PUBLIC WORKS—FOND HOPES AND HARSH REALITIES

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It is common knowledge that our public capital plant is inadequate to meet the demands made upon it. The volume of public construction has been increasing rapidly and is setting a new record each year. But this does not seem to reduce the vast backlog of needs at sufficient speed. We are running fast but do not appear to make enough headway.

The two main obstacles to a more rapid acceleration of public construction are:

1. Rising construction costs: Total construction has been increasing at a faster rate than the gross national product. Simultaneously construction costs have risen more sharply than other price indexes. It is feared that added emphasis on construction may lead to still higher costs.

2. Tax and debt burden: The heavy taxload and competing demands for public moneys—for national security and for a multitude of domestic public services—limit the rate of increase in funds which can be channeled into public works.

Thus the basic questions to be answered are:

1. How can public-works needs be met at a time of full employment without feeding more fuel to the fires of inflation?

2. How can these needs be met without unduly cutting other public requirements or overburdening the country's already top-heavy tax and debt structure?

The magnitude of present and future construction needs—public and private—is largely the result of the unprecedented population increase of 30 million since World War II, and the expected addition of another 30 million during the next 10 years. Other factors contributed, such as suburbanization, industrialization and insistent demands for more and better public services. Low activity during the depression and war days led to an accumulation of needs. Private residential and nonresidential construction were far below required levels during the 1930's and 1940's. Public works did not do poorly in the 1930's but lost at least $20 billion to $30 billion in the 1940's.

Public works construction has expanded substantially more than private construction. The increase between the 1920's and the 1950's amounts to 44 percent in private building and to 145 percent in civil-public works. (See table 1.)

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TABLE 1.—*New construction 1920–59*

[In billions of 1957 dollars]

Period	Private residential	Private nonresidential	Public civil	Public major national security	All new construction
1920–29	$118	$97	$44	$1	$261
1930–39	44	49	70	2	165
1940–49	73	68	48	47	236
1950–59	168	142	108	22	440
Total	403	356	270	72	1,102
Increase in percent, 1920–29 to 1950–59	42	45	145	2,750	69

NOTE.—Data for 1920–56 are actual. 1957–59 author's projection.
Source of data: Departments of Commerce and Labor.

It is hard to tell how deeply the spectacular construction rate of the 1950's is cutting into the backlog of needs. Concepts of need vary widely among sections of the country, communities and economic groups. Standards move up as old benchmarks are approached.

The hospital survey shows almost the same number of beds needed now as at the start in 1948. Conflicting estimates of classroom shortages serve to confuse more than to clarify the issue.

Dollar expenditures, though adjusted for price changes, cannot simply be translated into service units. The cost of the average home, school (classroom), hospital (bed) has increased more than the construction cost index would indicate. Public as well as private facilities are being designed more elaborately and to higher standards; they are being better equipped and built more expensively than ever before.

One hundred billion dollars was a frequently quoted total of the public works backlog needs a few years ago. In 1955 the Construction Division, Business and Defense Services Administration, Department of Commerce compiled 10-year requirements for State and local public works at $204 billion (in 1954 dollars). Others added $100 billion for Federal public works and arrived at a $300 billion 10-year public works need. That almost equals all public works construction in the past 40 years. It is very unlikely that such a goal could be approached within the next 10 years.

During the past decade public works construction has outpaced every other sector of the economy: gross national product increased 45 percent, personal consumption expenditures 36 percent, private construction 56 percent, public construction 180 percent (all in constant dollars). Public works were lifted from 1.5 percent of gross national product in 1947 to 3.2 of gross national product in 1957 (see table 3). Such a feat could be repeated only if we were willing to cut back on other activities and let construction costs skyrocket.

It appears necessary to review not only how much it would be desirable to have in new roads, schools, hospitals, etc., but to evaluate realistically how much of these facilities can be built within the Nation's existing and foreseeable economic and fiscal framework. The question thus is: How can we best achieve a balance between the legitimate claims for public facilities and other demands upon our national product?

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This paper will attempt to deal with this question in three parts:

1. Review of past trends, particularly during the past decade.
2. Current and future public works requirements, and methods of meeting them.
3. The use of public works as a contracyclical tool.

Historical Review

The civil public works share of all new construction jumped from 17 percent during the 1920's to 42 percent during the depressed 1930's, averaged 20 percent in the 1940's and 24 percent in the 1950's. In 1957 it equalled 27 percent. All public construction now accounts for 30 percent of total new construction.

Between 1929 and 1957 private construction increased 50 percent (residential 71 percent, nonresidential 34 percent), public construction 114 percent (constant dollars). Public construction dropped from 2.38 percent of gross national product in 1929 to 1.48 percent in 1947, then soared to 3.24 percent in 1957.

Within the public works field, national security showed the greatest increase between 1929 and 1957, followed by education and conservation.

During the past 10 years, educational construction led the field with a spectacular 570 percent increase, followed by national security 309 percent, with other types of public construction showing increases between 30 and 188 percent (constant dollars).

The percentage distribution reveals a steady decline in the highway share, from 51 to 35 percent and an almost complementary increase in national security construction from 1 to 13 percent in 1957.

Education is the only field besides national security that increased its percentage share of public construction.

The distribution by source of funds shows a jump in the Federal share from 9 percent in 1929 to 36 percent in 1957. Contrary to a widely held belief, Federal funds have declined since 1947 to 30 percent, with State and local governments raising their contribution from 64 to 70 percent.

Within the past 10 years Federal civil public works declined from 16 to 8 percent, Federal grants-in-aid to State and local governments from 12 to 9 percent of all public construction.

During the past decade Federal construction expenditures for civil works increased 45 percent, for grants-in-aid, 117 percent; State and local governments boosted their construction funds by a dramatic 207 percent (constant dollars).

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TABLE 2.—*New construction, 1929, 1947, 1957*

[In 1957 dollars]

	1929, actual	1947, actual	1957, estimated	Change, 1929–47	Increase, 1947–57	Increase, 1929–57
All new construction:	*Billions*	*Billions*	*Billions*	*Percent*	*Percent*	*Percent*
Private residential construction	$9,587	$11,061	$16,400	+15	48	71
Private nonresidential construction	12,382	10,197	16,600	−18	63	34
Public construction	6,575	5,039	14,100	−23	180	114
Total	28,544	26,298	47,100	−8	79	65
Public construction, by type:						
Highways	3,348	2,130	4,950	−36	132	48
Educational	1,029	421	2,820	−59	570	174
Hospitals and institutions	267	125	360	−53	188	35
Sewer and water	669	515	1,400	−23	172	109
Conservation and development	304	578	750	+90	30	147
Major national security	50	440	1,800	+780	309	3,500
Other	907	829	2,020	−9	144	123
Total	6,575	5,039	14,100	−23	180	114
By source of funds:						
Federal	(622)	(1,833)	(4,250)	(+195)	(132)	(583)
Direct:						
Major national security	50	440	1,800	+780	309	3,500
Civil public works	360	793	1,150	+120	45	219
Grants to State and local governments	212	600	1,300	+183	117	513
State and local governments	5,953	3,206	9,850	−46	207	65
Total	6,575	5,039	14,100	−23	180	114

Source: U. S. Departments of Commerce and Labor: Construction Review, various issues.

TABLE 3.—*New construction, 1929, 1947, 1957*

[In percent of gross national product]

	1929 actual	1947 actual	1957 estimated
All new construction:			
Private residential construction	3.47	3.25	3.77
Private nonresidential construction	4.49	2.99	3.82
Public construction	2.38	1.48	3.24
Total	10.34	7.72	10.83
Public construction:			
By type:			
Highways	1.21	.63	1.14
Educational	.37	.12	.65
Hospitals and institutions	.10	.04	.08
Sewer and water	.24	.15	.32
Conservation and development	.11	.17	.17
Major national security	.02	.13	.41
Other	.33	.24	.47
Total	2.38	1.48	3.24
By source of funds:			
Federal	(.23)	(.54)	(.98)
Direct:			
Major national security	.02	.13	.41
Civil public works	.13	.23	.26
Grants to State and local governments	.08	.18	.30
State and local governments	2.16	.94	2.27
Total	2.38	1.48	3.24

Source: U. S. Departments of Commerce and Labor: Construction Review, various issues.

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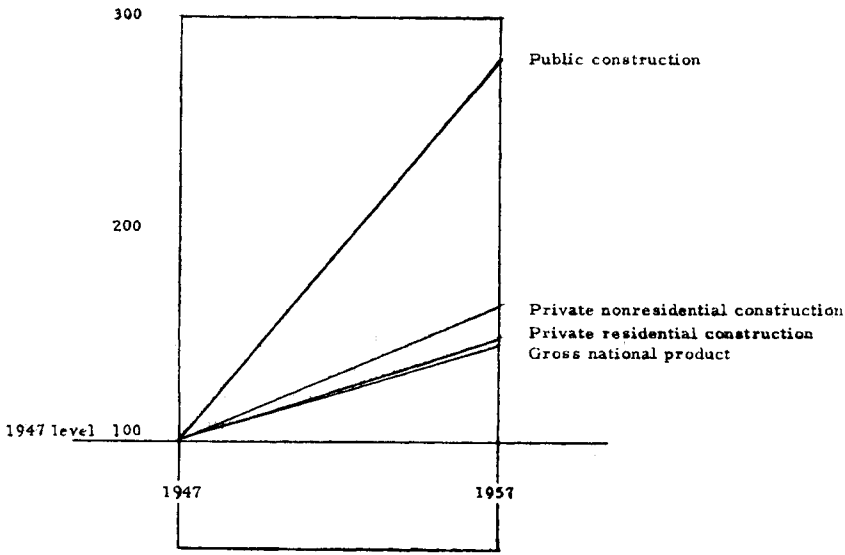
TABLE 4.—*Percent distribution of new construction, 1929, 1947, 1957*

	1929	1947	1957
All new construction:	*Percent*	*Percent*	*Percent*
Private residential construction	34	42	35
Private nonresidential construction	43	39	35
Public construction	23	19	30
Total	100	100	100
Public construction:			
By type:			
Highways	51	42	35
Educational	16	8	20
Hospitals and institutions	4	3	3
Sewer and water	10	10	10
Conservation and development	5	11	5
Major national security	1	9	13
Other	14	16	14
Total	100	100	100
By source of funds:			
Federal	(9)	(36)	(30)
Direct:			
Major national security	1	9	13
Civil public works	5	16	8
Grants to State and local governments	3	12	9
State and local governments	91	64	70
Total	100	100	100

Source: U. S. Departments of Commerce and Labor: "Construction Review" various issues.

INCREASE IN CONSTRUCTION VOLUME AND GNP

1947 to 1957 (■ constant dollars)
(1947 = 100)



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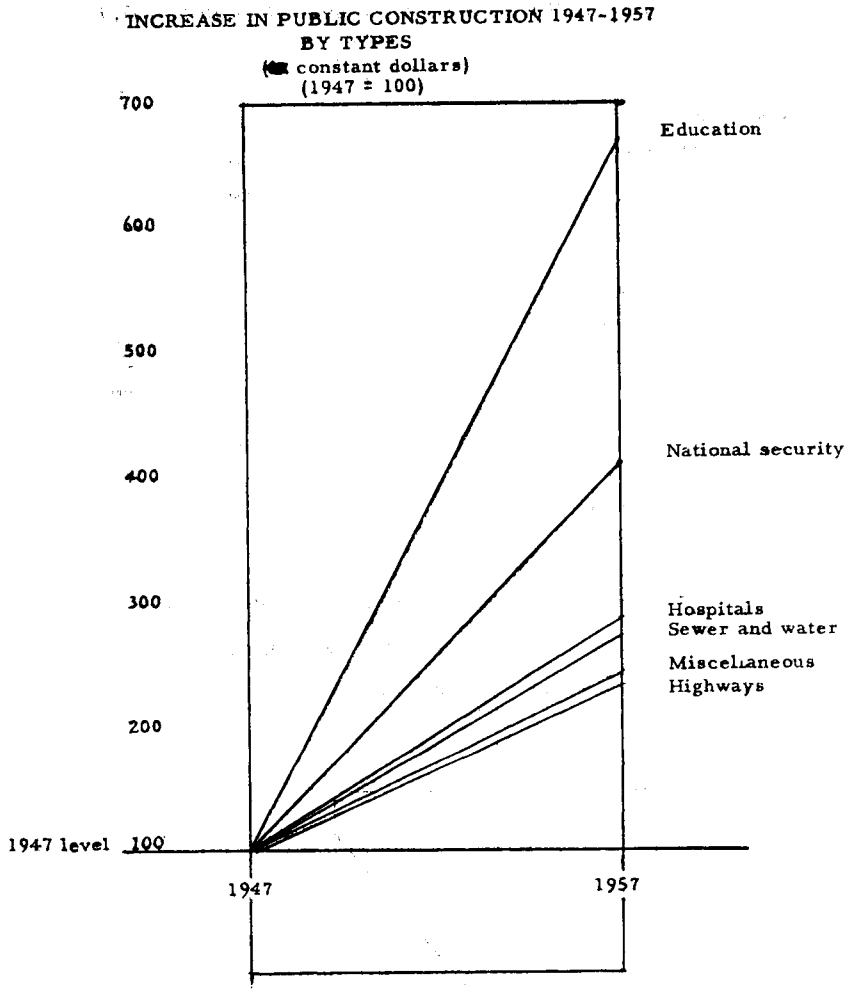

This trend of relatively greater State and local responsibility seems to be in the process of being halted or reversed. The 1958 United States budget proposed to double Federal civil public works expenditures between 1956 and 1958. Almost half of the increase from $1.8 billion in 1956 to $3.7 billion in 1958 resulted from the stepped-up highway program. But it is significant that 5 of the 7 functional categories of Federal civil public works in the budget were more than doubled. State and local governments cannot accelerate their capital programs at such rate because construction accounts for almost one-fourth of their expenditures. It equals only 5 to 7 percent of Federal outlays.

Not all of the proposed new and enlarged Federal works programs were enacted. But a number of new programs were approved at the 1956 and 1957 sessions and many other proposals for new or expanded construction programs are being seriously considered. The enlargement of the housing program, the built-in growth of the highway pro-

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gram, and the continuing pressure for many others make it appear that the Federal Government may assume a greater role in the public works field in the years ahead.

All new construction increased from 7.7 percent of GNP in 1947 to 10.8 percent of GNP in 1957, with more than half of the increase accounted for by public construction.

Table 5 shows that during the past 10 years the composite construction cost index of the Department of Commerce went up 46 percent—the Engineering News-Record indexes, even 60 and 74 percent, respectively, for building and other construction—while industrial wholesale prices rose 31 percent, all wholesale prices 22 percent, and the consumer price index 26 percent. The rise in building material costs at 39 percent accounts for the minor part of higher construction costs, a wage rise of 77 percent for the major part.

Average hourly wages in contract construction went up $1.25 compared with a rise in manufacturing wages of $0.83. (See table 5.)

TABLE 5.—*Prices, employees and wages in construction and selected other fields 1947 and 1957*

	Index (1947–49=100)		Increase in percent
	1947	1957 (June)	
Prices:			
Composite construction index, U. S. Department of Commerce	93.3	137.0	46.8
Engineering News-Record Index:			
Buildings	93.5	149.9	60.3
Other construction	92.2	160.2	73.8
Building materials	94.2	130.7	38.7
Industrial wholesale prices	95.3	125.2	31.4
All wholesale prices	96.4	117.4	21.8
Consumers Price Index	95.5	120.2	25.9
	In current dollars		Increase
	1947	1957 (June)	In dollars / In percent
Wages:			
Average hourly earnings:			
Contract construction	$1.62	$2.87	$1.25 / 77
Manufacturing industries	1.24	2.07	.83 / 67
Average weekly earnings:			
Contract construction	61.47	108.49	47.02 / 77
Manufacturing industries	49.97	82.80	32.83 / 66
	In thousands		Increase
	1947	1957 (June)	In thousands / In percent
Employees:			
Contract construction	1,982	3,109	1,127 / 56.9
Manufacturing industries	15,290	16,915	1,625 / 10.6
Civilian labor force	60,168	69,842	9,674 / 16.1

Sources: U. S. Departments of Commerce and Labor and Council of Economic Advisers.

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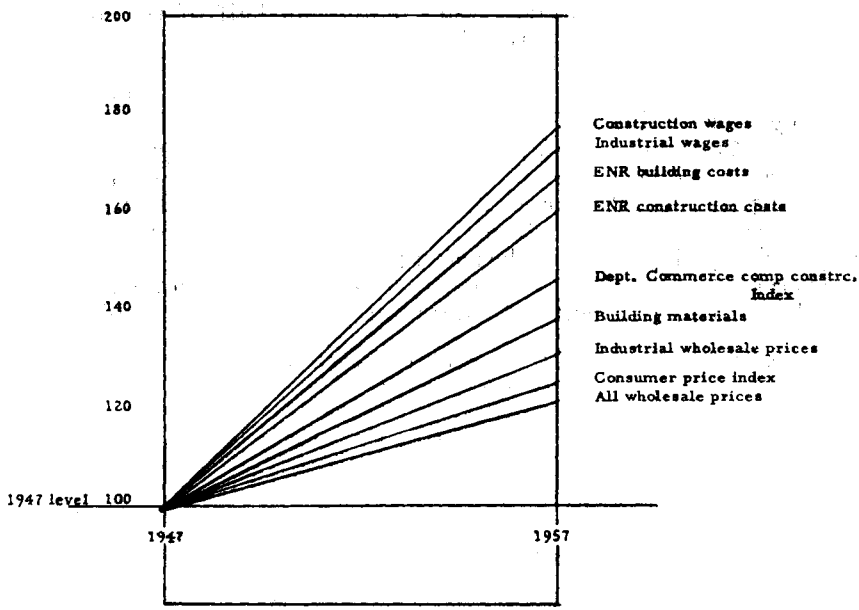
PRICES AND WAGE INCREASES IN CONSTRUCTION AND SELECTED OTHER FIELDS
1947 to 1957
(1947 = 100)



The wage boosts would have been noninflationary if they had been accompanied by correspondingly greater productivity. But there is no evidence that productivity has increased more rapidly in construction than in manufacturing. While no accurate devices are available for measuring changes in productivity, crude measures suggest that productivity increased considerably more in manufacturing than in construction.

Manufacturing industries boosted their output 44 percent with a work force 11 percent higher than in 1947. Construction output went up 79 percent with a contract construction force 56 percent greater than in 1947. More substantial wage boosts apparently made it possible to enlarge the construction trades work force by 56 percent during a period when the total civilian labor force expanded only 16 percent.

Within construction itself, productivity seems to have increased more substantially in engineering work than in building construction. There has been progress in design but firmly entrenched featherbedding practices, antiquated building codes and the slowness with which the public is willing to accept other than conventional methods, retard progress in productivity in the field of building. The combination of higher wages and lower productivity—not in absolute terms but compared with manufacturing—lifted construction costs more steeply than prices of other goods. Undoubtedly this created consumer resistance which is now particularly apparent in the housing field.

Union contracts concluded in the first half of 1957 show the familiar pattern of greater wage boosts in the building trades than in other

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industries. Some contracts provide for regular 6-month increases for as far as 3 years ahead. This means that the trend toward higher building costs will continue. What has been said in another field probably also applies here: Labor and management buried the hatchet—deep in the consumer's skull.

Consumer resistance has already led to a squeeze on contractors—failures are up one-fourth—and to a slowing up of activities. It would not be surprising if pockets of unemployment were to appear in some areas—unless they are absorbed by enlarged public works. Nor is it unusual that the Government now is being asked to help an industry which has been pricing itself out of the market.

Highway construction costs have been on the increase, prior to and particularly since the enactment of the enlarged highway construction program. It is now evident that the present authorizations are inadequate to build the system as planned. Greater funds will be required which in turn probably will drive up costs. By how much the eventual cost of the interstate highway system will exceed earlier estimates may somewhat depend on the number of years by which the completion date will be extended beyond the presently planned 13 years.

To sum up the construction picture of the past decade and the present outlook: Efforts at meeting the vast needs for public and private facilities succeeded in accelerating construction activity—more rapidly in the public than in the private field—beyond the growth rate of the economy, at the cost of driving prices up steeply. How much longer this process will go on and at what rate will depend on the pressure exerted toward further speedups in construction. Higher interest rates, brought about by an excess of demand over supply of investment funds, and rising construction costs may well slow up the growth of private building to a rate less spectacular than that which we have experienced in the past 10 years. This trend is evident in the residential field and may soon spread to nonresidential building.

Whether such development will lead to a correction of the existing imbalance by the market forces cannot easily be foretold. A slowdown in construction will create pressures upon the Federal Government to facilitate the financing of private building and to expand public works construction. If successful they would make adjustments less likely.

Under the continuing demands for more and better public facilities, State and local governments are likely to keep increasing their construction outlays. This will probably proceed at a moderate rate. Capital outlays now account for 27 percent of all State and local government expenditures and can be expanded only as ballot approvals of higher tax rates and bond issues and the absorptive capacity of the bond market permit.

Federal policies may well be a greater determinant of the future course of construction volume and costs than they have been in the past decade. A continuation of the trend evidenced in the 1957 and 1958 budgets and of attempts at stimulating State and local governments to greater efforts will produce a larger construction volume at higher costs.[1]

[1] The New York financial analyst Harry L. Severson recently projected State and local construction and bond issues for the next 10 years on an assumption of an annual increase in construction costs of 3 percent (The Changing Market for State and Local Bonds). This may not be an unlikely assumption if pressure for a greater construction volume keeps increasing.

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Current and Future Public-Works Requirements and Methods of Meeting Them

The public works field is divided between the Federal Government and State and local governments. The Federal Government currently is building 9 percent of all civil public works and contributes about 10 percent of the State and local public-construction funds.

Federal public works

No survey exists of the total needs for Federal civil public works. A number of studies have been undertaken, particularly in the water-resources field. However, the division of responsibility between the Federal Government and other public and private interests in this area is so controversial and policies have fluctuated so widely over the years that estimating the Federal share of all needs is largely crystal-ball gazing into future Federal policies.

Would a comprehensive national survey of all needs that may be regarded as Federal works responsibilities be helpful? A coordinated approach and the development of a grand plan undoubtedly are desirable. But it is doubtful just how great the practical value of such an undertaking would be as long as the views on the subject, based on conflicting political philosophies, differ so greatly. Meanwhile the established practice of judging projects on their individual merits within the framework of a general economc and fiscal plan may have to suffice.

Doubts have been expressed regarding the reliability of benefit formulas used to evaluate natural resource projects. Such formulas compute presumptive benefits for 50 and up to 100 years ahead. It may be questioned whether it is possible to foresee what for example the economical sources of energy or the benefits by classes of users will be 100 years from now. The diversity of formulas has led to competition among agencies. It appears desirable that formulas be uniform among agencies and that they be computed for shorter terms than at present.

The value of formulas should not be overrated. Many of the factors involved are subject to varying interpretation or cannot be expressed in mathematical terms. Final decisions probably will continue to be made more on a general judgment than on formulas.

In the majority of Federal departments, facility needs do not depend as much on broad policy considerations as they do in the water-resources field. Federal departments generally keep public-works plans for their authorized activities current for 6 years ahead. This provides a reservoir for acceleration in case economic fluctuations make such action desirable. The present processes of review of departmental requests for Federal direct public works by the Bureau of the Budget in consultation with the Council of Economic Advisers, and later review by congressional committees seem adequate.[2]

As a rule such review and executive and legislative control should not be weakened by the delegation of decision-making power on capital projects to semi-independent bodies or by grant of authority to enter lease-purchase contracts.

[2] This refers to review of public works within the existing procedural framework of budgetary review. It shall in no way detract from recommendations for improvements in the budgetary process.

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Procedures for the review of grants-in-aid or loan programs to State and local governments do not appear adequate. There is little if any prior consultation with top State officials on the need for or form of new or expanded programs intended to aid the States.

The Commission on Intergovernmental Relations in its report to the President recommended that in the case of proposed Federal grants-in-aid "a healthy safeguard here is for Congress to consult representatives of State governments—those with overall responsibility as well as heads of functional agencies—on the need for and the form of national participation."

Senate Resolution 184, 85th Congress proposes to implement this recommendation by transmitting, subsequent to committee action, all bills on new or enlarged grant-in-aid programs to the Governors and presiding officers of both Houses of the legislatures or to the chairmen of legislative councils in the several States for their opinions on the need for and form of such aid.

This recommendation should be given earnest consideration. If grant-in-aid programs aim to assist State and local governments—as is usually declared the legislative intent—then it appears reasonable that the governments to be aided ought to be consulted prior to final congressional action.

A good guideline for future Federal policy in accepting responsibilities was recommended by the Commission on Intergovernmental Relations (p. 6 of its report to the President): To reserve national action only to those cases where private initiative or State and local governments are inadequate and for responsibilities which only the National Government can undertake.

This principle applies to public works as well as to other activities. The burden of proof should rest upon those who assert the inadequacy of private or State and local ability to exercise responsibility.

The annual volume of Federal public works construction and particularly of new starts should be geared to the level of economic activity. The extent to which this can be done and the methods will be discussed in chapter 3 of this paper.

State and local public works

Most of the public facilities which serve the daily needs of our population are responsibilities of State and local governments. Those governments are building 91 percent of all civil public works in 1957. For obvious reasons most surveys of public works needs focus on the State and local field.

The Council of State Governments has recommended that the States study their facility needs and prepare long-range capital outlay plans. But only 8 or 9 State governments are known to have surveyed their public works requirements in recent years and to have prepared capital outlay programs for 5 to 10 years ahead. Even those plans do not cover all fields of State governmental responsibility.

Many large cities and some small ones have surveyed their facility needs and maintain 5- to 10-year capital outlay programs. Those programs cover only city governments and exclude the ten thousands of other governmental units which exercise independent jurisdiction within city boundaries such as counties and special districts operating schools, hospitals, parks, water, and sewer systems, etc.

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It is obvious that surveys of public works needs on a territorial basis are woefully inadequate and are of no help in estimating nationwide requirements.

Considerably more progress has been made in individual public works fields such as roads, schools, hospitals, water and sewer plants by local surveys with national coverage. The Construction Division of the Department of Commerce in 1955 compiled a number of such surveys conducted within the preceding 2 years, estimated the remaining gaps and showed this picture of 10-year requirements for State and local public works:

TABLE 6.—*Requirements for State and local public works construction, 1955–64*

[In billions of 1954 dollars]

Highways	$92.0
Educational	41.5
Hospital and institutional building	22.0
Water and sewerage works	25.3
Other	23.2
Total	204.0

Source: Department of Commerce.

Construction costs have risen about 14 percent since these surveys were taken and the present estimate would approximate $230 billion. Moreover, the estimates were based on population projections for 1964. To satisfy the needs of the 1967 population, the total would run at least $240 billion.

State and local construction has increased from $3.8 billion (1957 dollars) in 1947 to $11.2 billion in 1957. In percent of national income it rose from 1.7 to 3.1 percent.

If we assume a 40-percent growth of the national income over the next 10 years and a stable State and local construction share of 3.1 percent, such construction will reach $15.6 billion (1957 dollars) by 1967. The 10-year volume will be $136 billion.

If we assume a gradual increase in national income percentage from 3.1 to 3.7 percent, State and local construction will reach $18.6 billion by 1967 and the 10-year volume will total $150 billion.

Both projections assume a continued high level of defense spending but no shooting war, a gradual increase of gross national product over the period and no major economic disturbances.

To reach a 10-year total of $240 billion would require about 5.5 percent of the national income over the next 10 years. This probably cannot be done under the assumptions listed above.

State and local governments boosted their tax collections within the past decade from 5.6 to 8.1 percent of the national income, their total revenues, including charges, Federal aid, et cetera, from 8.8 to 12.9 percent of the national income. It seems reasonable to assume that State and local revenues will continue moderately to increase as percent of national income, particularly if Federal tax cuts give other governments more fiscal leeway. But the major share of higher tax proceeds will be needed for operating purposes. It is unlikely that State and local construction will receive more than a slightly higher percentage of the national income than at present. An assumption of an increase from the present 3.1 to 3.7 percent and of a 10-year volume of $150 billion may be on the optimistic side.

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To obtain the necessary funds will not be easy. State and local governments have been financing an increasing share of their construction by borrowing. State and local debt increased from $16.8 billion in 1947 to about $54.5 billion in 1957. A 10-year construction volume of 136 to 150 billion dollars may raise State and local debt to over $100 billion—provided that the market is able to absorb such a volume of tax-exempt securities.

For some time now the placing of the $6 to $7 billion of State and local securities which reach the market each year has been difficult. The steeply progressive tax structure has shrunk investable funds of wealthy individuals to whom the tax-exempt feature has the greatest value. Few of them are willing to convert a major part of their long-term investments into dollar securities.

It has been estimated that four-fifths of the long-term investment funds in 1957 come from the great fiduciary investors—pension funds, savings institutions, and insurance companies—to whom the tax-exempt feature is of little or no value. This situation is unlikely to change; municipal bonds often may have to compete with other bonds on a straight-rate basis. Their interest rates may stabilize at a higher level than what they enjoyed in the past.

It is known that the bond market as such as been weak. Whether the current preference for equity investments over dollar securities will change depends to some degree on Federal policies which may confirm or disprove a public expectation of a continued decline in the value of the dollar.[3]

The market for State and local securities could be widened by Federal acquisition of such bonds which cannot be sold at preset interest rates. Also, the State and local construction volume could be boosted more rapidly by substantial increases in Federal grants-in-aid and by attracting more labor and material from other fields. It is likely that an attempt to build the $240 billion of public works within the next 10 years by such means would drive up construction prices sufficiently to boost the eventual program cost to $300 billion or more.

Increases in Federal grants-in-aid beyond the revenue increases resulting from growth in the national economy would have to come from higher Federal taxes, from cutbacks in other public services, or from increases in the national debt. None of these alternatives appears promising. Demands are rising for Federal tax reductions. The revenues of all governments in the United States, Federal, State, and local, from taxes, charges, social-security contributions, etc., totaled $121 billion in the fiscal year 1956, the equivalent of 37 percent of the national income. It is doubtful whether the economy can sustain a burden of such magnitude in the long run without losing its vitality and its capacity to expand.

There is widespread hope and expectation that Federal expenditures will grow more slowly than revenues from existing tax rates so that rate reductions will be possible. Certainly Federal taxes should not be raised.

What all this adds up to is the sobering conclusion that the total volume of public works needs shown in the various surveys could be

[3] A pass-through of the tax-exempt feature such as proposed in H. R. 1222 or H. R. 8702 could be of some help to the municipal bond market.

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met within the next 10 years only at the price of inflation and a heavier tax burden. It would, of course, be highly desirable to provide all these roads, schools, hospitals, and other facilities. But it appears more likely that the program will have to be stretched out over more than 10 years. Actual building in the next decade may more nearly approximate 60 percent of the requirements shown in the Department of Commerce survey.

That does not mean that each type of public works should or will be cut 40 percent across the board. Only the total may be in that neighborhood.

The so-called 10-year requirements for roads, schools, hospitals, etc., should not be treated as essential needs nor as attainable goals but as what most of them are: expressions of the desires of functional administrators who are conscientiously trying to promote what they believe to be in the best interest of the people but who cannot be expected to judge the relative priorities of the multitude of claims for public funds nor the overall capacity of the economy to meet them.

How should the volume of construction for each type of public works be set? Should a nationwide survey be undertaken of all State and local public-works needs, as an aid to Congress in deciding the extent of the Federal assistance necessary in each field?

It is unlikely that such a survey would yield more reliable results than past surveys. A national survey of needs which implies that its results may be taken as the basis for Federal action is an open invitation to local officials to overstate needs.

To have such a survey undertaken by uniform national standards and through Federal officials who are not members of the particular professional group—similar to a census—would be very expensive. Its practical value is doubtful. National standards would either be far in excess of attainable levels in low-income States or would understate reasonable goals in wealthy States, or both.

The protracted arguments over the magnitude of classroom shortages and the glaring inconsistencies in some of the recent surveys indicate that concepts differ too widely to permit any optimism in regard to the applicability and acceptability of national standards for community facilities.

If, however, each State and community were permitted to set its own standards we would again face competitive bidding and wind up with surveys that resemble letters to Santa Claus.

How then are decisions on aid to State and local governments to be made at the national level?

The present system of review suffers from the shortcoming that in most cases only officials and groups with a vested interest in the particular activity are being heard. It was suggested earlier in this paper that State officials of general (overall) responsibility be consulted. Such a procedure would help but would not cure the basic ill.

The demand for more and larger grant-in-aid programs is growing. The 1958 budget lists 83 existing and 14 newly proposed programs of aid to State and local governments. At the same time charges are increasing that the Federal Government is gaining control of most State and local activities, is undermining the autonomy of these governments and is eroding the foundations of the Federal system. The

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specter of Federal control by a spreading bureaucracy hovers over most of the programs, and has become a reality in many of them.

The system of programmatic grants-in-aid subjects Congress to ever-increasing pressures from special-interest groups. Every new or enlarged program is an invitation to less favored groups to try harder next year. Unsuccessful groups raise the cry that they are being discriminated against, e. g., "Congress cares more about roads than about schoolchildren."

The Subcommittee on Tax Policy of the Joint Economic Committee made a very cogent remark in its report on taxation 2 years ago.

"It should be recognized that use of the Federal tax system as a means of stimulating growth of any particular industry necessarily means willingness to deter the growth of others not equally favored." This observation also applies to programmatic grants-in-aid.

There is no yardstick which would enable Congress to measure objectively the relative need for every type of public facilities in every corner of the country. Nor could one be devised. Thus, Congress has inadequate factual information to help it judge claims which may or may not be exaggerated; it is burdened with decisions which it is not well set up to make.

If the trend of the past few years continues, we may have 150 to 200 grant-in-aid programs within 10 years. It is likely that the proliferation of grant-in-aid programs, will force Congress to spend an increasing part of its time trying to decide how justified complaints about inadequate local services are. Such decisions could better be made at the local level where the existence or lack of adequate local services and facilities can be seen, felt, and judged more clearly and reliably.

The market mechanism could provide more balanced decisions than can be reached—after much pulling and hauling—under the present system in Washington.

That does not mean that State and local governments must be left to their own devices in financing public services and facilities. Some States and communities, or possibly all, may lack the fiscal capacity to meet the legitimate demands made upon them. That question cannot be adequately discussed within the frame of this paper. But there is no doubt that Federal assistance can be rendered to States and communities by better methods than programmatic grants-in-aid and without the possibility of undue Federal control of local activities.

The problem is not that the Federal Government aids State and local governments financially but that such aid is spread over almost 100 programs with innumerable detailed controls and that there is no adequate factual basis for the judgments to be exercised at the Federal level.

Obviously, there is no inability to finance a particular service, be it roads or schools or hospitals. There may be an inability to raise the sum total necessary to meet all legitimate claims on a State or local government. This could be remedied by general fiscal grants by the Federal Government better than by programmatic grants.

Nonearmarked, unconditional grants could be given in the form of tax sharing, on a per capita basis or with some built-in equalization, or by a formula combining these factors.

Such a system would have these advantages:

1. Many of the fights of competing interest groups over the division of public funds would be shifted from Washington to

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State capitals. This would relieve Congress of the necessity of concerning itself with the adequacy of innumerable local services and facilities and permit it to concentrate on those problems of national importance with which only Congress can deal.

2. It would eliminate the charges that the Federal Government is invading an increasing number of fields of traditional State and local responsibility, is subjecting State and local governments to national control, and is gradually transforming our Federal system into a centralized system of government.

3. It would eliminate the necessity of maintaining a large Federal bureaucracy to control and supervise the spending of Federal aid funds in close to 100 programs.

4. It would inject greater flexibility into the fiscal system and would provide a more effective and speedier mechanism to counteract undesirable economic fluctuations.

The main argument for a change from programmatic to financial grants is that it would strengthen State and local autonomy and permit greater leeway for direct popular decisions on public issues. This argument, of course, can also be used against the proposal: substitution of financial for programmatic grants would shift many major decisions from Congress to State legislatures, city councils, and to the people directly. If the purpose of grant programs is not to aid State and local governments but to provide throughout the country certain services and facilities regardless of local judgment, then programmatic aids are the answer and not fiscal aid.

The interstate highway program which is 90 percent federally financed has become in effect a Federal program with a token State and local contribution. It may be worth while exploring whether a 90-percent Federal participation is likely to make for the most economical administration of right-of-way acquisition and construction or whether a 100-percent Federal national highway system may not be preferable.

The short fall in highway fund revenues below estimates—while construction costs apparently will be greater—suggests that further consideration be given to the revenue potential of tolls on the interstate system. There seems to be no justification for abandoning tolls where they are now collected. Most of the new sections could not be fully self-supporting, but many could make a substantial contribution toward their cost. Also, the effect should be studied which free urban and rural superhighways will have on existing or potential competitive systems of mass or freight transportation such as urban and suburban rapid transit, railroads and airlines.

The revenue potential of user charges has barely been tapped. Full or partial support of public facilities by direct beneficiaries can provide much revenue, grant relief to the general taxpayer, and often can advance construction. User charges are viewed with little enthusiasm by those who may be called upon to foot the bill and are opposed by groups which dislike the market mechanism as such.

In summary: The question asked earlier (How can we best achieve a balance between legitimate claims for public facilities and other demands upon our national production?) can be answered: It is likely that a better balance will be achieved by decentralizing decisions as much as possible and by letting them be made by the presumptive

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users of the facilities who will weigh their desire for more and better public facilities against their wishes for alternative uses of the funds.

Whether a community needs more urgently a school, a hospital, a firehouse, or street paving or whether it prefers getting along on what it has without raising its tax rate can be more objectively decided without Federal incentives for some activities and none for others.

This probably also answers the two questions asked at the outset. The wide dispersal of decisions would make it likely that the sum total of actions on taxes, debt or construction level corresponds more closely to the wishes of the American people than could be accomplished by another process.

Public Works as a Contracyclical Tool

Expansion of public-works construction is an effective method of utilizing idle resources during a major, long-lasting depression. It exerts a stimulating influence on consumption and on the economy as a whole while producing tangible permanent assets.

The possibility of a major depression of the magnitude of the 1930's cannot be ruled out but has become remote in today's political and economic climate. Contracyclical policy now aims to and can arrest economic declines before they get out of hand.

The perfection of monetary and fiscal policy devices has made public works a less useful and less-used tool to counteract mild, short-lived economic fluctuations. Public works action by its very nature is clumsier than monetary tactics, cannot be regulated or switched on or off as easily or quickly, nor produce prompt results. It faces innumerable statutory and constitutional obstacles, requires a larger and cumbersome legal, political, and administrative mechanism, and generally needs the consent of so many parties that an emergency may pass before all signatures have been dotted. Public works action lacks the most important qualifications of an efficient contracyclical tool: speed and flexibility. It has a psychological advantage over monetary devices: visibility to the untrained eye of the remedial Government action.

With all their shortcomings, however, public works still are an essential element of economic strategy. Their acceleration in times of declining employment or retardation during inflationary pressures can help to counteract those trends.

It has been said with some justification that fiscal and monetary measures should be used to stabilize the economy, public works to stabilize the construction industry.

Attitudes toward a flexible public works policy are divided. Groups which generally do not favor enlarged government activity are more prone to recommend retrenchment in public construction at times of full employment and rising prices than expansion when employment is falling off. Conversely, groups which hold that government ought to do much more than it is doing, are quick to push enlarged public works programs when unemployment looms on the horizon but reject the idea of contraction when inflationary tendencies are evident. In the view of both groups public works have only a one-way flexibility—in the direction which serves their major purposes.

In political reality public works do seem to have largely a one-way flexibility. It is much easier to expand them in times of economic

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decline than to restrain them in prosperous days. In the long run, the inflationary spirit and trend almost always seem to gain the upper hand.

Public attention turns to public works as public works—rather than as roads, schools or hospitals—during periods of growing unemployment. Public works enjoyed the spotlight in the 1930's, again in 1949 and in early 1954. Several bills proposing the establishment of a public works administration were submitted in the second session of the 83d Congress and the Council of Economic Advisers created a public works planning unit in the spring of 1954.

The President in his 1955 economic report recommended establishing an Office of Coordinator of Public Works Planning. However, by then the economy had turned up again and public works as public works were no longer in the limelight. They had again become merely roads, schools, and hospitals. The proposal was not renewed in subsequent years.

The public works planning unit was transferred from the Council of Economic Advisers to the White House Office in the summer of 1956.

Public works policy at times of inflationary pressures

If any proof was needed that public works are hard to restrain—inflation or no—it was delivered during the past 2 years. While the Federal Reserve Board was trying to curb inflationary trends, the Federal Government more than doubled its public-works program and did its best to stimulate State and local government into enlarging theirs.

It is small wonder that the Reserve's antiinflationary policies were only moderately successful as they were counteracted by expansive fiscal policies of Federal, State, and local governments.

Because a public-works project once authorized cannot be held back, as evidenced recently by the upper Colorado project, it should be tried, at least, to postpone new starts and authorizations when inflation is rampant. But even this was not done in 1957.

The executive board of the Municipal Finance Officers Association in June 1957 issued a warning "Local finance officers should realistically evaluate the present economic status of their communities in an era of creeping inflation with a view to conserve financial resources to the greatest possible extent * * *." It suggested that "local governments acquire only the most urgent essential improvements, postponing others until loanable funds are available in larger supply." This was but a voice in the wilderness. Those who complain—justifiedly—about lack of Federal-State-local fiscal policy coordination had a point: municipal finance officers were counseling restraint during inflation when Federal officials were practicing expansion.

To be sure, the MFOA recommendation is not being followed: sales of State and local bonds in 1957 are running higher than in 1956; their annual total will be second only to 1955 when toll-road issues reached their peak.

There have been bitter complaints that high interest rates make it more difficult for State and local governments to market their bonds. Remedial action by the Government has been demanded. The purpose of high interest rates—to balance demand and supply in a tight capital market—seems to be understood by few.

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It is impossible to be optimistic about the prospects of a deliberate governmental policy—at any level—to retard public works construction for contracyclical purposes.

Public works policy at times of growing unemployment

Federal civil public works now account for 8 percent of all civil public works and for 0.3 percent of gross national product. The volume could be tangibly increased within 6 to 8 months by accelerating the progress rate of projects under construction and by advancing the start of new projects. The 6-year advance program of public works maintained by Federal departments offers a ready reservoir when activity and employment in private construction drop.

In selecting the types of projects it should be remembered that four-fifths of the contract construction force is in the building field and only one-tenth each in highway construction and in other engineering construction. Three-fifths of the building work force consists of special trades such as plumbers, painters, and electricians. Specialization and rigid unionization limit the possibility of shifting workers from one type of construction to another. A drop in residential building cannot easily be offset by using the employees on road work.

The timing of military public works is and should be conditioned by national security considerations rather than by economic fluctuations.

As a rule Federal direct public works can be accelerated more quickly than most types of State and local works. In terms of volume however, the State and local field offers a far greater potential because of the vast amount of backlog needs in that area.

State and local governments will be hard put to meet their operational obligations at a time when economic decline reduces their revenues. They will have few ready funds to increase public works construction. Tax boosts will be unpopular—and in fact undesirable because of their deflationary effect—and ballot approval of bond issues may be hard to obtain in an atmosphere of general belt tightening. Expansion of State and local construction during a depression will have to be underwritten largely by Federal deficit financing.

States and local governments will need grants-in-aid rather than loans or guaranties. Most larger governmental units can sell bond issues but cannot legally incur indebtedness without cumbersome and time-consuming processes. Nor can they raise matching funds in short order.

Speedier action could be expected if 100 percent of the funds were supplied by the Federal Government. Even then most governors could not legally spend the sums without calling their legislatures into session.

A technique of fiscal coordination between the Federal Government and State and local governments for contracyclical action has yet to be developed. The volume of unconditional grants-in-aid as outlined in chapter 2 of this paper can be more easily and quickly regulated by the Federal Government than programmatic grants. Also States would have greater leeway in the use of the funds and could expend them more rapidly. But there is no "grand plan" that offers a solution applicable to all States. A study is needed of the constitutional and statutory provisions in each State in order to develop adjustable

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formulas—and in some cases standby State and Federal legislation. Such a study could best be undertaken by the Bureau of the Budget in cooperation with State and local budget and finance officers and their organizations, the National Association of State Budget Officers and the Municipal Finance Officers Association.

A large shelf of blueprints of State and local public works could reduce lead time between authorization and execution of expansion programs. That fact motivated the initiation of planning advances for State and local public works plans in 1944. Presently both advances and grants are available for planning purposes. But the utilization of these programs under sections 701 and 702 of the Housing Act of 1954 is relatively small.

The major delaying factor in State and local public work construction is not so much the lack of blueprints but the time required to secure community acceptance and conclude financial arrangements under existing constitutional and statutory restrictions.

Efforts to build flexibility into the construction of the highway program so far have not been successful. A 100-percent Federal interstate highway program probably would be more responsive to directives for acceleration.

A program of rehabilitation of public buildings and roads would offer certain advantages: it would require little advance planning and engineering work, could be initiated with the least delay, would require few specialized skills and be spread widely throughout the Nation. It could be switched on or off, expanded or contracted. Unfortunately, it bears an undeniable resemblance to leaf raking.

The potential construction volume in the fields of urban renewal and public housing is great. The lead time, however, is long, usually extending over several years.

Summary

Acceleration and retardation of public works construction can and should be used to help offset major undesirable economic fluctuations which fail to respond to monetary and fiscal measures.

A slowdown at times of inflationary pressures should particularly apply to new starts but also to Federal projects under construction and to Federal aid and stimulation of State and local activities.

Substantial acceleration of Federal as well as State and local public works is possible and desirable when activity and employment in the construction industry show major declines. If such declines result from imbalance in costs, markets or methods, government intervention should not prevent the necessary corrections.

The largest potential for public works expansion in time of a major economic downturn lies in the State and local field. Most of the necessary funds would have to be provided by the Federal Government. Better techniques for a flexible Federal-State-local fiscal coordination should be explored in cooperation between the Bureau of the Budget and State and local finance officers.

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