation of existing assets that will be needed in the future and are wary about cutting maintenance of those assets out of their budgets. The importance of not deferring critical maintenance can be best illustrated by reference to those organizations that have habitually done so. In chapter 3 we discussed the effects of deferred maintenance on bridges, roads, and water and sewer systems.

Failure to plan--a serious flaw

A serious shortcoming among some organizations we studied is that they do not plan, or if they do, they do not integrate their plans with their budgets. Without a comprehensive plan, no single organizational component has a complete picture of the entire infrastructure, its condition, its composition, its short- and long-term needs, and how all of these aspects affect the mission of the organization.

The consequences of not planning or of not planning adequately are severe. In the absence of a reasonably accurate and detailed guideline to serve as the basis for managing and budgeting capital assets, State and local administrators are forced to merely react to one crisis situation after another. The reactive mode of managing complex capital plants tends to consume most resources in "putting out fires." Few are left to spend on deliberating on the future, on coordinating existing efforts, or on helping elected officials mitigate the influence of politics on capital projects.

Certain organizations in our survey face accelerating maintenance and repairs. We believe the failure to plan and to link planning to capital budgeting is the most important signal of future trouble, especially when resources begin to decline. For of these groups, inadequate planning is the underlying reason for their current deteriorating infrastructures.

In one of the organizations we studied, there had been no coordinated separate capital improvement plan or budget in 17 or 18 years. In another, the State prepares a 5-year plan, but its efforts are considered futile because the State legislature has such a poor track record for approving capital budgets. The last overall capital budget for the State was for fiscal year 1974-1975. Each department in that State develops its own plan and sets its own priorities, with little regard or knowledge of what other departments are doing. Recently, the State transportation chief discarded the department's 12-year highway plan, saying it was "uncertain, irrelevant, inflexible, and ineffective."

One city starts its capital budgeting plan with a "wish list" compiled by the heads of the city's various departments. The city planning office tries to regroup the proposed projects by singling out city-owned facilities and emphasizing rehabilitation over construction. (The planning office has assumed responsibility for screening the initial capital budget primarily by default, since no other organization within the city government has been officially charged with this responsibility.) Once a final program is put together, the city planning commission reviews it (any modifications to the plan are rare) and sends it on to the city council. The council rubber stamps the proposed plan and it becomes the city's new capital budget. An official told us that the city departments do not adhere to the "wish list" capital budget, and thus there is no correlation between it and any capital improvements that might take place.

Some organizations cut budgets with "closed" eyes. So entrenched is the reactive mode in some organizations that they are unable to fully recognize the long-term effects of their actions on the future of their capital infrastructures. They exercise few, if any, controls over their physical plants because they defer the more costly structural maintenance, focusing instead on cosmetic repairs.

As stated in congressional testimony,

> Capital investment and maintenance are favorite candidates for cutbacks during periods of spending restraint, since the implications of deferred capital spending are not visible until some years in the future. 1/

One city has procrastinated on structural maintenance to the point where deterioration is beginning to accelerate. A budget official estimated that the city is meeting only 1 percent of its bridge maintenance needs and none of its needs for additional capital. The city is closing its bridges as they become unsafe.

Another organization habitually defers maintenance until a crisis occurs. This has been the case for the last 5 years, during which time no general fund monies have been available for new construction, major repairs, or regular maintenance. Indeed, this organization has trouble even defining capital investment. The best the county can say is that its capital investment consists of those items that can be deferred.

In two cases, regularly deferred maintenance has become the "way of life." To compensate for its nonexistent building maintenance program, one organization has a reserve fund to pay for such emergency repairs as broken boilers and leaking roofs. Ironically, the other organization can respond quickly to emergencies. For example, within 2 hours it was able to repair a damaged boiler in a mental retardation unit by activating its own procedure for letting emergency contracts. The repairs were paid for by a private insurance company. A department official told us that if the organization had a sound, adequately funded maintenance program, the boiler would not have blown up. While the procedure works well for emergencies, it probably serves as an incentive to continue deferring maintenance.

The problem of deferring maintenance is part of the larger, more fundamental problem of cutting budgets without considering future consequences. As we stated before, maintenance and capital assets are prime targets for budget cuts because their effects are not felt for a long time. Some organizations rarely protect their capital investments with designated funding mechanisms. When they do use them, they let the mechanisms drive priorities. When funds become scarce, budget cutbacks follow. Maintenance and capital assets receive the majority of the cuts. 2/

1/Prepared statement by George E. Peterson, Director, Public Finance Program, the Urban Institute, to the Subcommittee on Economic Development of the House Committee on Public Works and Transportation, 95th Cong., 2nd sess., June 27, 1982.

2/"Federal Capital Budgeting: A Collection of Haphazard Practices."

An Urban Institute study points out that one organization, which skimped on maintenance and the routine renewal of its capital items, now faces exorbitant costs due to deferred maintenance. 1/ It is having serious trouble arranging financing for that deferred maintenance. This organization has had such extensive cuts in maintenance that parts of its capital infrastructure pose a serious safety hazard. Only after regional authorities assumed responsibility for part of the infrastructure did the capital assets begin to improve. The parts not taken over by the regional authorities continue to decay.

In another organization, acquiring new capital assets historically receives a higher priority than maintenance. Until last year, maintenance was performed on a political basis--the area politically affiliated with the current administration received the maintenance funds.

These three cases show how crisis budget cutting can cause problems in building and maintaining a healthy capital plant. Some organizations address the problem of budget cuts with a view of the short term. They use either a quick-fix solution that does not consider the future or they simply ignore the future.

SELECTING--CHOOSING THE BEST METHOD TO SATISFY INFRASTRUCTURE NEEDS

Selecting the individual projects that will meet infrastructure needs is often a complicated process carried out within the broad planning framework. Numerous decisions must be made that reflect long-term costs: alternatives to meeting needs, techniques for meeting needs, the proper sequencing and allocating of projects, and the political implications of the selections themselves. Failure to consider these factors could have devastating results on future operating budgets.

Successful organizations select projects with the future in mind

Successful organizations consider long-term costs and benefits before making capital investment decisions. They know that outlays for capital acquisition today will result in operating and maintenance costs in the future. One of our successful organizations, the City of Baltimore, requires its departments to determine for each of its proposed capital improvement projects the effect on the city's operating budget. The city's planning department, when reviewing departmental submissions, looks carefully for capital projects that will result in reduced

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1/Nancy Humphrey, George E. Peterson, and Peter Wilson, America's Urban Capital Stock, Vol. 2: The Future of Cleveland's Capital Plant. (Washington, D.C.: The Urban Institute, 1979).

operating and maintenance costs. Proposed capital projects may be cut if the operating budget is insufficient to finance the project's operations and maintenance activities. A statement of how proposed projects will affect the operating budget is included for each project in the City's capital budget. The City of San Jose, California, also includes such a statement in its capital budget.

Successful organizations often use capital budgeting techniques (such as life-cycle costing) where they are applicable and practical for project selection. They also consider alternatives for meeting objectives before selecting specific capital projects. The Port Authority of New York and New Jersey primarily looks at the rate of return for its projects. It considers cash flows over the estimated lives of projects, and in comparing alternatives, it discounts to the net present value and picks the least costly alternative.

The State of California analyzes various alternatives. For example, for a general purpose office building, the State determines life-cycle costs of lease, lease purchase, and purchase options. Discounted values (the present values of these future costs) would then be used to determine if the project would be a worthwhile investment. In those cases where there is a choice of either building anew or renovating an old building, renovation would be chosen if remodeling costs do not exceed 60 percent of the estimated costs for new construction. The City of Baltimore and Arlington County consider alternative uses for excess existing facilities. For example, schools in both municipalities that were declared excess were converted into community recreation centers. Even more creative choices might be hospitals or nursing homes.

Successful organizations generally select projects based on need rather than on the availability of funds. They view these projects as investments for the future. When there is a clear need for several projects, political leaders must decide which ones can be built with the limited funds available. In Baltimore, for example, voters generally understand competing interests and are willing to wait their turn. They have confidence that the city government will eventually get to their project if the need still exists.

Successful organizations select their projects in a logical sequence from their multi-year plans. Generally, once a project is in a multi-year plan it moves forward each year in the plan until it is in the capital budget. There are instances, however, where projects in the later years of a plan are dropped and other projects appear in the budget year without having been in the plan previously. This is to be expected in the case of emergencies, changes in priorities and financing, and for various other valid reasons. What is not to be expected, however, is totally ignoring the multi-year plans in selecting projects for funding without very sound reasons.

Organizations do not always select projects from a planning framework

Organizations do not always carefully consider the growth of their capital plants. Several of the ones we surveyed failed to make the connection between adding capital assets and the corresponding costs of operations and maintenance. Making this connection is important because the relationship between the two is not linear. Accumulated physical capital can magnify the long-term effects of operations and maintenance, particularly when more staff are needed. When large acquisitions of capital stock are made in a relatively short period, which often happens when cities, States, and regions have gone through major surges of development, the need for repairs often comes in peaks. Prior planning can smooth these peaks somewhat, but if not recognized they can wreak havoc on a budget and accelerate deterioration.

Some organizations tend to add capital items with little thought as to how they will pay for operations and maintenance in the future. They are now finding it difficult to make repairs and renovations, and their bridges, roads, and other capital assets show signs of serious deterioration.

The State of Pennsylvania, for example, has in the past added miles of roads to its highway system without considering the maintenance costs that would be incurred for their future upkeep. Cleveland's capital budget is entirely separate from its operating budget and as such does not consider the operating costs of any capital projects.

Organizations do not always use capital budgeting techniques, such as cost-benefit analysis, as a basis for project selection, nor do they consider alternatives before making selections. The City of Detroit does not perform official cost-benefit analyses. Some officials feel that it is difficult to perform such analyses on government projects unless there is an industry equivalent.

There is a tendency for some organizations to select projects based on availability of funds rather than on identified needs. One significant reason for this limited view is that these organizations do not gather assessment information on their existing assets or identify current and future needs. Accordingly, they do not prepare plans, or if they do so, they do not carry them out.

Because the planning processes of some organizations break down, they tend not to select projects in a logical sequence. In Cleveland, which has suffered from critical infrastructure and budget and management problems, the city's long-range capital improvement plan has not been used. A city agency official told us that any planned project actually performed was merely a coincidence. That agency has since thrown out its long-range plan and is working on a new one that takes its capital infrastructure into account. The crisis became so severe that the community has recognized the problem and is now taking

action to alleviate local infrastructure problems. A community strategy is being developed to meet capital rehabilitation and replacement needs in the 1980s.

CONTROLLING--MAXIMIZING THE BENEFITS FROM THE RESOURCES DEDICATED FOR INFRASTRUCTURE USE

Controlling the funds for and the time expended on capital acquisition projects helps maximize the benefits from the limited resources dedicated to capital improvements. Controls also help identify and alleviate inefficiencies and poor management practices. Features of good control include protecting funds for capital investment, reviewing the status of ongoing projects, determining the causes of deviations from schedules, and performing post-completion studies. Unsuccessful organizations usually lack these features.

As is the case with planning, the cycle an organization is in can influence its use of resources rowing organizations have abundant resources and can afford looser controls than organizations in a stable or declining cycle. Organizations that are declining must carefully control the use of their limited resources.

Successful organizations get the most out of their resources

Successful organizations set priorities for long-range capital improvements during their planning and budgeting processes. Many successful organizations go a step further and designate funding mechanisms to protect the funds allocated for their priority capital projects. Capital priorities can be set a number of ways, such as designating all or part of certain receipts for capital projects, establishing enterprise funds, and using bonds to finance capital projects.

Some organizations use proceeds from transfer taxes or construction and conveyance taxes to finance capital projects. Howard County, Maryland, imposes a 1 percent tax on the transfer of real property located in the county. The county code provides that certain percentages of the proceeds be used for school site acquisition and construction, agricultural land preservation, urban renewal, and acquisition and leasing of fire house sites, and training facilities. The City of San ose uses a construction and conveyance tax to finance capital projects. The tax sets aside a certain percentage of funds from every private construction project and title transfer to be used for capital improvements. Part of the taxes collected are returned to the geographical area from which they were collected and part can be used for area-wide improvements. (See chapter 5 for a more detailed discussion of these funding mechanisms.)

Another way of protecting priorities on capital investments is to establish enterprise funds. These are primarily used by the

organizations that provide a service, such as water and sewer, that is paid for by the users. User fees received by the fund are intended to cover the cost of providing the service and new capital investments.

General obligation bonds are also a way of protecting capital investment expenditures. The bonds must be approved by voters. Usually they are for set amounts, to be used only for specifically authorized projects, such as storm sewers or schools.

Another protection device is control over transfers of funds from one category to another. Not all organizations allow funds to be transferred, but those that do require prior approvals of such transfers. The organizations we classified as successful do not permit transfers from capital projects to operations. Transfers are generally permitted among projects in an area but not between areas. For example, funds from a highway project that has an underrun or a lower priority might be transferred to another higher priority highway project that is experiencing a cost overrun. Highway project funds could not, however, be transferred to a water project or be used for highway maintenance.

Another factor we found in the successful organizations was a continuous review of the status of ongoing physical capital projects to ensure that previously established targets (time, money, scope) are being met. Almost always these organizations have a reporting system that informs top management when project targets are not being met or cannot be met. The very successful organizations determine the causes for both cost and time variances; other successful organizations usually determine the causes for variances. For example, the Port Authority of New York and New Jersey determines cost and progress variances on its projects. A quarterly report is prepared for the Commissioners on the status of projects. This report lists projects authorized at $1 million or more in one of four categories: (1) underrunning authorization, (2) no variance, (3) overrunning by less than 5 percent and less than $1 million, and (4) overrunning by more than 5 percent or more than $1 million. Cost overruns and delays are taken before the Executive Director and Commissioners for resolution.

Inflation, particularly in the construction industry, has a tremendous effect on capital assets. The Port Authority budgets for and monitors inflation in a highly visible manner. It estimates costs for each capital construction project and then computes a contingency for inflation, which is shown as a separate line item following each project's uninflated estimated costs. This procedure makes it easier to plan for and monitor the effects of inflation.

Only the very successful organizations, such as the Port Authority of New York and New Jersey, perform post-completion studies to find out if a project accomplished the objectives for which it was planned.

Some organizations often do not maximize funds for capital

In contrast to the successful organizations, who set priorities and funding requirements for capital projects during the planning process, some groups tend to allow funding mechanisms to drive priorities. As a result, whatever funding is available usually determines what capital projects are undertaken. More often than not, priorities are compromised by the availability of funding.

For example, the ability of one organization to meet its physical capital needs was weakened by the improper use of bond funds. Bonds were supposed to be a protective funding mechanism for capital projects, but were actually used for operating expenses.

Several organizations repeatedly miss their financial and construction targets. No progress reports or reports on capital expenditures are required or prepared. No group is responsible for monitoring cost overruns, and funds are often transferred from one budget category to another after final authorization.

In one organization, an official we talked to blamed many of these incidents on the fact that there are no internal or external controls for monitoring any aspect of the organization's capital budgeting process.

CHAPTER 7

SUMMARY AND OBSERVATIONS

Given the current strain on public budgets, our investment in public physical capital assets needs serious attention. We can no longer afford to let the physical assets we will continue to need in the future--highways, bridges, sewage treatment plants, and they like--crumble away, nor can we continue to spend large sums to refurbish assets that have deteriorated due to neglect. Localities that are experiencing growing populations and tax bases often generate enough funds to adequately finance an expanding capital infrastructure. Those localities where populations and tax bases are relatively stable tend to be able to finance limited capital investment and maintain existing facilities in relatively good condition. However, jurisdictions whose populations and tax bases are declining often forego new capital investments and defer maintenance on existing facilities so that they can finance current operations.

A number of factors have contributed to the deterioration of State and local public infrastructure. Among them are revenue losses, a high rate of inflation, high interest rates for long-term borrowing, reluctance of voters to approve tax increases and bond issues, and a short-sighted view of management.

Federally financed programs that are oriented to capital investment generally emphasize and encourage new construction. These programs often are designed in ways that do not fully take into account the "cycle" a locality is in (i.e., growing, stable, declining) or the particular current and future capital investments needs of the locality. This can result in programs that willingly or unwillingly expand the Nation's capital infrastructure in preference to maintaining and/or restoring that part of the existing capital base that would be wise to save.

Many factors determine whether an organization succeeds in managing capital assets. Unlimited resources and a favorable political climate help tremendously. But, from our analysis, we conclude that four elements--assessing, planning, selecting, and controlling--are necessary for organizations to successfully manage their capital assets and to develop and maintain an infrastructure policy.

1. Assessing the condition of an organization's physical capital yields important information that is needed to determine the requirements for repair, renovation, and replacement.

2. Planning an organization's future physical needs allows careful consideration of trends and desires. This helps prevent the future being traded off for today's advantages.

3. Selecting physical capital projects and considering alternatives, life cycle costs, and needs can help minimize the number of bad investments and maximize the use of resources.

4. Controlling funds and time used on capital acquisition projects helps prevent sloppy management practices and inefficiencies.

The foregoing management techniques are essential to organizations that wish to manage their capital assets with a degree of success, particularly those organizations with declining resources. While these elements are essential to the success of organizations with declining resources, they also represent good management techniques that could be applicable to any organization--whether Federal, State, local, or private--that manages physical capital.

Federal funds for State and local government physical capital should be put to the best use both in acquiring public infrastructure and in arresting deterioration of those parts of the public infrastructure that will continue to be needed in the future. One option for meeting this need is to prescribe procedures that vary according to whether the recipient jurisdiction has growing, stable, or declining populations, tax bases, and tax revenues. Such procedures might include greater flexibility in the use of funds to more directly meet the needs of the recipient, be it a need for new capital investment or replacement and rehabilitation or maintenance of existing physical capital. The administration's "New Federalism" proposal, which would return many infrastructure programs along with the funding sources to the States, is one method of allowing State and local governments the flexibility to address their own priorities and needs.

State and local governments should also be encouraged to develop an infrastructure policy and to adopt sound physical capital management practices, such as those described in this study. An option for providing such encouragement would be the establishment of incentives and disincentives such as variations in matching fund requirements based upon management practices, organizational needs, and financial ability.

Because there are numerous capital-type grant programs that are directed to different purposes and are allocated and administered in various ways, we are addressing a broad policy issue rather than recommending specific program or procedural changes. We will continue to work with congressional committees to make these changes on a program-by-program basis and to make the governmentwide policy level changes described in our earlier report. (See appendix III for the digest of that report.)

SELF-ANALYSIS GUIDE: RATE YOUR ORGANIZATION'S APPROACH TO ASSESSING, PLANNING, SELECTING, AND CONTROLLING ITS PHYSICAL CAPITAL

The attached self-analysis guide is designed to walk you through your organization's method of assessing, planning, selecting, and controlling its physical capital. Rate your organization by reading each question and selecting the response that most clearly characterizes your organization. At the back of the guide is a tally sheet with a score assigned to each question's response. Total the individual scores for your organization to determine its rating.

The scores will give you an idea of where your capital budgeting process may need improvement. We emphasize, however, that this analysis is only one of the indicators 1/ that ultimately determines the degree of success of capital asset management. In other words, a high score does not always mean that your organization is successful; conversely, a low score does not always mean that your organization is unsuccessful.

We suggest this guide be used in conjunction with chapters 5 and 6 of this study, which describe desirable and undesirable capital budgeting and management practices. By using this guide together with chapters 5 and 6, you can detect basic strengths and weaknesses in your organization's capital budgeting and management system and determine some strategies for improvement.

1/See pp. 43-44 for other indicators to be considered in capital asset management.

ASSESSMENT

Assessing the condition of an organization's physical capital yields important information that is needed to determine the requirements for repair, renovation, and replacement.

1. Your organization collects information on the condition of specific capital investments (e.g., buildings, major equipment, utilities).

   (a) annually

   (b) every 2 to 3 years

   (c) every 5 years

   (d) at more than 5 year intervals

   (e) different items, different schedules, most items annually

   (f) different items on different schedules, most items every 2 to 3 years and none less often than every 5 years

   (g) not done your choice /____/

2. Information gathered from periodic physical capital assessments is used to (1) identify needs and projects that are included in capital plans and budgets and (2) identify maintenance needs and items that are included in operating plans and budgets.

   (a) 1 and 2

   (b) 1 only

   (c) 2 only

   (d) not done your choice /____/

3. Your organization has and uses formal or informal standards or guidelines to periodically assess the condition of its physical capital. (It does not matter if the standards are generated internally or externally.)

   (a) formal standards or guidelines are used regularly for most physical capital

   (b) formal standards or guidelines are used periodically for most physical capital

(c) informal standards or guidelines are used regularly for most physical capital

(b) informal standards are used periodically for most physical capital

(e) there are no formal or informal standards or guidelines

your choice /____/

4. The standards or guidelines (if used) are reassessed and adjusted periodically to reflect changing technology, etc.

(a) reviewed and adjusted on a schedule of not more than every 5 years

(b) adjusted from assessment feedback when the standards in use turn out to be too rigid or too lax

(c) no review of standards takes place

your choice /____/

5. Your organization uses different sources in the assessment process, such as (1) written and oral complaints, (2) regular in-house assessments, (3) periodic consultant assessments.

(a) 1, 2, and 3

(b) 1 and 2

(c) 1 and 3

(d) 2 and 3

(e) 1, 2, or 3

(f) none your choice /____/

6. Your organization maintains an up-to-date inventory of its physical assets and their current condition.

(a) up-to-date inventory and condition

(b) up-to-date inventory only (no condition information)

(c) up-to-date inventory for some parts of the organization

(d) inventory not up to date

(e) partial inventory not up to date

(f) no inventory your choice /____/

PLANNING

Planning what your organization's future physical capital needs allows careful consideration of trends and desires. This helps prevent the long-term being traded off for short-term advantages.

1. Your organization annually or biannually prepares capital budgets and capital plans that cover planned capital acquisitions for

   (a) the current year

   (b) 2 future years

   (c) 3 to 5 future years

   (d) 5 or more future years

   (e) not prepared your choice /____/

2. Your organization coordinates the current operating budgets and plans with capital budgets and plans.

   (a) in all relevant areas

   (b) in over half the areas

   (c) in a few areas

   (d) not at all your choice /____/

3. Your organization reviews both operating and capital budgets regularly (coordinates day-to-day activities with short- and long-term plans) and updates them as conditions change.

   (a) always

   (b) usually

   (c) sometimes

   (d) never your choice /____/

4. Your organization's capital budgets and plans offer different scenarios that assume different economic conditions and different responsibilities.

   (a) yes

   (b) no your choice /____/

5. Your organization places emphasis on operations and maintenance of existing physical capital rather than replacement or new construction when planning its operating and capital budgets.

   (a) where cost effective

   (b) yes, always

   (b) no your choice /____/

6. In times of economic adversity, your organization

   (a) cuts carefully taking into consideration the long-term effects. Neither operational nor maintenance nor capital investment is always cut first.

   (b) always cuts operational funding first, then maintenance and capital investment.

   (c) always cuts capital investments funding first, then maintenance and operations.

   (d) always cuts maintenance funding first, then capital investment and operations.

   your choice /____/

7. Your organization believes that deferred maintenance increases future costs; consequently, it keeps deferred maintenance at a minimum.

   (a) yes

   (b) no your choice /____/

8. Your organization has a long-term (at least 10 years) master plan that is used as a guide for shorter term capital plans.

   (a) yes

   (b) no your choice /____/

9. Do capital projects in your organization tie into the budget process and does the budget process reflect project planning?

   (a) always

   (b) usually

   (c) occasionally

   (d) never your choice /____/

SELECTION

Various analyses can be performed on potential capital investment projects. Each project should also be considered as part of a broader planning framework.

1. Your organization uses life cycle costing, rate of return, or other capital budgeting techniques (where applicable) as a basis for project selection.

   (a) always

   (b) at least half the time

   (c) occasionally

   (d) never your choice /____/

2. Your organization considers alternative methods for meeting the objective before it selects a specific capital project.

   (a) occasionally

   (b) at least half the time

   (c) always

   (d) never your choice /____/

3. Your organization considers long-term operation and maintenance costs before selecting capital projects.

   (a) always

   (b) at least half the time

   (c) occasionally

   (d) never your choice /____/

4. Your organization considers all possible sources of funds before selecting specific projects.

   (a) always

   (b) at least half the time

   (c) occasionally

   (d) never your choice /____/

5. Your organization selects and funds projects that provide long-term capital benefits rather than short-term capital relief.

   (a) always

   (b) at least half the time

   (c) occasionally

   (d) never your choice /____/

6. Your organization views capital projects as an investment.

   (a) always

   (b) at least half the time

   (c) occasionally

   (d) never your choice /____/

7. Your organization selects projects primarily on the basis of need rather than solely on the availability of funds.

   (a) always

   (b) at least half the time

   (c) occasionally

   (d) never your choice /____/

8. Your organization selects projects for funding from its long-range plans after the projects have progressed (yearly) through the plan (except for emergency type projects) instead of selecting projects that did not appear in the long-range plans until the current year.

(a) always

(b) at least half the time

(c) occasionally

(d) never your choice /____/

CONTROLS

Control of funds and time used on capital acquisition projects helps prevent sloppy management practices and inefficiencies.

1. Your organization has funds that can only be used for capital investment.

   (a) yes

   (b) no your choice /____/

2. Your organization reviews ongoing physical capital project status to ensure that established time and money targets are being met. Reviews take place

   (a) monthly

   (b) quarterly

   (c) semiannually

   (d) annually

   (e) other (more frequently than 4 times a year)

   (f) other (less frequently than 4 times a year)

   (g) never your choice /____/

3. Your organization has and uses a reporting system to inform top management when project targets are not being met or cannot be met.

   (a) always

   (b) usually

   (c) sometimes

   (d) never your choice /____/

4. Your organization determines cause for cost and time variances and takes corrective action when applicable.

   (a) always

   (b) usually

   (c) sometimes

   (d) never your choice /____/

5. Your organization's members clearly understand and accept the roles and responsibilities of the various management groups who participate in the capital investment planning, budgeting, and controlling process.

   (a) yes

   (b) no your choice /____/

6. Your organization performs post-completion audits or studies to determine if the projects accomplish the objectives for which they were planned.

   (a) always

   (b) usually

   (c) sometimes

   (d) never your choice /____/

7. Your organization controls the extent that funds are switched from project to project or to and from operating and capital investment categories.

   (a) yes

   (b) no your choice /____/

8. Your organization has used incentives (or disincentives) to ensure that capital projects are completed as planned.

   (a) yes

   (b) no your choice /____/

TALLY SHEET

ASSESSMENT		Points	Your Points
Q.1:	a	10	
	b	8	
	c	4	
	d	2	
	e	8	
	f	6	
	g	0	
			_____
Q.2:	a	25	
	b	15	
	c	15	
	d	0	
			_____
Q.3:	a	15	
	b	8	
	c	12	
	d	6	
	e	0	
			_____

		Your Points	Points
Q.4:	a	3	
	b	5	
	c	0	
			_____
Q.5:	a	5	
	b	4	
	c	4	
	d	4	
	e	3	
	f	0	
			_____
Q.6:	a	15	
	b	10	
	c	8	
	d	5	
	e	3	
	f	0	
			_____

APPENDIX I

PLANNING

		Points	Your Points
Q.1:	a	2	
	b	5	
	c	10	
	d	15	
	e	0	
			_____
Q.2:	a	35	
	b	25	
	c	15	
	d	0	
			_____
Q.3:	a	15	
	b	10	
	c	5	
	d	0	
			_____
Q.4:	a	5	
	b	0	
			_____
Q.5:	a	15	
	b	5	
	c	0	
			_____
Q.6:	a	20	
	b	15	
	c	10	
	d	5	
			_____
Q.7:	a	15	
	b	0	
			_____
Q.8:	a	25	
	b	0	
			_____
Q.9:	a	20	
	b	15	
	c	10	
	d	0	
			_____

APPENDIX I

SELECTION

		Points	Your Points
Q.1:	a	20	
	b	10	
	c	5	
	d	0	
			_____
Q.2:	a	3	
	b	8	
	c	15	
	d	0	
			_____
Q.3:	a	25	
	b	15	
	c	10	
	d	0	
			_____
Q.4:	a	10	
	b	5	
	c	3	
	d	0	
			_____

		Points	Your Points
Q.5:	a	20	
	b	10	
	c	5	
	d	0	
			_____
Q.6:	a	10	
	b	5	
	c	3	
	d	0	
			_____
Q.7:	a	20	
	b	10	
	c	5	
	d	0	
			_____
Q.8:	a	15	
	b	8	
	c	4	
	d	0	

APPENDIX I

CONTROLS

		Points	Your Points
Q.1:	a	15	
	b	0	
			_____
Q.2:	a	20	
	b	15	
	c	10	
	d	5	
	e	18	
	f	10	
	g	0	
			_____
Q.3:	a	15	
	b	10	
	c	5	
	d	0	
			_____
Q.4:	a	20	
	b	13	
	c	8	
	d	0	
			_____
Q.5:	a	15	
	b	0	
			_____
Q.6:	a	15	
	b	10	
	c	5	
	d	0	
			_____
Q.7:	a	10	
	b	0	
			_____
Q.8:	a	10	
	b	0	
			_____

VERY GOOD System	420 - 500 points
GOOD System	350 - 419 "
AVERAGE System	290 - 349 "
WEAK System	240 - 289 "
POOR System	Below 240

APPENDIX II

LOCATIONS VISITED

CITY GOVERNMENTS

Baltimore, Maryland

Cleveland, Ohio

Detroit, Michigan

San Jose, California

COUNTY GOVERNMENTS

Arlington County, Virginia

Howard County:
Ellicott City, Maryland

Maricopa County:
Phoenix, Arizona

Oakland County:
Pontiac, Michigan
Bloomfield Hills, Michigan

Wayne County:
Detroit, Michigan
Romulus, Michigan
Wayne, Michigan

STATE GOVERNMENTS

California:
Sacramento

Michigan:
Lansing

Ohio:
Columbus

Pennsylvania:
Harrisburg

REGIONAL AUTHORITY

Port Authority of New York and New Jersey:
Jersey City, New Jersey
New York, New York

* U.S. Government Printing Office : 1982 - 381-230/3762

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

FEDERAL CAPITAL BUDGETING: A COLLECTION OF HAPHAZARD PRACTICES

D I G E S T

The Federal Government has enormous amounts of capital assets--military installations, dams, public lands, buildings. It also helps fund State and local government projects, particularly roads and streets, waste water treatment plants, and mass transit systems.

Today much of these federally owned and financed items are deteriorating and the Government is faced with the prospect of either repairing or rehabilitating them, or risking a staggering replacement burden in the future. However, expenditures for capital items are often the first to be cut when budget constraints are imposed. The cuts usually go unnoticed by the public because their effects are not felt immediately by changes in the levels of services delivered.

Industry considers capital budgeting a vital part of running an effective organization. Most States and municipalities follow a capital budgeting procedure, but the Federal Government does not. Whether or not it should has been the subject of lively debate for a long time.

GAO supports the Federal practice of developing and presenting a unified budget. However, it concluded that a policy-level approach to capital investment must be added to the Federal Government's decisionmaking process and sound, up-to-date information is needed to support that approach.

Government agencies need to closely monitor the implementation of capital investment programs, audit their results, and check the condition of operating facilities and equipment to ensure a healthy capital plant--or at least that portion for which the Federal Government is directly responsible.

APPENDIX III

To determine how the Federal Government should plan, budget, and control physical capital and its operations and maintenance, GAO studied the experiences of 24 organizations, encompassing businesses, cities, counties, States, and Federal agencies. In the organizations studied, GAO conducted 191 indepth interviews with legislators, top managers, and other organization officials. (See ch. 2.)

It found that deteriorating public capital assets are partly the result of State and local neglect and partly the result of Federal Government actions. Federally owned assets appear to be in better condition than State and local assets, but they too suffer from obsolescence and deterioration. (See ch. 3.)

GAO found that the capital budgeting experiences of successful organizations are characterized by certain elements. GAO defines a successful organization as one that can, even under adverse conditions, acquire and/or maintain physical capital without jeopardizing its mission or its clientele. By adverse conditions, GAO means declining resources, political instability, or severe conflict among interest groups. (See ch. 4.)

Of the seven Federal agencies GAO examined, four directly acquire and manage federally owned physical capital. The U.S. Postal Service was the agency among the four which had the most desirable planning, budgeting, and control features that could be readily adopted by other Federal agencies.

Many factors have contributed to the problems of capital investment in the Federal Government: managers' views, congressional authorization and budgetary procedures, limited resources available for capital, and too little monitoring or oversight of ongoing and completed capital projects. (See ch. 5.)

Ownership of much of the capital stock financed by the Federal Government resides with States and municipalities, but Federal programs, policies, and planning procedures can accelerate or arrest its deterioration.

Short-term strategies are implemented in capital investment areas, increased costs of Federal capital programs are passed on to States without recognition, and no effective national capital improvement plan exists. Consequently, the Federal Government's ability to stop the decline of the physical capital across the nation is severely limited. (See ch. 6.)

The growth of uncontrollable outlays--principally entitlements and interest--has reduced the funds available for physical capital investments. Physical capital competes at a disadvantage for discretionary funds. Since the full costs of some capital programs appear in the budget, they may seem more costly than programs that show only 1 year's cost but continue for many years.

Federal decisions about physical capital are based on a parochial view rather than a global one, a perspective that ranges from project managers, to the Congress, to the President. (See ch. 7.)

RECOMMENDATIONS TO THE CONGRESS

The responsibility for assessing the amount and the condition of the nation's infrastructure and for advising on policy for it should be assigned to policy and oversight units in the Congress and the executive branch. Both branches should specify the information and analytical support they need from Federal managers. Specifically, the Congress should give a Senate and a House committee the policy-level oversight responsibility for Federal capital investment and for assessing infrastructure needs and conditions. A component of the Executive Office of the President should be designated as a focal point for executive policy directions.

AGENCY COMMENTS

With the exception of the Office of Management and Budget, all of the private organizations, State and local governments, and Federal agencies that reviewed this report agree with its message, recommendations, and conclusions.

Tear Sheet

In its comments, OMB indicated that if capital investment becomes a separate policy area, the budget will grow, tradeoffs will be made with other programs, and more money will be spent on public capital investments. It was not GAO's intention to imply that the Federal Government should increase spending. As a result of OMB's comments, GAO clarified its main recommendation to the Congress, but the basic conclusions and recommendations have not changed. This study points out the need for a cross-cutting analysis of and a policy direction for capital investments and the creation of more broadly based and informed policy advisory units. GAO does not believe that this approach would necessarily mean either a larger budget, cutbacks in other budget functions, or more money spent on capital investments. Responses to specific criticisms from OMB are contained in chapter 8.

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