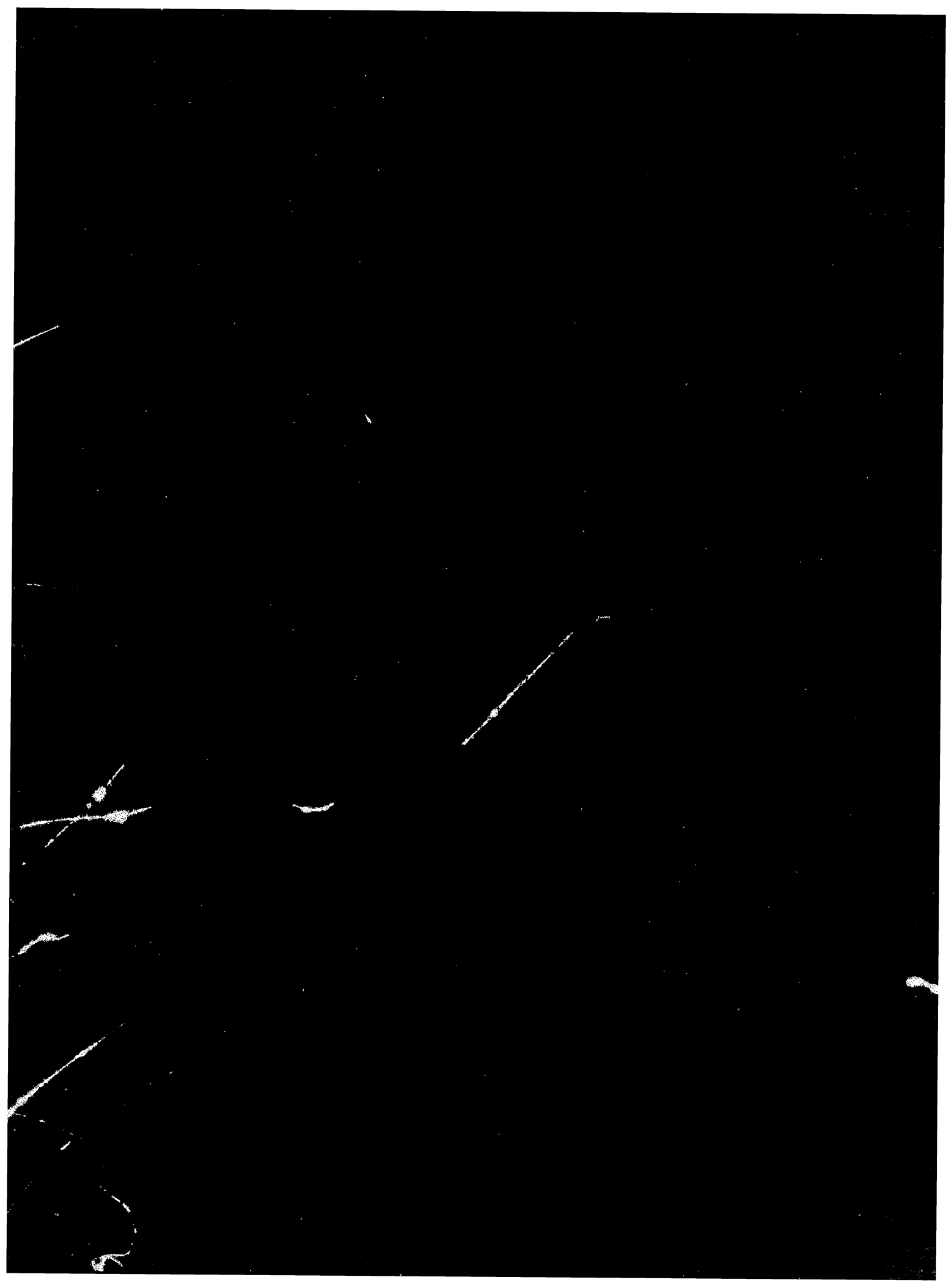


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METROPOLITAN RAPID TRANSIT FINANCING

*A Report to the Metropolitan Rapid
Transit Survey of New Jersey
and New York*

WILLIAM MILLER
Governmental Consultant



METROPOLITAN RAPID TRANSIT FINANCING

Legal, Administrative and Financial Studies

A REPORT

TO THE METROPOLITAN RAPID TRANSIT SURVEY
OF NEW YORK AND NEW JERSEY SPONSORED BY
THE PORT OF NEW YORK AUTHORITY AND THE
METROPOLITAN RAPID TRANSIT COMMISSION OF
NEW YORK AND NEW JERSEY

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April 7, 1957.

Mr. Arthur W. Page, Project Director
Metropolitan Rapid Transit Survey
111 Broadway
New York 6, New York

Dear Mr. Page:

I am transmitting herewith my final report on legal, administrative and financial studies for the Metropolitan Rapid Transit Survey. This report covers the subjects identified as Group III Studies in the Memorandum of Understanding between the Port of New York Authority and the Metropolitan Rapid Transit Commission, dated January 4, 1955, in accordance with our agreement dated December 7, 1955.

In the course of this work we have enjoyed the most cordial relationships with the Project Director and the staff of the Metropolitan Rapid Transit Survey. We have had every possible assistance from our principals, the Port of New York Authority and the Metropolitan Rapid Transit Commission, and from the associated consultants, Mr. Charles E. DeLeuw and his staff; Ford, Bacon & Davis, represented by Mr. Lee Poor; Coverdale & Colpitts, represented by Mr. Dudley Livingston; and Regional Plan Association, represented by Mr. C. McKim Norton and Mr. Henry Fagin. It is my pleasure to acknowledge the most helpful co-operation of all of these persons and organizations. We are also indebted to all the railroads serving the metropolitan area, to state and municipal officials in many states as well as in the immediate area of New Jersey and New York for their most willing assistance in providing information from their records and experience.

The report which follows is intended to complete our undertaking. It does not set forth a complete draft of proposed legislation, but it does contain the language of key sections in the form of recommendations. The final drafting must necessarily await the determination of policy by the Metropolitan Rapid Transit Commission on such major matters as the selection of alternative transportation plans, methods of financing, and the scope of public action to be proposed with reference to the railroad deficits on suburban service.

I appreciated the opportunity to work with you on this challenging subject and hope that in this report, together with the reports of the other consultants, you may find the way to a successful solution to the metropolitan rapid transit problem in the New Jersey-New York region.

Sincerely yours,



William Miller
js

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a partner in R. W. Pressprich & Co., investment bankers, served as special consultant on technical aspects of the municipal bond market and municipal bond financing, particularly in connection with Chapter VII of the Report.

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SUMMARY OF THE REPORT

FINANCIAL REQUIREMENTS

This report is concerned primarily with the financial implementation of the engineering recommendations made in the report of Mr. Charles E. DeLeuw, entitled "Trans-Hudson Rapid Transit," made to the Metropolitan Rapid Transit Survey, in February, 1957. Both of these reports are part of the survey conducted by five consultants under a Memorandum of Understanding between the Port of New York Authority and the Metropolitan Rapid Transit Commission, dated January 4, 1955, which has been published elsewhere (Metropolitan Rapid Transit Commission, *Interim Report*, February 18, 1955, Appendix C).

In the course of this study, certain financial requirements, beyond those established for the alternative plans set forth in Mr. DeLeuw's report (designated Plan 1, Plan 2, Plan 4) have been developed with reference to the possibility of public action to eliminate railroad deficits realized on New Jersey suburban and commuter service. Accordingly the estimated financial requirements to which this report is directed may be summarized as follows (Chapter I, page 6, Table 2):

	<i>Construction Cost</i>	<i>Annual Fixed Charges (See Chapter VII)</i>	<i>Net Operating Revenue (Before Depreciation)</i>	<i>Estimated Annual Income Deficit (Not Including Borrowing for Interest During Construction)</i>
	<i>(Amounts in thousands of dollars)</i>			
Plan 1	\$427,900	\$22,000	\$15,720	\$6,280
Plan 2	296,400	15,500	12,900	2,600
Plan 4	226,900	12,000	10,000	2,000

Plus

Railroad Suburban Service Deficit With Bi-State Loop in Operation (Page 14 of the Report)	\$8,000,000
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Or

Railroad Suburban Service Deficit, Pending Construction of Bi-State Loop (See Table 3, page 10)	\$12,500,000
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Public action to relieve railroad suburban service deficits would depend upon the acceptance by the Metropolitan Rapid Transit Commission in the first instance and by the elected representatives in both states ultimately, of a policy of public responsibility for such railroad operating deficits on one of two theories: Either on the general premise that private enterprise should no longer be required to furnish suburban transportation

service by rail without public subsidy; or that the successful operation of a new rapid transit system and the relief of the urban traffic conditions which it could accomplish are dependent upon the maintenance of adequate service by the railroads which would feed traffic to the new system. In either case, the deficit stated above is subject to the limitations of estimating techniques, constant change in the railroad revenues and expenses and increasing municipal tax rates which determine the bulk of the railroad tax.

Pending the construction of a bi-state loop, the \$12.5 million required to eliminate the railroad suburban service deficit could be reduced, if operating and fare adjustments recommended by Ford, Bacon and Davis could be effectuated, to approximately \$8 million annually. Further possibilities of railroad relief have been considered from two approaches: First, direct tax exemption, and second, the assumption of operating responsibility by a new public body.

The first would account for \$3,717,000—the estimated state and local taxes in New York and New Jersey attributable to railroad property used in suburban service. It would imply a partial tax exemption for the bulk of the taxed properties, since they are used for suburban service in connection with through passenger service, if not freight, on the main lines in New Jersey and at Pennsylvania Station in New York. The second alternative would require a major change in public policy, to accept operating responsibility for suburban transportation by rail.

It is beyond the purpose of this report to evaluate either of these policies. As a matter of feasibility, however, a new bi-state agency could well arrange for the lease of suburban service operating rights over existing railroads. Such a body could be authorized to fix rates, establish the quality of service, schedules, etc., and could have power to operate itself or to contract with the lessor railroads to operate the service. The public body would receive all of the revenues and be responsible for reimbursement, according to such standards as it might establish, to the railroad for its out-of-pocket expenses. Unless all of the railroads serving the metropolitan region, at least those west of the Hudson River, were able and willing to negotiate such agreements, the apportionment of expected deficits among taxing districts within the region would not be feasible with the methods proposed by this report.

PUBLIC FINANCING OF RAPID TRANSIT BY RAIL—EXPERIENCE IN OTHER REGIONS

A careful examination of the experience of rapid transit by rail in other metropolitan areas results in the following conclusions (see Table 9, page 21, and Appendix A):

(1) There are no areas which are entirely comparable with the New York metropolitan region, either because of the nature of the rapid transit operation or the level of construction cost at the time the system was built, or the nature of hidden subsidies, entailed in other systems.

(2) Within this limitation of comparability, rapid transit systems in other areas ranging in size from a very small one in Shaker Heights to the largest one of New York City have, with the exception of Boston, more than covered their operating expenses by their operating revenues. The rapid transit systems in Chicago, Cleveland, Detroit, Philadelphia, Shaker Heights and Toronto have either broken even or yielded a surplus after payment of operating expenses, taxes, debt service and other fixed charges, granted that substantial elements of indirect subsidy are apparent in each of these cases.

(3) Income deficits after fixed charges have been established in Boston and the City of New York in substantial amounts, the deficit per revenue car mile being \$.157 in Boston and \$.202 in New York.

(4) In all current proposals for improved rapid transit facilities in other metropolitan regions, such as San Francisco, Montreal, and Camden-Philadelphia, net income deficits have been projected. In some of the operating systems which have had a satisfactory record in the past, such as Toronto and Chicago, there is an indication of developing deficits.

(5) The principle of public aid to rapid transit is well recognized in all of the areas considered and it is applied in the form of support from general taxation in Boston and Toronto and New York City, use of funds previously accumulated in Chicago, and various forms of direct and indirect subsidy elsewhere.

APPRAISAL OF OUTSIDE CREDIT SOURCES

Extensive appraisal of the possibility of obtaining financial assistance for the proposed rapid transit system from federal, state and municipal sources is incorporated in Chapter IV. The conclusions of that Chapter are these:

(a) *Federal aid* would be fully justified as a matter of principle, but there is no reason to anticipate that it would be forthcoming, particularly in view of the adverse recommendations of the Hoover Commission and the Kestnbaum Commission on related matters.

(b) *The use of state credit* of the States of New Jersey and New York would rest upon the direct issuance of state bonds in each state. It could not be provided in the form of a guarantee of bonds to be issued by a new bi-state agency. The principal reasons for looking elsewhere for financial feasibility are:

1. The constitutionality is very questionable and could be established in New York and New Jersey only on the unlikely outcome of a test suit in the courts, or the uncertain result of the process of constitutional amendment in each state, to avoid existing prohibitions on the lending of State credit.
2. A state-wide popular referendum on the debt, including the constitutional amendments, would be required in each of the two states, and the political implications of such referenda cast doubt on their feasibility, especially in two states, for a metropolitan area project.
3. Each of the two states has an excellent credit rating but their respective borrowing power within present revenues is already well committed for needed state functions, and as a matter of fiscal policy, an able metropolitan area should not look to the state for its financial support.
4. The precedent of either state undertaking to guarantee or finance credit needs of a particular urban area would be unfortunate in both states, and has been either rejected or enmeshed in unresolved controversy, in New Jersey with respect to water supply and in New York with respect to rapid transit.
5. State financing would carry with it state appointment and control of administration, and unnecessary removal of local responsibility in the present situation.

(c) *Existing Public Authorities.* The possibility of financing rapid transit under one of the existing public authorities operating within the metropolitan area has been explored, with particular reference to the New Jersey Turnpike Authority, New York State Thruway Authority, New Jersey Highway Authority, Triborough Bridge and Tunnel Authority, and the Port of New York Authority. (Pages 27-30 and Appendix C.) An analysis of the enabling legislation and the effect upon the credit structures of these representative public authorities has led to the conclusion that none of them can provide financial feasibility of a rail rapid transit program.

1. The single purpose authorities may not impair the obligation of covenants with their bondholders limiting their financing to the stated purpose.
2. To use any of these authorities could impair their ability to discharge the other responsibilities for which they were established, or to carry out plans and commitments already undertaken.
3. To use any of them would mean the further separation of a large area of local government from local control, since each of them is governed by a board appointed by or in conjunction with the Governor of a state, or the Mayor of New York City.

4. The public authorities being completely dependent upon net operating revenues would tend to resist the expansion of deficit service into new areas however desirable such an improvement would be from a public standpoint.
5. If any attempt were made to confer a taxing power, directly or indirectly, on any of these public authorities, it would clearly require a complete change in their organization to require either a popularly elected governing body or the designation of a governing body by popularly elected local legislative officials, whereas one of the major purposes of the public authority is to provide for a business type operation independent of normal political restraints and direction.
6. Lacking the taxing power, any such public authority, be it a special purpose authority or a multi-purpose one like the Port of New York Authority, could never achieve the status of an effective organ of metropolitan government generally.

From the viewpoint of an orderly development of the government of the region, it would be well to follow the same pattern that has been evolved by experience in the administration and financing of other projects within each of the two states, that is:

Self-liquidating projects—require and receive no annual tax support and should be planned, constructed and operated either by conventional units of government or by public authorities, according to the law and economic feasibility as developed in each case; and

Tax supported projects—require credit support whether or not they produce some revenue and should be delegated to a new metropolitan district constituted in light of its actual or potential recourse to the taxing power.

A PROPOSED METROPOLITAN DISTRICT

Rapid transit is here considered a limited problem which requires a limited solution, but that solution has been set in a framework which is sufficiently flexible to permit eventual coverage of other and broader problems, built upon the experience with rapid transit.

The creation of a bi-state metropolitan district is proposed. (Chapter X.) The district would be created by interstate compact to encompass the area included in the present rapid transit survey, with provision for possible expansion to include the entire tri-state area covered by the Regional Plan Association. The principal features of the metropolitan district include:

Corporate Status and Name. The district would be created as the political corporate agency and instrumentality of the constituent political subdivisions, with perpetual succession, under the name of "Metropolitan District of New York and New Jersey."

Governing Body. The governing body shall consist of a council of 32 members, with 16 from each state, apportioned among and appointed by the elected governing bodies of ten counties in New Jersey (depending upon the railroad suburban deficit policy to be adopted), the counties of Orange and Rockland and the City of New York. (Chapter X, page 80.) Additional counties could be added with appropriate adjustment of representation. The council would select a board of seven directors with power to appoint an executive director and staff, authorize contracts, adopt budgets, and fix rates and service standards.

General Powers. The district would be delegated general powers essential to accomplish the program outlined. (See Chapter X, page 78 ff.)

REVENUES OF THE METROPOLITAN DISTRICT

The financial requirements of the district consist of the usual need for initial capital and the continuing annual revenue requirements for operation and fixed charges. These matters are considered in detail in Chapter IV, particularly pages 32 ff for capital purposes, and Chapter VI, relating to annual revenues.

Initial Capital—State Advances. Federal aid and state credit have been rejected as the possible basis of financial feasibility as already noted. For the purpose of initial capital, comparable to the equity investment made in private enterprise, state aid is recommended as a one-time form of assistance to reduce the initial capitalization of the project. Repayable advances and outright appropriations have ample precedent as a form of assistance to large scale regional projects. For the present project, such an advance, in the form of payment by the two states of the amount of interest incurred on bonds issued for capital funds needed over the four-year construction period of a bi-state loop, provides a major source of potential assistance. Such advances, either repayable or otherwise, would result in annual reductions in interest and amortization (and of the deficit accordingly) as shown in Table 16, page 59, as follows:

	<i>Reduction in Annual Debt Service For 46 Years</i>	<i>Total Saving</i>	<i>Amount to Be Advanced By 2 States Over 4 Years</i>
Plan 1	\$2,000,000	\$92,000,000	\$37,000,000
Plan 2	1,500,000	69,000,000	25,500,000
Plan 4	1,007,000	46,000,000	19,500,000

Annual Revenues—Apportionment of Deficits. The legal requirements and practical considerations relating to the revenues of a bi-state agency lead to the following conclusions and recommendations:

(1) The engineering projections of net operating revenues available for debt service leave no possibility of financing purely on the earning power of the proposed rapid transit system.

(2) It would be impractical to base financial support of a bi-state agency upon voluntary contractual agreements with counties or municipalities in the metropolitan region, because of the very number of governmental units affected as well as the special nature of a bi-state loop improvement.

(3) A direct delegation of taxing power to a bi-state agency, by concurrent action of both states would have obvious advantages in financing, but it is not recommended at this time for these reasons:

(a) It would require a constitutional amendment in New York;

(b) It would legally require the election of the governing body of the bi-state agency—a complicated and unsatisfactory process in the present state of public attitudes on bi-state problems;

(c) the political hazards in selection of a tax source for use of such a bi-state agency would present unnecessary obstacles in the way of solving the rapid transit problem.

(4) The use of special assessments to finance the capital costs of new subway stations in Manhattan, and, if special benefit can be established, of transfer stations in New Jersey, is recommended although not essential to successful financing of the rapid transit project.

(5) The principal revenue support of a new bi-state agency should be the power and duty of the governing body of the agency to certify its income deficits annually to constituent counties and the City of New York (according to a formula proposed in Chapter VIII). The amounts so certified could be made a mandatory charge on the local budgets by appropriate legislation. Such a form of support could be legally sustained provided (1) the bi-state agency were established as a corporate agency and an instrumentality of the constituent political subdivisions; (2) with the members of its governing body appointed by the elected local legislative bodies, and (3) with discretion vested in such local legislative bodies to raise the amounts so certified in any manner they might respectively determine.

BORROWING POWER

Credit of the District. The metropolitan district would be authorized to issue its own bonds which would not pledge the faith or credit of either state or of any constituent political subdivision. The bonds would be secured by (1) the net operating revenues of the district, (2) special assessments for local rapid transit benefits, if they are determined and levied by the district, (3) the proceeds of an annual certification by the district to the constituent counties and to the City of New York of any deficit which shall be apportioned by the district, which shall be budgeted annually and paid promptly by each of these political subdivisions, (4) a provision of the interstate compact that the metropolitan district shall have the duty to certify its deficits annually, including any amounts necessary to replenish its debt service reserve fund and to extinguish the balance of any deficit accrued for a prior fiscal year, whether such deficit may have resulted from the delinquency of one or more of the constituent political subdivisions or from any other cause.

Security. The interstate compact would further provide that the amount of deficits so certified annually shall be a direct and general obligation for the payment of which each constituent taxing district in the metropolitan district shall have power and shall be obligated either to make payment thereof out of any source the local governing body may determine, or to levy ad valorem taxes upon all taxable property therein, without limitation of rate or amount as to the counties in New Jersey and in the form of special district benefit assessments by the counties of Orange and Rockland and as a borough-wide special assessment upon all taxable property within Manhattan by the City of New York.

This use of public credit and form of security would permit the counties and the City of New York to provide for the payment of apportionments of any deficits from any revenue sources which are available to them, since an apportioned deficit would be a general mandatory charge upon the local budget, similar to other mandatory charges imposed by law. The recourse to the levy of property taxes by the district would be available, however, as a remedy against delinquency in payment of apportioned deficits. Under the proposed method of financing, the obligations of the district would not be considered in determining the constitutional debt-incurring power of the City of New York nor would the certified apportionment of deficit be subject to the constitutional limit on the amount of property taxes which may be levied by the local governments in New York State. The use of the special assessment form of tax recourse in New York is intended to confine the metropolitan district within the limits of the provision of the New York Constitution restricting the creation of public corporations having power to incur debt and require the levy of a property tax, although the clause in question does not expressly

apply to an obligation which may be paid out of non-property taxes nor to the obligation of an interstate metropolitan district in any event.

Debt Limit. The debt-incurring power of the metropolitan district itself would be limited in two ways: first it would require legislative authority by concurrent action of both states to undertake new projects; and second its total debt over and above borrowing supported by net operating revenues would be limited by the proposed compact. An adequate limit could be stated as an amount equal to \$25 per capita of the population, or $\frac{3}{4}$ of 1% of the full valuation of taxable property, whichever is greater, within the jurisdiction of the district.

COST OF BORROWING BY THE METROPOLITAN DISTRICT

Estimated Deficits. A complete schedule of the costs of borrowing under four alternative methods of financing each of the engineering recommendations is set forth in Table 16, page 59. The table presents the cost of borrowing with an interest rate of 4 per cent per annum, a maximum maturity of obligations of 50 years, with amortization over a period of 46 years beginning in the fifth year after the date of the initial issue of bonds. The metropolitan district, using this type of obligation, could finance the engineering plans with an estimated amount of deficit to be certified annually of \$2,600,000 for the bi-state loop Plan 2 or \$6,300,000 for Plan 1, given the advantage of bi-state advances for interest accrued during the construction period. Under the present conditions of the municipal bond market, moreover, the projection of a maximum interest rate of 4 per cent appears clearly conservative.

Reserves. In order to improve the marketability of the bonds, it is recommended that the original bond issue include an amount sufficient to set up a reserve equal to one year's debt service. A reserve for depreciation is not required, however, since the obligations are essentially supported by the taxing power. The creditors would be assured that the district would be able to renew depreciated equipment at the end of its useful life without the necessity of setting up a funded reserve for depreciation. The projections of annual deficit are presented, however, both with and without such a reserve in Table 16.

Apportionment of Deficits. The total amount of deficit annually would be apportioned between both sides of the Hudson River by a formula giving equal weight to population and full valuation of taxable property (using Manhattan figures only for New York City). The west of Hudson River share would in turn be apportioned by a formula giving equal weight to population and to cross-river traffic on public transportation originating in each of the counties, as determined by origin and destination surveys, beginning with the 1956 report by Charles E. DeLeuw for the present survey. Upon this basis, a metropolitan regional apportionment (Chapter VIII, Tables 18 through 21, pages 68-71) is illustrated in the accompanying Table A.

TABLE A
THREE BASIC PLANS AND AN ILLUSTRATIVE DEFICIT APPORTIONMENT
(See Table 16 for Basic References)

<i>A. Three Basic Plans</i>					
<i>(Amounts in thousands of dollars)</i>					
	<i>Plan 1-A</i>	<i>Plan 2-A</i>	<i>Plan 4-A</i>		
Construction Cost (Excluding Financing)	\$428,000	\$296,500	\$227,000		
Bi-State Advances (4 Years' Interest During Construction)—Total New York and New Jersey	37,000	25,500	19,500		
Annual Net Revenue:					
Net Operating (Before Depreciation)	15,700	12,900	10,000		
Net Operating (After Depreciation)	14,200	11,500	8,300		
Annual Charges:					
Debt Service at 4%—46 yr. amortz.	22,000	15,500	12,000		
Depreciation—per Charles E. DeLeuw ...	1,500	1,400	1,700		
Total	23,500	16,900	13,700		
Annual Bi-State Subway Deficit (Before Depreciation)	6,300	2,600	2,000		
Suburban Railroad Service Deficits	8,000	8,000	8,000		
Total Deficit (New Plan and Railroads)	14,300	10,600	10,000		
Bi-State Subway Deficit as per cent of Total Deficit	44%	25%	20%		
 <i>B. Apportionment of a Combined Annual Deficit</i> 					
<i>Counties and New York City</i>	<i>Total Met. Area Apportionment Factor</i>	<i>Plan II-A Apportionment of Deficit</i>		<i>Railroad Deficit Apportioned</i>	
		<i>Dollar Amount</i>	<i>Equivalent Tax Rate on Full Value Per Thousand*</i>	<i>Dollar Amount</i>	<i>Equivalent Tax Rate on Full Value Per Thousand*</i>
Bergen	15.32	\$398,320	\$.123	\$1,244,903	\$.386
Essex	13.59	353,340	.115	1,104,323	.358
Hudson	13.08	340,080	.243	1,063,247	.760
Mercer	2.29	59,540	.067	186,085	.209
Middlesex	3.53	91,780	.064	286,848	.200
Monmouth	3.02	78,520	.078	245,161	.244
Morris	2.49	64,740	.064	202,216	.199
Passaic	4.14	107,640	.080	336,742	.252
Somerset	1.15	29,900	.059	93,449	.183
Union	6.52	169,520	.086	529,490	.270
Total 10 Counties in New Jersey	65.13	\$1,693,380	\$.107	\$5,292,464	\$.334
Orange—N. Y.	1.35	35,100	.064	109,701	.199
Rockland—N. Y.	1.27	33,020	.093	103,200	.292
Total West of Hudson River	67.75	\$1,761,500	\$.105	\$5,505,365	\$.327
New York City (Manhattan)	32.25	838,500	.092	2,620,635	.287
Grand Total Met. Area .	100.00	\$2,600,000	\$.100	\$8,126,000	\$.314

* The equivalent of the amount apportioned in cents per thousand dollars of full valuation of taxable real estate. To the extent that assessed valuation is less than full value the actual tax rate would be higher.

The total annual deficit apportioned in this manner for a bi-state loop (Table 19) would average 10 cents per thousand dollars of full valuation of taxable property, with not much variation among the counties except for 24 cents in Hudson County. The railroad suburban service deficit would add an average of 31 cents per \$1,000 of full value of taxable property. Both deficits could be apportioned for a total of 41 cents per thousand with the actual equivalents ranging from 24 cents in Somerset County to 99 cents in Hudson County, for a total apportionment throughout the metropolitan district of \$10.6 million annually (Table 21).

GENERAL FEASIBILITY

The proposals for a bi-state loop are constitutionally feasible and financially practicable within the resources of the metropolitan district. A substantial margin of conservatism in the presentation may be emphasized. Thus:

(1) The railroad suburban service deficit looms large in the total deficit to be financed, but the projections make no allowance for more precise calculation of the deficit if a new system were actually effective or for induced traffic to the railroads resulting from the availability of a bi-state loop. The financing of any new rapid transit improvement may, of course, be resolved independently of the railroad problem with a minimum recourse to tax supported deficits.

(2) The operating revenue projections of the engineers charge the bi-state loop under Plan 2 with a payment to the City of New York of approximately \$6,500,000 annually for passengers carried on city-owned subway facilities. In view of the city's vital interest in improving access to it from suburban areas, this figure may well be negotiated by a metropolitan district so that, in combination with one or more methods here proposed, there could be no deficit on Plan 2.

(3) A funded reserve of one year's debt service is included in the projected amount of bonds to be issued, but no credit has been taken for earnings on the investment of this reserve which might be applied toward reduction of the estimated deficits.

(4) A 4 per cent rate has been used in projecting debt service costs. This rate is deemed reasonable under present and foreseeable market conditions, the 50-year maturity and type of security. If it were to become possible to borrow at an interest cost less than 4 per cent, say 3½ per cent, at the time the bonds are issued, this would reduce annual debt service by almost 10 per cent annually—and would practically wipe out the deficit under Plan 2, assuming bi-state advances for interest during construction.

(5) The burden of estimated annual deficits has been expressed in terms of the present taxable valuations, although it is readily apparent that the growth of population estimated by the Regional Plan Association for the next 20 years at least, and more so

over the life of a 50-year bond issue, will be accompanied by a similarly growing tax base even more able to bear the fixed charges which have been projected.

The legal problems in the proposed form of organization and finance are novel and difficult. Of necessity, however, any mature effort to integrate and organize the financial resources and administrative needs of 358 political subdivisions, covering almost 4,000 square miles in two states, must be ready to accept innovations and assume some calculated legal risks. While there is no precedent for a metropolitan district with jurisdiction in more than a single state, one or more of the essential features of the proposed district have been employed successfully in the Southern California Water District, in the rapid transit operations of the Municipality of Metropolitan Toronto, and in the Boston metropolitan area to finance the deficits of rail rapid transit.

On the basis of the studies made for this report, the consultant has concluded that the proposed district and its financing can be established within the framework of the present state constitutions. Since the courts have not directly passed upon some of the basic concepts, however, a test suit will undoubtedly be required before bonds can be issued. Time and political feasibility permitting, all of the legal doubts could, of course, be resolved by appropriate constitutional amendments in both states.

CONCLUSION

All of these considerations lead to the conclusion that a constitutionally sound, financially practicable, and politically feasible plan is available—given the public demand and willingness to support the proposed improvements in transportation service.

METROPOLITAN RAPID TRANSIT FINANCING

LEGAL, ADMINISTRATIVE AND FINANCIAL STUDIES

CHAPTER I

THE NORTH JERSEY-NEW YORK REGION AND ITS NEEDS

Over the past two years there has been more concentrated activity and thought devoted to metropolitan regionalism than in any other like period in our history. The monumental studies and report of the Commission on Intergovernmental Relations, submitted to the President for transmittal to the Congress in June, 1955, looked upon the 174 metropolitan areas in America as "the most intricate aspect of state-local relations. . . ." Emphasizing the importance of finding ways to integrate these economic and social complexes into the governmental structures of the states and the nation, the federal commission declared:

"Modern needs and demands for government to provide services in such fields as welfare, education, transportation, housing, and civil defense, among others, are often most intensely felt and expressed in metropolitan areas. . . ."

"It is clearly the responsibility of the States to assume leadership in seeking solutions for the problems of metropolitan government. These solutions will require constitutional revision as well as legislative and administrative action. In cases where metropolitan areas overlap State boundaries, new forms of interstate co-operation and action may be needed. . . ."

The following year, the Council of State Governments, at the direction of the Governors' Conference, prepared a comprehensive staff study of the problem of government in metropolitan areas. The Government Affairs Foundation sponsored a national conference on the same subject at East Lansing, Michigan, in April, 1956. Other national organizations of

businessmen, scholars and public administrators, such as the Tax Institute, Governmental Research Association, National Tax Association have devoted substantial efforts to bring light to this problem. The American Municipal Association created a special committee to evaluate metropolitan area research and experimentation, and the American Political Science Association accepted a foundation grant to undertake metropolitan area studies. The section of municipal law of the American Bar Association, the American Society of Public Administration and the National Municipal League have done substantial work and devoted important meetings to the subject.

Throughout the nation there is a growing number of legislatively authorized studies by and for state governments to consider specific and general aspects of the problems of governing metropolitan areas. The *New York Times* recently assigned a group of top reporters and commentators to write a series of eight articles which were published daily beginning January 27, 1957, concerned primarily with the great urbanized regions, some eighteen geographic centers in which two or more standard metropolitan areas overlap or adjoin. Of direct significance to the New York-New Jersey metropolitan area was the founding of the Tri-State Metropolitan Regional Conference in 1956, with a steering committee under the chairmanship of Mayor Robert Wagner. The traffic and transportation committee of the conference, under the chairmanship of the Mayor of Jersey City, reported to the General Assembly of the conference in December of 1956 that "the proper solution of these traffic

and transportation problems requires all affected communities to join together with their neighbors in the Metropolitan Regional Conference so that a united frontal attack may be carried through to a successful conclusion."

All of this activity is concerned with describing and analyzing, and sometimes attempting to resolve, the general problem which can be simply stated: In the metropolitan areas and urban regions the responsibilities and powers of government are divided among countless local units, whereas the problems of government encompass the entire area in scope and in financial burden, without regard to the political boundaries. The result is that all of the individual units and their citizens see and feel the problem but are often helpless to do anything substantial about it for lack of any effective organization of their combined economic resources and facilities of government. The scope of the problems touched upon by this widespread concern goes far beyond public mass transportation facilities, rapid transit or otherwise, into the fields of water supply, sewerage disposal, port development, recreation and flood control. Many of these efforts may prove to be abortive or the subjects inappropriate, but this does not lessen the significance of their dominant emphasis on seeking new solutions to new problems of urbanism.

"A CONSTITUTIONALLY SOUND, FINANCIALLY
PRACTICABLE AND POLITICALLY
FEASIBLE PLAN"

The present study is directly concerned with the development of what has been well described as a "constitutionally sound, financially practicable and politically feasible plan" of organizing and financing major improvements to rapid transit by rail in the New York-New Jersey metropolitan area. The impact of the problem is obviously part of the broad general influence of metropolitan areas just described. It can be sensibly considered only in the context of that influence. It has the great advantage, however, of being specific, of being urgent and of being manageable, as compared with the grand concept of reform of governmental areas and service responsibilities generally. A sound

solution of the rapid transit problem, however, may well be looked upon as a test of acceptance of regionwide solutions, and as a guide to broader approaches.

This study is one of five surveys on the various aspects of improving commuter and suburban transportation service by rail. These surveys include comprehensive reports by the Regional Plan Association on its "population, economic and land use studies" (August 1, 1956), by Charles E. DeLeuw, Consulting Engineer, on the feasibility and need for alternate plans, recommending a particular plan which will be considered subsequently, by Ford, Bacon & Davis on the economics of commuter service by rail as compared with buses or other alternatives; and by Coverdale & Colpitts on means of better integrating existing railroad service to the needs of the commuter. The present report, on the legal, financial and administrative aspects, is written on the usual assumption that it is unnecessary to repeat what has already been stated in those reports as to the nature and scope of the problem, the alternative technical solutions, and the implications of improved rapid transit for the comfort and convenience of travelers in the economy in the entire area.

Pursuant to the Memorandum of Understanding between the Port of New York Authority and the Metropolitan Rapid Transit Commission, dated January 4, 1955, the present study has been limited to the legal, administrative and financial means of carrying out the engineering recommendations; the relationship of deficits in railroad operations on commuter service lines to the over-all improvement of transportation in the region, the proper function of state, county and municipal governments in dealing with the financial requirements of a rapid transit improvement program, and the legal and financial requirements of an organization adequate to administer such a program in a bi-state area. The work has included the careful examination of the experience of comparable areas of government and private enterprise, and an effort to evolve suitable principles and methods particularly applicable to the North Jersey-New York metropolitan area.

THE AREA SURVEYED

The New Jersey-New York-Connecticut metropolitan region, described in the report of the Regional Plan Association consists of 22 counties, of which nine are in New Jersey, twelve in New York and one in Connecticut. This region with an estimated population of 15,225,000 in 1954 is the largest urban area in the world, and it is predicted by Regional Plan Association that this figure will increase to 19,100,000 by 1975. When these figures are contrasted with the 1940 population of 12,518,000 the phenomenal growth of the area is readily apparent.

The present rapid transit survey covered ten counties in New Jersey with 291 municipalities, each a separate taxing district; and two coun-

ties with 54 municipalities in New York west of the Hudson River and the county of New York (Borough of Manhattan) east of the Hudson River, as shown in Table 1. All of this area except Mercer County is part of the growing metropolitan region as defined by the Regional Plan Association. These 346 municipalities had a population of 6,429,000 people in 1954, and it is forecast that over 8,500,000 persons will be living in the area by 1975. The forecast also indicates that the population will increase at a more rapid rate in this part of the tri-state region than in the region as a whole, namely, a rise of 33 per cent contrasted with 25 per cent. The diversified economy of the area is a recognized national resource.

Residents of the area are well aware of the recent rapid growth of population and industry

TABLE 1
GOVERNMENTAL TAXING UNITS IN NEW JERSEY-NEW YORK METROPOLITAN AREA
RAPID TRANSIT SURVEY (1956)

State and County	Number of Taxing Units			Area Sq. Miles	Population**		Per Cent Change
	Co.	Municipalities*	Ind. School District		1955 (In Thousands)	1975	
New York State:							
New York City (Manhattan only)	1	1	..	22.3	1,875	1,825	-3
Rockland County	1	16	26	178.0	100	250	150
Orange County	1	38	90	829.0	170	260	53
Total	3	55	116	1,029.3	2,145	2,335	8
New Jersey:							
Bergen County	1	70	70	236.5	655	1,100	68
Essex County	1	22	21	127.1	950	1,100	16
Hudson County	1	12	12	45.0	645	600	-7
Mercer County	1	13	13	225.8	259	400	54
Middlesex County	1	25	25	311.4	335	700	109
Monmouth County	1	52	52	478.9	280	600	114
Morris County	1	39	39	473.1	200	400	100
Passaic County	1	16	16	190.1	375	460	23
Somerset County	1	21	21	304.2	115	225	96
Union County	1	21	21	102.6	450	640	42
Total	10	291	290	2,494.7	4,284	6,225	49
Grand Total	13	346	406	3,524.3	6,429	8,560	33

* Cities, villages, townships, towns, boroughs.

** As estimated by the Regional Plan Association, except for Mercer County.

and their accompanying changes and pressures. Municipal, county and state officials are continually struggling with problems occasioned by this vibrant economic growth. The need for additional schools, adequate water supply, housing, recreational facilities, and all the requirements of our expanding way of life, have taxed our governmental ingenuity if not our capacity to govern, but none more so than the need for improved transportation facilities to serve this growing area.

TRANSPORTATION FACILITIES

Vehicular traffic in the area is presently served by a network of super highways and expressways, such as the New Jersey Turnpike, the Garden State Parkway and the New York Thruway. The Trans-Hudson crossings with a bridge and two tunnels, together with the proposed enlarged capacity of these and other new trans-river crossings would indicate that planning for the future movement of vehicular traffic on the part of the Port of New York Authority and agencies within both States and municipalities of New York and New Jersey is well under way.

The need for such planning is readily apparent when we consider the recent phenomenal increase in the number of motor vehicles. Registrations in the States of New York and New Jersey doubled in the past decade while the increase within the area with which this study is concerned kept pace with this rise.

State	Year	Total Vehicles Registered
New York	1945	2,454,473
	1955	4,807,747
New Jersey	1945	1,045,989
	1955	2,096,152

Expenditures, annual and periodic, on highways, bridges and tunnels in the region are and will continue to be great. The Port of New York Authority has invested some \$349,300,000 in existing bridges and tunnels crossing the Hudson River. In addition a new program was presented in January, 1955, by the Port of New York Authority and the Triborough Bridge and Tunnel Authority for the expenditure of \$600 million on arterial vehicular facilities, includ-

ing up to \$200 million in improvements to be tax supported.*

In presenting the above program, the Joint Study of Arterial Facilities stated:

“The program of Hudson River crossing facilities proposed in this report is not to be considered as in any way a substitute for a program of improving rail passenger facilities between New Jersey and Manhattan. One program is not an alternative for the other.”

The area is now served by eleven railroads, nine of which carry the New Jersey-New York metropolitan passenger traffic, two have passenger service from the west but are not substantial commuter lines.¹

It has been estimated that approximately 375,000 persons crossed the Hudson River on a normal week day in 1954. While only 33 per cent of these traveled by rail, the volume during the peak travel hours was proportionately greater, being 47 per cent of those crossing between 7 A. M. and 10 A. M.²

It is obvious that with almost 50 per cent of the river crossings in peak hours now being carried by rail, the public convenience and policy of these large investments in highway

* The Port of New York Authority and Triborough Bridge and Tunnel Authority, *Joint Study of Arterial Facilities* (1955).

¹ (1) Central Railroad of New Jersey; (2) D. L. & W. Railroad; (3) Erie Railroad; (4) Hudson & Manhattan Railroad; (5) New Jersey and New York Railroad; (6) New York Central Railroad; (7) Northern Railroad of New Jersey; (8) New York, Susquehanna & Western Railroad; (9) Pennsylvania Railroad; (10) Baltimore and Ohio Railroad; (11) Lehigh Valley Railroad. These facilities are described in detail in Appendix B of the Report by Charles E. DeLeuw also made for the Metropolitan Rapid Transit Survey.

² “Trans-Hudson Passenger Travel 1948-54,” Port of New York Authority (1955).

Mode of Transportation	1954	Per Cent of Total
Automobile	148,200	39.6
Bus	99,278	26.5
Railroads	122,849	33.8
Ferry (pedestrians)	4,187	1.1
Total	374,514	100.0

The above figures are for a typical business day 24 hours, eastbound. The tabulation below gives the picture on a typical business day during the peak hours 7 a. m. to 10 a. m., eastbound.

Mode of Transportation	1954	Per Cent of Total
Automobile	27,969	18.4
Bus	49,974	32.8
Railroads	71,537	47.1
Ferry (pedestrians)	2,567	1.7
Total	152,047	100.0

crossings would be seriously impaired if the rail system were allowed to become inadequate.

These 125,000 rail passengers who cross the Hudson River on a normal weekday are brought to the river bank, or in the case of the Pennsylvania Railroad, into the city, by over 300 trains. This figure does not include the frequent service on the Hudson and Manhattan R. R. The retention and improvement of trans-Hudson rail service, which carried 266,000 passengers a day in one direction in 1930 contrasted with the 128,000 in 1956 is of vital importance to the economic welfare of the entire region. Despite the drastic decline in rail traffic indicated, passengers during the peak travel periods of each weekday are still dependent to a very significant degree upon rapid transit by rail as this method of transport carries almost 50 per cent of the traffic.

While it has been forecast that the present tendency toward decentralization of population and industry within the area will continue accompanied by a decline in the total number of workers in New York City, it is also expected that the number of those commuting from New Jersey to Manhattan will increase by 1975. This apparent paradox is explained by the expectation that New York City will remain the pre-eminent administrative, financial and management center of the nation. Consequently the growth of the industry and economy of the country will result in an increasing number of commuters to Manhattan despite the expected fall off in the number of industrial plants and workers on Manhattan Island.

PLANS OF THE ENGINEERS

The consulting engineer, Charles E. DeLeuw, in his report entitled "Trans-Hudson Rapid Transit (January, 1957), considered in detail four alternative plans—Plan 1 was recommended; Plan 2 also was recommended with "nearly as much merit"; Plan 3 was rejected; and Plan 4 was offered as a minimum alterna-

tive. In addition, this report has separately considered (in Chapter II) the possibility of public aid in support of existing commuter railroad service, so as to maintain such service in undiminished quantity and quality, and also to assure the anticipated flow of traffic into the bi-state loop. The total financial requirements to which this report is directed thus consist of the alternative physical costs of Plan 1, Plan 2 or Plan 4, plus the potential public cost of sustaining suburban rail service. These requirements are summarized in Table 2.

The stated figures on capital costs are drawn from the engineering consultant's report by Charles E. DeLeuw, but they exclude the item of interest during construction which appears as part of the estimates in that report. They are also stated before the allowance for depreciation which has been charged to operating income in the engineer's report. For the purposes of the present report, this treatment permits Chapter VII to present alternative ways and means of financing the physical improvements without confusion of the estimating assumptions necessarily used by the engineers.

The \$8.0 million in annual railroad service deficits, were it to be assumed as a public obligation, may be looked upon as the equivalent of adding \$164 million in capital financing to the bond issue for the rapid transit system. The engineering estimates indicate that the bi-state loop operating revenues should provide from $\frac{2}{3}$ to $\frac{3}{4}$ of the annual debt service requirements. Combining the new capital financing with the suburban railroad deficit, the problem for the present report may be reduced to these terms:

First, the establishment of adequate credit resources;

Second, provision for meeting annual deficits equal to the debt service on a capital sum of up to \$300,000,000, depending on which of the bi-state Plans is adopted and how it is financed; and

Third, to provide an ample margin of security and flexibility above these requirements.

TABLE 2
METROPOLITAN RAPID TRANSIT SURVEY
CAPITAL COSTS AND ANNUAL INCOME DEFICITS TO BE FINANCED*

<i>A. Plan 1 with Railroad Service Deficits</i>		
Capital Requirements—		
Bi-state loop	\$415,000,000	
H. & M. Railroad improvements	12,900,000	
Total		<u>\$427,900,000</u>
Annual Income Deficit—		
Fixed charges annually (see Chapter VII)	\$22,000,000	
Less net operating revenues before depreciation	15,720,000	
<i>Income deficit of bi-state rapid transit</i>		6,280,000
<i>Railroad suburban service deficit after adjustment</i> (Chapter III)		8,000,000
<i>Total Annual Deficit Including Railroad Service</i>		<u>\$14,280,000</u>
<i>B. Plan 2 with Railroad Service Deficits</i>		
Capital Requirements—		
Bi-state loop	\$283,500,000	
H. & M. Railroad improvements	12,900,000	
Total		<u>\$296,400,000</u>
Annual Income Deficit—		
Fixed charges annually (see Chapter VII)	\$15,500,000	
Less net operating revenues before depreciation	12,900,000	
<i>Income deficit of bi-state rapid transit</i>		2,600,000
<i>Railroad suburban service deficit after adjustment</i> (Chapter III)		8,000,000
<i>Total Annual Deficit Including Railroad Service</i>		<u>\$10,600,000</u>
<i>C. Plan 4 with Railroad Service Deficits</i>		
Capital Requirements—		
Bi-state Subway Extension	\$129,000,000	
H. & M. Railroad improvements	97,900,000	
Total		<u>\$226,900,000</u>
Annual Income Deficit—		
Fixed charges annually (see Chapter VII)	\$12,000,000	
Less net operating revenues before depreciation	10,000,000	
<i>Income deficit of bi-state rapid transit</i>		2,000,000
<i>Railroad suburban service deficit after adjustment</i> (Chapter III)		8,000,000
<i>Total Annual Deficit Including Railroad Service</i>		<u>\$10,000,000</u>

* Note: All income deficits of bi-state rapid transit stated above are based upon annual fixed charges which do not include borrowing for interest during construction (see chapter VII).

CHAPTER II

RETENTION OF RAIL SERVICE

The provision of the new rapid transit service outlined in Chapter I is designed, as was pointed out, to facilitate the expeditious transport of passengers from the 12 counties in North Jersey and New York across the Hudson River into New York City. The effectiveness of this plan obviously depends upon a reasonably healthy railroad system to bring to it the present volume of traffic as well as to facilitate the anticipated increase as the factors of time saving, convenience and economy of travel attract new patrons to the rails.

However, the earliest completion date for the new facilities is estimated to be 1962. It therefore becomes pertinent to the projected plan to consider recent trends in rail transit in the North Jersey-New York metropolitan area and their possible effect on the transportation situation between now and the estimated completion date of the new facilities. This is particularly in point because the plan is not predicated upon an immediate large scale return of passengers to rapid transit by rail, but rather upon retaining present traffic. Beyond this an increment might be expected from increased employment in New York City, estimated to be 10 per cent by 1975 (Regional Plan Association, *Report*, pp. 70, 75).

The drastic decline in the use of rail facilities in this area during the past 25 years mentioned in Chapter I is apparent from the following table showing the number of weekday railroad passengers from New Jersey, Rockland and Orange counties (New York) into New York City at five-year intervals from 1930 to 1955:⁴

Year	Rail Passengers	Total Trans-Hudson Traffic
1930	266,394	373,617
1935	189,986	
1940	184,753	
1945	220,437	373,158
1950	164,579	
1955	120,832	365,399

⁴ Port of New York Authority, Department of Port Development, March, 1956.

This rail decline during a period when total daily trans-Hudson passenger traffic was remaining approximately static is illustrative of a nationwide, if not a worldwide, phenomenon, namely, the increasing use of motor vehicle transportation, both public and private, in preference to transit by rail. This trend has continued despite the difficulties and costs of using the family car in downtown areas and has led one traffic analyst to state that:

“The future of mass transportation will depend on the extent of cost and service competition with the automobile. On the cost side, transit fares have been mounting with higher wage costs and the higher cost of new equipment. Although fares are generally lower than out-of-pocket costs of using the family car, especially when parking fees are added, there is generally insufficient saving to persuade the motorists to forego the greater comfort, speed and flexibility of his car. If municipal governments were to weigh more closely the economic advantages of encouraging mass movement of passengers in downtown areas, however, it might be that subsidized modern transit would compete for a larger number of patrons than at present.” (Wilfred Owen in *America's Needs and Resources*, p. 285, The 20th Century Fund, 1955.)

It is obvious that a new phase in public policy on public aids to transportation is emerging. The Metropolitan Rapid Transit Commission in its Interim Report dramatized this situation by stating that “transit in the New York-New Jersey metropolitan area is on the brink of catastrophe.” The report indicated that traffic congestion results in economic losses of over a billion dollars a year in New York City alone and pointed out that:

“The crisis is also continually being deepened by the little-realized but tremendous fact that, although since 1930 billions of public dollars have been spent and are still being spent in the development of tax-exempt

or subsidized highways, bridges and other facilities for vehicular traffic, no public funds whatever have been spent during the same period in promoting or improving traffic flow or mass transportation by rail between the New York and New Jersey halves of the metropolitan area. One very grave consequence has been the creation of a stupendous cycle of traffic congestion in the streets, constantly calling for still further enormous expenditures of public funds for still further vehicular traffic." (Metropolitan Rapid Transit Commission *Interim Report*, February 18, 1956, pp. 3 and 4.)

The effect of this shift in the riding habits of the public from rail to rubber has been reflected in the efforts of the railroads to obtain increases in passenger fares, curtailment of service and abandonment of routes. These efforts have been very pronounced since the end of World War II, although prior to the war commuter fares in the New York-New Jersey area had remained amazingly stable at the approximate level set in 1920.⁵

In 1946 the Jersey Central led the way in the first round of the postwar fare increases when it received a 20 per cent upward adjustment (264 ICC 583). This was quickly followed by a general increase for all the New Jersey roads in 1947 (269 ICC 87). Two years later a second general increase was granted (273 ICC 693) and (277 ICC 459). The third increase of from 10 per cent to 15 per cent followed in 1952 (284 ICC 129) and a fourth increase was authorized in 1955 (ICC Docket 31663). Finally the basic interstate and intrastate passenger fares are in the process of being increased by 5 per cent as this report is written (February, 1957).

Facts brought out at the hearing in connection with the fourth increase indicated that previous upward adjustments in fares had failed to produce any improvement in passenger revenues because of the decline in the number of suburban passengers. The railroads claimed that this loss of passengers would have occurred even in the absence of fare increases and in light of a similar decline in the number of rapid transit passengers in other sections of the

country this contention would appear sound. This indicates that the solution to suburban passenger deficits must be found by means other than recurring fare increases.

Petitions to the Interstate Commerce Commission and the Public Utility Commissions of the States of New Jersey and New York seeking abandonment of Hudson River ferry service and of suburban service on the West Shore (New York Central) Railroad and the Susquehanna Railroad have been symptomatic of this serious decline in the use of suburban rail transit facilities.

The Delaware, Lackawanna and Western Railroad was granted permission to abandon its 23rd Street Ferry in 1946 and its Christopher Street Ferry in 1955. The Erie Railroad has given up most of its ferry service as a result of its terminal merger with the Lackawanna at Hoboken.

While the petitions for abandonment of all passenger service on the West Shore Railroad and the Susquehanna were denied, drastic curtailment of service was permitted. And finally if further evidence were needed to indicate the serious state into which suburban rail service has fallen, it would only be necessary to refer to the receiverships and reorganizations which have occurred in recent years, notably in the case of the Susquehanna, Long Island, New Jersey and New York, and Hudson and Manhattan railroads.

The plight of the railroads as seen by their executives when meeting with the Metropolitan Rapid Transit Commission in the fall of 1954 was stated as follows:

"Great sums of money are being lost by the railroads on suburban service in the metropolitan area. A way must be found to permit the railroads involved the opportunity of meeting their expenses and their liabilities. Continuing financial stability is basic to the continuity of transportation, let alone the important aspect of improved service to the public." (Metropolitan Rapid Transit Commission, *Interim Report*, February 18, 1956, p. 38.)

Assuming that these operating losses continue, ordinary prudence by railroad management will produce continued pressure for rate

⁵ In 1931 the D. L. & W. was granted an increase of about 25 per cent on its then recently electrified line and about 15 per cent on its non-electric lines (181 ICC 21) and in 1933 the Erie received a 15 per cent increase (200 ICC 723).

increases, abandonments and further reductions in service. The dire results of such efforts are not within the province of this study to predict. This situation raises the question as to whether it is even possible to retain the existing rail facilities as the feeders of passengers for a new facility without some public action to end the vicious cycle of railroad operating deficits, fare increases, abandonments, curtailed service and loss of patronage. To proceed with consideration of such a plan there must be some approximate estimate of the costs that might be involved.

RAILROAD SUBURBAN SERVICE DEFICIT

Any estimate of the actual deficit incurred by the railroads in providing suburban service for this metropolitan region must be approximate at best. Railroad accounts are maintained on a system basis according to the I. C. C. System of Accounts for steam railroads. This system of accounts is supplemented by a formal instruction for determining passenger service revenues and expenses. The system has been so widely questioned that the I. C. C. has recently undertaken a full review of the entire matter. Meanwhile, various estimates have been made of the revenues and expenses attributable to suburban service alone, as distinguished from total passenger service. These estimates are no better than the original classification of the data from which they are made, and at best require a number of assumptions and somewhat arbitrary allocations of expense items. They are more readily made for some railroads than others because of the nature of the operation.

The estimates may be made on at least three different bases:

- (1) Fully distributed
- (2) Out-of-pocket
- (3) Above-the-rail

For the purposes of rate making proceedings, the railroads are entitled to use the fully distributed basis. Under this method all costs of operation are allocated to the classes of railroad service as either direct costs or allocated common costs. The allocation is made according to various criteria related to operations. The

method attempts to allocate to freight and passenger service the full cost incurred including a proportion of overhead and general management. It has been assumed that something less than this basis would be sufficient to save railroad suburban service from further deterioration, if not to make it a fully paying venture.

The out-of-pocket basis is intended to include expenses of operation only where they are direct costs or are such common costs as can be directly attributed to passenger operations without the use of arbitrary apportionment factors. The latter might include, for example, a limited kind of allocation of the cost of locomotive repair shops in proportion to the number of locomotives of each class of the service which are maintained, as distinguished from the kind of allocation in the fully distributed method which might charge maintenance of way expenditures in proportion to car miles or gross ton miles. Those expenses, and only those, which are related to actual use of facilities should be included on the out-of-pocket basis.

A further form of the out-of-pocket method, sometimes meant to denote it, is the avoidable cost method. This may be defined as the incremental cost which would be added by the addition of a car or train or saved by the elimination of a train or the entire suburban service. As a matter of connotation, it should differ from the out-of-pocket cost in no material respects, but some of the costs included in so-called out-of-pocket studies would not be avoided by abandonment of passenger service. The avoidable cost notion provides a basis for presentation without such costs.

The above-the-rail method should be limited to the cost elements it connotes. In general, this method is intended to eliminate controversy as to whether or not a railroad would require its right-of-way, track, etc., for its freight and through-passenger business alone, even though there were no commuter service. However, it still involves some apportionment of expense items.

In the present study, the railroads were requested to prepare estimates of their "out-of-pocket" deficit, considering only those costs which would be eliminated if the service were

eliminated. These estimates, adjusted only for comparability, appear in Table 3. They differ somewhat from estimates made by Ford, Bacon & Davis,⁶ but the difference is notably small in view of the array of assumptions, arbitrary allocations and basic approaches already described.

These cost studies have included the seven railroads which supply the bulk of the suburban passenger service within the area under survey, namely the Pennsylvania, the Central Railroad of New Jersey, the Delaware, Lackawanna & Western, the Erie, the New York Central (West Shore Railroad), the New York, Susquehanna & Western, and the Hudson & Manhattan.

The figures used have been taken from passenger service cost studies and reports furnished by the railroads. Where these studies have been on a fully allocated basis, we have taken 85 per cent of the operating expense as an approximation of out-of-pocket costs. It has been pointed out in recent decisions on commutation rate cases by the Interstate Commerce Commission that the figures used by the various railroads before the Commission are not comparable in every case. The data used here are principally based upon 1955 experience with some adjustments, particularly to reflect such

fundamental changes as the 1956 Erie-Lackawanna terminal merger. No adjustment has been made for increased costs, however, in 1956, but this may be offset by lack of adjustment for 1957 fare increases.

Nevertheless, the indicated over-all annual deficit of \$12,772,000 before return on investment presents the dimension of the problem. If public policy is to encompass governmental responsibility for this deficit on existing suburban rail passenger service, as an integral part of a comprehensive rapid transit system, various measures of public action may be considered.

ALTERNATIVE COURSES OF PUBLIC ACTION

The alternatives to allowing the present situation to follow its own course are limited to such parts of the railroad cost problem as are within a possible expanded scope of public authority. The following possibilities have been studied:

- (1) Tax concessions and exemptions related to the property used for suburban service;
- (2) Public operation of railroad properties used for suburban service, subject to operating contracts with the railroads on a cost reimbursement basis.

TABLE 3
ESTIMATED RAILROAD DEFICIT ON SUBURBAN PASSENGER SERVICE IN
NEW JERSEY, BY RAILROAD (1955-1956)

(in thousands of dollars)

Item	Penn.	C. R. R. of N. J.	D. L. & W.	Erie	N. Y. C. (West Shore)	N. Y. S. & W.	H. & M.	Totals
Operating Revenues	5,063	7,696	6,768	3,938	1,563	688	7,331	.....
Operating Expenses	8,532	8,428	5,615*	5,080*	2,655	866	6,765	.....
Operating Profit (deficit)	(3,469)	(732)	1,153	(1,142)	(1,092)	(178)	566	.....
Taxes:								
Payroll .....	.....	345	287	189	82	23	276	.....
Property	1,648	594	614	306	42	26	488	3,718
Other .....	.....	.....	.....	.....	.....	.....	30	.....
Profit (deficit) before return on investment	(5,117)	(1,671)	252	(1,606)	(1,216)	(227)	(228)	.....
Ferry Deficit .....	.....	(930)	(706)*	*	(1,267)	(56)	.....	(2,959)
Total Deficit including ferry..	(5,117)	(2,601)	(454)	(1,606)	(2,483)	(283)	(229)	(12,772)

* Net after estimated savings from D. L. & W.-Erie terminal and ferry co-ordination.

Source: Reports and estimates furnished by the railroads and reports of the Interstate Commerce Commission, adjusted for comparability.

TABLE 4
1955 PROPERTY TAXES AS ALLOCATED TO PASSENGER FACILITIES IN THE
NEW JERSEY-NEW YORK AREA
(in thousands of dollars)

Item	Penn.	C. R. R.	D. L. & W.	Erie	N. Y. C.	N. Y. S. & W.	H. & M.	Totals
Total operating profit or (loss) including ferry operating....	(5,117)	(2,601)	(454)	(1,606)	(2,483)	(283)	(228)	(12,772)
Local tax—New York City	808	.....	.....	.....	.....	.....	351	1,159
Local tax—New Jersey	639	479	599	306	42	8	88	2,161
State tax—New Jersey	200	115	15	.....	.....	18	49	397
Total property taxes	1,647	594	614	306	42	26	488	3,717

TAX CONCESSIONS AND EXEMPTIONS

The property taxes related to suburban railroad service, as shown in Table 4, totaled \$3,717,000 in 1955. This sum was assessed within the metropolitan region, as shown in Table 5. Of the total of \$3,717,000 allocated to passenger service in the metropolitan region, \$2,558,000 was assessed in New Jersey. Local taxes accounting for \$2,160,721 of the New Jersey total. It is notable that all but two of the railroads attribute to passenger service approximately 20 per cent of the total local tax paid in New Jersey (Table 5). It is significant that almost 70 per cent of this total tax is levied in Hudson County (Table 6).

The Class II tax is paid to the municipalities and accordingly there is shown below in Table 5 the total amount of Class II tax paid by the railroads in the area, the amount allocated to suburban passenger service and the per cent this allocation is of the total Class II tax within the area.

The \$2,160,721 of the Class II tax allocated to passenger service within the ten counties of New Jersey included in this study is shown on Table 6 broken down by railroads and counties,

and in Appendix G broken down by municipalities.

The tax systems of the two states, as applied to railroad property, are substantially different. In the State of New York the real estate of railroads is assessed and taxed locally as other real estate, and in addition a "special franchise" tax is assessed, in lieu of the real estate tax on land and improvements, upon the occupation by railroads (as well as other public utilities) of city streets and other public places. The value of the special franchise is determined by a state assessment agency, but it is assessed at the general property tax rate and the tax is payable to the city where the franchise is located. In general, special franchise or intangible right to use streets and other public places is valued by capitalizing the excess earnings, if any, of the railroad above a normal return on the physical properties used in the exercise of the franchise [see New York Tax Law, Sec. 2 (6); Sec. 45-E].

In New Jersey, railroads are taxed primarily on the assessed value of their property used for railroad purposes. Such property is classified as follows: Class I—"main stem" or right-

TABLE 5
NEW JERSEY TAXES ON RAILROAD PROPERTY OTHER THAN "MAIN STEM" AND EQUIPMENT
ALLOCATED TO PASSENGER FACILITIES, 1955

Item	Penn.	C. R. R.	D. L. & W.	Erie	N. Y. C.	N. Y. S. & W.	H. & M.	Total
Total tax paid in area (\$)	3,125,368	2,459,929	2,182,545	1,689,287	1,143,461	29,619	87,806	10,718,015
Allocated to suburban passenger service (\$)	638,524	478,697	598,957	306,345	42,237	8,155	87,806	2,160,721
Per cent of total	20%	19%	27%	18%	3.7%	28%	100%	20%

of-way 100 feet in width, state assessed for state use at fixed rate of \$1.20 per hundred dollars of value; Class II—all real property outside of main stem, state assessed for local use at the current general tax rate of the municipality in which the property is located; Class III—rolling stock and equipment, state assessed for state use at \$1.20 per hundred. The railroads also are subject to a low rate net income tax assessed for state use, and the total tax payable in New Jersey is limited by a "ceiling" fixed in the statute.

Any tax concession or exemption must be considered in light of these two systems of taxation. An exemption of property used to provide suburban railroad service probably could be sustained in both states from a purely legal standpoint, but the impact could be most unequal. In New York the impact would be entirely local, and would be limited to a percentage of the value of Pennsylvania Station. In New Jersey, the impact would be predominantly in Hudson County, as shown in Table 6, and each municipality would in effect contribute to the plan in proportion to the amount of Class II tax presently assessed. This contribution would have no demonstrable relationship to the interest of the municipality in improved rapid transit or to the benefits of any of the Plans. It is impracticable, moreover, in that little rail-

road property is used exclusively in suburban service and a proportionate tax exemption of unequal application could not be legally sustained.

PUBLIC OPERATION OF RAILROAD PROPERTY

The Erie Railroad management has, among others, promoted the idea of public operation of the railroad properties in suburban service, subject to operating contracts granted to the railroad on a cost reimbursement basis. This type of proposal would not take the properties off the local tax rolls since they would remain in private ownership. Its purpose would be to enable the railroads to "break even" on this type of service. Implicit in the proposal is that the present deficit from this type of railroad operation would become a public responsibility. A public agency would be required to effectuate the proposal and to raise the revenues required to offset the deficit.

This approach has a small scale precedent in the arrangement effectuated between the City of New York and the Baltimore & Ohio Railroad whereby the City subsidizes the Staten Island Rapid Transit Railway Company to the extent of taxes otherwise payable. The agreements between the City and the railroads are contained in three separate contracts; a lease from the Staten

TABLE 6
NEW JERSEY TAXES ON RAILROAD PROPERTY (OTHER THAN "MAIN STEM" AND
EQUIPMENT) ALLOCATED TO SUBURBAN PASSENGER FACILITIES—1955

By Railroads and By Counties

(amounts in dollars)

County	Penn.	Co. of N. J.	D. L. & W.	Erie	N. Y. C.	N. Y. S. & W.	H. & M.	County Total	County Per Cent of Total
Bergen .....	.....	.....	\$3,814	\$12,066	\$10,990	\$3,924	.....	\$30,794	1.4
Essex	\$340,580	\$29,769	64,945	11,509	.....	.....	.....	446,803	20.7
Hudson	195,148	367,613	475,004	259,538	31,247	622	\$87,806	1,416,978	65.6
Mercer	25,980	.....	.....	.....	.....	.....	.....	25,980	1.2
Middlesex	36,344	10,431	.....	.....	.....	.....	.....	46,775	2.2
Monmouth	13,419	17,200	.....	.....	.....	.....	.....	30,619	1.4
Morris .....	.....	.....	32,565	309	.....	309	.....	33,183	1.5
Passaic .....	.....	.....	7,071	22,923	.....	3,300	.....	33,294	1.5
Somerset .....	.....	16,571	8,421	.....	.....	.....	.....	24,992	1.2
Union	27,053	37,113	7,137	.....	.....	.....	.....	71,303	3.3
Regional Total....	\$638,524	\$478,697	\$598,957	\$306,345	\$42,237	\$8,155	\$87,806	\$2,160,721	100.0

Island R. T. Ry. Co. to the City of New York of the railroad line for transportation of passengers, an operating agreement between the city and the Ry. Co. providing for the rendering of passenger service by the Railway Company on the leased line, and finally an indemnity agreement from the Baltimore & Ohio Railroad Company to the city. Under these agreements the railway company has reserved the right to use the railroad line for any service, particularly freight, other than the transportation of passengers, provided there is no interference with the passenger service. The lease runs from the date of its approval to June 30, 1966, and thereafter from year to year but not beyond June 30, 1976.

Under the lease, the city rental payments are required to equal the sum of all real estate and special franchise taxes, sales and use and utilities taxes, ferry compensation payments due from the railway under a prior agreement with the city, and other payments required under laws imposing taxes on the company or its activities in the operation of railroad lines. The aggregate of these payments made by the company to the city for the year 1955 amounted to approximately \$345,000. The effect of the lease, therefore, is to abate this amount of obligation running from the company to the city. Under the operating agreement, the Railway takes all the revenues and expenses, except for the tax abatement, that it had previously.

The City's interest in the arrangement was to forestall an abandonment of service based upon continuing deficits. Examination of the books of the company by the City Comptroller's office disclosed a net railway operating deficit (after depreciation) for the year 1955 in the amount of \$634,807, representing a loss of \$1,249,676 from passenger service and a profit of \$614,869 from freight service.

The idea of extending the Staten Island arrangement to Class I railroads, where stock and bonds are publicly held and widely disposed, is imaginative but opens many difficulties. Outstanding mortgage bonds and equipment trust certificates may well be based upon covenants with creditors relating to the transfer of the property. All railroads would not necessarily be in a position to separate property

used for suburban service from property used for other passenger service. Although the railroads have extensive experience with inter-railroad operating arrangements, the terms of joint facility operation based upon segregation of commuter service expenses would be complex and difficult to establish. At best, it is only after a new public agency was established that negotiations among the parties looking toward such an arrangement could determine its feasibility, as well as its legal limitations.

The indirect tax exemption accomplished by the Staten Island arrangement would not necessarily persist under the form of public operation here considered for railroads operating elsewhere in the metropolitan region. Under an operating lease to reimburse the railroad for expenses, tax payments would be included. The amount required for this purpose would then be raised by apportionment in the same manner as the annual income deficit of the agency (Chapter VIII), as compared with direct tax exemption which would allocate the cost of railroad tax relief according to the location of the taxable property.

A bi-state agency such as proposed in Chapter X of this report could be authorized to negotiate the various agreements and leases. The railroad interest in being relieved of the deficits would justify a lease without rental. If all the railroads do not effectuate leases, however, the allocation of deficit incurred on those that do participate could not fairly be apportioned under the formula proposed in Chapter VIII. The principal characteristic of the problem may be summarized as follows:

- (1) Tax relief related to suburban rail passenger service could be justified if public policy is to reverse the trend toward deterioration of such service, but state and local taxes are less than $\frac{1}{3}$ of the claimed railroad deficit of \$12.7 million.

- (2) Such relief could be legally and practically achieved by public acquisition of leases of railroad properties used in suburban service, followed by voluntary agreement with the railroads to operate on a cost reimbursement basis.

- (3) The annual public cost and railroad benefit of such relief in New Jersey and New York

is estimated to amount to \$3.7 million in taxes at current tax rates; added to \$4.3 million in operating deficits before taxes.

(4) The municipal impact of the tax loss entailed in such action may, but need not, follow the location of such railroad property. For simplicity of arrangement and uniform treatment of all municipalities, however, the tax portion of the subsidy entailed in public operation could either be left with the municipalities where the property is located, or it might be allocated throughout the region according to the method recommended in Chapter VIII. The latter is more in accord with a proper accounting for the cost of service.

FUTURE COST OF SUBURBAN SERVICE DEFICITS

Present data, however accurate, are of limited usefulness with regard to railroad operations five years hence. The future effect of a bi-state loop (Plan 1 or Plan 2), the alternatives discussed above, and the effect of recommendations of Ford, Bacon & Davis (Report, February 13, 1957) "for increasing revenues, betterment of service, savings in operating expenses, and more economical operations through modernization of equipment" under a public agency may be combined and summarized as the present railroad suburban service deficit, as shown in Table 7.

TABLE 7
ESTIMATED DEFICIT ON RAILROAD SUBURBAN SERVICE BEFORE AND AFTER
CONSTRUCTION OF BI-STATE LOOP

<i>Aggregate Railroad Deficit—</i>		
(F. B. & D.—\$12,500,000)		\$12,772,000
<i>Savings—</i>		
Ferry Elimination (F. B. & D.—\$3,660,000)	\$3,000,000	
Ford, Bacon & Davis rail economies	1,740,000	
		4,740,000
Deficit to be recovered by Bi-State Agency		\$8,032,000
Estimated Property Taxes Attributable to Suburban Railroad Service		3,717,000
		\$4,315,000
<i>Annual Deficit Pending Construction of Bi-State Loop—</i>		
(a) With ferry "arbitrary" recommended by F. B. & D.		\$8,000,000
(b) Without ferry "arbitrary"		9,140,000

Note: Above references to "F. B. & D." are to the Ford, Bacon and Davis, *Report to the Metropolitan Rapid Transit Survey* (February 13, 1957) cited in the text above.

CHAPTER III

PUBLIC FINANCING OF RAPID TRANSIT—EXPERIENCE IN OTHER REGIONS

It was stated in the memorandum of understanding between the Metropolitan Rapid Transit Commission and the New York Port Authority that no study of suburban rail service would be realistic without consideration of a method for meeting deficits and debt charges if such should appear to be inevitable. Consequently it was suggested that a study be made of other metropolitan areas and of their experience with the problems of rail transit service.

This examination of the systems, existing or proposed, in the larger metropolitan areas of this country and Canada was accordingly undertaken with several objectives in view: To determine whether these systems are being operated without financial loss; to study the methods provided for meeting such deficits as may occur; and to evaluate the extent of public acceptance of the principle that mass transportation by rail is of such importance to the welfare of a metropolitan area that the whole community might fairly bear some financial responsibility for its construction or retention and improvement.

RAPID TRANSIT IN OTHER CITIES

The existing transit systems of Boston, Chicago, Cleveland, Detroit, New York City, Philadelphia, Shaker Heights, Toronto, and the proposed systems (or proposed changes in current systems) in Los Angeles, Montreal, Philadelphia, San Francisco, and the South Jersey-Camden area were studied in detail (see Appendix B for comparative summary of these systems). These cities are served by various types of transit systems: Bus, trolley, street car, subway, etc. In none, however, are the circumstances strictly comparable to those of the New York-New Jersey situation. They differ either because of the type of transit, the size of the system (i. e., the number of passengers handled as well as the physical area covered) or the governmental structure of the

area served (i. e., the number of separate governmental units which either administer or have financial responsibility for the transit system), as shown in Table 8.

Rapid transit in other metropolitan regions has not been faced with the problems—nor has it had the opportunities—present in the North Jersey-New York region. For example, Detroit is served exclusively by a bus or trolley-coach type of mass transportation. Toronto, Shaker Heights and Cleveland all have grade-separated, high speed rapid transit but their operations are relatively small compared to the system required in the New York region. In none of these cities does the length of the rapid transit system exceed fifteen miles. Chicago, Philadelphia and New York City, while they have extensive subway systems, all lack the multi-governmental aspect of the New York-New Jersey metropolitan area. Furthermore the complex character of the transit services in this area, where the railroads and certain bus lines are privately owned and operated while the subways and other bus lines are publicly owned and operated, makes impossible any direct comparison of the over-all situation with the other areas studied.

Boston, however, offers a situation which, because of its multi-governmental character, does bear more closely on the metropolitan New York problem. Because of this it will be discussed at some length. The basic characteristics of each of the major systems are set forth in Appendix A.

Boston: The Boston Metropolitan Transit Authority operates within fourteen municipalities and is the only transit system under which deficits are assessed against the constituent governmental units by a formula based upon benefits as measured by passenger use.

The mass transportation system serving the Boston metropolitan area has been under public ownership and operation since 1947 but the 14 municipalities now comprising the Boston

TABLE 8
COMPARISON OF THE JURISDICTION OF MAJOR RAPID TRANSIT SYSTEMS

<i>System</i>	<i>Area Served (or Authorized to be Served) Sq. Miles</i>	<i>Population of Area Served (1950)</i>	<i>Number of Municipalities Within Area Served (or Authorized to be Served)*</i>
Boston	114	1,495,000	14
Chicago	725	4,500,000	85
Cleveland	135	1,221,000	17
Detroit	173	2,099,000	6
New York City	314	7,892,000	1
Philadelphia	1,648	3,284,000	36
Shaker Heights	12	100,000	5
Toronto	240	1,055,000	13
San Francisco Bay Area (proposed)	7,452	2,681,321	77
Proposed New Jersey-New York Metropolitan Rapid Transit (including suburban railroad service)	3,724	6,429,000	346
London	2,000	10,000,000	1

(* Excludes counties, school districts, and other special districts)

¹ The London Passenger Transport Area is prescribed by a special map referred to in the London Passenger Transport Act [23 & 24 Geo. 5, c. 14, Sch. Seventh].

Source: Correspondence with officials of transit systems, annual reports of systems, and United States Census Reports.

Metropolitan Transit Authority have been underwriting the deficits of the system since the adoption of the Public Control Act of 1918.

Prior to 1947 the Boston Elevated Railway operated its privately owned lines, as well as the subway and surface lines owned by the City of Boston with deficits assessed against the 14 municipalities "in proportion to the number of persons in [each municipality] using the service." The same method and formula for assessing deficits was rewritten into the act establishing the Metropolitan Transit Authority, hereafter referred to as MTA, in 1947.

This proportion was determined by using an origin and destination survey in which the number of passengers "originating" in a municipality was taken to be the number entering the turnstiles, buses or cars within each municipality during the period of the survey. The results of the 1940 count are still being used as the basis for determining the percentages of the annual deficits assessed against each of the 14 municipalities. These percentages vary from 64 per cent in the case of Boston to less than 1 per cent (.77 per cent) in the case of Milton. The deficit assessed in 1955 was \$7,275,000 and its allocation as reflected in local real estate tax rates varied from 31 cents per \$100 of ratables in Chelsea to 2½ cents in Newton.

Considerable criticism has been made of the type of formula used in allocating the deficits as well as the out-dated count (1940) being used as the base. Objections have been raised by some of the outlying municipalities where the number of passengers entering the transit system in the municipality concerned contains a considerable percentage of "commuters" who live outside the municipality, in question, drive in from the "fringe" areas, park their cars and by boarding the vehicles or cars of the MTA are considered as residents of that municipality.

However, each attempt to amend the legislative formula has been fruitless. Allegedly this has been due to the opposition of the "fringe area municipalities" which object to being included in the MTA when that is proposed or of certain of the municipalities now in the MTA who fear that a change in the formula will bear more heavily on them. The latter is also given as a reason for the failure to conduct another origin and destination survey to establish new percentages for assessment purposes.

Various proposals have been advanced to place the system on a self-sustaining basis or failing that, to relieve the general property taxpayers of the 14 municipalities.

The creation of the MTA in 1947 came about as the result of the continuing deficits of the Boston Elevated Railway under the Public Control Act of 1918. (Deficits were incurred in every year from 1929 to 1947 except 1942 and 1943.) This situation developed into a crisis when the state, which in effect acted as the deficit collecting agency by advancing funds and then assessing the amount against the constituent municipalities of the MTA, withheld payment of approximately \$3,000,000 of a deficit assessment while appealing to the Courts on a disputed item in the reserve for depreciation.

This crisis hastened legislative action following the report of the Coolidge Commission in 1947 (Report of the Metropolitan Transit Recess Commission, April 1, 1947; House No. 2000; Boston, Massachusetts). This Commission proposed to eliminate the deficits by extending rapid transit facilities into the suburban areas not being served directly. This was the heart of the proposal which the Commission summarized (*Ibid.*, pp. 9 and 41-42):

“Substantial increases in fares do not, in our judgment, offer the solution. A modern system of rapid transit such as we have recommended will go to the root of the problem and provide transportation in the metropolitan area at reasonable rates as well as solve the traffic problem. People living in the suburbs of Boston would find that rapid transit would give them faster, cheaper and more comfortable service than they can expect to get from their automobiles or from buses. They will, therefore, patronize the system in increasing numbers, and therein lies the solution of the matter of deficits which have plagued the metropolitan communities for so many years.”

The commission report had recommended that the municipalities to be served by the proposed extension of rapid transit facilities automatically be included as members of the MTA. This proposal was not acceptable to the legislature which substituted a clause requiring a referendum vote in any municipality to be affected by an extension.

This amendment proved to be an effective barrier to the extensions upon which the Com-

mission staked the financial success of its proposal; namely, to eliminate deficits by increasing services.

The trustees of the new authority immediately proposed extension of the system to Quincy and Braintree. Referenda were held and the proposal defeated by a 5-1 vote in Quincy and a 10-1 vote in Braintree. The reasons given by the opposition were those advanced in the Legislature against the automatic inclusion of new members of the MTA—the refusal of the suburban areas to make themselves liable for the assessment of deficits through their general tax rolls. A history of long continuing deficits evidently was not to be forgotten despite rosy promises for the future. The “fringe areas” were content to ride the system at the expense of their neighbors who lived nearer the center of the metropolitan area.

The opportunity to test the soundness of the proposal to eliminate deficits by extending services having been lost, other suggestions were then advanced. Governor Dever argued that rapid transit facilities should be defined by the Legislature as public highways and that part of their maintenance costs should be paid out of state highway funds and some of the deficit met by general revenues of the State. (Senate No. 581 (1949), Message of the Governor.)

While this met with no enthusiasm in the Legislature, it could hardly be considered as radical because 20 years earlier Governor Calvin Coolidge had also argued that:

“Transportation is a public necessity of the first importance. Without it the transaction of business as now conducted would cease. The cost of this service has become prohibitive in many instances, but transportation is none the less a public necessity like schools, highways, and public lighting. If it cannot be paid for by the car rider, the expense must be met by the remission of taxes or by a contribution from the public treasury.” (Report of Metropolitan Transit Recess Commission, p. 62.)

Furthermore, the Justices of the Massachusetts Supreme Court pointed out in 1919 that “steam railroads in their last analysis are highways for the use of the public . . . and . . .

the commonwealth has in several instances lent its aid to the construction of such railroads." (Opinion of the Justices, 231 Mass. 603, 122 N. E. 763 (1919).)

Another suggestion for tax revenue reflecting the thought that the rapid transit system benefits the auto owner by providing a "stand by" service in bad weather as well as reducing the traffic congestion of the city has been made by Mr. Edward Dana, General Manager of the MTA. Mr. Dana proposed to the Legislature that automobiles in the transit district and the 15 fringe municipalities be taxed at the annual rate of \$1 per vehicle and the proceeds used toward the deficit of the MTA. (Statement Before Committee on Metropolitan Affairs, January 19, 1953.)

Mr. Dana's proposal as well as the others mentioned have failed to produce any change in the method of financing the deficits of the MTA. Fare increases have not closed the gap between revenues and expenses. The basic cause of the deficits persists, namely, the falling off in the number of those using the system.

The general property taxpayers of the 14 municipalities comprising the MTA continue to make up the deficits. The distinguishing feature in the Boston situation is the arrangement for allocating the burden of the deficits among the taxpaying areas rather than in the source of the revenue to meet the deficits.

Other Cities: Some form of subsidy appears to be common among transit systems. Most, or all, of the systems included in this study enjoy some form of direct or indirect subsidization. The various types of subsidies include payment of all deficits (Boston); direct payment of debt service (New York); exemption from property and other taxes (Boston, Chicago, New York and Philadelphia); rental charges for city-owned facilities which are less than current annual amortization charges paid by the city (Philadelphia); some form of original capital subsidy (Chicago); and direct lump sum subsidy (Toronto).

The New York City transit system, for example, is operated under an authority whose only financial requirement is that revenue cover operating expenses. Capital outlay, interest,

certain pension costs assumed under the 1940 unification, and amortization are all borne as direct City expense. In the fiscal year ending June 1955, amortization and interest charges paid by the taxpayer amounted to \$81 million.

Subsidies through original capital outlays have taken various forms. They include outright grants such as those made by the Federal government under the Public Works Administration; favorable purchase agreements with either the city government or some private concern for existing rights-of-way or facilities; or an initial purchase price lower than reproduction costs (or original cost less depreciation). They all add up to providing a system at less than actual cost so that debt service charges are less than they would be on a comparable system not so subsidized.

The systems of Boston, New York, Chicago and Philadelphia all enjoy partial or complete exemption from property taxes. In Philadelphia, however, only city-owned facilities are so exempt. The Chicago Transit Authority does make in-lieu payments to the Chicago Park District for road maintenance. Other systems such as Cleveland, Shaker Heights, and Detroit pay full property taxes in addition to such miscellaneous levies as wheel taxes and fuel taxes.

Both Philadelphia and Chicago have rental agreements with their transit systems which provide for rental charges on city-owned facilities less than the annual amortization costs. Although the agreements provide for larger rental payments when transit income permits, they have been operating on a less than full-cost basis up to now. The debt service charges on city-owned subway facilities in Philadelphia are some \$4 million in excess of the rental payments made by the Philadelphia Transportation Company. In Chicago, the extent of the deficit is less certain because the city did not borrow to finance subway construction. Rental payments made to the City of Chicago by the transit authority cover debt service on bond issues specifically issued for subway construction. These issues, however, represent a small portion of total subway cost. At the same time, the rental agreement does provide for a "municipal compensation" payment of 3 per cent of gross

revenue when and if revenue is sufficient to cover all prior transit authority obligations.

Capital subsidies are more difficult to identify and in some instances simply represent a shrewd, business-like approach of acquiring bankrupt private transit systems at a price considerably under reproduction costs. Nonetheless, certain types of indirect capital subsidies are not available to a newly constructed system or one constructed under different circumstances and therefore their presence in one or another transit system eliminates the use of that system as a yardstick of performance.

Both Chicago and New York City, in the construction of their subway systems, had the benefit of PWA grants. Chicago received a grant of \$26,000,000 and New York a grant of \$6,000,000. The City of Shaker Heights purchased its system from a bankrupt private company for \$1,300,000 when the reproduction cost less depreciation was \$4,117,536 (Moody's Municipals). The City of Cleveland was able to use terminal and right-of-way facilities provided for rapid transit at the time of the construction of the Cleveland Union Terminal but left unused. These facilities which originally cost \$18,000,000 are leased at an annual rental of \$180,000 or a 1 per cent return. The Shaker Heights system also enjoys a similar arrangement with the Cleveland Union Terminal Company.

The Chicago Transit Authority purchased several bankrupt companies for \$87,000,000 (assets acquired in the purchase included \$25,000,000 in cash) when the original cost of the systems had been between \$250,000,000 and \$300,000,000. Admittedly, the systems had deteriorated and extensive modernization was required, but the original bond holders thought Chicago was getting a bargain.

NEW PROJECTS

Recent studies of the Transportation Problem in Los Angeles, the San Francisco Bay Area, Montreal and the Camden-Philadelphia metropolitan area all stressed the vital necessity for improved transit facilities but pointed out that this can be achieved only by

public subsidy in some degree either in the form of tax exemption, tax support, or both.¹

The Los Angeles study indicated that the subsidy of tax exemption would be sufficient to enable the project to make financial ends meet from the revenues of the proposed facilities.

In the San Francisco Bay Area report the forecasts of revenues showed that operating costs and capital costs of rolling stock would be covered but that the costs of construction would have to be met out of public funds.

Possible sources of these public funds were indicated but not necessarily recommended. They were: (1) a general property tax, (2) a sales tax effective throughout the area to be served, (3) a local gasoline tax, and (4) bridge toll funds. Essentially the report of the Stanford Research Institute on the method of financing the capital costs of the proposed San Francisco Bay Area system suggested a combination of the sources listed above.

The Montreal report stated that private capital could not be expected to finance the project but did not discuss the possible source of the public funds that would be required to underwrite the transit improvements. The survey of the Southern New Jersey transportation problem suggested four possibilities for achieving the recommended mass transit system, (1) guarantee of the transit bonds by the States of New Jersey and Pennsylvania, (2) construction by public contribution of a portion approximating 50 per cent of the system without using operating revenues for interest or amortization, (3) increase the tolls on the bridges so that the combined income of the Delaware River Port Authority would be sufficient to finance the combined operations, and (4) any combination of the three.

¹ Report to Los Angeles Metropolitan Transit Authority on a Monorail Rapid Transit Line by Coverdale & Colpitts, January 15, 1954.

Report to the San Francisco Bay Area Rapid Transit Commission by Parsons, Brinckerhoff, Hall & Macdonald, January 5, 1956.

Report of the Montreal Transportation Commission for the Establishment of a System of Rapid Mass Transportation, June 1953.

Southern New Jersey Mass Transportation Survey by Parsons, Brinckerhoff, Hall & Macdonald, January 30, 1956.

PUBLIC SUBSIDY OF RAIL TRANSIT

Examination of the legislation and financial experience in the construction, acquisition and operation of the various transit systems described above reveals an interesting development in the attitude of the public toward mass transportation. Two apparently divergent theories as to public policy are found to be intertwined in the legislation establishing public transit systems and in their operation. One is the oft-stated principle that the transportation system must be entirely self-supporting, both as to capital and operating costs. In other words, this is an expression of a policy that all costs should be met by those who use the system. The other might be described as that of broad public benefit resulting from a system of mass transportation. This theory justifies using public funds for transit systems, either for construction or for meeting operating deficits or both, on the basis of public necessity for a system of mass transportation with the resultant benefits of increased property values, relief of street congestion, parking and the mass moving of passengers at peak traffic hours. Public financial support for this purpose, it has been argued, is no different from similar support of highways, airports and waterways. The two theories, however, become inextricably intertwined in the actual operation of existing transit systems as well as in the planning of proposed systems, under present-day conditions. When the issue has been clearly drawn between a progressively deteriorating system of mass transit and the provision of public subsidy, service has prevailed over cost.

FINANCIAL EXPERIENCE (1955) OF EIGHT
SELECTED TRANSIT SYSTEMS

In reviewing the current operations of the transit systems included below, it was necessary to place their financial data on a comparable basis. For the purposes of this study we were concerned with the ability of the systems to pay operating costs, required taxes, and current fixed charges.

The procedure for classifying these charges against current income differs in each of the systems. In general, the more recently created

authorities treat interest charges and current amortization, i. e., the repayment of currently maturing debt, as charges against current income. Any remaining income is then allocated to reserve funds for future debt repayment, replacement of plant and equipment, and surplus accounts.

The older transit systems or those following the procedure of private corporations make depreciation allowances out of current income. Current debt retirement is not treated as a charge against income, but such payments are made out of funds available as a result of non-cash charges (principally depreciation allowances) made against current income.

The latter method may result in charges against income which are either greater than current debt retirement or less than debt retirement. The first situation provides a reserve "cushion" for the transit authority; the second produces a hidden deficit which may sooner or later exhaust working capital. The first situation arises when there is a quantity of debt-free but not fully depreciated assets or when the expected economic, or depreciated life of the assets is less than the life of the bonded indebtedness. The situation in Toronto corresponds to the first alternative. The Toronto Transit Commission took over from its predecessor, the Toronto Transportation Commission, a large quantity of debt-free assets. The depreciation charges on these assets have served as a source of funds for current debt retirement.

The second situation, where debt retirement is greater than current depreciation charges, occurs in Detroit. In Detroit the deficiency has resulted in a reduction of working capital. This need not happen, however, if the system's revenue is adequate to produce a surplus, and over a period of years this deficit may be balanced out. In any case, assuming that the economic life of the asset is longer than the debt retirement period, no deficit should occur over the total life of the asset. At the same time in any one year or even over the period of debt retirement, the transit system may sustain a serious drain on its supply of working funds.

In general, it may be argued that a public authority or agency operating a transit system,

especially a newly constructed one, should be concerned with current debt retirement charges rather than with depreciation allowances. This gives its financial status a more realistic tone and means that the current generation of transit users, and general taxpayers, should the system receive public support, are paying for the transit system. It can be argued that, however, the generation which demands and creates the facility should bear the heaviest share of its cost despite the fact that the life of the system may be considerably longer than the life of the debt. In Chicago, this principle was actually extended to the point where the initial subway system was paid for prior to its con-

struction, perhaps even paid for by a generation which did not get to use the facility.

Many of these systems have restrictions on the allocation of their income. These restrictions are stipulated in either the authorizing legislation or the bond indenture. In general they require that operating expenses, interest and amortization have priority over sundry reserve accounts.

A financial summary of the eight selected rapid transit systems appears in Table 9. This table converts the official reports of the various systems to a common basis of comparison. Such adjustments as were required to this end are described in a footnote—continued as Ap-

TABLE 9
SELECTED RAPID TRANSIT SYSTEMS—1955 FINANCIAL EXPERIENCE (a)
OPERATIONS OF TRANSIT SYSTEM AND RELATED MUNICIPAL EXPENDITURES
(Amounts in thousands of dollars)

Item	Boston	Chicago	Cleveland	Detroit (b)	New York (b) City (c)	Phila- delphia	Shaker Heights	Toronto
Transit System								
Revenues	38,302	120,897	28,542	40,060	268,357	70,538	1,393	31,337(i)
Expenses—								
Operating	37,804	101,114	23,683	35,226	261,965	56,643	1,050	26,089
Direct Taxes (other than payroll)—								
Property .....	.....	.....	564	1,043	.....	211	64	601
Fuel and License	203	1,083	349	2	.....	1,049	.....	380
Other .....	.....	.....	.....	38	.....	212	.....	.....
Rentals for city-owned facilities	388(d)	291	x x x	x x x	x x x	3,915(g)	x x x	x x x
Other—Miscellaneous	10	.....	.....	.....	.....	.....	.....	460
Income/(deficit) Before								
Fixed Charges	(103)	18,409	3,945	3,751	6,392	8,508	279	3,807
Interest Charges	3,634	5,665(e)	1,215	573	x x x	2,294	31	2,341
Current Debt Amortization	1,864	3,959(e)	478	3,642(f)	x x x	1,173(f)	120	1,740(f)
Income/(deficit) After								
Fixed Charges	(5,601)	8,785	2,252	(464)	x x x	5,041	128	(274)
Related Municipal Ex- penditures								
Municipal Payments For—								
Interest	x x x	x x x	x x x	x x x	43,732	3,705(h)	x x x	x x x
Principal	802	x x x	x x x	x x x	37,980	4,283	x x x	x x x
Compensating Payments to Municipalities .....	.....	x x x	x x x	x x x	x x x	3,742(h)	x x x	x x x
Transit Surplus/(deficit) to City	(802)	x x x	x x x	x x x	(81,712)	(4,246)	x x x	(j)
Total Transit Surplus/ (deficit)	(6,403)	(k)	2,252	(464)	(75,320)	795	128	(274)
Per Cent Revenue to Ex- pense and Fixed Charges								
Direct and Indirect	85.6	107.8	108.5	98.8	78	101	119.5	99

x x x Indicates that this item does not apply.
(a) through (k)—See Appendix B.

pendix B. This financial experience may be compared even more effectively in terms of revenue miles operated, as shown in Table 10. These observations are significant—

(1) All but Boston were able to realize a current operating surplus before fixed charges;

(2) Four of the systems, Chicago, Cleveland,

Philadelphia and Shaker Heights, realized a surplus after fixed charges.

(3) As shown in Appendix A and Chapter IV following, the systems which have been able to earn their fixed charges have in each case enjoyed the use of some capital which was not acquired by borrowing.

TABLE 10
SELECTED RAPID TRANSIT SYSTEMS
COMPARATIVE OPERATING RATIOS AND REVENUE MILES (1955)

<i>City</i>	<i>1955 Revenue Miles Operated</i>	<i>Operating Ratio (1)</i>	<i>Total Surplus (deficit) per Revenue Mile After Fixed Charges</i>	<i>Debt Service Ratio (2)</i>	<i>Income Ratio (3)</i>
Boston	40,877,161	98.2	(\$157)	...	116.7
Chicago	163,069,463	83.6	.054	1.9	92.7
Cleveland	42,081,465	83.0	.054	2.3	92.1
Detroit	61,613,430	88.0	(.008)	...	101.2
New York City	373,043,642	97.6	(.202)	...	128.1
Philadelphia .....	.....	80.3	...	2.5	98.9
Shaker Heights	1,381,676	75.4	.093	1.8	90.8
Toronto	46,476,000	83.3	(.006)	...	100.9

(1) Operating Ratio—Operating expenses as a percentage of revenue.

(2) Debt Service Ratio—Number of times income before fixed charges covers fixed charges.

(3) Income Ratio—Operating expenses, taxes, fixed charges and debt service as a percentage of revenue.

CHAPTER IV

APPRAISAL OF OUTSIDE CREDIT SOURCES

The financing of a specific rapid transit proposal, as already noted in Chapter I of the Report, can be intelligently considered only in relation to the broad question of financing government in a metropolitan area. The major premise of each of the four Plans considered by Mr. DeLeuw is that it will render an essential service in both states. The engineer's report so finds. The evidence elsewhere adds confirmation if needed. The public credit needs already developed have three related sides:

- A. Provision of initial capital requirements on the credit of an issuer able to support annual debt service requirements in a manner acceptable to the municipal bond market;
- B. Provision of a means of underwriting annual income deficits, including an apportionment of this legal obligation within the metropolitan area; and
- C. Provision for the administrative organization of a public agency empowered to integrate and exercise the credit resources available.

It is well to recognize that the credit source and the responsibility for annual income deficits need not be identical. From the viewpoint of the municipal bond creditor, a general obligation of an issuer having the ability to meet debt service if necessary, is all that is required. From the viewpoint of an interstate or intermunicipal arrangement within the metropolitan area, the actual obligation to provide funds to meet the income deficit may be a matter of mutual agreement differing from the source of the credit; for example if bonds were issued on the credit of the state or federal government, the actual annual income deficit could still be recovered by some form of municipal contribution.

The scope of the problem and the implications of a successful solution, however, dictate use of a new bi-state agency—a premise upon which Mr. DeLeuw has proceeded with the full concurrence of this consultant. In passing, it

should be noted that any of the Plans could conceivably be implemented by a public body incorporated by the State of New Jersey to plan, finance and construct the part of the loop which would extend the New York City Subway System, and to contract with the New York City Transit Authority for the operation of the entire system. Such a contract could also provide for allocation of financial responsibility. This would be the narrowest possible concept of the metropolitan problem, and would so separate planning, finance and operation as to be a cause of confusion of responsibility between these two states or their political subdivisions. It is mentioned only as a least desirable alternative. Were such an arrangement to be seriously considered, it should be remembered that experience in this same metropolitan area indicates that fully effective action requires a single interstate agency. This was apparent in the development of the Metropolitan Rapid Transit Commission itself, as it was of the Port of New York Authority in 1921 which was preceded by the New York-New Jersey Tunnel Compact of 1919 under which administration was by two independent state commissions. Similarly, it was necessary in 1936 to create a single interstate agency to govern the Palisades Interstate Park Commission, even though the separate ten member commissions adopted by each state were integrated by overlapping memberships. The organization of a new bi-state metropolitan district is the subject of Chapter X of this report. Meanwhile it may be concluded:

The bi-state nature of the problem in operation and finance, and the hope of evolving an instrumentality which will be a prototype or will itself be expandable to deal with the entire metropolitan region, Long Island and Staten Island in particular, commends the choice of a bi-state agency to plan, finance and act in the bi-state interest. Its characteristics and composition, discussed in another Chapter, will depend upon the administrative and financial tasks assigned to it.

EQUITY CAPITAL

To require the new bi-state agency to finance its entire operation under the fixed charges of borrowed capital is to place upon it a burden which no privately owned public utility would contemplate. The analogy to borrowing in public finance is most apparent in connection with non-voting preferred stock. If a public body were able to issue such stock, it would avoid the necessity of providing out of current income for the amortization of capital which does not in fact depreciate, such as right-of-way, expensive tunnel excavation if not the physical tubes themselves, and other necessary land acquisitions. These are the principal elements in the cost of the bi-state loop, as shown in the engineering report. In this connection it is of interest to note that among existing public rapid transit systems, as more fully developed in Chapter III, those that have made any pretense of self-sufficiency have in each case enjoyed the benefit of using some capital which was not financed by borrowing for a new construction. For example

City of Chicago Transit Authority—Assets of previous private operators were written down upon acquisition; and original capital was provided from the city's tax-fed traction fund and a PWA grant. The authority has not been paying for the use of the city subway properties, and the city has financed extensions in the amount of \$10,000,000 with its own general obligation bonds.

Cleveland Transit Authority—An original capital subsidy was provided through the write-down of the assets of the Cleveland Railway Company upon acquisition and through the benefits of a right-of-way purchase contract with the New York-Chicago and St. Louis Railroad. Some continuing subsidy in terminal operations is also apparent.

Detroit Street Railways—Financed on general credit of the City of Detroit and also capital subsidy implied in write-down of assets upon acquisition of private facilities in 1922.

New York City Transit Authority—All capital requirements provided by general obligation bonds of the city; operation by the transit authority since 1953 is supported by

a capital program financed as part of the city's capital budget.

Philadelphia Transportation Company—This private corporation, owned by National City Lines, Inc., operates city-owned subway facilities under contract. These facilities, valued at \$200,000,000 were financed by general obligation bonds of the city. The rental payment to the city is less than the city's debt service and amounts to a capital subsidy of about \$40,000,000.

In the present proposals each of the four Plans would have the benefit of some of this type of original equity, although the effects are indirect and not readily measurable:

- A. Existing railroads and their large capital investment would be used to gather passenger traffic from the entire suburban area of New Jersey for transfer to the compact central system proposed under each of the four Plans.
- B. The physical plant of the Hudson and Manhattan Railroad would be acquired at a value, if any, written down without regard to replacement cost, due to its loss of earning power as a private enterprise as well as depreciation and obsolescence.
- C. Under Plans 2, 3 and 4, the extension of the New York City subway system would make use of the capital investment of the city to the extent that the existing subway is used to complete a loop system, but the City would be compensated for passengers carried in annual amounts estimated by Mr. DeLeuw as follows:

Plan 2	\$6,500,000
Plan 3	7,000,000
Plan 4	6,500,000

The fact that Plans 2 and 4 require substantially less capital investment than Plan 1 and produce less than one-half the net income deficit of Plan 1 illustrates the benefit of the hidden equity capital available in each of the lower cost plans, even though they do not possess the attractive qualities of a completely new and independent system envisaged in Plan 1.

The idea of a bi-state agency issuing some form of preferred stock, or perhaps a second lien bond, has some precedent in the matter of

financing various federal corporations. Most of the latter have issued some form of non-profit capital stock all of which has been held by the federal government. The possibility of a comparable support for the present project has been explored.

FEDERAL AID

National policy with respect to federal-state-local relations has within recent years been the subject of two major investigations. The Hoover Commission, formerly known as the Commission on Organization of the Executive Branch of the Government, reported on the subject of "Lending Agencies" in its report to the Congress, March 1955, and the Commission on Intergovernmental Relations, sometimes known as the Kestnbaum Commission, also reported to the Congress and the President in June 1955 more particularly on national-state-local relationships. Despite a history of federal loans and grants and guarantees for a variety of public and private purposes, neither report provides any encouragement that metropolitan rapid transit facilities might properly receive any form of federal aid.

In its report the Hoover Commission identified a total of 244.3 billion dollars in outstanding agency loans, insurance, guarantees and commitments for the six main groups of purposes of such federal activities, that is, aids to housing, to agriculture, to business, to foreign governments, and veterans life insurance and insurance of bank deposits. According to the same report, almost 17 billion dollars in federal capital stock and loans made to such agencies and over 14 billion dollars in further authority of the agencies to borrow from the federal treasury stands of record. While the RFC lending authority has been terminated, its lending authority formerly embraced the making of loans to railroads and business enterprises, and to public agencies for the purpose of financing public projects. This latter aspect included loans to states, municipalities, other political subdivisions of states, and to the buying of their securities and obligations. At any one time the aggregate amount of such loans outstanding was not to exceed \$200,000,000.

From 1932 to 1941 the RFC authorized 221 loans to 89 railroads, aggregating \$922,741,587. The most relevant and recent loan of special interest to this Commission's studies was one made in 1949 to the Triborough Bridge and Tunnel Authority of New York. This loan, one of RFC's largest, amounted to \$107,000,000. The reason for the loan was that construction had not been completed, and sufficient revenues to service full charges on operations had not been produced. Other examples of RFC loans which are of interest for their possible value as precedents were these:

1. The Pennsylvania Turnpike (\$35,000,000)
2. The Knickerbocker Village in New York (\$8,000,000)
- *3. The 240-mile aqueduct to carry water from the Colorado River in Arizona to southern California (\$208,500,000)
- *4. The San Francisco-Oakland Bay Bridge (\$73,000,000)

The RFC financed all of the Colorado River Aqueduct, except for \$2,100,000. Started in 1933, the project was opened in August of 1944. Interest payments on the aqueduct's bonds averaged \$7,000,000 annually during the 1940's. From 1952 to 1975 the interest payments will average somewhat over \$5,000,000 annually, and thereafter with maturities, they will decline gradually to 1988 when the final payment will be less than \$35,000.

On most self-liquidating loans such as those discussed above, the RFC charged 4 per cent interest while the RFC held the securities and on most of these projects the RFC financed the entire construction cost. Congress in 1953 enacted "Public Law 163" known as the RFC "Liquidation Act," which provided for the termination of RFC's lending authority as of September 28, 1953.

The attitude of the Hoover Commission toward this type of federal activity was expressed as follows:

Recommendation No. 19—That the program of urban planning and reserve of planned

(* The loans for these projects were authorized initially at 5 per cent interest. The bond market improved, however, and the RFC was able to get a premium for the securities so that the interest rate was reduced, first to 4 per cent then to 3½ per cent.)

public works in the Housing and Home Finance Agency be terminated.

Loans for Public Works—A former authority of the Reconstruction Finance Corporation (in liquidation) was revived by the Housing Act of 1954, that is the authority to purchase securities or to make loans to states, public agencies, public corporations, etc., on terms up to 40 years for public works. Loans may be made only if funds are not obtainable elsewhere on reasonable terms. There is no limitation as to the kind of public projects which may be financed. The loan authority of the agency is \$50 million.

The present authority to make loans to states, municipalities, commissions, and public corporations can extend to bridges, turnpikes, and other undertakings. Obviously, the financing of these types of projects is not an appropriate function of the Housing and Home Finance Agency, except in those situations where such construction is essential to public housing projects participated in by the federal government.

Recommendation No. 20—That the authorization of the Housing and Home Finance Agency to lend money for public works except as they are necessary for public housing projects be repealed.

The Commission on Intergovernmental Relations differed with the Hoover Commission on the matter of planning grants for metropolitan areas, but conspicuously emphasized that metropolitan area problems require state "leadership."

The Commission states in strong terms the nature of the problem of metropolitan areas and the particular interest of the national government in such functions as civil defense. But its specific recommendations are limited to a proposal for "an intensive nationwide study of governmental areas with special attention to metropolitan communities" (*Report*, p. 52), and to increased attention to metropolitan area planning by national and state governments. (*Report*, pp. 231-232.)

In view of these two major national efforts to give definition and content to federal-state-local relationships in the loan and grant area, it is inappropriate for this report to attempt any further definition of the issues. Your consultant is strongly of the opinion, however, that the same national policies which justify a

national interest in highway building within and without city limits and in the civil defense areas, would fully justify national financial participation in a program of mass public transportation within the metropolitan region. The various forms which such participation could take are already well developed in existing programs. Further action depends solely upon political values yet to be determined, but is hardly a reliable basis upon which to project the financial feasibility of current proposals.

STATE CREDIT

The possibility of resorting to the use of state credit of the States of New York and New Jersey for direct financing of the capital requirements of a bi-state loop, or to guarantee the obligations which might be issued by an interstate agency, has been fully explored. In this connection it is pertinent to observe, also, that the report proposing rapid transit improvements for the South Jersey-Camden-Philadelphia area suggested, admittedly without study or recommendation of the alternative, that one of the possibilities for making the South Jersey project financially feasible was a "guarantee of the rapid transit bonds by the two parent states or by responsible subdivisions thereof."¹

The use of state credit directly, and the assumption of state liability for local obligations, have some history which bears a brief restatement. As a result of unfortunate experience with railroad aid bonds issued during the 19th century, many state constitutions were amended to incorporate prohibitions against the "lending of state credit." In New York (Art. VII, Sec. 8) and New Jersey (Art. VIII, Sec. II, Par. 1) it is provided in the one case that "nor shall the credit of the state be given or loaned to or in aid of any individual, or a public or a private corporation or association," and in the other that "the credit of the state shall not be directly or indirectly loaned in any case." These provisions are broad in statement and even broader in philosophy. Their vitality is evident in the difficulty encountered by the

¹ See Smith, Barney & Company, *Analysis of Financial Feasibility of Proposed Rapid Transit System for Southern New Jersey*, a report prepared for Parsons, Brinckerhoff, Hall & Macdonald (January 1956), consulting engineers for the Delaware River Port Authority, on the Southern New Jersey mass transportation survey.

Supreme Court of New Jersey in 1953 in *Behnke vs. New Jersey Highway Authority*, 13 N. J. 14, in establishing the validity of a state guarantee of the bonds of the authority. The court was able to sustain the legislation only upon the theory that the use of state credit was for a state purpose and the form of administration of the highway program through an authority did not alter that state purpose.

In New York, similarly, the court of appeals has held that a public authority statute was unconstitutional where it authorized a county to issue its bonds for the benefit of the authority which did not serve the entire area of the county, thereby constituting a lending of the credit of the county. *Gaynor vs. Marohn*, 268 N. Y. 417 (1935).

Conclusion: Were either state to attempt to issue its own bonds or to guarantee bonds issued by a bi-state agency for rapid transit improvements, and such improvements were found by the court to be for a municipal rather than a state purpose, the courts of both states would probably be compelled to invalidate the arrangement.

The credit is required by a particular region of both states, but a state guarantee or the use of state credit directly would require a referendum in both states at which the people of the entire state would vote. Recent experience with state referenda on large bond issues has been inconclusive, but it certainly should discourage this means of financing the needs of a separate section or region of a state. Such a referendum could not be avoided, however, under the constitution of either state if state credit were to be involved.

Other practical reasons also would make recourse to state credit undesirable, as follows:

The financial situation of the two states is somewhat different.² In New York the state is already committed to the issuance of 1.39 billion dollars in new debt in the foreseeable future. For this state to take on additional debt for rapid transit purposes, especially where the need is not unavoidable, would be most unwise. In New Jersey, on the other hand, the state has refrained from making new com-

mitments to issue large bond issues because of the extreme stringency of the state's revenue picture. To look to that state for substantial capital support, therefore, would entail the real possibility of enmeshing the metropolitan rapid transit problem with the already controversial problems of state finance.

In both states it is clear that it would be distasteful to the rest of the state for the state government to establish any precedent of assuming responsibility for the special problems of urban centers.

Conclusion. The use of state credit as the direct means of financing cannot be ruled out absolutely but it presents such substantial elements of doubt as to be undesirable, namely:

1. The constitutionality is very questionable and could be established in New York and New Jersey only as the result of a direct test suit or the uncertain result of the process of constitutional amendment in each state;

2. A statewide popular referendum would be required in each of the two states, and the political history of such referenda cast doubt on their feasibility, especially in two states, for a metropolitan area project;

3. Each of the two states is already well committed in its borrowing power for needed state functions, and there is substantial doubt as to the policy of an able metropolitan area looking to the state for its financial support;

4. The precedent of either state undertaking to guarantee or finance credit needs of a particular urban area would be unfortunate in both states and has been either rejected or enmeshed in unresolved controversy, in New Jersey with respect to water supply and in New York with respect to rapid transit;

5. State financing would carry with it state appointment and control of administration, an unnecessary removal of local responsibility in the present situation.

EXISTING PUBLIC AUTHORITIES

Several existing public authorities have been considered as alternative sources of equity capital in the sense that they have an established credit base, including some surplus (equivalent of equity capital) and adequate

² Net debt March 31, 1957, of the State of New York was \$714,996,632 and of the State of New Jersey, \$100,166,000, exclusive in both cases of State-guaranteed highway authority debt.

current earnings. Five of the public authorities operating in the metropolitan region were carefully studied for the purpose of determining their capacity and availability to finance the proposed rapid transit system. In each case it should be understood that the bond resolution under which a public authority issues its bonds constitutes a contract between the authority and its bondholders.

It is evident that, in the discretion of the state legislature, the act under which the Authority functioned at the time it issued its bonds may be amended or supplemented to grant such authority wider powers—e. g., powers to construct, own, and operate a rapid transit system—than it possessed under the act at the time it issued its bonds. Nevertheless, such amendments of or supplements to the act as it existed at the time the bonds were issued may not constitutionally be enacted in such terms as to impair the bondholders' security under the original bond resolution.

Any attempt to issue bonds for rapid transit purposes under the bond resolution of those public authorities which originally possessed only the power to issue revenue bonds for highway, bridge, tunnel and other projects facilitating vehicular traffic would constitute such an impairment of the present bondholders' security.

This impairment results from the entirely different nature and extent of the risks encountered (1) in the operation of a vehicular toll facility and (2) in the operation of a rapid transit system. Consequently, the holders of the vehicular toll facility bonds would be subjected to risks they never bargained for and could not have foreseen at the time they purchased their bonds. The United States Constitution and the Constitution of each of the two states forbid the passage of any law impairing the obligation of contracts (Art. I, Sec. 10) and also forbid a state to deprive any person of life, liberty, or property without due process of law (14th Amendment, Sec. 1).

Detailed analyses of the situation of each of the five authorities appear in Appendix C, and may be summarized as follows:

1. *New Jersey Turnpike Authority*: Under the statute creating the Authority, it may not

lawfully undertake to finance a rail rapid transit system, since any such undertaking would impair the obligation of its contract with the holders of its outstanding bonds.

2. *New York State Thruway Authority*: In substance, the General Revenue Bond Resolution provides that all revenues of the pledged facilities are and shall be pledged for the payment only of: operating expenses of the pledged facilities; accrued debt service on the revenue bonds of the Authority and the Authority's bonds guaranteed by the State of New York; certain reserves for such debt service; reserves for insurance; any remainder to the Construction Fund.

The Construction Fund is in turn specifically limited for use for designated purposes only, and all of such uses are related to the construction of the thruway project, or any extensions or additions thereto or connection therewith, or of any other expressway or highway supported by an engineer's certificate that it "will not have an adverse effect on the net revenues." It is also financially impracticable for the Authority to consider the redemption and refinancing of its outstanding bonds in order to free them from the existing pledge.

3. *New Jersey Highway Authority*: The enabling statute and the general bond resolution of the Authority clearly limit its financing powers, as part of the covenant with bondholders, to the Garden State Parkway project, a connection between that project and the New York State Thruway, and any existing highway which constitutes an integral connection between portions of the Parkway project. A rail transit system could not legally be identified with any of the powers which might be exercised by this Authority.

4. *Triborough Bridge and Tunnel Authority*: The statute and the general bond resolution of the Authority, adopted January 22, 1952, authorizes the Authority to issue additional bonds for refunding and for certain purposes specified in the resolution, including enumerated bridges, and vehicular tunnels. The revenues of the first ten projects are pledged under the resolution, and represent the credit base of the Authority. In addition the resolu-

tion reserves the right to finance the Coliseum and the Brooklyn-Richmond bridge project and various other vehicular tunnels or toll bridges while the enabling statute reserves "the construction of any bridge or tunnel exclusively for railway rapid transit purposes" from a covenant with bondholders against construction of competitive facilities, the bond resolution seems to have fully precluded the use of revenues of the Authority's major facilities to secure any issue of bonds for rail rapid transit.

From a purely financial standpoint, this authority is already committed to the huge Narrows Bridge project and will be obligated to the Port of New York Authority to pay rentals sufficient to cover the total expenses of the Port Authority in connection therewith, including debt service, and finally will be obligated to purchase the project from the Port of New York Authority not later than 1969. In addition Triborough is required to conserve its borrowing power for financing Throgs Neck Bridge.

5. *The Port of New York Authority*: The Port Authority, as it is known, is authorized by the interstate compact between the two states to undertake rail rapid transit facilities, upon the concurrent authorization of both states. Its power in this regard will be strictly construed, *Port of New York Authority vs. Weehawken Township*, 14 N. J. 570 (1954) but there is no doubt that under the compact the two states could legally, by appropriate legislation, authorize the authority to undertake rail rapid transit. A careful analysis of its outstanding bond resolutions, particularly the consolidated bond resolution adopted October 9, 1952, and the general reserve fund resolution adopted March 9, 1931 and amended May 5, 1932, leads to the conclusion that the Port Authority has not by either of these resolutions divested itself of legal power in relation to rail rapid transit. It is equally clear, however, that financial and governmental considerations deprive the Port Authority of competence to undertake such a project.

The Authority is specifically prohibited by the compact from pledging the credit of either state, and is denied direct or indirect access to the taxing power in either state.

One of the specifications for the present comprehensive study, as written into the agreement between the Metropolitan Rapid Transit Commission and the Port of New York Authority, states that "the Port Authority is able to undertake transportation and terminal facilities which can be financed by revenue bonds only if competent estimates indicate that in the long run they will be self-liquidating in and of themselves." This agreement reflects the long established and well known policy of the authority to limit its investments to projects which, while temporarily unable to sustain themselves, may reasonably be expected to become self-supporting eventually.

Two basic factors justify the Authority in its policy: First, it has no taxing power and its ability to acquire private funds for its important public undertakings depends upon the confidence of the investing public that its net revenues from operations will not only cover interest and principal on its bonds, but will also provide sufficient reserves to serve as a cushion against lean years, catastrophe, changes in modes of transportation, or any other development which might impair its earning power; and, secondly, were it to follow the practice of undertaking deficit projects which do not eventually become self-supporting, its earnings from other projects would be permanently drained off and further expansion of its services to the public would be prevented.

Under its Consolidated Bond Resolution of October 9, 1952 (See Appendix C), moreover, each new project must meet an earnings test which could not be satisfied by any of the proposed bi-state rapid transit plans.

The financial history of the Port Authority, as well as its existing commitments, demand that we look elsewhere for the financial feasibility of rapid transit by rail. The marketability of the Port Authority's bonds was not established until 1931 when the two states sold the Holland Tunnel, a good revenue producer, to the Port Authority for its \$50 million construction cost. As of January 31, 1957, it had outstanding a total of \$386,348,000 in par value of funded debt. At that time, under existing legislative directives of both states, the Port Authority was committed to market up to

\$1,000,000,000 of new obligations during the next ten years to meet the needs of its program for aviation, marine and inland terminals and vehicular bridges and tunnels. Unlike general obligation bonds of a state or city, which sell because of the taxing ability and general economic strength of the entire community, the marketability of the Port Authority bonds, known as revenue bonds, is determined by the inherent quality of each project, and its net revenue prospects; the over-all earnings record of the issuing body and its reputation for sound management; and its financial strength established by accelerated debt retirement and the building of adequate reserves. Rapid transit not only is a demonstrated deficit operation but it has a bad reputation in the financial market for revenue bonds. To undertake it would hurt the Port Authority and the program it has already laid out.

This conclusion is confirmed by Dun & Bradstreet, the national municipal credit agency, in a credit survey report on the Port Authority (December 5, 1952, p. 8) in which they observe that a major factor in the ability of the Port Authority to enlist private capital on favorable terms, and to provide the metropolitan area with the benefits of the high marketability of its bonds, has been the "avoidance (by the Port Authority) of major projects that would freeze resources in the support of long term deficits."

In summary, there are substantial reasons why we cannot look to any of these public authorities for the financial feasibility of a rail rapid transit program, as follows:

1. The single purpose authorities may not impair the obligation of covenants with their bondholders limiting their financing to the stated purpose.

2. To use any of these authorities would impair their ability to discharge the responsibilities for which they were established, or to carry out plans and commitments already undertaken.

3. To use any of them would mean the further separation of a large area of local government from local control, since each of them is governed by a board appointed by or in conjunction with the governor of a state or the mayor of the City of New York.

4. The public authorities being completely dependent upon net revenues would tend to resist the expansion of deficit service into new areas, however desirable such an improvement might be from a public standpoint.

5. If any attempt were made to confer taxing power, directly or indirectly, on any of these public authorities, it would require such a complete change in their organization to require either a popularly elected governing body or the designation of a governing body by popularly elected local legislative officials, whereas the accepted purpose of the public authority is to provide for a business type operation independent of normal political restraints and direction.

6. Lacking the taxing power, any such public authority, be it a special purpose authority or a general purpose one like the Port of New York Authority, could never achieve the status of an effective organ of metropolitan government generally.

7. It is clearly apparent that many of the same reasons which have justified the creation of special purpose public authorities to separate self-supporting projects from the operations of general purpose units of government having taxing power, also require and justify the separation of tax supported operations from special purpose public authorities having no taxing power. In essence, there is room in the North Jersey-New York metropolitan region for the public authority which is confined to self-supporting revenue-producing projects and for another form of metropolitan organization which is concerned with tax supported projects and governmental services.

Recommendation: It is recommended that the proposed rail rapid transit system be financed outside the framework of existing public authorities in the metropolitan region.

POOLING OF TRANSPORTATION REVENUES

In lieu of the provision of equity capital, a substantial body of opinion has been developing along the line that it is possible and desirable to finance deficit operations in the transportation field out of the aggregate of all public transportation revenues. This notion which might be called pooling of transportation revenues goes

so far as to suggest the pooling of all revenues and expenses of the operation of public transportation facilities and of all public revenues from special taxes directly related to transportation service, principally the highway user revenues. In effect, this view was espoused by the recent report of the Bittenwieser Commission, and by reports previously issued with respect to rapid transit in the Philadelphia-Camden area and in the San Francisco Bay area.

The initial premise which seeks to justify the pooling of such revenues, be they operating revenues or taxes, is that all transportation facilities for mass transportation, be they rail or road, should be planned with an over-all concept of the needs of the metropolitan area. With this metropolitan planning requirement there can be no quarrel. From planning, the idea proceeds to common management and financing.² Most recently, Luther Gulick, former city administrator of New York, proposed the creation of a regional transportation authority for the North Jersey-New York metropolitan area with complete jurisdiction over all forms of public transportation in the area.³ The idea is not so much to achieve more efficient administration, but rather to make it possible for concerted planning of the use of alternative physical facilities as well as the construction of needed additional facilities. Such planning would in turn be effectuated by a price structure designed to encourage or discourage the use of particular facilities. A very frank statement of this view has been expressed from a personal standpoint by another city official as follows:

“A further aspect of the New York metropolitan transportation problem is that it extends into three states, and no existing government agency is capable of dealing with it. What is required is an integrated transportation system which will serve the metropolitan region as a whole, consider the relation of the various types of facilities to each other, pool their resources, and construct

a price structure to promote the most efficient pattern of use. The most promising approach so far is the creation of a metropolitan region transportation authority, with jurisdiction over all forms of transportation in the area.

“Complete unification of control over transportation facilities is a long way off, since it involves conquering more strongholds than ever confronted a monarch trying to create a unified kingdom out of a collection of feudal demesnes. It would involve some measure of control over commuter railroad services and terminals, private and public mass transit, principal highways and streets, and municipal parking facilities, not to mention the preserves now ruled by the three powerful authorities—New York City Transit Authority, Port of New York Authority and Triborough Bridge and Tunnel Authority. But such a degree of unification is unnecessary and probably not desirable. We can, I think, begin on a much more modest scale.

“The most important thing in urban transportation planning, to restate my point, is to recognize what has been almost completely ignored to date—that public charges have an important role to play and that they have price (restrictive) functions as well as tax (revenue raising) functions.

“Unless we limit road space with reference to what motor vehicle users are willing to pay for in competition with other land uses, plan facilities for collecting from users where appropriate, and integrate automobiles and mass transit charges, I think we shall not soon find a way out of the urban traffic dilemma.”⁴

Your consultant has carefully examined the proposal for the pooling of revenues and its implications from the viewpoint of the legal, administrative and financial aspects of this survey. Its able proponents have offered all of the favorable arguments. As a solution to the metropolitan rapid transit problem, however, the proposal obviously falls short of the feasibility test.

1. The assumption that unified planning requires unified finance is refuted by existing experience with the federal-state highway construction program, the administration and

² See Owen, W., *The Metropolitan Transportation Problem* (Brookings Institution, 1956) pp. 249, et seq.

³ See Paper by Luther Gulick in *The Next Twenty-Five Years in Government in the New York Metropolitan Region*, Proceedings of the 25th Anniversary Meeting of the New York Regional Plan Association, October 6, 1954.

⁴ Lyle C. Fitch, *Transportation Pricing in A Metropolitan Area*, in *National Tax Association Proceedings of 48th Annual Conference, 1955 (1956)* p. 181.

financing of public education, to mention two major services of government.

2. The assumption that governmental action should be used to "channel" the habits and preferences of the citizenry into manageable areas of public administration is questionable at best.

3. The consolidation of public mass transportation facilities solely for financial purposes overlooks the financial and managerial advantages of separation of self-liquidating facilities from tax-supported facilities.

4. Whatever the merits of the theory of pooling all public revenues from transportation activities, it is surely apparent to its advocates that the idea requires a broader basis of support before it can be employed as an immediate and practical solution to a specific problem.

5. An effective unit of metropolitan government, motivated by a need for immediate solu-

tion of the rapid transit problem, might prove itself the instrument of achieving a satisfactory regional basis of planning and finance for public transportation generally, as well as rail rapid transit.

Conclusion: The pooled revenues idea should not be considered as a basis of supporting any of the four metropolitan rapid transit plans.

ADVANCES AND APPROPRIATIONS

The history of financial self-liquidating projects has many precedents for state or federal provision of equity capital. Such capital has been made available in the form of advances, either repayable or non-repayable, and outright appropriations to various public authorities. For example, in other regions the following amounts of capital are known to have been contributed:

<i>Name of Receiving Agency</i>	<i>Amount of Capital</i>	<i>State or Federal Source</i>
1. Pennsylvania Turnpike Commission	\$29,250,000	Federal public works administration
2. Montana State Water Conservation Board..	3,433,898 (cash) 3,326,752 (in kind)	State and other governmental units
3. Platte Valley Public Power and Irrigation District	2,913,777	State of Nebraska (other loans and grants from PWA)
4. South Carolina Public Service Authority ...	34,438,264	Various State and local governmental units

In the North Jersey and New York metropolitan area, similarly, at least twenty-two public authorities have received capital advances or appropriations, or both, from the States of New York and New Jersey. As shown in Table 11, the advances have aggregated \$177,064,328, of which \$52,323,845 has been repaid. In addition, appropriations totaling \$87,608,745 have been made to supposedly self-liquidating public projects. The largest advances have been made to transportation facilities, with the New York State Thruway Authority the major beneficiary of over \$109,000,000. A smaller but important

payment of advances has been made to the Port of New York Authority totaling \$19,480,000 by both states, which was fully repaid in advance by a cash transfer of \$15,640,816 discounting the balance; to the Jones Beach State Parkway Authority of \$16,110,000; and to the Ogdensburg Bridge Authority of \$15,110,000. It does not appear that either of the latter has been repaid in whole or in part.⁶ Among the largest appropriations, as shown in the same Table, the Triborough Bridge and Tunnel Authority and its predecessors received over \$47,000,000 from

⁶ See footnote (g) Table 11.

the federal government and the City of New York, and the Buffalo Sewer Authority received \$11,208,616 from the federal government.

The principle of city, state and federal contributions to the capital of public authorities is thus well-established throughout New York State and within the metropolitan region. It is apparent that few of these large enterprises

have been able to commence operations without some assistance of this kind. Where the original capital funds were provided in the form of repayable advances, moreover, the over-all repayment record has not been impressive. To date, less than one-third of the total amount of advances has been repaid by the various authorities.

TABLE 11

CAPITAL ADVANCES AND APPROPRIATIONS TO PUBLIC AUTHORITIES IN NEW YORK STATE

<i>Authority and Source</i>	<i>Advances</i>		<i>Total of All Appropriations</i>
	<i>Granted</i>	<i>Repaid</i>	
Port of New York Authority—			
States (New Jersey—\$8,950,000)	(a)\$19,480,000	(i)\$19,480,000	\$533,639
Lake Champlain Bridge Commission—			
States (Vermont—\$80,000)	200,000	.....	.....
Federal .....	.....	.....	362,500
Power Authority of State of New York—			
State	(b)3,600,000	200,000	.....
New York State Bridge Authority—			
State	7,500,000	7,500,000	100,000
Triborough Bridge and Tunnel Authority—			
State	158,700	154,200	.....
City (New York City)	108,534	.....	20,700,000
Federal .....	.....	.....	(c)26,394,523
Bethpage Park Authority—			
State	500,000	.....	.....
Federal .....	.....	.....	875,287
Jones Beach State Parkway Authority—			
State	16,110,000	.....	.....
Regional Market Authority's (Four)—			
State	1,127,081	20,000	15,000
Federal .....	.....	.....	545,194
Rockland Westchester Hudson River Crossing Authority—			
State	40,000	.....	.....
Dormitory Authority—			
State	184,000	184,000	6,900,000
New York State Thruway Authority—			
State	(d)109,062,005	27,912,500	(e)
Nassau County Bridge Authority—			
State	115,900	115,900	.....
County (Nassau County)	1,143,804	(f)	.....
City (New York City) .....	.....	.....	800,000
World Trade Corporation—			
State .....	.....	.....	205,000

OUTSIDE CREDIT SOURCES

TABLE 11—Continued

CAPITAL ADVANCES AND APPROPRIATIONS TO PUBLIC AUTHORITIES IN NEW YORK STATE

Authority and Source	Advances		Total of All Appropriations
	Granted	Repaid	
County Water Authorities (Five)— (4 County—1 inter-county authority)			
State (to inter-county authority)	\$150,000	.....	.....
County (to the 4 county authorities)	689,000	\$606,000	.....
Ogdensburg Bridge Authority—			
State	(g)15,110,000	.....	.....
Long Island Transit Authority—			
State	460,000	.....	.....
Whiteface Mountain Authority—			
State	548,629	8,429	\$150,000
Niagara Frontier Bridge Commission—			
State .....	.....	.....	1,050,000
Saratoga Springs Authority—			
State .....	.....	.....	1,794,000
Buffalo Sewer Authority—			
Federal	32,675	.....	11,208,616
City (Buffalo) .....	.....	.....	(h)
World War Memorial Authority—			
State .....	.....	.....	17,500
State Parking Authority (Four)—			
City (from cities where authorities located) ..	680,000	.....	56,486
Grand Totals	\$177,064,328	(i)\$52,323,845	\$87,608,745

Source: Compiled from Temporary State Commission on Coordination of State Activities, Staff Report on Public Authorities Under New York State (1956) Legis. Doc. (1956) No. 46, Chapter VIII.

(a) Repayment provisions of construction advances were usually at four per cent (4%) interest per annum, with payment of principal at rate of two per cent (2%) per annum.

(b) Balance to be repaid when outstanding debts mature—1995 or later. No interest.

(c) Includes grants to previous authorities which the present authority superseded and appropriations benefiting authority.

(d) Balance is to be repaid by April 1, 1958.

(e) Present estimates are that the authority will receive \$53,000,000 in Federal grants for construction.

(f) Balance is now \$1,204,577, including accrued interest.

(g) Repayment without interest was to be from bonds sold within eighteen months after bridge opened.

Moody's *Municipals*, August 10, 1956, page 1114 reports the sale of bonds by the Ogdensburg Bridge Authority to repay the State advances (N. Y. Laws 1956, ch. 864, § 9), but the Comptroller of New York State bought the bonds at private sale.

(h) In 1938 the authority received the sewer system of the City of Buffalo at no cost.

(i) The total shown for the Port of New York Authority is a full repayment credit although the cash transfer discounted the obligation before its due date for \$15,640,816. The grand total of advances repaid in cash is therefore \$3,834,184 less than the sum of the items above.

The DeLeuw report indicates that any of the feasible plans will cover from two-thirds to three-fourths of the annual debt service requirements. Upon the basis of these estimates, an annual income deficit could be completely eliminated if the aggregate of capital contributions in the form of "preferred stock," second lien bonds, advances or appropriations by the federal government, the states and political sub-

divisions of the metropolitan area were to aggregate approximately \$80,000,000. Although some formal pledge of direct and indirect taxing power would still be necessary, in order to provide sufficient coverage of the annual debt service requirements, there might be no need to have recourse to an annual tax levy of any kind to support the new rapid transit facility on the basis of estimated revenue.

It is, of course, unlikely that the full amount required for this purpose could or would be provided. It is reasonable to expect, however, that a lesser, but substantial, capital contribution could be made in the form of repayable advances by the two states. A desirable form of such advances, which would spread their burden on the state treasuries over a period of four or five years, would provide for the payment of interest during construction out of such advances. This would have the important effect

of reducing the total amount to be borrowed and would actually cost the two states less than the saving to the bi-state agency because of elimination of the interest charge on borrowing to pay interest during construction, as well as the elimination of that interest itself from the total amount to be financed. Based upon engineering estimates of the investment required for each of the four plans, the effect of providing equity capital in the form suggested may be illustrated as follows:

<i>Item</i>	<i>Plan 1</i>	<i>Plan 2</i>	<i>Plan 4</i>
Total Amount to be Financed	\$505,000,000	\$350,000,000	\$268,000,000
Interest during Construction	40,500,000	28,000,000	21,500,000
Estimated Annual Interest and Amortization	24,000,000	17,000,000	13,000,000
Revised Annual Interest and Amortization after State Advances for Interest during Construction	22,000,000	15,500,000	12,000,000
Annual Savings Due to Advances	2,000,000	1,500,000	1,000,000
Estimated Annual Income Deficit	8,300,000	4,100,000	3,000,000
Revised Annual Deficit Based Upon State Advances for Interest during Construction	6,300,000	2,600,000	2,000,000

Source: The above data are taken from Table 16, in Chapter VII following.

The specific allocation of responsibility for such a capital contribution, and its appropriate source, should be a matter of negotiation among the interested parties after the creation of a bi-state agency and the adoption of a specific rapid transit plan. For present purposes, it would be sufficient for an interstate compact to provide that the bi-state agency may apportion

between the two states the initial capital requirements to pay interest during construction.

Recommendation: It would be desirable and proper for the two states to assist the metropolitan area with appropriations or repayable advances to meet the cost of interest during construction—which would amount to \$28 million over a four-year period under Plan 2, for example.

CHAPTER V

MUNICIPAL CREDIT SOURCES

The need for a permanent and stable basis of financing, as well as the lack of adequate outside sources, requires primary emphasis on the local credit resources of the bi-state agency. This requires a means of integrating municipal credit within the metropolitan region for purposes of the proposed bi-state agency. In this connection it has been necessary to give extended consideration to the elaborate legal limitations, direct and indirect, upon the debt incurring power of municipalities in the state of New Jersey and of the City of New York under the state constitutions and statutes. The alternatives which were selected for more serious consideration included the following:

A. The issuance of bonds by counties and municipalities in the metropolitan area and the deposit of the proceeds with the bi-state agency for use in financing the new project.

This alternative has some precedent in the method of financing the North Jersey district water supply commission. It is rejected as a basis of financing metropolitan rapid transit for several reasons:

1. The theory of the water supply scheme that each municipality is buying a certain amount of water cannot apply to a rapid transit scheme under which each municipality cannot buy a certain amount of transportation;

2. The amount of capital that would be provided by such a scheme would be determined by the individual borrowing power of each of the municipalities in the metropolitan area rather than by the aggregate borrowing power of the entire area;

3. Serious constitutional objections would be presented by the lending of credit of each of the municipalities to the bi-state agency, in the absence of an arrangement whereby the

individual municipalities were purchasing a particular share in the enterprise.

B. The issuance of bonds by the bi-state agency to be purchased in predetermined amounts by the various municipalities in the metropolitan area, presumably with funds they would acquire by issuing their own bonds in the open market.

This alternative is rejected essentially for the same reasons applicable to alternative A, and for the further reason that this very arrangement was used in the railroad aid bonding history which preceded the adoption of constitutional provisions in both states prohibiting the lending of credit and presumably intended to bar this kind of financing.

C. A guarantee by the municipalities of the area of bonds issued by the bi-state agency.

This alternative was rejected for the same constitutional reasons implicit in alternatives A and B and for the further reason that the purchasers of the bi-state agency bonds would have the uncertainty of looking to a multitude of municipalities for the ultimate security, beyond the earnings of the enterprise, which would lie behind the obligations. This would undoubtedly increase the borrowing cost.

D. The integration of municipal and county credit on a regional basis through the issuance of obligations by the bi-state agency which are supported directly or indirectly by the taxing power, but not by the direct credit, of the municipalities within the metropolitan area.

This alternative, which is more fully developed below, avoids the difficulties of the other three alternative forms of credit, and also offers the advantage of not encumbering the existing debt margins of the various municipalities under constitutional and statutory limitations in the two states.

MEASURES OF LOCAL DEBT-INCURRING
CAPACITY

Before we turn to the specific means of providing the necessary funds, it is prudent to consider the broader question:

Could the North Jersey-New York metropolitan area safely add the equivalent of \$10-\$12 million in annual payments for public debt for rapid transit to the existing debt structure of states and local governments that make up the area?

There are no absolute measures of the limits, that is the safe limits, of public borrowing. In effect, such borrowing like other borrowing is a pledge of future income to pay for the present enjoyment of public improvements. In this sense, the borrowing for rapid transit must be considered in terms of the aggregate or foreseeable needs of the metropolitan area for these and other improvements. It is plain that the next ten years may be expected to produce a continued high level of borrowing for the construction of public schools, for highway programs, for state institutions and for the large scale development programs of the public authorities. It is neither necessary nor practicable to appraise here the impact of all of this public borrowing, together with the potential private borrowing over the same period. But it is necessary to recognize that any rapid transit project will be in the market for financing, together with all that are seeking funds. In due course the market for the various securities will find its own level.

Certain central characteristics are predominant in the metropolitan area, however, and furnish a notable credit base. The Regional Plan Association report and other sources confirm these trends:

Growing population and employment throughout the area as a whole;

Growing income payments, consumer sales,

and value added by manufacture within the metropolitan area; and

Growing investment per employee which, based upon the Regional Plan Association projections of employment, implies a substantial additional investment in taxable property throughout the area.

The basic economic strength of the area may be briefly indicated by some key measures.

Employed Labor Force—

1,495,000 in 1955, will be 2,245,000 by 1975, or an increase of 50 per cent.

Full Value of Taxable Property—

\$26,823,954,000 (1956) or a per capita property valuation of \$4,185—experience indicates the total by 1975 will grow with the growth in population.

Percentage of the Total Covered Labor Force Engaged in Manufacturing—

highly diversified as follows:

<i>County</i>	<i>Per Cent Manufacturing</i>
Bergen	58%
Essex	45%
Hudson	63%
Mercer	55%
Middlesex	70%
Monmouth	37%
Morris	49%
Passaic	64%
Somerset	65%
Union	60%
Orange	45%
Rockland	57%
New York County	60%

Per Capita Effective Buying Income—

\$2,137 average (or one-third greater than the average for the United States which is \$1,602) distributed by county as follows:

MUNICIPAL CREDIT SOURCES

<i>County</i>	<i>1955 Population (000)</i>	<i>Effective Buying Income (000)</i>	<i>Per Capita</i>	<i>Per Family</i>
Bergen	687	\$1,644,209	\$2,391	\$7,804
Essex	980	2,191,449	2,236	7,510
Hudson	642	1,199,561	1,868	6,155
Mercer	259	515,059	1,989	7,358
Middlesex	327	622,184	1,897	6,598
Monmouth	278	512,377	1,838	6,136
Morris	203	410,359	2,016	7,187
Passaic	366	722,969	1,975	6,347
Somerset	119	222,263	1,865	6,695
Union	461	1,087,372	2,358	7,990
Orange	156	232,059	1,481	4,937
Rockland	103	154,330	1,498	5,890
Manhattan	1,885	4,312,258	2,288	6,776
Metropolitan Area Totals	6,466	\$13,826,449	\$2,138	\$6,931
United States Average .....	....	\$265,601,325,000	\$1,602	\$5,465

(Source: Sales Management, May 10, 1956)

Public debt in relation to the diversified and high level economy of the metropolitan area is not excessive. This conclusion is justified by the two measures of debt burden which are commonly accepted: The tax-supported debt in relation to the full valuation of taxable real estate; and the tax-supported debt per capita. There is a substantial concensus of informed judgment that net tax supported debt for all overlapping purposes may be incurred by local governments with safety so long as the ratio of outstanding debt to the full valuation of taxable property of the local government does not exceed 15 per cent, or the per capita total of debt does not exceed \$250 per capita, whichever is greater. It should be emphasized that these are upper limits, not desirable levels of debt, but for present purposes it is clear that the debt burden in the metropolitan area is well within any safe limit.

The situation of individual taxing districts (municipalities) within the area is, of course, a matter of considerable variation, both because of basic economic factors and in some respects because of a date selected for the calculation. Even in the City of New York, for the fiscal year 1957-1958, the normal change in calculation of the debt margin will produce an added \$100 million of borrowing power within the city's constitutional debt limit.

The overlapping net debt condition in the ten counties in New Jersey which have been considered is favorable even in relation to assessed valuations (which averaged about 30 per cent of full value as compared with 96 per cent in New York City). The debt incurring power of the City of New York is limited generally to 10 per cent of the five-year average full value of taxable real estate in the city. In addition the city may incur an additional 2 per cent for low rent housing; and certain debt for rapid transit, docks, hospitals and pollution control facilities, and all debts for water supply purposes, are exempt from the constitutional limitation. The counties and school organizations within the City of New York have no independent debt incurring power, that is, there is no overlapping tax-supported debt for local government beyond the debt incurred by the City government. In other New York counties, by comparison, the county has separate debt incurring power of 7 per cent plus the larger cities 9 per cent and smaller 7 per cent, and in smaller cities school districts may incur an additional 5 per cent or more with the approval of the voters, the Board of Regents and the State Comptroller. These debt limits thus permit a total overlapping debt of from 16 per cent to 19 per cent. In such counties, water debt and self-liquidating debt are also excluded from the debt limitation.

The gross funded debt of the City of New York was \$3.7 billion before any deductions or exemptions. This was a *gross* debt of 15 per cent of the full valuation of taxable property in the city in 1956, and approximately \$370 per capita. As compared with these gross figures, however, the City Comptroller's Debt Statement of January 1, 1957 reported a general debt incurring power of \$343,850,115 remaining to the City within its 10 per cent constitutional debt limitation. This amount was subject to various reservations and adjustments, leaving only \$66,976,217 of unreserved debt margin available within the limit. In addition, debt incurring power exempt from the 10 per cent limit was still available for rapid transit construction and hospitals. The rapid transit status is sufficiently pertinent to the present inquiry to set forth in Table 12.

Both the Mayor and the Citizen's Budget Commission have respectively emphasized that the city's needs for more subway improvements are greater than it can reasonably finance.

From the viewpoint of economic burden of public debt and capacity to pay, the City of New York is in good condition. Under

existing legal limitations on its debt incurring power, and in light of its long range capital program, however, the City of New York could not be expected to contribute any direct credit resources to a bi-state rapid transit system. The city will have a substantial interest and clear benefits in one or more of the Plans, however. This factor is the basis of recommendations elsewhere in the report.

Among New Jersey's municipalities in the nine counties having a substantial interest, the debt burden as of December 31, 1955, was very favorable even on a gross debt basis. As shown in Table 13, in the 278 municipalities, the average ratio of gross debt (excluding county debt) to full valuation of real estate was 4.07 per cent and the average gross debt (excluding county debt) per capita was \$167.16. All but eighteen of the municipalities had such gross debt to property ratios of less than 6 per cent and few had gross debt per capita which was as much as \$200. The county averages are shown in Table 14, and separate distributions within each county in Appendix D.

Regional rapid transit may not compete directly with other needs for the borrowing

TABLE 12
NEW YORK CITY
STATEMENT OF DEBT-INCURRING POWER FOR CONSTRUCTION OF RAPID TRANSIT
AS OF JANUARY 1, 1957

Original Credit ¹		\$500,000,000
Corporate Stock Issued	\$30,000,000	
Serial Bonds Issued	83,910,000	
Contract, Land and Other Liabilities	111,400,756	
		225,310,756
Total Indebtedness		
Remaining Debt-Incurring Credit		\$274,689,244
<i>Less Reservations:</i>		
Remainders of Authorizations	\$45,772,945	
Unauthorized Amount in the 1957 Capital Budget ...	121,182,031	
Reservations ²	35,000,000	
		201,954,976
Unencumbered Balance of the \$500,000,000 Credit		\$72,734,268

¹ Exempt pursuant to Section 7. D of Article VIII of the State Constitution, effective January 1, 1952.

² Reservation made pursuant to Section 3. 1 of Agreement with the New York City Transit Authority in accordance with Chapters 200 and 201 of the Laws of 1953.

capacity of local governments. If there is such competition, however, there is ample evidence that (1) the tax base tends to grow with growing population to affect growing needs; and (2) that areas of predicted rapid population growth, according to the Regional Plan Association, show ample reserve borrowing capacity in relation to full valuation of taxable property. These are not conclusive observations due to several variables and the effect of changes in the price level unrelated to changes in population, but the data are presented in the Appendix for the worth they have. It thus appears that the metropolitan area as a whole could readily stand the added burden of supporting from tax

sources an additional one-half billion dollars in debt for rapid transit if necessary, although the engineering estimates plainly indicate that from $\frac{2}{3}$ to $\frac{3}{4}$ of the capital requirements of the bi-state loop and H. & M. Railroad rehabilitation could be financed from net revenues available for debt service out of current operations.

Conclusion: Without taking any account of the stimulating effect of the improvement itself on the economy of the entire region, it is clear that there are ample resources within the metropolitan region to carry the anticipated debt load of any of the bi-state rapid transit plans plus the annual suburban railroad service deficit.

TABLE 13

GROSS DEBT PER CAPITA AND IN RELATION TO FULL VALUE REAL ESTATE IN 278 MUNICIPALITIES
BY GROUPS OF GROSS DEBT AS PER CENT OF FULL VALUE REAL ESTATE—TOTALS FOR
NINE COUNTIES IN NEW JERSEY SECTOR OF METROPOLITAN AREA

<i>Gross Debt As Per Cent of Full Value Real Estate</i>	<i>Number</i>	<i>Gross Debt* December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Gross Debt Per Capita</i>
No debt	9	.....	\$24,699,691	7,900	.....
Under 1%	25	\$4,875,361	685,070,669	135,530	\$35.97
1.00- 1.99	59	29,155,817	1,957,349,007	366,900	79.47
2.00- 2.99	54	72,283,721	2,801,868,242	604,900	119.50
3.00- 3.99	54	111,147,988	3,223,946,471	614,900	180.76
4.00- 4.99	38	104,631,824	2,393,148,076	461,000	226.97
5.00- 5.99	21	111,153,238	2,022,136,063	567,400	195.90
6.00- 6.99	6	100,548,571	1,485,346,961	529,700	189.82
7.00- 7.99	6	66,217,063	914,775,966	419,900	157.70
8.00- 8.99	3	29,113,149	344,240,544	100,800	288.82
9.00- 9.99	1	6,013,253	66,327,142	36,800	163.40
13.00-13.99	2	19,211,500	145,131,248	68,900	278.83
Total	278	654,351,485	16,064,040,081	3,914,630	.....
Avg. 4.07%					Avg. 167.16

* Includes all overlapping municipal and school debt, but does not include county debt (see Table 14 footnote).

TABLE 14

AVERAGE GROSS DEBT PER CAPITA AND IN RELATION TO FULL VALUE OF TAXABLE REAL ESTATE
MUNICIPALITIES IN TEN COUNTIES
NEW JERSEY SECTOR OF METROPOLITAN AREA

<i>County</i>	<i>Average Gross Debt as Per Cent Full Value Real Estate</i>	<i>Number of Municipalities</i>	<i>Gross Debt* December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Average Gross Debt Per Capita</i>
Bergen	3.20%	70	\$112,407,456	\$3,507,542,754	630,530	\$178.27
Essex	4.72%	22	152,903,617	3,238,916,942	940,100	162.65
Hudson	6.98%	12	96,602,524	1,383,200,011	644,800	149.82
Mercer	3.71%	13	34,919,225	942,296,383	250,000	139.67
Middlesex	3.58%	25	54,087,533	1,511,653,625	319,800	169.13
Monmouth	3.35%	52	37,626,264	1,124,319,003	269,700	139.51
Morris	3.47%	39	39,189,245	1,130,982,752	190,000	206.26
Somerset	2.57%	21	14,429,328	562,169,389	110,100	131.06
Passaic	4.60%	16	65,277,666	1,418,850,351	370,000	176.43
Union	3.74%	21	81,827,852	2,186,405,253	439,600	186.14

* Includes all overlapping municipal and school debt, but does not include county debt as follows:

<i>County</i>	<i>Gross Debt</i>	<i>Per Capita</i>
Bergen	\$11,378,500	\$18.09
Essex	31,759,000	33.78
Hudson	17,492,672	26.82
Mercer	4,390,000	17.56
Middlesex	4,113,000	12.86
Monmouth	7,193,456	26.67
Morris	6,174,000	32.49
Somerset	1,864,000	16.93
Passaic	5,841,000	15.76
Union	6,920,000	15.74

CHAPTER VI

REVENUES OF THE BI-STATE AGENCY

The borrowing capacity of a bi-state agency will be directly related to its capacity to raise net revenues applicable to its debt service. With financing basically dependent upon local credit resources as recommended in the preceding chapter, the integration of those resources resolves itself into a combination or choice among four sources of revenue:

1. *Net revenues from operations* available for fixed charges—The DeLeuw Report estimates that the recommended plans could cover from $\frac{2}{3}$ to $\frac{3}{4}$ of the annual debt service requirements. This is reasonable as compared with most other mass rapid transit systems, but leaves no possibility of financing purely on the security of the earning power of the enterprise. Such financing would require an engineering projection that at least two times the annual debt service could be covered by net earnings.

2. *Contractual agreements* with states and political subdivisions in the metropolitan area which may be pledged as security for bonds issued by a metropolitan agency. This method, or a variation of it, is used on a smaller scale in court approved district water supply and sewerage projects in New Jersey, and the South Jersey Port District comprising seven counties in the Camden area (R. S. 12:11-26 et seq.), as well as in the Elmira (N. Y.) Parking Authority arrangement. It has been found inapplicable to the proposed rapid transit plans as a general method of financing. A metropolitan agency should be provided, however, with power to contract with political subdivisions and other federal, state and local agencies of government for mutual purposes.

Because of the large number of municipalities involved, however, it would be undesirable to attempt to base financing upon the individual voluntary contracts of the municipalities.

An alternative would be to use the county as a contracting unit. This would have the major disadvantage of requiring the system to be financed within the legal borrowing power of each county and the City of New York. Since the bi-state loops cannot be built without benefiting all the counties, moreover, and it is impossible to foresee how many would enter into a contractual arrangement, a more independent and substantial means of financing is decidedly preferable.

3. *Direct taxing power* delegated to the metropolitan agency. This requires extended consideration, which follows.

4. *Mandatory charges* to the constituent municipalities and counties in the metropolitan area could be imposed by the respective state legislatures. This is a form of indirect recourse to tax support which has some precedent in both states. It merits extended consideration, which follows.

The choice among these alternatives cannot and should not be made without reference to the ultimate concept of the new bi-state agency, whether it is to be single purpose or multi purpose, to the legal and economic limits of the kind of taxing power that could be delegated to the agency; and to the effect of the decision on the marketability of the bonds to be issued. Nor is any such decision made for the purposes of financing rapid transit necessarily conclusive as to future uses of the agency for other regional purposes. Without attempting to predict the ultimate scope of the functions of a new metropolitan agency, the two ways of vesting it with independent financial capacity (Items 3 and 4 above) have been carefully examined.

DIRECT TAXING POWER

The power to tax within a metropolitan area consisting of two states must necessarily conform to the constitutional requirements of both of them. This is a peculiarity of the present problem which thus far has not been solved anywhere in the United States. Within a single state, the law is reasonably well established that the power to tax is essentially a legislative power, and that it may be delegated to local legislative bodies for local purposes as an historical exception to the general rule of the non-delegability of the powers of a state legislature.

In both states the courts have applied the old political dogma of "no taxation without representation" to establish the legal principle that the delegated power to tax may be exercised only by or through a popularly elected body or representatives selected by the local legislators within and from the constituency to be taxed. The court of appeals in New York has said that the power to tax "cannot be delegated, except as the legislature may confer upon the municipalities or political subdivisions, which are through the local authority's representatives of the people and participants in the government of the state, powers of providing revenue for local government and public purposes." *Gautier vs. Ditmar*, 204 N. Y. 20, 27, 97 N. E. 464 (1912).

The court of last resort in New Jersey similarly has held that the power to tax may not be delegated to the governing body of a district appointed by the Governor and not chosen locally within the area to be taxed. *Van Cleve vs. Passaic Valley Sewerage Commissioners*, 71 N. J. L. 574, 60 Atl. 214 (1905); *Township of Bernards vs. Allen*, 61 N. J. L. 28, 39 Atl. 716 (1897).

These cases do not, however, limit the power of the legislature to exercise its power of taxation directly, and to create and define a district of special benefit within which the cost of a public improvement may be assessed either generally or in proportion to special benefit realized by individual property owners. See *Tide-Water Co. vs. Coster*, 18 N. J. Eq. 518, 9 Am. Dec. 634 (1866); *Van Cleve vs. Passaic Valley Sewerage Commissioners*, supra. Taxes

specially related to some public work or service must therefore be distinguished as between two types:

(1) Those taxes which are levied according to individual benefit—this is the familiar special assessment which is used in the case of local improvements; and

(2) Those which are levied according to some measure of ability to pay (such as ownership of property ad valorem) but within a district determined with reference to special benefits—this is the familiar special district used to provide municipal services such as fire protection, water supply, within a limited area of the municipality.

The decision whether to use a special tax is one to be made by the legislature rather than the courts, and the courts will not upset it in the absence of a deliberate attempt to take the property of one group of taxpayers or area for the sole benefit of another. See *Brewer, J., in Illinois Central R. R. vs. Decatur*, 147 U. S. 190, 37 L. Ed. 132 (1893), a special assessment case. While no interstate bodies are known to have been delegated the power to levy either general taxes or special benefit taxes within a benefited area, the financing of the waterfront commission of New York harbor is closely analogous in that a special benefit assessment is, in effect, levied upon the benefited industry.¹

Beyond the limits fixed by the courts on the delegation of taxing power to a bi-state metropolitan agency, there are specific provisions of the constitution of the State of New York which impose further limitations. Article VIII, Section 3 prohibits the creation of any municipal or public corporation, other than the conventional political subdivisions (and certain others not here pertinent) to which the legislature delegates the power both to contract indebtedness and to levy taxes upon real estate. The provision was placed in the Constitution in 1938 so as to eliminate the possibility of creating additional district corporations like

¹ The interstate compact provides for the levy, assessment and collection of a payroll tax upon the shipping industry, which shall be sufficient together with all other revenues and reserves of the bi-state commission to pay its cost of administration of the compact. See *Waterfront Commission Compact*, consented to by Congress, August 12, 1953, 67 Stat. 541, Art. XIII.

the Albany Port District. That district does not have the power to levy taxes directly but may require municipalities within the district to levy an annual tax on real estate directly on its behalf.² The section does not expressly state whether it applies to public corporations created by interstate compact. Article X, Section 5, on the other hand, which further restricts the authority of the legislature to create public corporations possessing the power to contract indebtedness and to collect rentals, charges or tolls, expresses the policy that it shall not apply to a corporation created pursuant to an interstate compact.

It is significant that since the legislature has all powers of government not taken away by the Constitution, the constitutional limitation in question does not prohibit creation of public corporation or district with debt incurring power supported by non-property taxes.

Within the present constitutional framework in the bi-state area, therefore, there are these conditions to a direct delegation of taxing power by interstate compact:

(1) Such a delegation would require that the governing body of the bi-state agency should be popularly elected. The mechanics of achieving such election would be exceptionally difficult for the reason that the constituency would be spread throughout the metropolitan area and within two states.

(2) Under the present constitution of New York, the agency probably would not be permitted to levy a direct tax upon real estate if it had the power to incur debt—which it would undoubtedly require.

(3) An agreement would be required not only within but also between the two legislatures as well as the two governors on one or more non-property taxes to be utilized by the agency.

Political experience in both states discourages any likelihood of agreement upon these questions of tax policy. Even if agreement were possible, it would present difficult technical

problems in the selection of an appropriate tax base, particularly as follows:

- (1) the adequacy of the yield;
- (2) the need to co-ordinate with existing general tax policy and tax levies in the two states; and
- (3) the justification of a general tax levy to support a single facility which would serve an area consisting of only parts of the bi-state taxing jurisdiction.

Some thought has been given to the selection of taxing power peculiarly related to rapid transit. All of the alternatives examined under this heading have been rejected for two main reasons: either that they presented esoteric and theoretical forms of the exercise of taxing power, difficult to justify and awkward to administer and a nuisance in character; or that they conflicted with the basic premise which justifies the support of rapid transit by the taxing power, namely, that it is of general benefit to the area served rather than of special benefit to the riders or to other groups in its total impact.

A principal technical consideration in the selection of potential tax sources, the co-ordination of tax levies within the area, is especially difficult to resolve due to the great differences in the tax systems of New York and New Jersey. The State of New York has a widely diversified tax base, employing both corporate and individual income taxes, as well as the death duties, cigarette tax, alcoholic beverage levy, highway user levies and pari-mutual betting taxes upon which New Jersey relies for the great bulk of its state revenues. Within the metropolitan area itself, the City of New York employs a general business tax measured by gross receipts, a consumer sales tax and various lesser yielding but important miscellaneous excise taxes on public utilities, cigarettes, horse racing, hotel room occupancy, liquor, and motor vehicle use, whereas the municipalities in the New Jersey section of the metropolitan area have only the liquor license revenues and the yield of a public utility franchise tax measured by gross receipts. In both states the real estate tax is a mainstay of local government, and pay-

² This section was construed in: *Salzman vs. Impellitteri*, 203 Misc. 486, af'd 281 App. Div. 1023, part. af'd 305 N. Y. 414 (1953) (N. Y. City Transit Authority); *Albany Port District Commission vs. National Commercial Bank and Trust Co.*, 259 App. Div. 115, af'd 283 N. Y. 768 (1940).

roll taxes are used by the state to finance social insurance programs.

Any delegation of direct taxing power to the bi-state agency must necessarily consider this difference in the taxing systems of the two states, as well as the general problem of overlapping and duplication of taxes in federal, state and local governments which has developed over the past fifty years.³ Granted these considerations, potential sources of taxing power and the estimated yields, for the bi-state agency may be summarized as follows:

<i>Tax</i>	<i>Estimated Annual Yield</i>
(1) Ad valorem tax levy on real estate (maximum rate \$1 per thousand of full value)	\$27,000,000
(2) Per capita employment tax at \$5 per job covered by unemployment compensation	7,500,000
(3) Payroll income tax (maximum rate one-half of 1%)	30,000,000

The enumeration of these revenue yields is not to suggest that the particular taxes are recommended at this time, or that others could not be developed. It can be said for them, however, that except for the real estate tax, they are not now levied in either state although the City of New York has legal authority to levy a payroll tax as part of its rapid transit package legislation. (*Laws of New York*, 1953, ch. 202, §§ 25-b and 25-h.) They also could be readily administered together with existing taxes on payrolls or property without the necessity of setting up a new and independent administrative machinery within the bi-state agency.

Tax Supplements. A further form of direct taxing power which avoids the difficulty of selecting a new tax for use by the bi-state agency would employ the principle of the tax supplement. The principle could be applied to a metropolitan unit of government with respect to existing state and local taxes whose incidents can be plainly identified as within the metropolitan area. The delegation of power to levy

a tax supplement would authorize the metropolitan governmental unit to vote an additional rate, within fixed limits, upon an existing tax base being used by the state, which the state would collect along with its own levy and turn the proceeds over to the metropolitan unit. The supplement would be effective, of course, only within the metropolitan taxing jurisdiction. It could be carried one step further, moreover, by authorizing the metropolitan unit to supplement a tax or taxes being used by constituent municipalities within the area. The alternative of a flat millage on real estate, noted above, is one illustration of a way in which the metropolitan unit would employ a supplemental levy on a tax base already being administered by the local units.

The tax supplement provision could permit the bi-state agency to raise its total revenue by levying different taxes in each of the two states, depending upon authority delegated by the Interstate Compact in recognition of the different taxing systems prevailing. The tax supplement idea would raise all of the difficulties of a delegation of direct taxing power, and would have the further disadvantage of any novel and relatively untested fiscal device. While it might eventually be developed as an instrument of metropolitan area finance, it does not appear acceptable for application to the immediate problem of financing bi-state rapid transit.

General Tax Policy. The basic difficulty in the selection of a suitable tax source to be used directly by the bi-state agency is that tax policy cannot properly be determined in isolation with respect to a single function of government. The history of the States of New York and New Jersey, particularly with reference to the City of New York, and to the needs of the North Jersey-metropolitan area, is marked by extremely contentious differences of political values as to taxation. In New Jersey these difficulties have been documented by the reports of the Commission on State Tax Policy⁴ and in New York by the recent reports of the Bird Commission, the Heald Commission and the

³ See "Overlapping Taxes in the United States," prepared for the Commission on Intergovernmental Relations by the Analysis Staff, Tax Division, U. S. Treasury Department (January 1, 1954).

⁴ Commission on State Tax Policy, *Fifth Report: Taxation and Public Policy in New Jersey (1950)*; *Sixth Report: The General Property Tax in New Jersey (1953)*; and *Seventh Report: Public School Financing in New Jersey (1954)*.

Buttenwieser Commission⁵ in that order. These reports approach the problems of public finance from widely varying perspectives, but they all emphasize that tax policy must be determined concurrently with broader questions of state-local relations, fiscal and economic goals, and the changing budgets of state and local governments.

In light of the practical and policy considerations fully set forth in comprehensive reports made for both states, it is clear that the selection of a tax source or sources for a bi-state agency in the isolated context of a rapid transit study would be unwise even if it were feasible to arrive at some concensus of policy from these comprehensive fiscal reports. There can be no doubt, however, that the key to the ultimate development of a new bi-state agency as a multi-purpose unit of metropolitan government will depend upon its ability to finance through taxation those services which are not self-liquidating. Some form of independent taxing power for the bi-state agency would obviously contribute to this development. Such power would have the further advantage of making it unnecessary to undertake the divisive process of allocating or apportioning the annual deficit of the agency among the many primary taxing districts in the metropolitan area. The direct taxing power, as in Toronto, could be used on the theory of a general benefit to the area justifying the levy throughout the region. A further possibility is that properly selected independent taxing power from the above alternatives, could enable the bi-state agency to assume the function of inter-municipal equalization of tax burden in relation to services provided for the region. But these are considerations well beyond the requirements of a practical solution to the problem before the Commission.

Special Assessments. Beyond any consideration of general revenues to meet annual deficits, the special benefit assessment for

⁵ Temporary Commission on the Fiscal Affairs of State Government (Frederick L. Bird, Chairman) *Report* (1955); Temporary Commission on Educational Finances (Henry T. Heald, Chairman) *Report: Financing Public Education in New York State* (1956); New York State-New York City Fiscal Relations Committee (Benjamin J. Buttenwieser, Chairman) *A Report to the Governor of the State of New York and the Mayor of the City of New York* (November 1956).

capital purposes (which reduces the need for annual income from other sources for debt service) could be an important source of financing.

The history of efforts to finance rapid transit by special assessment is not encouraging. All the experts on public finance are agreed that the method is sound and desirable. Except for the street railway tunnels in San Francisco and the Moffat Tunnel in Colorado⁶ all of the public experience has been to the contrary. Yet there are peculiar considerations in relation to a bi-state loop which warrant a re-examination of the merits of this method of financing part of the cost for this special type of improvement.

There is ample evidence of the special increase in land values in the zones centering around subway stations, even though informed opinions differ as to the effect on land adjacent to the line. For example:

1. "The investigations conducted by this Board disclose that the existing rapid transit lines have at least doubled the value of the property in the areas served, and that property located at stations has everywhere gained three times its earlier value." (Board of Transportation, Communication to Board of Estimate and Apportionment, 1925.)

2. "Figures show that timely extensions of transportation facilities cost less than the enhancement of land values produced thereby. In the case of one of the subway extensions in New York City the aggregate increase in land value of a district extending about a half mile on either side of the subway, due to the building of the subway, and in excess of a normal rise of \$13,500,000 was about \$31,300,000. The cost of the line was about \$5,700,000. Had the property which was benefited borne this expense through the form of an assessment, after having such assessment, there would still have remained an aggregate profit of \$25,600,000 in excess of the normal rise in value. . . . In the case of subways and elevated lines with stations several blocks apart, the zones will be concentric about those stops. Express stops confer a larger benefit and justify larger zones and heavier assessments." (National

⁶ The validity of these projects was upheld by the courts respectively, in *Larsen vs. City-County of San Francisco*, 182 Cal. 1, 186 Pac. 757 (1920); *Milheim vs. Moffat Tunnel Improvement District*, 72 Colo. 268, 211 Pac. 649, aff'd. 262 U. S. 711 (1923).

Municipal League, Committee on Sources of Revenue, *Special Assessments: A Means of Financing Municipal Improvements*, 3rd Ed., New York, 1929, pp. 18-19.)

3. "This type of deferred benefits is well illustrated in a survey by the North Jersey Transit Commission, undertaken for the purpose of determining the possibility of financing rapid transit construction by special assessments. As a hypothetical case this commission considered the construction and resultant effects of the Hudson Tunnels, particularly the effect of the station at Journal Square in Jersey City upon the adjacent territory. (Cornick, P. H., in *Report of the North Jersey Transit Commission*, p. 81. The construction here mentioned was privately financed by the Hudson and Manhattan Railroad Co., with the Pennsylvania Railroad co-operating. The first service began in 1908, but the Journal Square station was not thrown open until 1912.) It was proven that the impetus given to the development of the surrounding territory was not immediately felt; in fact it was several years after the completion of the tunnel before the influence of this station became apparent. . . . Other contributing conditions have been considered and comparisons have been made with similar localities, with the result that an excellent case is established in support of the contention that the increase in value arises from the influence of the rapid transit station." (Arthur Rowland Burnstan, *Special Assessment Procedure*, Special Report of the State Tax Commission No. 1, Albany, 1929, pp. 65, 66, 67.)

4. Professors Robert M. Haig and Carl S. Shoup in reporting to the Mayor's Committee on Management Survey of the City of New York in 1953, recommended:

"That a strong effort be made to extend the use of special assessments to assist in meeting the costs of additional types of outlay, for example, to recover part of new subway costs by levies upon increased land values attributable to the location of subway stations and even to cover certain types of maintenance costs such as street repairs." (Haig and Shoup, *The Financial Problem of the City of New York*, p. 314.)

The best argument, on principle, against the use of special assessments is that the large in-

creases in value adjacent to stations, as elsewhere, are reflected in increased assessments which enable the municipality to finance its costs out of general taxation. The fallacy in this view is that it neglects the matter of tax equity among taxpayers who share the general tax burden. It would lead to the conclusion that special assessments are never justified, for subway stations or any other local improvement. Moreover, the claimed increment in total tax base would occur in very different proportions among the counties and municipalities as compared with their responsibility for financing the new rapid transit project. (See Chapter VIII, *infra*.)

Special assessments for subway financing may no longer be worthy of consideration by the City of New York, for many reasons not relevant to a new bi-state loop: the bulk of the City's system has long been completed, benefits of subway development are so widely diffused that federal and state tax systems compensate for inequities among taxpayers, and many non-property taxes affect the distribution of the tax burden.

As to a bi-state loop, however, the weight of all considerations favors some use of special assessments to finance the cost of station construction:—

1. The benefit is limited and specific.
2. The distribution of capital cost by a metropolitan unit of government would be more clearly related to economic gain than by any other method.
3. It could, in combination with other measures, avoid the necessity of any resort to a general levy throughout the metropolitan area.
4. It would facilitate an allocation of costs between rider and non-rider beneficiaries of the system.

If the policy of special assessments is accepted as a matter of public policy, it is recommended that the cost of new stations only shall be assessed by a proximity method based upon

benefit zones established for each of the subway stations. Such a method could be applied directly to property within one-half mile radius of the new stations in Manhattan under Plan 1 or 2, but a special study would be required to establish proximity for the transfer stations to be built in outlying areas of New Jersey. For these stations proximity might be established for communities along the line of railroads served by the transfer station. The cost of all other construction of trackage and structures and right-of-way should be provided by the rider or by general revenues of the system. Special assessments could be made payable over as much as fifty years in recognition of the deferred benefit factor.

The effect of special assessment financing would vary to the extent that new subway stations are required by the alternative plans. Including interest during construction and financing charges the costs of subway and transfer stations have been estimated as follows:

Plan 1	\$92,941,000
Plan 2	49,712,000
Plan 4	28,750,000

If these sums were available from special assessment, the annual deficit calculated by the engineers would be greatly reduced, if not eliminated, as shown by Table 16, in Chapter VII. The precise calculations would necessarily depend upon the extent to which construction costs not directly part of station cost estimates, but essential to station functioning might be included in the assessment, as well as upon the extent to which special assessment of transfer stations in New Jersey might prove feasible.

The adverse history and the difficulties of special assessments are not under-rated, nor is financial feasibility dependent upon their use. In view of their clear equity and special application to a bi-state loop—

It is recommended that any new metropolitan agency be authorized to finance appropriate parts of its cost by special assessment, as it may determine pursuant to law, and to call upon its constituent political subdivisions to exercise this power of assessment on its behalf.

MANDATORY CHARGES—INDIRECT TAX SUPPORT

The purpose of mandatory charges imposed by the State Legislatures, as an indirect access to the taxable resources of the area, is to afford the obligations of the bi-state agency the backing of the governmental power of taxation to the extent that the facility did not earn its debt service requirements. Several methods to accomplish this result, in the absence of direct taxing power being vested in the bi-state agency, have been considered:

1. A delegation of power to the bi-state agency to certify its deficit, in pre-determined apportionment, to the various municipalities in the metropolitan area, which would be placed under a legislative mandate to include the amounts certified in their respective local budgets;
2. A delegation of a similar power to the bi-state agency to certify its deficit to the respective state fiscal officers, allowing each state to raise its requirements in such manner as it may determine, and to remit the proceeds to the agency;
3. Provision by Interstate Compact for the earmarking of certain state or municipal revenues, to the extent needed to make up annual deficits, combined with alternative one or two.

The first of these alternatives has been selected as having no greater legal difficulties than the others and considerably more practical appeal. Our approach has been conditioned by the obvious advantage of avoiding the delay and uncertainty of result attendant upon the process of constitutional amendments.

(1) *Lending of Credit.* Both state constitutions prohibit the "lending of credit" by the state or any municipal corporation to any public or private corporation. (New York Art. VIII, Sec. 15. New Jersey Art. VIII, Sec. III, Par. 2.) In general these prohibitions were designed to eliminate the experience of the 19th century when state and local governments became financially embarrassed due to the issuance of railroad aid bonds. In both states the courts have held that this type of prohibition does not apply to the borrowing of money or the guarantee of loans by the state or a municipality for its own purposes even though the

purpose is effectuated through the instrumentality of a separate public corporation, for example a highway authority or a school district [*Behnke vs. New Jersey Highway Authority*, 13 N. J. 14 (1953); *Union Free School District No. 3 vs. Town of Rye*, 289 N. Y. 469]. It has also been established that this type of constitutional prohibition does not prohibit the annual levy of a tax or taxes and the appropriation or grant of funds derived therefrom by the taxing district to another public body for a public purpose of the taxing district [*Comereski vs. City of Elmira*, 308 N. Y. 248, 125 N. E. 2d 241 (1955); *Western N. Y. Water Co. vs. Erie County Water Authority*, 305 N. Y. 758, 113 N. E. 2d 152 (1953) (repayable advance by Erie County to a water authority held not prohibited lending of county credit since this was a lending of its assets, not its credit); *Romano vs. Housing Authority*, 123 N. J. L. 428, 10 A. 2d 181 (1940)].

In *City of Camden vs. South Jersey Port Commission*, 4 N. J. 357, 73 A. 2d 55 (1950), the New Jersey Supreme Court had before it the validity of an agreement, pursuant to statute, whereby the city and the port commission entered into a contract under which the municipality would lend to the port commission certain sums for the purpose of financing a river front pier and warehouse to serve city commerce. The Commission had power, under the statute, to issue bonds from time to time in anticipation of the payments to be made to it under the contract, but the bonds were not to be an indebtedness of the contracting municipality. The moneys loaned by the municipality were eventually to be repaid by the port commission together with interest at the rate of 4 per cent annually. In upholding the validity of this contract, as against the contention that it violated the above cited provision of the New Jersey Constitution, the court stated flatly:

“It is well established, not only in New Jersey but in most of the states of the Union, that such prohibitions do not apply to gifts or appropriations or loans to a public corporation to finance a public purpose. Nor can there be any doubt in the instant case that the defendant Port Commission is a public corporation and that the money advanced to

it is being used for a public purpose.” (4 N. J., at 368.)

The courts of New York have similarly upheld grants by one municipality to another where it was of benefit to the grantor, and have held that the prohibition as to local lending of credit relates only to borrowing by a local unit for the benefit of another without benefit to itself. [*Bogart vs. County of Westchester*, 185 Misc. 561, af'd 270 App. Div. 274, app. dismd. 296 N. Y. 701 (1946); *Union Free School Dist. No. 3 vs. Rye*, 280 N. Y. 469 (1939); *Salzman vs. Impellitteri*, 203 Misc. 486, af'd 281 App. Div. 1023, part. af'd 305 N. Y. 414 (1953).]

Conclusion: In neither state is there any constitutional objection, based upon the lending of credit and gift clauses, to annual support of a metropolitan district by appropriations from the constituent municipalities of which it may be the corporate agency and instrumentality for the better furnishing of services on a metropolitan area basis.

(2) *Creation of District Corporations with Power to Contract Debt and to Levy or Require the Levy of Taxes on Real Estate.* A provision peculiar to the constitution of New York (Art. VII, Sec. 3) prohibits the creation of any district corporation other than the conventional forms of political subdivisions and a few specific types of districts (not including rapid transit) which have the power both to contract debt and to levy or cause to be levied taxes on real estate. The purpose of this amendment was undoubtedly to bar the spread of the type of district known as the Albany Port District, which possessed the power to fix its own rates of service and to cause real estate taxes to be levied on its behalf by submitting an annual budget to the two cities in its area which were then required to levy real estate taxes for their proportionate shares. This arrangement had been upheld in *Callanan Road Imp. Co. vs. McMullen Co.*, 253 App. Div. 424, 2 N. Y. S. 2d 666, affm'd 280 N. Y. 536, 20 N. E. 2d 7 (1939) and it is presumed that the constitutional provision only bars the same kind of arrangement.

Where there is no power conferred to levy or compel the levy of an annual real estate tax, other than as a remedy for default, it seems

clear that this constitutional provision does not apply. [(*Comereski vs. City of Elmira*, 308 N. Y. 248, 125 N. E. 2d 241 (1955) (upholding the validity of the Elmira Parking Authority arrangement with the city whereby the city obligated itself to turn over part of its parking meter revenues to the authority each year to defray any deficit in the funds of the authority available for the payment of its bonds).] Similarly, the validity of the legislation of 1953 creating the New York City Transit Authority was upheld even though the City of New York undertook, once it acted under the statute, to pay the capital costs of the authority for the ensuing ten years. The court held that since the city was not obligated to impose real estate taxes for the payment of its commitments to the authority and could levy other types of taxes, there was no violation of Article VIII, Sec. 3. *Salzman vs. Impellitteri*, 203 Misc. 286, 124 N. Y. S. 2d 369, aff'd 281 App. Div. 1024, 122 N. Y. S. 2d 787, part. aff'd 305 N. Y. 414, 135 N. E. 2d 543 (1953).

Conclusion: The constitutional prohibition in New York, relating to public corporations with power to incur debt and to levy or require the levy of taxes on real estate must be limited to its known purpose. The constitution does not cover public corporation of two states which could not be created by the New York legislature alone and with power limited to place a general charge upon local budgets which, in the discretion of the elected local governing body, may be paid out of non-property tax revenues such as state aid, excise taxes, earnings of public enterprises, etc.

(3) *Mandatory Charge by Legislature vs. Delegation of Taxing Power.* In both states, as noted above, the courts have interpreted the constitutions to require that local taxation and local representation must concur; accordingly, the power to tax may be delegated only to popularly elected representatives of a duly constituted taxing district possessing powers of local government. (*Van Cleve vs. Passaic Valley Sewerage Comm'rs, supra., Gautier vs. Ditmars, supra.*) Under this rule a considerable variety of special districts have been upheld in both states. The principal requirement

of these cases is that the power of direct taxation be exercised by elective officers and that the tax be spread within the area to be served or benefited.

The essential quality of the power to taxation is not to determine how much shall be spent but rather how the public burden shall be distributed. It is significant that at least one case has re-affirmed that such elective officers may appoint others with power to certify to the elective officers the amount required for a particular municipal service. (In re *Newark School Board*, 70 Atl. 881 (Sup. Ct., 1907.) This practice is followed by metropolitan districts in California, Massachusetts and Toronto. An approach to the problem via the legislative control over taxation in each of the two states is most promising. As stated by Judge Cooley (*The Law of Taxation*, 4th ed., 1924, Volume 1, pp. 914-916):

“Speaking generally, it may be affirmed that the rule in most states is that in any case in which compulsory taxation is found necessary, in order to compel a municipal corporation or political division of the state (1) to perform properly and justly any of its duties as an agency in state government, or (2) to fulfill any obligation legally or equitably resting upon it in consequence of any corporate action, the state has ample power to direct and levy such compulsory taxation, and the people to be taxed have no absolute right to a voice in determining whether it shall be levied, except as they may be heard through their representatives in the legislature of the state. On the other hand, the general rule is that if the purpose of a tax is local rather than general, the legislature cannot compel a municipality, county, or the like, to levy such a tax nor can the legislature itself levy such a tax; and that it is within the power of the legislature to impose a tax upon a particular subdivision or municipality of the state when in its judgment it is for the benefit of the locality as well as that of the state at large.”

Judge Cooley adds, moreover, that in some states, including New York, the courts have gone further and held “that the legislature has supreme power in regard to taxation, and may itself impose taxes, or compel the local sub-

division to impose them, regardless of whether the purpose of the tax is purely local or not. . . .” (Ibid.)

This statement of the law is supported by *People vs. Flagg*, 46 N. Y. 401 (1871) (an act requiring the city of Yonkers, without its consent, to issue bonds for raising money which was to be expended in the construction of highways in the town, in the manner prescribed by the act, was held constitutional); and *Buchanan vs. Town of Salina*, 270 App. Div. 207, 58 N. Y. S. 2d 797, aff’d 297 N. Y. 508, 74 N. E. 2d 460 (1945) (a franchise tax statute which allocated to school districts in towns in Onondaga County only, one-third of the receipts of the tax paid to towns in that county possessing industrial elements, was held valid). In the last cited case, the court declared:

“Next to the police power of the state, the least limited of all the powers of government is that of taxation. That power is lodged in the state legislature which is practically unfettered by any constitutional limitations. . . . Yet despite the absence of any express constitutional provisions [requiring equality and uniformity] it is true that the underlying principle of all taxation is that it must be uniform and equal. However, that requirement is confined to the levy and assessment of the tax, and ordinarily does not apply to the distribution or application of the revenues derived therefrom. . . . In considering this particular question we must bear in mind that the legislature was allocating the tax revenues, not solely for a local purpose but one in which the entire state was interested, namely education. It must be presumed that the legislature found conditions in Onondaga County warranting the allocation of these moneys to the school districts of the towns of that county alone, of all the school districts in the state. . . . In this state the apportionment of tax revenues is a matter resting in the discretion of the legislature.” (58 N. Y. S. 2d at 802, 803.) (Accord. *People vs. Ronner*, 185 N. Y. 285, 77 N. E. 1061 (1906).)

In both states the courts have re-affirmed the power of the legislature to impose mandatory charges upon local governments, to support a local service of statewide interest. See, for example, *Tobin vs. LaGuardia*, 276 N. Y. 34, 11

N. E. 2d 304 (1937) and 290 N. Y. 119, 48 N. E. 2d 287 (1943) (City required to pay expenses of maintenance of a state regimental armory within the city); *Gubner vs. McClellan*, 130 App. Div. 716, 155 N. Y. S. 755 (1909), (local taxation by New York City to pay salaries of certain employees of the Public Service Commission, a state agency, was upheld as a mandatory charge for governmental purposes).

Conclusion: District financing may employ the device of a mandatory charge upon local budgets, under state legislative authority.

(4) *Certification of Financial Needs by One District to Another.* Both states have a substantial history of legislation authorizing various public corporations and districts to certify their needs to a primary taxing district which then becomes obligated to raise the required funds and to remit them to the certifying body. This is basically an application of the legislative control over the use of local taxing power as in the mandatory legislative charge discussed above. It has been upheld in *McAneny vs. Board of Estimate and Apportionment*, 232 N. Y. 377, 134 N. E. 187 (power of the transit commission in New York City to require the levy of taxes upheld on the theory of the state’s plenary power over taxation and municipal corporations); *Zitel vs. Fuhrmann*, 101 Mis. 109, aff’d 183 App. Div. 448 (1917) (certification by trustees of the city and county building to the respective political subdivisions for maintenance expense); *Tobin vs. LaGuardia*, 290 N. Y. 119, 48 N. E. 2d 287 (1943), (trustees of an armory building authorized to certify mandatory expenditure imposed by the legislature); *Comereski vs. City of Elmira*, supra (support for credit of the city parking authority based upon right of the authority to certify its deficits to the city); *In re Newark School Board*, (not officially reported) 70 Atl. 881 (N. J. Sup. Ct., 1907), (upholding the constitutionality of vesting power in a board of school estimate to determine and certify the requirements for operating the public schools); *Passaic vs. Consolidated Police, etc., Pension Fund Commission*, 18 N. J. 137 (1955) (held that state pension fund commission could lawfully be delegated the power to determine the proportionate share

each municipality must bear of the amount required to bring the fund up to an actuarial solvency).

In the opinion of your consultant, there is nothing in the *Van Cleve* opinion, supra, which would bar a statutory plan for support of a bi-state agency by a certification given effect as a mandatory charge on the local budget. In that case, the Passaic Valley Sewerage Authority was established by statute, with a board of commissioners to be appointed by the Governor. The statute provided that the indebtedness of the district "shall be a charge upon all persons and property in the municipalities or taxing districts lying in whole or in part within said sewerage district." The sewerage commissioners were authorized to determine the amount to be apportioned and that amount was "to be assessed upon all persons and property within the taxing area, as other general taxes. . . ." The court noted three main factors relating to the taxing powers of the board of commissioners: (1) that the amount to be raised by taxation was in the sole discretion of the commissioners appointed by the Governor; (2) that the tax was to be levied on an area not coterminus with the sewerage district; (3) neither the area of taxation nor the sewerage district was a political subdivision or "invested with any governmental function."

With reference to these issues, the *Van Cleve* case held that the power of direct taxation for local purposes could not be delegated to commissioners appointed by the Governor (following the leading case of *Bernards Township vs. Allen*, supra). The court also held that an area outside the sewerage district could not be taxed to support the sewerage district—another proposition of general application. Beyond this, however, the court expressly emphasized that:

"Nothing in this opinion is intended to imply a lack of power in the legislature to effectuate the object expressed in this act by means that are in harmony with the fundamental principles of taxation, illustrated by the decisions I have cited." (71 N. J. L., at 585).

The issues raised by the case did not present, and the court did not consider, a legislative plan

whereby the governing body of the district would be selected by local constituent representatives, and the distribution of the tax burden would be left to the discretion of the locally elected officials, even though the amount to be raised might result from the action of their representatives on the governing body of the district. It is submitted that if these factors were present, and the district had been constituted as a corporate agency and instrumentality of its constituent political subdivisions, with its boundaries coinciding with their boundaries, the legislation could have been upheld.

Conclusion: A provision for certification of deficits by a metropolitan district to its constituent taxing districts, and a legislative mandate to include the amount certified in the budget of the respective taxing districts, could be drawn so as to satisfy the constitutional requirements in both states.

REVENUE SUMMARY—CONCLUSIONS AND RECOMMENDATIONS

The legal requirements and practical considerations relating to the revenues of a bi-state agency lead to the following conclusions and recommendations:

(1) The engineering projections of net operating revenues available for debt service leave no possibility of financing purely on the earning power of the proposed rapid transit system.

(2) It would be impractical to base financial support of a bi-state agency upon voluntary contractual agreements with counties or municipalities in the metropolitan region, because of the very number of governmental units affected as well as the special nature of a bi-state loop improvement.

(3) A direct delegation of taxing power to a bi-state agency, by concurrent action of both states would have obvious advantages in financing, but it is not recommended at this time for these reasons:

- (a) It would require a constitutional amendment in New York;
- (b) It would legally require the election of the governing body of the bi-state agency—a complicated and unsatisfactory proc-

ess in the present state of public attitudes on bi-state problems;

- (c) The political hazards in selection of a tax source for use of such a bi-state agency would present unnecessary obstacles in the way of solving the rapid transit problem.

(4) The use of special assessments to finance the capital costs of new subway stations in Manhattan, and, if special benefit can be established, of transfer stations in New Jersey, is recommended although not essential to successful financing of the rapid transit project.

(5) The principal revenue support of a new bi-state agency should be the power and duty

of the governing body of the agency to certify its income deficits annually to constituent counties and the City of New York (according to a formula proposed in Chapter VIII). The amounts so certified could be made a mandatory charge on the local budgets by appropriate legislation. Such a form of support could be legally sustained provided (1) the bi-state agency were established as a corporate agency and an instrumentality of the constituent political subdivisions; (2) with the members of its governing body appointed by the elected local legislative bodies, and (3) with discretion vested in such local legislative bodies to raise the amounts so certified in any manner they might respectively determine.

CHAPTER VII

FORM AND COST OF BORROWING BY A METROPOLITAN AGENCY

SUMMARY OF THE TYPE OF ISSUE PROPOSED

On the basis of the available credit resources already discussed, the type of bond issue that is proposed has some of the characteristics of a revenue bond and some of a general obligation bond. It would be a revenue bond in the sense that it is estimated that from $\frac{2}{3}$ to $\frac{3}{4}$ of the annual debt service would be paid out of the revenues of the new transportation system. It would be a general obligation in the sense that it would be secured by the power and duty of the bi-state agency to certify its deficits to the constituent political subdivisions, and the income that would result therefrom would be produced out of municipal budgets supported in whole or in part by taxation. The bonds would be issued in serial or sinking fund form for a maximum maturity of fifty years. Debt service has here been calculated upon an estimated interest rate of 4 per cent per annum, and upon a level annual payment for principal and interest beginning in the fifth year after the first bonds are issued.

SECURITY

The bonds would be secured by the revenues available to the metropolitan district, as proposed in Chapter VI, preceding. To apply these revenues effectively, the two states shall provide by interstate compact for payment of annual debt service of the bi-state agency, to the extent that net operating revenues may be insufficient, out of proceeds of annual certification of its deficits to the constituent counties and the city of New York, to be included as a mandatory charge in the county (and New York City) budgets. As the security of bondholders, this source of payment would be implemented specifically as follows:

The bonds would be secured by: (1) the net operating revenues of the district; (2) special assessments for local rapid transit benefits, if they are determined and levied by or on behalf

of the bi-state agency; (3) the proceeds of an annual certification by the agency to the constituent counties and to the City of New York of any deficit which shall be apportioned by the agency, which shall be budgeted annually, financed in any manner the local governing body may determine, and paid promptly by each of these political subdivisions; (4) a provision of the compact that the amounts so certified shall be a direct and general obligation for the payment of which each constituent taxing district in the described metropolitan region shall have the power and shall be obligated, unless it makes payment thereof out of other sources, to levy ad valorem taxes upon all taxable property therein, without limitation of rate or amount as to the counties in New Jersey and in the form of special district benefit assessments by the counties of Orange and Rockland and the City of New York (the latter as a borough-wide special assessment upon all taxable property within Manhattan); and (5) a further provision of the interstate compact that the bi-state agency shall have the duty to certify its deficits annually, including any amounts necessary to replenish its debt service reserve fund and to extinguish the balance of any deficit accrued for a prior fiscal year, whether such deficit may have resulted from the delinquency of one or more of the constituent political subdivisions or from any other cause.

Items 3 and 4 above would permit the counties and the City of New York to provide for the payment of apportionments of any deficits from any revenue sources which are available to them, since an apportioned deficit would be a general mandatory charge upon the local budget, similar to other mandatory charges imposed by state statute. The recourse to the levy of property taxes by the district would be available, however, as a remedy against delinquency in payment of apportioned deficits. Under the proposed method of financing, the obligations of the district would not be con-

sidered in determining legal debt-incurring power of the City of New York, or of the constituent counties in New York State and in New Jersey. The use of the special assessment form of tax recourse in New York is intended to exclude any such levy from the constitutional tax limitation and conform to the constitutional restriction on the creation of public corporations having power to incur and require the levy of a property tax, even though the clause in question does not apply to an obligation which may be paid out of non-property taxes nor to the obligation of an interstate agency in any event.

In effect, the security of the proposed type of issue would be aided by the local budget law in New Jersey and charter provisions in New York City compelling appropriations for mandatory charges. The security would be enforceable by mandatory process of the courts, and would have an even broader base than the ordinary general obligation bonds because it would be supported by the joint resources of taxing districts in ten counties in New Jersey, two counties in New York and City of New York for allocated portions thereof.

MATURITY

Although the principle of serial maturities is incorporated in the Constitution of the State of New York and in the local bond law in New Jersey, sinking fund obligations would be an alternative to a new bi-state agency. Either form should be authorized by the interstate compact. In both states the practice is to issue bonds for a maximum maturity limited to the period of probable usefulness of the project for which the bonds are issued. It can be readily demonstrated that the period of probable usefulness for much of the construction required by a bi-state loop will well exceed fifty years, particularly the tunnel excavation for the north and south parts of the loop. While a longer maturity results in the larger interest cost, it does facilitate the capitalization of the project without more than a minimum requirement of annual deficit financing. Accordingly, every reasonable way of extending the maturity of the proposed bond issue has been examined.

The investment market does not recognize any formal limit on the maximum maturity of an issue, but there has been a long tradition that the maturity of a municipal issue should not exceed fifty years. Appendix E contains a selected description of revenue bond maturities, giving examples of the longest duration, such as for Tri-Dam Revenue Bonds issued in California for fifty years as term bonds. Any maturity in excess of fifty years would so handicap the issue as to reflect adversely upon its marketability. Our projections of borrowing costs have accordingly been made upon a maximum maturity of fifty years.

INTEREST RATE

A firm projection of interest costs is neither possible nor desirable. It is obvious that the fluctuations in interest rates generally, in the supply and demand for investment funds of all kinds and the attractiveness of the issue in the municipal bond market at the time it is offered, as compared with the competition for capital at that time, are all vital influences on the interest rate that may be expected. A major factor in the cost of borrowing will be the possible future demand of states and local governments for capital funds which will compete with the rapid transit issue for the available supply of investment funds. It is expected that the demand will be heavy. In the metropolitan area, the largest needs will be for highways, school buildings, water supply and distribution systems, sanitary sewerage systems, and public housing and urban redevelopment. As against this foreseeable demand, it is impracticable to estimate the supply of capital in the future economy for alternative investment in public and private sectors of the economy.

A guide to the difficulty of basing financing plans for the rapid transit improvements on any fixed concept of interest rate is furnished by a review of the range of indices of municipal bond prices over the past ten years. As shown in Table 15, the low price, which means higher interest rates, is marked by substantial fluctuations in all three of the generally used indices, with the highest interest rates appearing in 1953 and in 1956. If a projection of interest

TABLE 15

RANGE OF INDICES OF MUNICIPAL BOND PRICES 1948-1956
 ("HIGH" DESIGNATES HIGH PRICES AND LOW INTEREST RATE;
 "LOW," LOW PRICES AND HIGH INTEREST RATE)

<i>Item</i>	<i>Dow-Jones Revenue Bonds</i>	<i>Dow-Jones General Obligations</i>	<i>Bond Buyer General Obligations*</i>
1948—High	2.36 May	2.14 Dec.	2.23 June
Low	2.53 Sept.	2.52 Feb.	2.47 Feb.
1949—High	2.31 Jan.	2.06 Dec.	2.08 Dec.
Low	2.53 Oct.	2.28 May	2.21 (Feb. May)
1950—High	2.17 Dec.	1.83 Dec.	1.70 Dec.
Low	2.49 June	2.20 June	2.07 Jan.
1951—High	2.05 Feb.	1.72 Feb.	1.58 Feb.
Low	2.49 June	2.36 June	2.23 June
1952—High	2.27 Apr.	2.13 Apr.	2.03 Apr.
Low	2.69 Dec.	2.46 Oct.	2.39 Oct.
1953—High	2.71 Jan.	2.45 Jan.	2.38 Jan.
Low	3.27 June	3.06 June	3.09 June
1954—High	2.72 Aug.	2.24 Aug.	2.26 July
Low	3.00 Jan.	2.52 Jan.	2.54 Jan.
1955—High	2.76 Jan.	2.35 May	2.37 May
Low	2.99 Dec.	2.62 Aug.	2.63 Aug.
1956—High	2.89 Feb.	2.44 Feb.	2.42 Feb.
Low	3.94 Dec.	3.29 Nov.	3.24 Nov.

* Average maturity 20 years.

costs were being made in December, 1956, solely on the then current experience, an interest rate of 4½ per cent would have been more appropriate for use as a maximum estimate whereas a projection made in February of 1957 justifies the use of the rate of 4 per cent.

The use of the 4 per cent interest rate for purposes of projecting the financing cost is justified by the long-term trend of the bond market. As compared with the Daily Bond Buyer's index of 20 municipals, shown in Table 15, it may be expected that the first issues of a new bi-state agency to finance rapid transit developments, even though supported by the authority of the agency to certify its deficits to the constituent taxing districts in the metropolitan region, would sell at a lower price, and higher interest rate, than the Bond Buyer average. The 4 per cent interest rate has been assumed as a matter of conservatism and especially because of the

anticipated long average maturities. This is a matter of judgment, supported in substantial measure by the experience of other metropolitan rapid transit issues, which are summarized in detail in Appendix F. The Boston Metropolitan district has sold at better than average, but the credit of the district is well established, and its financial support fully understood. In the case of Toronto, Detroit, Montreal and even the general obligations of the City of New York and the City of Philadelphia, the net interest cost was considerably above the Bond Buyer average on the sale date. In the case of revenue bonds, of course, the net interest cost was very much above the Bond Buyer average (composed of general obligation bonds) on the sale date. Such bonds have been issued by the City of Chicago, the Cleveland Transit Authority, and the City of Seattle, to finance rapid transit facilities. The general obligation experience, more fully developed in Appendix F, may be summarized as follows:

MARKET CHARACTERISTICS OF SELECTED RAPID TRANSIT GENERAL OBLIGATIONS

Item	Boston Metropolitan District	City of Detroit	City of Montreal	City of New York	City of Philadelphia	Municipality of Toronto
Rating:						
Moody's	Aa	A	A	A	A	Aa
S. & P's	A1	A	A	A	A	A
Average Life	T 1986	8½ yr.	20 yr. s. fund	7 yr.	14½ yr.	3-25 yr.
Call Feature	Yes (a)	Yes (b)	Yes (c)	No	Yes (d)	Yes (e)
Sale Date	1/26/56	8/28/56	5/18/54	9/12/56	10/23/56	11/18/53
Coupon	2.40%	4% & 3%	4¼%	3.30%	3¼% to 4%	3% to 3½%
Net Interest Cost	2.395%	3.019%	3.93%	3.28%	3.45%	Not available
Bond Buyer Average Sale Date	2.48	2.90	2.49	2.96	2.96	2.60
Offering Price	1.60-2.50%	2.50-3.00%	.....	2.25-3.30%	2.40-3.75%	2.75-3.50%
Current Price (3/14/57)	3.40%	3.25%	5.20% (f)	2.25-3.30%	3.60%	4.75% (f)
	(30 yr. bond)	(12 yr. bond)	(20 yr. sink- ing fund bond)	98½ for 3's due 6/1/80 3.10%	(30 yr. bond)	(20 yr. bond)

(a) About \$18,870,000 due 1975-84 callable at par beginning 1974 through 1979.

(b) About \$12,748,000 due 1956-63 now callable at from 101½ to 102.

(c) Due 1973 callable 1957 at 102.

(d) Call provisions vary. Generally callable from 15 to 30 years after issue at par.

(e) Callable on 30 days notice at premiums of ¼% for each year between redemption and maturity but not to exceed 2% or 3%.

(f) Income from these issues is not tax exempt under the Internal Revenue Code, 1954.

(T) Average life not applicable—final maturity 1986.

DEBT LIMITATION

If this were to be a pure revenue bond, firm covenants affecting future debt incurring power would be essential to the marketing of the issue. Since the issue has the characteristics of a general obligation bond, however, some assurance on these matters should go to enhance its quality rather than to the basic marketability. With respect to future borrowing, the interstate compact should provide at the outset that the bi-state agency shall undertake only such additional projects as are authorized by concurrent action of the two state legislatures. Beyond this control, the point is made elsewhere in this report that present constitutional and statutory debt limitations would not affect a bi-state agency nor would its debt be chargeable to the constituent political subdivisions. Some specific limitation is desirable, if not for the bondholders then to reassure taxpayers within the region.

Recommendation: The interstate compact should provide that the bi-state agency shall not incur debt which, together with all of its outstanding indebtedness, exceeds an amount equal to \$25 per capita of the population or ¾ of 1 per cent of the full valuation taxable,

included within its jurisdiction. For the purposes of this limitation such amount of debt as is estimated to be covered by net operating revenues available for debt service or by special assessments, or state or federal aid, should be exempt.

DEBT SERVICE RESERVE

The ability of the bi-state district to meet its debt service charges is assured by its power to certify annual income deficits to the constituent municipalities. In the type of issue proposed, however, the only question that might arise relates to a temporary inability of the district to meet its debt service if there were any delay in payment by the taxing districts to which the deficits are certified. It is desirable to provide assurance against this possibility.

Recommendation: The financing provisions should include power to borrow a sufficient sum to set up an immediate funded reserve for payment of debt service. For purposes of projecting debt service costs, it would be prudent to estimate a full year's debt service reserve, and, to be conservative, not to anticipate investment earnings on this reserve, even though such earnings will in fact accrue.

DEPRECIATION

The treatment of depreciation is also of importance in its effect on the financing of the project. If the bi-state agency were viewed as a private business venture, supported by equity capital, it would be appropriate to establish depreciation reserves as a proper charge to be covered by revenues annually, for the recovery of capital over its useful life. A public body supported by taxation, however, does not have equity capital, and annual charges to current revenues for both depreciation and amortization would require the current generation of taxpayers and transportation users, in effect, to pay twice for the depreciable assets. If amortization alone is charged to current revenues, those who are currently exhausting depreciable assets will be paying for them, and when the time comes to renew such assets, the necessary capital can be provided by new borrowing. The latter method has been widely used by public authorities in New York State, and its validity has apparently been accepted in audit reports of these and other public agencies. (See also Chapter III, Tables 9 and 10 and text for the practice in other regions.)

Depreciation accounts may, of course, be maintained for bookkeeping purposes even though the amount charged for depreciation is actually, as a matter of the flow of cash funds, applied to annual debt service requirements. Beyond this, if an actual depreciation reserve is to be maintained, it may be established in accordance with the estimates of the engineering consultants on a 3 per cent sinking fund basis with a uniform annual series based upon an average useful life of the depreciable assets of 28 years. The effect of such a reserve on annual deficits is shown in Table 16 as an alternative which might make the bonds more attractive, but the immediate deficit more costly.

ALTERNATIVE FINANCIAL PLANS—NET
ANNUAL DEFICITS

The over-all financing of the three plans which have been deemed worthy of recommendation by the engineers, upon the basis of advances by the two states, special assessments, and the capitalization of interest during construction,

as alternatives, with a reserve of one year's debt service set up in each case, are set forth in Table 16. The basis upon which the Table was constructed, and the interpretation of the references in the table, follow:

(1) Amount of bonds to be issued includes amount required for construction, plus debt service reserve, capitalized interest during construction where such interest is to be borrowed and financing cost of 2½ per cent.

(2) Construction period of 4 years with 10 per cent expenditure of construction cost the first year, 20 per cent the second year, 30 per cent the third year, and 40 per cent the fourth year, with the funds needed each year provided by bonds, to be issued at the beginning of each year of construction.

(3) The bonds are assumed to bear interest at the rate of 4 per cent per annum with the principal amortized in annual installments over a period of 46 years beginning 5 years and ending 50 years from the date of the first block of bonds, and with approximately equal annual payments of principal and interest combined.

(4) Plans IA and IVA provide for a debt service reserve fund amounting to one year's debt service on each issue of bonds, but interest during construction is to be matched by bi-state advances.

(5) The bonds under Plan I-AS, II-AS, and IV-AS are similar to those under Plans I-A, II-A and IV-A in every respect, but it is assumed that special assessments are levied in an amount sufficient to amortize over a 46-year period \$84,955,000 (IAs), \$45,551,000 (IIAs) and \$26,280,000 (IVAs) of capital cost.

(6) Plans I-c, II-c and IV-c provide for the same debt service reserve fund amounting to one year's debt service, but interest during construction is capitalized instead of being advanced by the states.

(7) The bonds under Plans I-cs, II-cs and IV-cs are the same as those under Plans I-c, II-c and IV-c in every respect, but it is assumed that special assessments are levied in an amount sufficient to amortize over a 46-year period \$92,941,000 (Ics), \$49,712,000 (IIcs) and \$28,750,000 (IVcs) of capital cost, including

TABLE 16
ESTIMATED ANNUAL DEBT SERVICE, AND RESULTING DEFICITS UNDER
ALTERNATIVE PLANS OF FINANCING*
 (AMOUNTS IN THOUSANDS OF DOLLARS)

Plan (See Text for Definitions)	Construction Cost	One Year's Debt Service	Financing Cost	Interest During Construction	Amount Bonds Issued	Initial Bi-State Advances	Annual Special Assessments	Depreciation	Net Revenue After Depreciation	Deficit to Be Certified	Net Revenue Before Depreciation	Deficit to Be Certified	Interest Earned Debt Service Reserve Fund (1½%)
I—A	428,000	22,000	11,500	(a)	461,500	37,000 (b)	.....	1,500	14,200	(7,800)	15,700	(6,300)	330
I—AS	428,000	22,000	11,500	(a)	461,500	37,000 (b)	4,100	1,500	14,200	(3,700)	15,700	(2,200)	330
I—C	428,000	24,000	12,500	40,500	505,000	.....	.....	1,500	14,200	(9,800)	15,700	(8,300)	360
I—CS	428,000	24,000	12,500	40,500	505,000	.....	4,500	1,500	14,200	(5,300)	15,700	(3,800)	360
II—A	296,500	15,500	8,000	(a)	320,000	25,500 (b)	.....	1,400	11,500	(4,000)	12,900	(2,600)	232
II—AS	296,500	15,500	8,000	(a)	320,000	25,500 (b)	2,200	1,400	11,500	(1,800)	12,900	(400)	232
II—C	296,500	17,000	8,500	28,000	350,000	.....	.....	1,400	11,500	(5,500)	12,900	(4,100)	255
II—CS	296,500	17,000	8,500	28,000	350,000	.....	2,400	1,400	11,500	(3,100)	12,900	(1,700)	255
IV—A	227,000	12,000	6,000	(a)	245,000	19,500 (b)	.....	1,700	8,300	(3,700)	10,000	(2,000)	180
IV—AS	227,000	12,000	6,000	(a)	245,000	19,500 (b)	1,300	1,700	8,300	(2,400)	10,000	(700)	180
IV—C	227,000	13,000	6,500	21,500	268,000	.....	.....	1,700	8,300	(4,700)	10,000	(3,000)	195
IV—CS	227,000	13,000	6,500	21,500	268,000	.....	1,400	1,700	8,300	(3,300)	10,000	(1,600)	195

* Alternative construction plans, construction costs, net annual revenues and depreciation from Report by Charles E. DeLeuw, "Trans-Hudson Rapid Transit." (A Report to the Project Director of the Metropolitan Rapid Transit Survey, February, 1957.)

(a) Interest during construction paid by Bi-State advances and therefore not included in bond issue.

(b) Bi-State advances used to pay interest during construction.

ALTERNATIVE FINANCIAL PLANS

interest during construction, which accounts for the greater assessments as compared with Item (5) above.

The conclusions to be drawn from Table 16 may be summarized as follows:

(1) Plan 1 annual deficit could range from \$2,200,000 to \$8,300,000 depending upon which alternative method of financing is employed;

(2) Plan 2 could be made substantially self-supporting, under the most favorable circumstances, but with the assistance of bi-state advances alone could limit the annual deficit to \$2,600,000.

(3) In each of the above cases the surplus or deficit has been stated with respect to net revenues before depreciation. If a depreciation reserve were to be established, the annual deficits would be increased by the amount of the reserve.

(4) Interest earnings on investment of the debt service reserve would reduce the deficit somewhat.

EFFECT OF MUNICIPAL DEBT AND TAX LIMITS

Municipal debt and tax limits are imposed by Constitution in New York and municipal debt limits are imposed by statute in New Jersey. There are no limitations upon the rate or amount of property tax which may be levied by municipalities in New Jersey.

Tax Limits

As a matter of policy, it is neither necessary nor desirable that the obligations of the bi-state agency should be included as within such tax limitations. The mandatory charge on the municipal budgets would be imposed by the compact and could be satisfied by non-property tax revenues. In effect, therefore, the burden of carrying the bi-state agency is placed upon local government in such a manner that it could well be financed by a special non-property tax levied for its support. If such a tax were to be levied, it would not be subject to the tax rate limitations on property taxes, imposed by the New York State Constitution. As a matter of law, the constitutional limitation (Art. VIII, § 10) does not apply to a tax, even though it be on real estate, which is required to be levied for state or regional purposes. The limitation is expressly directed to levies for county purposes,

for city purposes, for village purposes and for school district purposes. It does not apply to taxes levied for town purposes or for special district purposes, even though both towns and improvement districts are recognized by the constitution (Art. VIII, § 3 and Art. X, § 5).

A specific exception to the tax limitation is provided "whenever the City of New York is required by law to pay for all or any part of the cost of capital improvement by direct budgetary appropriation in any fiscal year." [Art. VIII, § 11(a).] While no precedent is available, it would seem that the proposed mandatory charge to finance rapid transit could be such an appropriation "required by law." If the City of New York were to finance the mandatory charge as a boro-wide assessment within Manhattan, this would alone exempt it from the constitutional tax limitation.

Debt Limits

The debt limitations imposed by statute in New Jersey and those imposed by constitution and statute in New York recognize that to the extent that it is covered by revenues of a revenue producing enterprise, indebtedness incurred for the purposes of the enterprise should not be included in computing the amount of outstanding debt subject to the limitation. Similarly, in New York prior to 1938, it had been recognized that indebtedness of a public corporation payable out of a special fund not fed by any levy on real estate was to be excluded in computing the margin of municipal borrowing power under the constitutional debt limitation. (*Robertson vs. Zimmerman*, 268 N. Y. 52, 196 N. E. 740 (1935).) Except as the constitution changed the law in 1938, it is appropriate to consider that the common law as previously determined by judicial decisions is still in effect. Accordingly, it may be concluded that obligations of the bi-state agency, which are not issued by any of the political subdivisions subject to the constitutional debt limitations, and which are not supported by any pledge of a direct tax upon real estate, would not and should not be included in calculating the debt-incurring capacity of the City of New York with respect to the form of obligation proposed in this Chapter to finance bi-state rapid transit.

CHAPTER VIII

APPORTIONMENT OF DEFICITS

A. BETWEEN USERS AND NON-USERS

Public aid to transportation can no longer be considered a public issue. We have "always" had it—for ship, canal, rail, air and highway transportation, and there is no foreseeable lessening of the need. The public cost of such aid, according to all available evidence, is more than offset by its benefits.

The economic benefits of rapid transit in a thickly populated urban area are obvious and have been widely recognized. Thus referring to the present tax-supported New York City subway system William Zeckendorf, head of Webb & Knapp, prominent urban developers, declared: "If the subway were to quit tomorrow, New York would be out of business. But with its rapid transit it can grow despite its disadvantage in being the nation's only city with a restrictive rent law. Private industry should encourage city planning in the transit field in every way it can for mobility of people and goods means life or death for the businessman." (Quoted in *Metropolitan Transit Research*, by Werner W. Schroeder, Chap. 6, p. 13.)

A comprehensive study of the Boston rapid transit system concluded:

"The MTA, as it provides a rapid means of access to the central business district, serves to retard deterioration and decentralization resulting from traffic congestion. Already downtown retailers have been moving to the suburbs as traffic strangles the area and discourages shoppers. Even businesses in less competitive sectors of the economy are considering decentralization as they find it more and more difficult to attract and retain large working forces because of the problems which employees have in getting to and from the area. The impact of higher fares, less frequent service, crowded and unattractive equipment on the MTA therefore can only intensify the forces impelling businesses to move away. In economic terms this means depressed land values, mounting tax rates

and a profound disjunction of the patterns of living and economic activity in the entire metropolitan area." (Deems, *The Problem of Boston's Metropolitan Transit Authority*, p. 52.)

In San Francisco, on the basis of a large scale engineering study, the following conclusion was reached:

"It is as the least-cost solution to the transportation requirements of such a regional organization of living and working areas that we recommend a program of interurban rapid transit to supplement and complement the regional highways.

"The essence of the story is that without rapid transit the region will ultimately pay many times its cost in additional hours of travel time, in the additional cost of trucking goods over highways congested by automobiles, in diminished revenues from property depreciated by congestion or swallowed by automobile facilities, and in the premium costs of urban freeways and parking garages. We do not doubt that the Bay Area citizens can afford rapid transit, we question seriously whether they can afford not to have it." San Francisco Bay Area Rapid Transit Commission, *Report on Organizational and Financial Aspects of a Proposed Rapid Transit System for the San Francisco Bay Area*, March, 1956, p. 10.)

The Commission in San Francisco pointed out the diversified nature of the benefits:

"The benefits are not local. The commuter who rides the transit system to work benefits the city where he works, and his employer benefits the commuter's town or residence by supplying income to the commuter. Passengers traversing any segment of the route are benefited by the capital costs of that segment, regardless of their place of residence. Finally, all passengers profit by the station and yard facilities and the water crossings, the location of which is unrelated to the taxable domicile of the passengers using them." (Ibid., p. 31.)

Public support for tax subsidy to rapid transit comes in this metropolitan area from the long accepted practice of the City of New York, and from thoughtful leadership on all sides.

“The development that we may look for in the necessary preservation of our existing suburban railroad service is in the field of public finance rather than in the field of construction. At some stage in the near future we must have public acceptance of the fact that the suburban communities themselves will have to meet the cost of existing fixed rail service (to say nothing of any improvements) just as the subway deficits are met by the City of New York.

“The present reorganization of the Long Island Railroad, with the communities granting substantial tax reduction, is a tentative step in that direction. Only on some such basis of community support will it be possible to reorganize the New Jersey suburban railroads, or to finance and construct any direct New Jersey rail connections with a new terminal in Manhattan. The problem facing the new Metropolitan Rapid Transit Commission is, therefore, almost entirely a problem in the field of governmental finance rather than in the field of engineering.” (Austin J. Tobin, Address, 1954, in Regional Plan Association, *Metropolis in the Making*, p. 39.)

“From the studies of the Mayor’s Committee on Management Survey, I am convinced that urban mass transportation must be subsidized. This is justified because the benefits of such transportation go not alone to the rider or customer, but also to property values, *at the two ends of the journey*. [Italics added.] It requires no penetrating analysis to show the value of land in the suburbs is due primarily to its accessibility to and from the center, or to show that the high values at the center are due to the possibility of concentrating there vast numbers through converging lines of transportation. I am inclined to believe that the best way to allocate the resulting transportation subsidy tax burden is thus in proportion to the value of land. Except for this subsidy, designed to help support mass transportation, I would make the port self-supporting, except as the national government continues to assume the cost of

dredging, harbor maintenance, coast guard and lighthouse services, and its system of shipping and air subsidies.” (Luther Gulick, Address, 1954, in Regional Plan Association, *Metropolis in the Making*, p. 71.)

“Cities are going to have to assist mass transit facilities. I am not afraid of the word ‘subsidy.’ We are subsidizing just about everything under the sun and the people who yell the most about subsidies are generally those receiving the greatest benefits therefrom. The copper producers, the dairy men, the wool growers, the cotton producers, the home builders, the publishers of newspapers and magazines, the makers of crockery, are all subsidized directly or indirectly. Subsidies in one form or another for mass transportation are simply a means of self-preservation for municipalities.” (Walter Blucher, in Passenger Transport Annual, August, 1953, p. 33.)

The Possibility of Revenue Financing. Despite this acceptance of tax support, the question is frequently asked, in one form or another, cannot the rapid transit facility be made to stand on its own feet, that is, cannot those who ride the facility pay what it costs? This deceptively simple question has a deceptively simple answer: To make people pay what it costs is self-defeating for the reason that one of the broad social justifications of a new investment in rapid transit facilities is to relieve the urban traffic dilemma by inducing people to give up the use of private motor vehicles, or to remain on public transportation if they are becoming discouraged by poor service. To carry this argument to its logical conclusion, of course, the rapid transit facility should be free, but other public values leave no danger of such a policy being acceptable.

In this connection the New York City subway experience with increased fares furnishes an excellent illustration of the effect of the price of the service upon its accomplishment in contributing to a solution of the urban traffic dilemma. When the city subway system increased its fare from 10 to 15 cents in 1950, the effect was to increase subway revenues by about 34 per cent (\$55 million) and not 50 per cent which was the ratio of the fare increase. It has been estimated by the City Administrator’s office

that the city lost 8 per cent of its traffic or 120 million rides as a result of the fare increase. The loss was concentrated, moreover, in the off hours when the extra passengers could have been carried for very little extra cost.

The basic fare proposed by the engineers for Plan 1 is 25 cents for cross-Hudson transportation, with additional fare for transfer to the Hudson and Manhattan or to the New York City subways if a transfer is required. The fare for the Plan 2 loop is 30 cents with a free transfer to the Hudson and Manhattan and to the New York City subways. (See page III-6 of the DeLeuw report.) Under Plan 3, passengers boarding in New Jersey "would pay two 15-cent tokens and have free transfer privileges to the entire New York City subway system as

well as to the Hudson and Manhattan service. Passengers boarding in New York would deposit one token when boarding and another when departing from their New Jersey transfer stations. The Hudson and Manhattan railroad fares would be 20 cents as at present except that where free transfers were permitted to the New York subway system the fare would be increased to 30 cents."

The proposed fare structure is reasonable from the viewpoint of maximum rider support, as compared with experience elsewhere—in the actual price of the ride as well as in the proportion of the cost of the ride which will be paid by the user.

Fares. A comparison of the proposed fare with other fares follows:

COMPARATIVE MUNICIPAL FARES (1955)

Boston	October 31, 1955	20 cents and 15 cents local
	August, 1954	15.4c.
	August, 1953	13.4c.
	August, 1952	13.6c.
	August, 1951	13.6c.
		<i>Surface</i> <i>Rapid Transit</i>
Chicago	April 22, 1954	20c. 20c.
	June 1, 1952	20c. or 5/85c. 20c. or 5/90c.
	August 1, 1951	17c. 18c.
Cleveland	July 22, 1956	20c. Local
		25c. Express
		3c. Transfer
		Previously 15c.
Detroit	September 22, 1952	20c. and 25c. Express
	May 15, 1950	15c.
Montreal	September 26, 1952	Central Zone 3/30c. or 12c. cash
		Other zones 5/25c. or 7c. cash
New York	July 25, 1953	15c.
		Previously 10c.
Philadelphia	December 18, 1955	5/90c. or 20c.
		Previously 2/35c. or 18c.
Seattle	November, 1955	4/75c. or 20c. + 5c. zone
	November, 1954	3/50c. or 20c. + 5c. zone
	November, 1952	6/1.00 or 20c.
	November, 1951	7/1.00 or 15c.
Toronto	July 1, 1956	Fares increased by 2½c. to 5c.
	November 1, 1954	and previous zones merged
		Central Zone 10c.
		Suburban 10c. or 4/30c.
		Previously 10c. or 3/25c.

It is thus clear that the proposed fare structure is well above the charges elsewhere, but is justified in comparison with present costs and quality of mass public transportation in this region.

Rider Proportion of Cost. The proportion of the cost to be borne by the rider has frequently been set at the cost of operation plus the capital cost of equipment, with tax support for the fixed capital investment. Under all three Plans proposed for consideration, the riders would, if estimates are sustained by experience, pay more than this cost, but not quite as much as riders on older systems except New York City. This data may be compared as follows:

<i>System</i>	<i>Per Cent of Total Annual Cost Provided by Riders' Fares (See Table 9)</i>
DeLew Plans:	
Plan 1	69%
Plan 2	80%
Boston	85.6%
Chicago	107.8%
Cleveland	108.5%
Detroit	98.8%
New York City	78.0%
Philadelphia	101.0%
Toronto	99.0%

A strong view within the Mayor's Committee on Management Survey proposed that the riders bear only 60 per cent of the New York City subway cost. Among the most carefully worked out previous proposals for the New York City area, such as the Delaney Plan, users would have paid only 40 per cent of initial capital cost plus the cost of renewal of equipment and operations.

Conclusion. The problem of user charges versus taxes presents wide areas of disagreement as among those who have studied the problem. In the broader realm of public policy it would be very desirable to achieve some commonly accepted criteria for the distribution of the cost burden, but this cannot be the place to indulge in an analysis of the basic issues. Certain practical criteria, however, may be recognized:

(a) Public aid to transportation in general is long established and with respect to urban

rapid transit systems, in particular, it is fully documented by the experience of other metropolitan areas.

(b) The City of New York has itself long subscribed to a policy of supporting rapid transit out of general taxation in part, and of resisting, moreover, numerous attempts to obtain some of the capital cost from specially benefited property.

(c) The proposal of the engineers requires the rider to pay as favorable a share of the cost of transportation as it is reasonable to expect on the basis of experience in other areas, including fares charged and construction costs.

B. AMONG TAXING JURISDICTIONS

The purpose of the improvement is to benefit transportation within an area approximately fifty miles from the urban center, but the location of the loop lines is found within a radius of approximately two miles from the center of the Hudson River—entirely in Hudson County on the New Jersey side and entirely in Manhattan on the New York City side. While the benefits of such an improvement are real and substantial in the reduction of travel time from sections of the metropolitan area to the center, such benefits are neither measurable according to the requirements for special assessment of the entire cost to benefited areas nor are they recognized as sufficiently general to justify a uniform tax levy throughout the metropolitan area for the support of the project. In this respect, the function of the new bi-state agency is to be distinguished from the functions of such organizations as the Metropolitan Water District of Southern California, the Washington Suburban Sanitary District, or the Toronto Metropolitan District, each of which have power to levy direct ad valorem property taxes throughout the area of the district. In each of these cases the benefit to individuals and property within the entire district is so apparent and accepted that the support of capital and operating requirements by a general tax levy follows as a matter of course.

It undoubtedly could be demonstrated that the benefits of an efficient and adequate mass transportation system also have a general effect

throughout the metropolitan area. The City of New York has long been applying such a concept in supporting the capital and (previously) operating needs of the city subway system out of general taxation of the entire area of the city, regardless of the expense of subway system service in any particular section. The city, being a general purpose unit of local government, furnishes such a broad variety of municipal services, however, that it is the impact of the total service program and the total tax levy in any area which distinguishes it from a single purpose metropolitan unit of government. For the purposes of the new bi-state agency, any theoretical argument that would justify a uniform tax support throughout the metropolitan area must necessarily be subordinated to the real and apparent legal and political advantages of an equitable formula which would apportion the financial responsibility for the bi-state loop roughly in proportion to the benefits its confers.

We suggest four essential criteria of such a formula of apportionment:

(1) It should allocate cost so as to reflect both present use and economic benefit of the facility;

(2) It should be sufficiently flexible to give effect automatically to future changes in such benefit or use;

(3) It should be administratively feasible, that is, it should be based upon information regularly available or obtainable without excessive administrative cost; and

(4) It should give adequate assurance to creditors that the required financial backing will always be available.

Our study of the problem included a careful analysis of the method used in all other multi-community public rapid transit systems. The bulk of the experience elsewhere proved to be inapplicable for one of three reasons: either that the system was operated within a single municipality; such as the City of New York, or that a multi-community service was being rendered by a system which was owned and operated by a single municipality; such as Cleveland and Chicago, or the multi-community service was being rendered by a general pur-

pose metropolitan district which employs a general taxing power such as in Toronto. This left the Boston system, among those now in operation, as the only system which attempts to apportion the cost among numerous municipalities in proportion to use. As already noted, this method has a number of apparent defects, and lacks the condition of a bi-state area on one side of which the policy has long been to finance rapid transit out of the general tax levy, as in the City of New York. In Boston, moreover, as compared with the New York-New Jersey area, the travel pattern shows substantial reverse flow coming from the central city. The Boston system, if applied to the present case, would merely result in the City of New York becoming responsible for approximately one-half of the annual income deficit for the reason that except for a reverse flow, each originating commuter who starts a trip in New Jersey is matched by a similar originating trip on the return leg which starts in New York City.

In order to arrive at an equitable apportionment basis, it must be recognized that the central city area and the suburbs have a common interest in the benefits of transportation in and out of the central city, as already noted. This interest is the primary basis upon which to divide the responsibility between the City of New York and the municipalities on the westerly side of the Hudson River. For the purpose of a gross division of the cost between the central and suburban areas, it was concluded that general economic measures reflecting benefit would be desirable, and that the subsequent apportionment of the share allocated to the suburban area, located to the west of the natural boundary of the Hudson River, could then be made upon the basis of relative use as well as benefit.

Among the various measures that were examined, the following four proved to have the closest acceptance judged by the criteria established above:

1. Population.
2. Full valuation of taxable property (designated ratables).
3. Employed labor force.
4. Municipal expenditures (designated municipal service budgets) excluding debt

service, education and capital improvements.

For the purpose of fixing the several measures of apportionment, the metropolitan area to be served was defined as ten counties in New Jersey, the counties of Orange and Rockland in New York and the Borough of Manhattan. To have used the entire city of New York would have distorted the apportionment factors and defeated the purpose of the formula. Whatever apportionment may be made to the City of New York, however, may be treated by the city as a city-wide charge or as a borough-wide assessment limited to the Borough of Manhattan, a matter solely within the discretion of the city authorities.

Population. The factor of population is one of the most frequently used in efforts to define, measure and compare governmental costs and services. It has the attribute of an authoritative record, of being related to the need and benefit of mass rapid transit, and of being gen-

erally accepted as a measure of governmental responsibility. As shown in Table 17, Manhattan had 29.3 per cent of the population of the defined metropolitan area in 1955, according to estimates of the Regional Plan Association. By the time it becomes necessary to apportion actual deficit responsibility, however, the 1960 census will be available and there will be an automatic adjustment to any change in the relationship for that year or for subsequent years.

Equalized Ratables. The use of full valuation of taxable property is also a widely accepted measure of local ability to support municipal services, on a comparative basis. Where the assessed valuations can be equalized under effective systems of determining the difference between the aggregate assessed valuation in a taxing district and the aggregate full valuation, it has been found that the comparative ability of municipalities to support services is reflected as fully by these full valuations alone as it would be by a more complex scheme of examining a variety of economic factors. Both the

TABLE 17
MEASURES OF ABILITY TO CONTRIBUTE TO THE SUPPORT OF RAPID TRANSIT FACILITIES

County	Population ¹		Service Budgets ²		Equalized Ratables ³		Employed Labor ⁴	
	Per Cent of New Jersey Total	Per Cent of Met. Area Total	Per Cent of New Jersey Total	Per Cent of Met. Area Total	Per Cent of New Jersey Total	Per Cent of Met. Area Total	Per Cent of New Jersey Total	Per Cent of Met. Area Total
Bergen	15.36	10.22	11.12	6.37	20.44	12.46	15.32	9.93
Essex	22.28	14.82	27.74	15.89	19.17	11.90	22.97	14.90
Hudson	15.13	10.06	23.57	13.50	8.15	5.40	15.60	10.12
Mercer	6.07	4.04	5.22	2.99	5.56	3.43	5.56	3.60
Middlesex	7.86	5.23	6.40	3.66	8.88	5.55	7.94	5.15
Monmouth	6.57	4.37	4.88	2.79	6.57	3.88	5.39	3.50
Morris	4.69	3.12	3.15	1.81	6.67	3.93	4.25	2.76
Passaic	8.79	5.85	6.94	3.97	8.35	5.17	9.64	6.25
Somerset	2.70	1.80	1.59	.91	3.29	1.97	2.55	1.66
Union	10.55	7.02	9.39	5.38	12.92	7.58	10.78	6.99
Total New Jersey (10 counties)....	100.00		100.00		100.00		100.00	
Manhattan		29.26		39.64		35.23		31.64
Orange		2.65		1.94		2.13		2.21
Rockland		1.56		1.15		1.37		1.29
Total Met. Area..		100.00		100.00		100.00		100.00

¹ Regional Plan Association, August 1, 1956, as of 1955.

² Total county and municipal functions excluding debt service, school districts (and school expenses) capital improvements:

New Jersey—17th Annual Report of the Division of Local Government, State of New Jersey, 1954.

Orange and Rockland counties—Special Report on Municipal Affairs, State of New York, 1955.

Manhattan County—Annual Report of the Comptroller of the City of New York, 1953-54.

New York City figures are allocated to Manhattan on the basis of the borough President's budget.

³ New Jersey—1956 Equalized taxable real property.

New York—1956 fully taxable real estate.

⁴ Estimates by Regional Plan Association for 1955, except Mercer County.

states of New Jersey and New York now have well administered systems of determining the full valuation of taxable property and these data thus meet the test of regular availability. This measure reflects ability to provide support from property taxes, as contrasted with population which at best reflects ability to provide support from excise taxes.

Employed Labor Force. This measure is intended to reflect the relative weight of places of work as distinguished from places of residence. On a county basis, however, the effect of inter-municipal travel to work is spread out and minimized in the comparative data. As between the two sides of the Hudson River, moreover, the relative proportions do not differ substantially from population data alone, being 68 per cent in the former and 71 per cent in the latter (Table 17) on the westerly side of the river.

Municipal Service Budgets. This measure reflects the net effect of policy decisions, economic costs, and standards of municipal service in each municipality. Its use as a measure of apportionment for responsibility for rapid transit would be justified as a criterion of relative standard of living among the municipalities in the metropolitan area. It is significant that as between the New York and New Jersey parts, this measure does not add any substantial quality that either of the other two measures would not provide. Within the New Jersey sector, moreover, it is apparent that the relative position of each New Jersey county as a per cent of the metropolitan area in service budgets is not substantially different from its per cent of the total population. Since the use of expenditure data to apportion other expenditure obligations would be difficult to explain in a popular way, this characteristic of service budgets is used not to commend it as a measure of apportionment, but rather to confirm the validity of the other two measures.

Recommendation. Because of their simplicity, equity and flexibility, population and full valuation of taxable property are recommended as the basis of apportioning any income deficit which might develop annually, as between both sides of the Hudson River.

At present this would allocate the obligation as follows:

	<i>West of the Hudson (New Jersey Counties and Orange and Rockland Counties)</i>	<i>East of the Hudson (Based on Manhattan Factors)</i>
Per Cent of Population (1955)	70.74	29.26
Per Cent of Tax Rat-ables (1955-56)	64.77	35.23
Bi-State Apportionment (Average)	67.75	32.25

This factor of apportionment on both sides of the Hudson River, with roughly one-third of the responsibility allocated to the City of New York (on the basis of Manhattan factor alone) and two-thirds allocated to the counties on the other side of the river, is also broadly justified by the intense interest of the central city in an adequate transportation system to maintain the economic values of the central area, and by the heavy interest of the suburban area in the same kind of adequate system for the convenience of its residents in going to and from work in the central area, thereby maintaining the economic value of the suburbs as a place to live or work. This mutual interest of the two sectors of the metropolitan area has been widely recognized and accepted.

APPORTIONMENT AMONG THE COMMUTER COUNTIES

The roughly two-thirds of the total responsibility to be allocated among the commuter counties of North Jersey and Orange and Rockland counties in New York can most equitably be apportioned upon the basis of the total cross-river traffic originating within each of these counties. Consideration has been given to apportionment on the basis of municipalities, but any such measure would present the administrative obstacle of dealing with over 300 different points of origin, and the determination of the factor would be costly and inconclusive. Since the counties are an established taxing area and the economic influence of improved mass transportation is apt to be well dispersed throughout the county, they are recommended as the basic unit of apportionment.

The choice of traffic carried by the loop alone as against all river crossings represents a second area of policy. Since the entire premise of tax support is based upon the acceptance of the view that there is general community benefit from adequate mass transportation, it follows that the total number of public passengers originating in each county should be the measure of apportionment and not solely the number carried on the bi-state loop. A successful loop, moreover, will not only be of service to those who ride on it, but will be of substantial service to those who use highway transportation by opening up the highway arteries to the extent that traffic is diverted from road to rail. A general benefit element which will reflect area growth and potential use can readily be introduced by an even weighting for population.

Recommendation: The West of Hudson share should be allocated according to an aver-

age of population and originating trans-Hudson River passenger movement according to an origin and destination study to be revised once every ten years after operation begins. The first apportionment would use the 1955 study by Charles E. DeLeuw and the above bi-state allocation (67.75 per cent West of Hudson River and 32.25 per cent New York City) to determine the total metropolitan area apportionment factors, as shown in Table 18.

EFFECT OF APPORTIONMENT

The effect of applying the apportionment factors shown in Table 18 to one of the alternative financial plans, Plan 2-A, is shown in Table 19. It is significant that the entire cost of an apportioned deficit under the proposed formula as shown by the table would not exceed 10 cents per \$1,000 on the full valuation of taxable real estate in the metropolitan area as a whole.

TABLE 18
APPORTIONMENT FACTORS FOR THE NORTH JERSEY-NEW YORK METROPOLITAN AREA

County	Trans-Hudson River Passengers on Public Transportation		Per Cent of West Hudson Met. Population ²	Average Per Cent of West of Hudson Totals	Total Met. Area Apportionment Factor
	Number Originating ¹	Per Cent of Origins			
Bergen	65,598	30.73	14.45	22.59	15.32
Essex	40,981	19.20	20.95	20.07	13.59
Hudson	52,117	24.41	14.23	19.32	13.08
Mercer	2,193	1.03	5.71	3.37	2.29
Middlesex	6,497	3.04	7.39	5.22	3.53
Monmouth	5,796	2.72	6.17	4.44	3.02
Morris	6,231	2.92	4.41	3.67	2.49
Passaic	8,468	3.97	8.27	6.12	4.14
Somerset	1,820	0.85	2.54	1.69	1.15
Union	19,880	9.31	9.92	9.62	6.52
Total New Jersey	209,581	98.18	94.04	96.11	65.13
Orange	552	0.26	3.75	2.00	1.35
Rockland	3,329	1.56	2.21	1.89	1.27
Total West of Hudson River	213,462	100.00	100.00	100.00	67.75
New York City (Manhattan)					32.25
Total Metropolitan Area					100.00

¹ From Charles E. DeLeuw "Basic Data on Commuter Travel Across the Hudson River (A report to the Project Director of the Metropolitan Rapid Transit Survey, January, 1957), Table 24, adjusted to eliminate counts of passengers unallocated or originating outside the metropolitan area.

² Computed from population data reported in Table 1, as estimated by Regional Plan Association for 1955.

TABLE 19
BI-STATE LOOP DEFICIT APPORTIONMENT ANNUALLY TO COUNTIES AND NEW YORK CITY
FINANCING UNDER PLAN II-A

Counties and New York City	Total Met. Area Apportionment Factor	Plan II-A Apportionment of Deficit	
		Amount	Equivalent Tax Rate on Full Value— Per Thousand*
Bergen	15.32	\$398,320	\$.123
Essex	13.59	353,340	.115
Hudson	13.08	340,080	.243
Mercer	2.29	59,540	.067
Middlesex	3.53	91,780	.064
Monmouth	3.02	78,520	.078
Morris	2.49	64,740	.064
Passaic	4.14	107,640	.080
Somerset	1.15	29,900	.059
Union	6.52	169,520	.086
Total 10 Counties in New Jersey	65.13	\$1,693,380	\$.107
Orange—N. Y.	1.35	35,100	.064
Rockland—N. Y.	1.27	33,020	.093
Total West of Hudson River	67.75	\$1,761,500	\$.105
New York City (Manhattan)	32.25	838,500	.092
Grand Total Met. Area	100.00	\$2,600,000	\$.100

* On taxable real estate only.

Among the various counties, the range of equivalent tax rate on such taxable full valuation is from slightly less than 6 cents per \$1,000 in Somerset County to a maximum of 24 cents per \$1,000 in Hudson County.

Using the same apportionment factor to allocate an aggregate railroad suburban service deficit of \$8,126,000, as developed in Chapter II, the resulting burden on the several counties and the City of New York averages 31 cents per \$1,000 of full valuation of taxable real estate in the metropolitan area, as shown in Table 20. Again the counties vary with a range between 18 cents per \$1,000 for Somerset County and 76 cents per \$1,000 for Hudson County.

An illustration of the effect of combining the deficit from a typical bi-state loop financing plan (Plan 2-A, Table 16) and the railroad suburban service deficit (Chapter II) is set forth in Table 21, on two different assumptions as to the man-

ner in which the railroad tax part of the railroad deficit might be handled. The principal effect of requiring a municipality to absorb the burden of a railroad tax abatement on property used for suburban service which is located in the municipality, as compared with allocating the total railroad deficit including property taxes on the formula basis, appears in Hudson County. As shown in Table 21, the equivalent tax rate on the full valuation of taxable real estate by the former method is \$1.659, as compared with \$0.994 by the latter method. Since tax costs, like other costs of operating railroad commuter service, are properly chargeable to the entire ride, regardless of where the cost is incurred, there does not seem to be a reasonable basis of requiring Hudson County to absorb a proportion of the railroad deficit represented by the fortuitous fact of the location of railroad property in that county.

Conclusion: The burden upon any one county of contributing to meet the deficit of a bi-state loop according to the apportionment factors proposed would be trivial, amounting to the equivalent of \$1.00 per year on a piece of property having a market value of \$10,000. The difference under alternative methods of financing set forth in Table 16 would not be much. If the railroad suburban service deficit is also assumed as a public cost, the

average burden on the same value of property would rise to \$4 per year, and in a county where the apportionment produces the largest amount, the burden would be under \$10 per year on such a parcel of real estate. In any case, these figures are only illustrative of the burden since each county and municipality would be free to raise its apportioned amount from non-property taxes or miscellaneous revenues, as proposed in Chapters VI and VII.

TABLE 20
RAILROAD SUBURBAN SERVICE DEFICIT APPORTIONED IN EQUIVALENT TAX RATE
IN METROPOLITAN AREA

County	Apportionment Factor (From Table 18)	Railroad Deficit Apportioned*	
		Amount	Equivalent Tax Rate on Full Value— Per Thousand†
Bergen	15.32	\$1,244,903	\$.386
Essex	13.59	1,104,323	.358
Hudson	13.08	1,063,247	.760
Mercer	2.29	186,085	.209
Middlesex	3.53	286,848	.200
Monmouth	3.02	245,161	.244
Morris	2.49	202,216	.199
Passaic	4.14	336,742	.252
Somerset	1.15	93,449	.183
Union	6.52	529,490	.270
Total 10 Counties in New Jersey	65.13	\$5,292,464	\$.334
Orange	1.35	109,701	.199
Rockland	1.27	103,200	.292
New York City (Manhattan)	32.25	2,620,635	.287
Grand Total	100.00	\$8,126,000	\$.314

* The amount apportioned, \$8,126,000, is as estimated by Ford, Bacon & Davis (Report, February 13, 1957).

† Taxable real estate.

TABLE 21

COMBINED APPORTIONMENT OF DEFICIT FROM BI-STATE LOOP (PLAN II-A) AND RAILROAD SUBURBAN SERVICE DEFICIT (TOTALING \$10,632,000 ANNUALLY)

Counties and New York City	Total Counties and New York City Contributions						
	R. R. Tax Payments Apportionment Factor (1)	Allocated By Location of Property (2)	R. R. Deficit** Before Property Taxes, By Apportionment Factor (3)	With R. R. Tax By Location of Property		With R. R. Tax By Apportion- ment Factor	
				Amount (Table 19 plus Col. (2) + Col. (3) (4)	Equiv. Tax Rate on Full Value Per Thousand* (5)	Amount (Table 19 plus Col. (1) + Col. (3) (6)	Equiv. Tax Rate on Full Value Per Thousand* (7)
Bergen	\$569,444	\$30,686	\$661,058	\$1,090,064	\$.338	\$1,628,822	\$.505
Essex	505,140	446,895	586,409	1,386,644	.450	1,444,889	.469
Hudson	486,184	1,417,184	564,402	2,321,666	1.659	1,390,666	.994
Mercer	85,120	25,932	98,814	184,286	.207	243,474	.274
Middlesex	131,210	46,678	152,319	290,777	.202	375,309	.261
Monmouth	112,253	30,686	130,313	239,519	.238	321,086	.320
Morris	92,553	33,279	107,444	205,463	.202	264,737	.260
Passaic	153,884	33,280	178,641	319,561	.239	440,165	.329
Somerset	42,746	25,067	49,622	104,589	.205	122,268	.240
Union	242,348	71,313	281,338	522,171	.266	693,206	.353
Total 10 Counties in New Jersey	\$2,420,882	\$2,161,000	\$2,810,360	\$6,664,740	\$.420	\$6,924,622	\$.436
New Jersey State Tax		397,000		397,000	....		....
Orange—New York	50,180		58,252	93,352	.169	143,532	.260
Rockland—New York	47,206		54,800	87,820	.248	135,026	.382
Total	\$2,518,268	\$2,558,000	\$2,923,412	\$7,242,912	\$.432	\$7,203,180	\$.429
New York City (Manhattan) ..	\$1,198,732	\$1,159,000	\$1,391,588	\$3,389,088	\$.371	\$3,428,820	\$.376
Grand Total	\$3,717,000	\$3,717,000	\$4,315,000	\$10,632,000	\$.411	\$10,632,000	\$.411

* Full Value means full valuation of taxable real property in the counties and in Manhattan alone for the City of New York.

** Deficit total reported by railroads has been reduced to reflect savings in rail operations recommended by Ford, Bacon & Davis (Report, February 13, 1957).

CHAPTER IX

PUBLIC UTILITY REGULATION AND TAX EXEMPTION PROBLEMS

The presentation of each of the Plans by the engineers and the conversion of those Plans to financial plans in this report have been premised upon the exemption of the property of the bi-state agency from all state and local property taxes and the exemption of the operation from the jurisdiction of the respective state public utility commissions and of the Interstate Commerce Commission. In both aspects, the justification for exemption lies in the public nature of the project, under which the public interest is intended to be fully protected. Nevertheless, there are two special problems which do not fit the pattern of public ownership and operation, as follows:

(1) TAX EXEMPTION

The law in both states is well settled that property used for publicly owned and operated rapid transit may be exempt from property tax. The experience in other states has indicated the desirability of such a policy from the viewpoint of achieving the greatest degree of self-sufficiency. The interest of the respective taxing districts also lies in the direction of tax exemption for the properties of a new bi-state loop in recognition of the important contribution of such a rapid transit facility toward the economic growth and development of the region. Fortunately, the proposed route of the loop and the location of its stations will not deprive municipalities of any substantial source of existing property tax revenues.

If the new bi-state agency is to acquire any operating interest in suburban railroads, with a view toward eliminating the suburban railroad service deficit, the question of tax exemption becomes more complicated. The alternative possibilities of such action are considered in Chapter II of this report. As noted in that chapter, the most likely arrangement, if any, would not entail the transfer of legal title to the railroad properties from the railroads to the bi-state agency, but would rather present

a lease by the railroad to the bi-state agency of the right to operate suburban service over the railroad right-of-way and using railroad equipment, on a joint facility basis. Under such an arrangement, the property used for railroad purposes would not be tax exempt and the cost of operation by the bi-state agency would necessarily include property and other taxes levied in both states according to their respective systems of taxation.

If the ownership of the Hudson & Manhattan Railroad were to be acquired by the bi-state agency, its operating and related properties would become tax exempt as public property under the law of both states. The taxes paid by the Hudson & Manhattan Railroad, after adjustment for tax concessions granted by Jersey City in the interest of continuing service, are set forth in Chapter II.

It is apparent that the bulk of the tax payments on property now made by the Hudson & Manhattan relate to the terminal building in New York City. If that building were to be acquired by the bi-state agency, as part of the acquisition of the railroad, it may be anticipated that the bi-state agency would remain liable for the property tax imposed by the City of New York, either directly or by some in-lieu form of payment.

(2) INTERSTATE COMMERCE COMMISSION
AND STATE REGULATION

Each of the states is fully competent to agree, by interstate compact, that the operations of the bi-state agency shall be exempt from the regulatory jurisdiction of the respective State Public Utility Commissions. Beyond this, a substantial problem is presented by the possible application of the Interstate Commerce Act. This would be a particularly pertinent matter if the New York City Transit Authority were to be considered as the operating agency for the bi-state loop under Plan 2, pursuant to contract with the bi-state agency. The city sub-

way system is now exempt from the federal regulation and it would undoubtedly prefer to avoid operating the bi-state loop if such operation were to subject it to such regulation.

A careful examination of the federal statutes, United States Supreme Court decisions under it, and the applicable Interstate Commerce Commission decisions indicate that there is ample precedent for the view that the new facility should not be subject to the jurisdiction of the Interstate Commerce Commission. Such jurisdiction could, of course, be foreclosed by appropriate legislative action by the Congress in approving a new interstate compact.

The basic statutory exclusion presently reads like that in the Transportation Act of 1920, which excludes "street, suburban, or interurban electric railways, which are not operated as a part or parts of a general steam railroad system of transportation." (Transportation Act of 1920, c. 91, s. 402, 41 Stat. 478. Title 40, *Transportation*, s. 1 (22) U. S. C. A.) In interpreting this statutory exemption the courts and the I. C. C. go into much factual detail to determine whether or not the line is in fact part of a steam railroad system. The word "steam" is, of course, given little significance. The deciding point is whether or not the city or intercity line is part of the larger national railroad system which the whole set of I. C. C. laws was designed to foster, control and protect. It is a question of the intent of Congress, not of general principles of law. Certain of the main characteristics of lines which are usually excluded from the jurisdiction of the I. C. C. have been established by the courts, particularly in the *Omaha*, *Yonkers*, *Piedmont* and *Chicago* cases, which may be summarized as follows:

Railroads are excluded from the jurisdiction of the I. C. C. on the grounds that they are urban, suburban or interurban, and not part of or connecting to larger interstate lines where they have all or most of the following characteristics:

1. They are predominantly for passenger service;
2. Transfer between the "local" line and the trunk railroads is difficult, i.e., passengers must alight from cars and/or buy new

tickets, freight must be transhipped because standard railroad cars do not fit the rails. This is very significant;

3. The ownership, operation and finances of the line are distinct from any other larger line. Such facts as joint operation of stations and tracks, joint use of employees, joint publication of parts of train schedules tend to hook the smaller lines into the larger;
4. Revenue from interline traffic is small (in *H. & M.* case, 22.97 per cent was considered high in light of other facts);
5. A significant proportion of its tracks are in or under city streets (in the *Chicago* case, 14.66 per cent was considered sufficient in light of other facts);
6. The number of cars in the trains are not high (in the *Chicago* case passenger trains ran from one to five cars, freight up to 20);
7. Passenger stops are made frequently in relation to the number of miles traveled;
8. The line is not in direct competition with interstate railroad lines.

In the *Omaha* case, *Omaha vs. I. C. C. and U. S.*, 230 U. S. 324 (1912), the court considered an intercity passenger railroad which was operating interstate, a significant parallel to the proposed bi-state loop. This case is important because it discusses both the intent of Congress in framing the original I. C. C. Act and also the meaning of the term "railroad," as defined in the case. In the first place, the court maintained that "railroad" could not be divorced from the statutes in which it is used. "The meaning of the words is to be determined by construing the statute as a whole." *Ibid.*, at 325. Therefore, the main question becomes, did Congress intend that street railroads running between states be controlled by the statute? There is no discussion as to power. Congress had the power, it is silently assumed; did it have the intent? In brief, the answer was no. The court maintained that Congress intended to correct certain "mischief"—"pooling, rebating and discrimination" by the control of certain "business." The "business" controlled included only "railroads proper" and not "street rail-

roads" which had not been accused of carrying on these practices.

In the *Yonkers* case, *Public Service Commission of New York vs. U. S.*, 323 U. S. 675 (1946), a small interurban railroad was held to be within the jurisdiction of the Interstate Commerce Commission because of its physical, administrative and financial relationship to the New York Central Railroad. The key factors were not so much that the operation was completely intrastate, but rather that it was integrated to the service and operations of the New York Central's Putnam Division.

In the *Piedmont* case, *Piedmont and Northern Railway Company vs. I. C. C. and U. S.*, 286 U. S. 299, 1115 (1931), a wholly electric railroad engaged in carrying freight and passengers between cities was found not to be exempt for the reason that it was connected directly with and was operated as part of a main railroad system in competition with interstate carriers under the Act. The company previously owned and operated two separate and disconnected lines of railway, one in South Carolina of about 100 miles, and one in North Carolina of about 26 miles. The extensions in question involved some (1) 53 miles to connect the northern terminal of the South Carolina with the southern terminal of the North Carolina line, interstate; and (2) 75 miles from the northern line to a new terminus, intrastate. The question of the exclusion paragraph as applied to any railroad was admittedly a question of degree and fact.

Roberts, J. went into the facts in the manner of the *Omaha* case. He considered the type of traffic, which was largely freight, percentage of track laid in city streets (2.25 per cent), the fact that the tracks were of standard railway gauge, a considerable extent of foreign line car flow, that train lengths may run to 65 cars with trains of 40-50 cars as "usual," the fact that through and local freight trains operated in the same manner as steam railroads, the fact that methods of business solicitation, membership in traffic organizations and traffic published and concurred in are national in scope, and the fact that it now connects with a large main line railroad, and with new connections it would become a connecting link in a new through trunk line

strongly competitive with existing trunk lines.

As to the "distinguishing features of a 'street or a suburban electric railway' under the Act":

"These are essentially local, are fundamentally passenger carriers, are to an inconsiderable extent engaged in interstate carriage, and transact freight business only incidentally and in small volume. The record indicates that prior to 1920 such street or suburban railways had grown in many instances as to link distinct communities, and that in addition so called interurban lines were constructed from time to time, to serve the convenience of two or more cities. But the characteristics of street or suburban railways persisted in these interurban lines." (286 U. S., at 307.)

The *Chicago* case, *Chicago North Shore and Milwaukee Railroad Co.*, 219 I. C. C. 135 (1936), is perhaps most apposite to the proposed bi-state loop. The question was: Is this railroad exempt under the provisions of the Railway Labor Act, as amended June 21, 1934, S. 1 (1)?

"The term 'carrier' shall not include any street interurban or suburban electric railways, unless such railways are operating as a part of a general steam railroad system of transportation. . . .

The railroad was found to be a street interurban railroad within the provisions of the Act and thus exempt from the I. C. C. The facts found indicated: The railway was electric powered, with none of its securities owned by a steam railroad; it ran from Chicago, Illinois, to Milwaukee, Wisconsin, a distance of 96.67 miles, and with branches a total of 138.38 miles of line; its operation into Chicago involved sharing elevated or raised tracks used in common with the Chicago Rapid Transit Company, which then performed the local service and with city lines in three other cities, a total of 14.66 per cent of the total miles of the line was in city streets; bridges, tracks, etc., were not sufficient to permit steam railroad operation on part of the line; approximately 80 per cent of the revenue was from passengers, 20 per cent from freight; the trains range from single cars to four or five cars which are smaller than steam railroad passenger cars; parlor buffets where meals are

served on trays were on some trains; interline tickets were sold but accounted for only 1.7 per cent of passenger business. There were 202 passenger stops between Chicago and Milwaukee, only 11 per cent of total revenue from interline freight; it was impossible to handle carload freight in standard equipment on 31.47 miles of line or 22.73 per cent of total route miles because of physical conditions or franchise restrictions which prevent handling of freight to or from either of the principal terminals, Chicago and Milwaukee; and there was no interchange connection with any of the steam railroads in Chicago or Milwaukee.

In another case, the Hudson and Manhattan, which is one of two railroads considered whose freight revenue was less than this railroad's, carried no freight but was distinguished because 22.97 per cent of its total passenger revenue is derived from interline traffic; because it has a joint operating agreement with the Pennsylvania Railroad, and it operates a downtown passenger terminal for that carrier in New York City. The New York, Westchester and Boston Railway Company, the other railway with less freight than the Hudson and Manhattan, 4.2 per cent of total revenue, and because it was owned by the New York, New

Haven and Hartford, was found to be part of that system and hence it was not excluded. Using similar reasoning, the Hudson and Manhattan has been found not exempt from the Railway Labor Act, as amended in 1934, that is, due to its close operating affiliation with the Pennsylvania Railroad, including participation in joint fares, joint operation with a trunk line railroad. (*Hudson and Manhattan Railroad Company*, 216 I. C. C. 745 (1936).)

Based upon these authorities it may be concluded that:

Conclusion: A new bi-state loop and its operations would be exempt from the jurisdiction of the Interstate Commerce Act and from the various collateral statutes which similarly exempt suburban or interurban electric railways which are not operated as a part or parts of a general steam railroad system of transportation. If the bi-state agency were to take over the Hudson and Manhattan Railroad, and if its operations were to continue to follow the present pattern of relationship with the Pennsylvania Railroad, however, the Hudson and Manhattan phase of the bi-state operation would be subject to the I. C. Act and similar legislation in the absence of a specific exemption by the Congress. Such an exemption might properly be provided by federal legislation.

could by compact with the approval of Congress achieve metropolitan governmental purposes through machinery which would not be available to either of them alone under their respective state constitutions. Thus far, the decisions of the United States Supreme Court clearly establish that compacts serve as contracts between sovereign states and that the compacts are superior to subsequent legislation of either state and may not be unilaterally overruled or abrogated. Beyond this, two theories have appeared in the cases: One that an interstate compact is equivalent to a treaty between sovereign powers and is for that reason not restricted by internal limitations on the domestic legislation of either state; and, second, that it becomes a federal law by reason of Congressional consent and as such it becomes the "law of the land" under the Supremacy clause of the federal constitution. Some support is found for one or the other of these theories in the opinions of the Supreme Court, but on the two principal occasions when actual precedents could have been so established the court held that there was no conflict between the interstate compact and the provisions of the state constitutions in question.

Conclusion: We have accordingly proceeded upon the premise that a new metropolitan district formed by compact between the states of New Jersey and New York would be obliged to fit the constitutional requirements not only of one state but of both states.

In both states, the common law control of the legislature over the organization, property, powers and finances of special districts is well established. There is no constitutional home rule in New Jersey, and the courts of New York have repeatedly held that under the home rule provisions of the constitution of that state the legislature may deal specially with the matter of rapid transit for the City of New York, that being a subject which is at least concurrently a matter of state concern, if it be also a matter of the "property, affairs of government" of the City of New York. The legal questions are presented primarily by a few specific clauses of the state constitutions. The key matters of

revenue sources and the form of obligations, as affected by these constitutional provisions and practical considerations were the subjects of Chapters VI and VII.

RECOMMENDATION

In view of the foregoing considerations, and the task to be performed as outlined in the preceding chapters of this report, it is *recommended*:

That the two states of New Jersey and New York enter into an interstate compact to incorporate a "metropolitan district of New York and New Jersey," with power to plan, construct, finance and operate trans-Hudson rapid transit facilities and services in the region as well as such other facilities and services as authorized by the legislatures of the two states. Such a compact would provide that each service and facility shall be financed by or within those political subdivisions of the region specially benefited or served, or in such other manner as the legislatures of the respective states may provide by concurrent legislation.

(1) *Name:* Metropolitan District of New York and New Jersey. This name is intended to be broader than the subject of rapid transit for two reasons: First, it will be adequate to encompass all future developments of metropolitan area functions which may be committed to it; and second, such a name may well enhance the credit standing of the metropolitan district as compared with one specifically identified as a rapid transit service area.

(2) *Area:* The boundaries of the district should at the start include the ten counties in New Jersey, Orange and Rockland counties in New York, and the City of New York, as a basis for proceeding on the rapid transit question. If a railroad suburban service deficit plan as described in Chapter II of this report is not adopted, Mercer County might be omitted. It should be contemplated that eventually Dutchess, Putnam, Westchester, Nassau and Suffolk counties in New York and Fairfield County in Connecticut might be added to the district, depending upon the legislative determination of the scope of services it is to perform.

(3) *Corporate Form:* The district shall incorporate the inhabitants of the territory described within the above area as a body politic and corporate, the municipal corporate agency and instrumentality of the two states and of each of the political subdivisions heretofore existing within the described district for the better discharge of their respective responsibilities of local government.

This form of incorporation will take advantage of the implications of the decisions of the courts already summarized, and should satisfy the constitutional limitations already discussed.

(4) *General Powers:* The district will require the usual array of corporate power of management and administration. Beyond this, its procedures, accountability and internal relationships should be established. These would not be substantially different from the familiar requirements of public authority legislation in both states.

Rapid Transit: The detailed development of the scope, limitations and control of the powers of the metropolitan district must necessarily await the decisions of policy by the Metropolitan Rapid Transit Commission and by the legislatures of the two states. Nevertheless the following powers would be the minimum required to carry out a comprehensive program of rapid transit improvement:

(A) To adopt and effectuate a comprehensive plan for the development and improvement of mass public rapid transit for cross-Hudson River commuters and other suburban traffic, and as need and feasibility is demonstrated for Westchester and Long Island traffic;

(B) To acquire or lease the Hudson & Manhattan Railroad;

(C) To negotiate with the federal government for grants which may be lawfully available to finance or assist in financing the cost of preparing detailed plans and specifications for the proposed rapid transit plan;

(D) To construct, finance and operate the recommended loop system for rail rapid transit and such other projects as may be authorized by concurrent action of the two state legislatures;

(E) To acquire by purchase, grant, lease or otherwise such privately owned railroad properties within the metropolitan district as are used exclusively for passenger service and to contract for the operation of such facilities by or on behalf of the district, provided that this power may be exercised only with the consent of the railroad affected;

(F) To negotiate, execute and enforce contracts and other arrangements for the prompt construction and financing of all new facilities required to carry out the rapid transit plan;

(G) To acquire, contract with, and support buses, parking facilities and other appurtenances to a comprehensive rapid transit service;

(H) To operate or contract for the operation of the projects, facilities and services which it may acquire or control;

(I) To fix standards of service and of operations and to determine in its complete discretion the fares and other charges upon all properties within its jurisdiction;

(J) To negotiate and enter into contracts with the New York City Transit Authority for the use of tracks, equipment, stations and appurtenances owned or controlled by the district or by the transit authority, for the sharing of fares where necessary and for the operation by the New York City Transit Authority of trains and services provided by the district.

(K) To exercise its power to contract and acquire property for any and all of the foregoing purposes, and to make and enforce reasonable rules and regulations governing the use of its facilities and properties.

Financial Powers: The district shall have the power to issue its bonds and other obligations upon its full faith and credit, pledging its properties and revenues and all tax resources directly or indirectly available to it, as security for the payment thereof, and to fund and refund its indebtedness as its best interest may appear. The compact shall provide that its bonds and other obligations shall not constitute an indebtedness directly or indirectly of the State of New Jersey or the State of New York or of any political subdivision within the district.

The district shall have the powers of fixing its own rates and charges and raising revenues

as previously described. Its property, revenues, net income and activities shall be exempt from all state and local taxation by or within either state. Its operations shall also be exempt from the jurisdiction of the public service commission in the State of New York and the public utilities commission in the State of New Jersey. Its rates and services shall also be exempt from any and all municipal regulations or control in either state.

The security, form and cost of borrowing by the metropolitan district were considered in Chapters VI and VII. It is submitted that the recommendations of those chapters will provide a constitutionally sound, financially practicable and politically feasible plan of financing. Due to the lack of precedent for the particular plan, it will undoubtedly require the frequently used legal test suit to assure marketability of the bonds.

Governing Body

The nature of the bi-state agency as a metropolitan district will substantially determine the character of its governing body. The legal and financial problems previously discussed justify two recommendations:

(1) That the governing body of the district be appointed by popularly elected local legislative representatives (unless they are themselves elected by direct popular vote—a procedure not recommended).

(2) That the appointment of representation be sufficiently flexible to facilitate the entry of additional counties, and sufficiently weighted for population to reflect the interest of the central city.

Direct popular election of members of the governing body of the district will be required if it should ever be delegated the power to levy direct ad valorem taxes, unless the constitutions of the States of New York and New Jersey are amended to authorize the delegation of such taxing power to an appointive body. Since the recommendation is that direct taxing power is not necessary for the time being, the district may be organized under a plan of indirect popular election, that is, through the election of representatives to the metropolitan district governing body by each of the elected local governing bodies of the counties and of the City

of New York, to serve on the council of the metropolitan district.

The members of the council of the metropolitan district should be chosen, respectively, by the boards of chosen freeholders of the several counties in New Jersey and by the city council of the City of New York. There is no method of apportioning such representation scientifically. The commonly used basis of population would give the City of New York either twice as many councilmen as the New Jersey total (if the total city population were used) or half as many councilmen if the population of Manhattan alone were used. In the present state of development of bi-state cooperation, moreover, some recognition may well be given to the state line, even though it is to be hoped that eventually this will not be a pertinent consideration in metropolitan area government. Accordingly, it is proposed that the council be comprised of 32 representatives from the central city and from the suburban areas, appointed as follows:

New Jersey Counties—Total.....	16
New York City	14
Orange County	1
Rockland County	1

The above representation among the New Jersey counties would then be divided in recognition of the present and potential population as estimated by the Regional Plan Association, on the basis of one representative for each 500,000 of population, or major fraction thereof, estimated for 1975, provided that each county shall be entitled to at least one representative:

<i>New Jersey Counties</i>	<i>Estimated Population</i>		<i>Representation</i>
	<i>1955</i>	<i>1975</i>	
	<i>(000)</i>		
Bergen	655	1,100	2
Essex	950	1,100	2
Hudson	645	600	2
Mercer	259	400	1
Middlesex	335	700	2
Monmouth	280	600	2
Morris	200	400	1
Passaic	375	460	1
Somerset	115	225	1
Union	450	640	2
Total	4,284	6,225	16

Term and Compensation: Each of the members of the council of the district would serve

for a term of five years and until the election and qualification of a successor. Vacancies would be filled for the unexpired term only. Members of the council would serve without compensation.

Internal Organization: The council would select a chairman and other officers among its members, and would meet annually for the consideration and approval of the budget of the district. The members of the council from each state would each select three from among their number who, together with the chairman, would constitute the board of directors of the district. The board would be empowered to provide for the internal organization and administration of work of the district, to let and execute its contracts for construction and other purposes, to appoint a full-time chief executive officer, and such other officers and employees as might be required for the work of the district, and to fix their term and compensation within the limits of the annual budget adopted by the district. The district council would annually certify its deficit requirements, based upon the adopted budget, in accordance with the procedure outlined in Chapter VIII.

Railroad Advisory Board: The new rapid transit system will be publicly owned and operated, but it will require many contacts with the privately owned and operated railroads and efficient service to the public will require a substantial degree of cooperation and planning. Accordingly, it is recommended that a railroad advisory board be constituted, to consist of representatives designated by each of the commuter service railroads in the metropolitan area. The board would be available to consult with the board of directors of the district and with the executive director and staff, would serve as a coordinating body in railroad operations affecting the bi-state loop, and would assist in the development of plans and programs for the improvement of service.

Popular Referendum: The advisability of one or more popular referenda on the question of establishing a metropolitan district has been seriously considered. In view of the fact that the district covers 13 counties, and over 350 municipalities and counties, a separate referendum in each political subdivision would not

be a feasible way of expressing popular sentiment. A consolidated referendum throughout the same area would be inconclusive because of the great difference in degree of interest in a new rapid transit system which necessarily prevails—a difference which could not be reflected in the balloting although it is reflected in the financial program.

There is no constitutional requirement of a referendum in either state. There are many precedents for undertaking large scale public ventures without a referendum, for example the Port of New York Authority, the Water-from Commission Compact between New York and New Jersey, the New York State Thruway and the New York State Power Authority, each of which will spend substantially more than the proposed rapid transit project, and the New Jersey Turnpike Authority are examples of major ventures undertaken without referendum. Neither Toronto nor Boston, which are tax supported, conducted popular referenda upon their creation of other metropolitan ventures. Tax supported municipal bond issues may be issued by the City of New York and the counties in New Jersey without the necessity of referenda. Since the credit of neither of the two states will be pledged, there will be no bond issue referendum required under either state constitution.

In brief, the metropolitan district is conceived of as an administrative instrumentality to provide transportation and perhaps other services within and for a great number of municipalities in the district which requires them but cannot provide such service themselves. It is not essential under the constitutional law of either state that a county or municipal bond issue be approved by referendum to the voters. While it has been common to require referenda on public bond issues, the multiple political divisions and complex public relationships in the proposed metropolitan district would tend to defeat the purpose of such referenda as a direct expression of popular approval or disapproval.

In Conclusion: A popular referendum on the organization of the district or on its bond issues is not required by either state constitution and is not recommended.

APPENDICES

APPENDIX A
COMPARATIVE SUMMARY
EXISTING OR CURRENTLY-PROPOSED METROPOLITAN TRANSIT SYSTEMS

BOSTON METROPOLITAN TRANSIT AUTHORITY

Board of Trustees

Origin and Legal Basis	<i>To acquire existing facilities</i> previously operated by Boston Elevated Co., (1947); <i>to provide for extension of service</i> ; to provide for the assessment of deficits. Created by <i>Statute Chapter 544, Acts of 1947</i> . MTA made a political subdivision of the state.
Area Served	<i>Multimunicipal</i> rapid transit and surface system. (1) Serves 14 municipalities. <i>Extension conditioned</i> on a referendum in the municipality to be included.
Original Financing	Special District Bonds (<i>Municipal Obligations</i>) issued by Boston Metropolitan District. (2) These bonds are guaranteed by the 14 municipalities in the District.
Additional Financing	Additional bond issues require approval of Advisory Council by 85 per cent of votes (Amend. in Chapter 197, Acts of 1953).
Provisions for Deficits	<i>Deficits are assessed against the individual municipalities</i> "in proportion to the number of persons . . . using the service . . . said proportion to be determined . . . by trustees from computations made in their discretion." (Sec. 13, Chapter 544, Acts of 1947.) In practice the assessment is determined by 1940 station count regardless of origin of trip.
Determination of Benefits	Benefits are assumed to be shared by the <i>riders</i> and the <i>general taxpayers</i> of the <i>municipalities</i> served. The formula for assessing deficits assumes that benefits to the municipalities are in proportion to the number of passengers boarding the system in each municipality.
Administrative Organization	<i>Authority</i> —3 compensated trustees <i>appointed</i> by Governor with consent of Council for 6-year term. <i>Advisory Council</i> —City Manager (or Chairman of Selectmen where there is no City Manager) and Mayor of municipalities involved. Votes assigned in proportion to amount of deficit assessed against the municipality.
Taxability	All real and personal property of the Authority is exempt from taxes and special assessments, with the exception of motor vehicle and fuel taxes.
Government Regulation	Authority fixes rates subject to approval of Department of Public Utilities. Law is ambiguous as to supervision of character and extent of services.

(1) Rapid Transit is any high-speed grade-separated rail system. Surface system is any mass transportation facility such as bus, trolley, street car, which uses the public streets.

(2) The Boston Metropolitan District is an incorporated unit which serves as financing agency for MTA. District holds the obligations issued by the MTA and in turn issues bonds to the general public.

CHICAGO TRANSIT AUTHORITY

Chicago Transit Board

Origin and Legal Basis	<i>To acquire existing facilities</i> previously operated by private companies; to provide unification of transit facilities. Created by <i>Statute</i> State of Illinois, April 1945—Metropolitan Transit Authority Act, and City of Chicago Ordinance, April 1945, Began operation October 1947.
Area Served	<i>Multimunicipal</i> rapid transit and surface system. Serves Chicago and suburbs in Cook County. <i>Extension permitted</i> within Cook County for interurban transportation of passengers. May not extend street railroad without consenting ordinance.
Original Financing	<i>Public Authority Bonds</i> 30 year serial <i>Revenue</i> bonds. City-owned facilities were financed in part by accumulated funds, and in part by <i>revenue</i> bonds, and in part by a PWA grant.
Additional Financing	Improvements of Chicago System were financed by a unique plan of improvement certificates payable out of depreciation reserves. Extensions of facilities were financed by <i>revenue</i> bonds and a <i>Property Purchase Obligation</i> with the Chicago, Aurora & Elgin Railroad Co.
Provisions for Deficits	<i>None allowed.</i> Authority is required to charge fares sufficient to cover operating expenses, depreciation, debt service, amortization, and improvements. The Authority pays annual rental equal to depreciation on "transportation equipment" in the city-owned subway system. Additional payment (Municipal Compensation) for the use of subways proper, however, is required only if other expenses are covered.
Determination of Benefits	Beneficiaries are assumed to be the <i>riders</i> and <i>indirectly the general taxpayers of the City of Chicago</i> . The latter bear the cost of any debt service on the subway proper which is not met by payments from the Transit Authority.
Administrative Organization	<i>Authority</i> —7 compensated board members. Four members are <i>appointed</i> by the Mayor of Chicago and three members by the Governor for seven year terms. Board elects its own officers. Chairman must have no other employment.
Taxability	Pays state fuel and license taxes and fees; City license fees; and in lieu payments to the Chicago Park District for wear and tear of boulevards. Exempt from property taxes (Revenue Act of 1939, Sec. 19 amended in 1945).
Government Regulation	None.

CLEVELAND TRANSIT SYSTEM

The Transit Board of the City of Cleveland

Origin and Legal Basis	<i>To acquire existing facilities</i> of the Cleveland Railway Co. (1942); <i>to provide new facilities</i> of a rapid transit nature. (1955) <i>General powers of City</i> exercised under Ohio Constitution (Art. XVIII, § 4) which permits municipalities to acquire public utilities by ordinance except that a protest petition signed by 10 per cent of the voters can cause a referendum.
Area Served	<i>Multimunicipal</i> rapid transit and surface system. Serves Cleveland and 20 suburban communities.
Original Financing	<i>Municipal Obligations</i> —20 year <i>mortgage revenue</i> bonds \$17,500,000 (1942) (this issue was retired 10 years ahead of maturity date).
Additional Financing	Construction of rapid transit facilities was financed by <i>Mortgage Revenue Bonds</i> and a <i>Right of Way Purchase Contract</i> with the New York, Chicago, St. Louis Railroad.
Provisions for Deficits	<i>None allowed.</i> City Charter provides that fares shall be such as to meet all operation expenses, debt service, improvements, amortization, and tax payments. Deficits could result in foreclosure. The City of Cleveland has the right to re-purchase.
Determination of Benefits	Beneficiaries are assumed to be the <i>riders</i> .
Administrative Organization	<i>Commission</i> —5 compensated board members <i>appointed</i> by Mayor, with Council approval, for overlapping 5 year terms. Not more than 3 members may belong to the same political party. Chairman elected by board. Board has complete responsibility for operation and extension of system except that bond issues must be authorized by Council.
Taxability	Ohio Constitution, as currently interpreted, does not permit tax exemptions; if it should at some future date, the Charter provides for in-lieu payments not to exceed \$600,000 per year.
Government Regulation	None.

DEPARTMENT OF STREET RAILWAYS

CITY OF DETROIT

Board of Street Railway Commissioners

Origin and Legal Basis	<i>To provide new facilities (1920); to acquire existing facilities privately owned (1922). Statute provisions of City Charter, Chapter 13, Title 4. All purchase and lease agreements require approval by 3/5 of the electors.</i>
Area Served	<i>Multimunicipal surface system. Serves Detroit and enclaves plus area within ten miles of city limits.</i>
Original Financing	<i>Municipal Obligations—backed by full faith and credit of the City. The city is allowed to issue bonds up to 1½ per cent of assessed value of property in City (public utility bonds).</i>
Additional Financing	<i>City has the choice of using general obligation bonds or revenue bonds secured by street railway property and revenues.</i>
Provisions for Deficits	<i>None allowed. City Charter provides that fares shall be such as to meet all operating expenses, taxes, debt service, and amortization.</i>
Determination of Benefits	<i>Beneficiaries are assumed to be the riders.</i>
Administrative Organization	<i>Department—3 non-compensated commissioners appointed by Mayor and subject to removal at his will. With Council approval the Board can extend the system.</i>
Taxability	<i>Pays City and county real and personal property taxes. Also pays a wheel tax to the State and certain municipalities.</i>
Government Regulation	<i>None.</i>

NEW YORK CITY TRANSIT AUTHORITY

Board of Commissioners

Origin and Legal Basis	<i>Unification</i> of city-owned and privately-owned subway facilities (1940); <i>Transfer to a public authority</i> the lease rights on the system (1953). <i>Statute</i> created and empowered the transit authority. Title 15, New York State Public Authorities Law (March 25, 1953).
Area Served	<i>Single City</i> rapid transit and surface system. Serves the boroughs of New York City. <i>Extension permitted</i> within the City with the prior approval of the Board of Estimate.
Original Financing	<i>Municipal Obligations</i> —general obligation bonds issued to cover original city-owned facilities and for purchase costs under the unification plan. Some of these bond issues (approximately 40 per cent of outstanding debt) are exempt from the city's constitutional debt limitations.
Additional Financing	Capital expenditures are covered by <i>general obligation bonds</i> of the City. New capital expenditures require prior approval of Board of Estimate if they exceed \$5 million in any fiscal year.
Provisions for Deficits	<i>None allowed.</i> Authority must charge fares sufficient to cover operating costs exclusive of depreciation, i. e., no replacement funds provided from operating revenue. Capital costs are met through the general taxing and borrowing powers of the City. The city is responsible for capital costs and debt service as well as pension payments contracted under the 1940 unification plan.
Determination of Benefits	Benefits are assumed to be shared by the <i>riders</i> and <i>general taxpayers of City of New York</i> . Riders bear the cost of operating expenses. Taxpayers bear the cost of debt service and replacement costs.
Administrative Organization	<i>Authority</i> —3 compensated board members <i>appointed</i> for 6 year terms. One member each appointed by the Governor and by the Mayor. The third member, who serves as Chairman, is selected by the two appointees.
Taxability	Exempt from all State and local taxes.
Government Regulation	None.

PHILADELPHIA TRANSPORTATION COMPANY

Board of Directors

Origin and Legal Basis	<i>To consolidate</i> existing facilities (1907). A private corporation (owned by National City Lines, Inc.) with public participation. <i>Contract</i> with city covers franchise and use of City-owned subway facilities.
Area Served	<i>Multimunicipal</i> rapid transit and surface system. Serves Philadelphia and surrounding communities including downtown Camden, N. J. <i>Extension permitted</i> within the City with prior approval of City Council and State Utility Commission. Any extensions outside of the city are subject to approval by affected units of government.
Original Financing	<i>Private Credit</i> —guaranteed by PTC as to both principal and interest. PTC leases from City about \$200 million in facilities. City-owned facilities were financed by general obligation bonds.
Additional Financing	City must approve increases in capital stock. Capital funds for new lines shall be raised, as far as possible, by bonds guaranteed by PTC as to both principal and interest.
Provisions for Deficits	<i>No provision.</i>
Determination of Benefits	Beneficiaries are assumed to be the <i>riders</i> and <i>indirectly the general taxpayers of the City of Philadelphia</i> . The latter bear the cost of any debt service on city-owned subway facilities which is not met by payments from the Transit Company.
Administrative Organization	<i>Private Corporation</i> —5 of the 21 members of the Board of Directors are <i>appointed</i> by the City Council. Public members have the same powers as private members and are paid director's fees. City Controller audits Company records. The City Planning Commission has approval powers over new construction of facilities.
Taxability	Pays property taxes on property not owned by City. (4) Pays all other state, local, and federal taxes to which a private corporation is subject.
Government Regulation	Subject to regulation by the State Utility Commission.

(4) PTC pays City \$700,000 per year in lieu payments for street maintenance, snow removal, license fees, etc. Also pays City 6c. to 8c. per square yard for any surface extension of operations.

**DEPARTMENT OF TRANSPORTATION
CITY OF SHAKER HEIGHTS**

Director of Transportation

Origin and Legal Basis	<i>To acquire existing facilities</i> previously owned and operated by private company (1944). <i>General powers of City</i> exercised under Ohio Constitution (Art. XVIII, § 4) which permits municipalities to acquire public utilities by ordinance except that a protest petition signed by 10 per cent of the voters can cause a referendum.
Area Served	<i>Multimunicipal</i> rapid transit. Runs between downtown Cleveland and three suburban communities.
Original Financing	<i>Municipal Obligations</i> —mortgage revenue bonds, with no pledge of credit of City.
Additional Financing	
Provisions for Deficits	<i>None allowed.</i> Fares must be such as to cover all costs, debt services, and taxes.
Determination of Benefits	Beneficiaries are assumed to be the <i>riders</i> .
Administrative Organization	<i>Department</i> —Operated under a <i>City-appointed</i> Director of Transportation.
Taxability	Ohio Constitution, as currently interpreted, does not permit tax exemption.
Government Regulation	None.

TORONTO TRANSIT COMMISSION

Board of Commissioners

Origin and Legal Basis	<i>To consolidate existing facilities on a metropolitan basis; to provide new facilities of a rapid transit nature. Established under the provisions of the Ontario Statute creating the Municipality of Metropolitan Toronto. (April 2, 1953)</i>
Area Served	<i>Multimunicipal rapid transit and surface system. Serves Metropolitan Toronto (an area of 240 sq. miles) consisting of the City of Toronto and 12 surrounding municipalities.</i>
Original Financing	<i>Municipal Obligations</i> —all debt of the Commission is part of the consolidated debt of the Municipality of Metropolitan Toronto but is serviced by the Commission.
Additional Financing	Additional bond issues require prior approval of the Metropolitan Council.
Provisions for Deficits	<i>No provision.</i> The system is expected to be self-supporting. Fares are to be such as to cover all expenses. In practice, the metropolitan government pays debt service even though it has not been earned.
Determination of Benefits	Beneficiaries are assumed to be the <i>riders</i> except where purely local transportation is supplied. In the latter situation, the municipality assumes any deficits involved. (Sec. 108, Toronto Metropolitan Act 1953.)
Administrative Organization	<i>Commission</i> —5 compensated members <i>appointed</i> by the Metropolitan Council for a 5 year term. All members must be residents and rate-payers in an area municipality. The commission must obtain prior approval of the Metropolitan Council for any expenditures requiring the issue of debentures of the Metropolitan Corporation.
Taxability	Property taxes assessed against subway property. Heretofore the Commission had paid no property taxes.
Government Regulation	None.

PROPOSED TRANSIT SYSTEMS

PROPOSED SYSTEMS

LOS ANGELES

Study Group and Proposed System	Los Angeles Metropolitan Transit Authority; monorail system for the City of Los Angeles.
Area to be Served	<i>Multimunicipal.</i> A portion of Los Angeles County 45 miles long and 8 miles wide.
Proposed Method of Initial Financing	<i>Public funds.</i> Revenue bonds are precluded by regulatory functions of public utility commission and by "untested" character of proposed Mono-rail system.
Proposed Operating Finances	Authority Act requires system be completely self-supporting including in-lieu payments, but engineering report does not provide for complete debt service or tax payments out of revenue.
Proposed Administrative Organization	Would use existing Los Angeles Metropolitan Transit Authority (1951) 7 members, compensated Authority with members appointed by Governor for four year terms.
Taxability and Government Regulation	Tax exemption recommended in engineering study. Enabling Legislation requires that taxes be paid out, and rates and service be subject to Public Utility Commission control.

PROPOSED SYSTEMS

MONTREAL

Study Group and Proposed System	Subway system for the Montreal area.
Area to be Served	<i>Multimunicipal.</i> Montreal and 17 surrounding municipalities.
Proposed Method of Initial Financing	The cost of construction to be borne by <i>general Public</i> .
Proposed Operating Finances	Debt service and interest to be supplied by municipalities on a pro-rata basis to be determined.
Proposed Administrative Organization	Would use existing Montreal Transportation Commission.
Taxability and Government Regulation	None.

PROPOSED SYSTEMS

PHILADELPHIA

Study Group and Proposed System	The Urban Traffic and Transportation Board appointed by the City of Philadelphia. [Report dated March 1956] An integrated transportation organization.
Area to be Served	<i>Multimunicipal</i> . Eight county area, consisting of five in Pennsylvania and three in New Jersey, with future addition of two others in New Jersey and one in Delaware.
Proposed Method of Initial Financing	An increase in <i>tax funds</i> now allocated for highway and bridge construction (Federal-State Highway funds, and Pennsylvania Motor License fund allocation) plus <i>Revenue bond</i> financing [proposal is vague but indicates other public funds would be required for rapid transit].
Proposed Operating Finances	System as a whole should be self-supporting. There would be pooling of revenues without eliminating tax funds now allocated to such functions. Highway and bridge tolls, parking fees, transit fares would make up revenue.
Proposed Administrative Organization	Regional Transportation Organization. A regional governing council with taxing and bond issuing powers, and having broad control over all bridges, expressways, transit, parking, taxicabs, and railroad terminals. At least a majority of members should be elected. Organization should permit future enlargement into a multi-purpose agency.
Taxability and Government Regulation	None.

PROPOSED SYSTEMS

SAN FRANCISCO

Study Group and Proposed System	San Francisco Bay Area Rapid Transit Commission (1951) appointed under state legislature. State's share of study cost to be repaid with interest from the first bond issue [Report dated March 1956] Rapid Transit System for area.
Area to be Served	<i>Multimunicipal</i> . Nine counties (3 of them would not be included until a later stage).
Proposed Method of Initial Financing	Capital costs financed by District Bonds. Annual debt service to be covered by a variety of proposed taxes.
Proposed Operating Finances	Operating deficits are not expected. Capital costs and debt service are to be covered by taxation (\$31 million a year for 40 years). Alternative taxes are suggested: Property, Sales, Gas.
Proposed Administrative Organization	An already existing provision for rapid transit district could be used.* Council consists of one from each City which lies in whole or part within district, and one from each unincorporated territory. Each City over 200,000 to have one extra member for each additional 200,000 population. Members appointed by Mayor for 4 year term—must be voter. Member paid by meeting. Council to appoint Board of Managers to conduct operations.
Taxability and Government Regulation	Tax exemption assumed. Public Utility Commission "to fix rates and fares over the facilities owned by the district."

* San Francisco can, under existing enabling legislation, establish a rapid transit district which would include "78 individual units of government."

District: A board of supervisors desiring to form or join the district must adopt a resolution of intention. This is followed by a public hearing at the conclusion of which the board may exclude any territory which will not be benefited. Referendum is then necessary. District not created unless 9 key cities approve. District has power to issue bonds and borrow money; debt may not exceed 20 per cent of assessed valuation of taxable property within district. Debt subject to $\frac{3}{4}$ approval of council and $\frac{2}{3}$ referendum. District may levy taxes for payment of principal and interest. Operating deficits must be met by borrowing through revenue bonds which cannot be paid off by taxes. Power to tax for capital outlay only.

PROPOSED SYSTEMS
SOUTH JERSEY-CAMDEN

Study Group and Proposed System	Delaware River Port Authority [Report dated January 1956] Rapid Transit system for area.
Area to be Served	<i>Multimunicipal</i> . Southern New Jersey within 35 miles of Camden and Philadelphia.
Proposed Method of Initial Financing	Four suggestions: (1) Port Authority bonds guaranteed by New Jersey and Pennsylvania or some subdivision thereof; (2) Partial grant of construction costs; (3) Higher bridge tolls to make revenue bonds marketable; (4) Some combination of 2 and 3 above.
Proposed Operating Finances	Operating deficits are not expected. Revenues are expected to cover debt service on rolling stock, yards and shops. Estimated annual amortization deficit on construction costs of way and stations: \$10.6 million.
Proposed Administrative Organization	Would use existing Delaware River Port Authority.
Taxability and Government Regulation	Tax exemption assumed.

APPENDIX B

NOTES TO TABLE 9—1955 FINANCIAL EXPERIENCE

- (a) The information in this Table is summarized from the point-of-view of a public authority charged with meeting current operating expenses and current debt service charges. As stated it does not reflect the financial experience of certain transit systems as it appears in their published financial statements. Depreciation allowances, certain non-operating income adjustments and the allocation of surplus to relevant funds is not included.
- (b) Fiscal year June, 1954 - June, 1955.
- (c) New York figures do not include South Brooklyn Railway Company operations which had a net profit of \$51,778 in 1955.
- (d) The rental payment is for the state-owned Cambridge Subway. The yearly rental payment constitutes the actual amount necessary to meet serial debt and interest payable on the state debt for the Cambridge Subway.
- (e) Includes interest and principal repayment on revenue bonds, equipment trust certificates and property purchase obligation. Under the Chicago arrangement the latter two are payable out of the depreciation reserve fund and do not represent a direct charge to current income. The amounts included are:

	<i>Interest</i>	<i>Amortization</i>
Revenue Bonds	4,947	2,600
Equipment Trust Certificates	770	1,245
Property Purchase Obligation	28	114
Discount and Interest Earned	(80)	....
Total	5,665	3,959

- (f) Current Amortization is not treated as a charge against income in the financial statement of the transit system. In each case depreciation is so charged, and the non-cash charge used to defray debt retirement costs.

	<i>Depreciation Allowance (thousands of dollars)</i>	<i>Amortization (thousands of dollars)</i>	<i>Depreciation (over) Under Amortization</i>
Detroit	2,561	3,642	1,081
Philadelphia	3,162	1,173	(1,989)
Toronto	3,568	1,740	(1,828)

The difference between depreciation charges and amortization charges is the reconciling

factor between the attached table and the financial reports of the transit system.

	<i>Detroit</i>	<i>Philadelphia</i>	<i>Toronto</i>
Depreciation over/(under) amortization	1,081	(1,989)	(1,828)
Additional interest on an accrual basis	(33)	.....	.....
Provision for income tax .....	.....	(332)	.....
Other income adjustments	(47)	(1,391)*	(207)**
Income/(deficit) after fixed charges (from schedule)....	(464)	5,041	(274)
Surplus/(deficit) shown on transit financial statement	537	1,329	(2,309)

* Extraordinary items.

** Deficit on Island Ferry Service.

(g) Includes \$360,000 sinking fund payment and \$703,000 payment in lieu of street repairs under terms of 1907 Agreement and \$173,000 rental for Delaware River Bridge Line leased from the Delaware River Joint Commission.

(h) City of Philadelphia only. Does not include the Delaware Bridge Line amounts. The Bridge Line, a self-contained transit, is rented to the PTC on a per passenger rental. The transit line, aside from that portion of the bridge structure which it occupies, represents an investment of approximately \$11 million. This investment is included in consolidated debt and subject to refunding so that amortization and interest are not separable from general debt. But a rough approximation

indicates that fixed charges would be between \$400,000 and \$500,000 a year for the Bridge Line. Compared with rental payments of \$173,000 (maintenance and operating costs are paid by the PTC) there is approximately an annual subsidy of from \$225,000 to \$325,000.

(i) Includes dividends received from the Gray Coach Lines, a wholly-owned subsidiary.

(j) The Municipality of Metropolitan Toronto made a grant of \$2,300,000 to compensate the Commission for losses suffered during 1955 (see note f).

(k) Reconciliation of attached schedule with published financial statements of transit systems. (Also see note f for Detroit, Philadelphia and Toronto.)

	<i>Boston</i>	<i>Chicago</i>	<i>Cleveland</i>	<i>New York City</i>	<i>Shaker Heights</i>
Income/(deficit) after fixed charges (from attached schedule)	(5,601)	8,785	2,252	6,392	128
Residual Reserves—					
Future amortization .....	.....	(360)	(122)	.....	(58)
Replacement	(1,200)	(7,594)*	(2,005)	.....	(117)
Other Income Adjustment	86	.....	.....	.....	47
Surplus/(deficit) shown on transit financial statement	(6,715)	831	125	6,392	.....

* See note e.

APPENDIX C

PUBLIC AUTHORITIES IN THE METROPOLITAN REGION—FINANCIAL POWERS

THE PORT OF NEW YORK AUTHORITY

The Compact

Article VI of the Compact between the State of New York and the State of New Jersey establishing the Authority, the text of which is contained in Chapter 154 of the Laws of New York of 1921, as amended by Chapter 419 of the Laws of New York of 1930 (McK. Unconsol. S. 6401-6423), and Chapter 151 of the Laws of New Jersey of 1921, as amended by Chapter 244 of the Laws of New Jersey of 1930 R. S. N. J. 32:1-1 to 24), provides as follows:

“The Port Authority shall constitute a body corporate and politic, with full power and authority to purchase, construct, lease and/or operate *any terminal or transportation facility* with said district and to make charges for the use thereof; and for any of such purposes to own, hold, lease and/or operate real or personal property, to borrow money and secure the same by bonds or by mortgages upon any property held or to be held by it . . .

The powers granted in this article shall not be exercised by the Port Authority until the legislatures of both states shall have approved of a comprehensive plan for the development of the port as hereinafter provided.”

Such comprehensive plan, as approved by the legislatures of both states in February, 1922 (Chapter 9 of the Laws of New Jersey, 1922), did not provide for a rapid transit rail system although it did make provision for certain railroad facilities. However Section 7 provided that:

“The right to add to, modify or change any part of the foregoing Comprehensive Plan is

reserved by each state with the concurrence of the other.”

A pattern was thus established for each undertaking by the Authority thereafter consisting of (1) concurrent legislation by the two states approving the project (2) approval by Congress, if necessary and (3) concurrent legislation by the two states making the bonds issued for such purpose legal for investments and eligible for deposit as security with certain public officers and agencies.

In view of the provision for railroad facilities in the Comprehensive Plan and of the power specifically conferred by Article XII of the Compact upon the Authority to “make recommendations to the legislatures of the two states or to the Congress of the United States, based upon study and analysis, for the better conduct of the commerce passing in and through the Port of New York, *the increase and improvement of transportation and terminal facilities therein*, and the more economical and expeditious handling of such commerce,” it seems certain that a rapid rail transit system is comprehended within the term “transportation facility” as used in the Compact. Therefore, although the operation of such a system by the Port Authority would probably require (1) concurrent approving legislation by the two states and (2) concurrent legislation making the bonds legal investments etc., there seems little doubt that bonds for such a purpose could legally be issued under the Compact as amended and supplemented.

It should be noted that the act enabling a public authority to undertake a certain project

is ordinarily limited to the specific project in question and, since it represents a delegation of power by the State, is strictly construed by the courts. For example, the New Jersey Supreme Court in *Port of New York Authority vs. Weehawken Township*, 14 N. J. 570 (1954) held that the Port Authority required additional authorization to construct a third tube for the Lincoln Tunnel notwithstanding the powers originally granted to build the Lincoln Tunnel.

BOND RESOLUTIONS

The Authority is now financing its operations and will unquestionably continue to finance its present and future operations under the terms of the Consolidated Bond Resolution adopted October 9, 1952. Section 2 of the Consolidated Bond Resolution provides as follows:

“Said Consolidated Bonds shall be issued *only for purposes for which at the time of issuance the Authority is authorized by law to issue bonds secured by a pledge of the General Reserve Fund* and only in such amounts as are permitted by Section 3 of this resolution.”

The Resolution establishing the General Reserve Fund adopted March 9, 1931, as amended May 5, 1932, provides, in part, as follows:

“WHEREAS, by Chapter 48 of the Laws of New York of 1931 and Chapter 5 of the Laws of New Jersey of 1931, The Port of New York Authority is directed to pool all surplus revenues, as defined in said statutes, received by it from certain *terminal and/or transportation facilities*, and to apply such surplus revenues to the establishment and maintenance of a general reserve fund in an amount equal to one-tenth (1/10th) of the par value of all outstanding bonds of the Port Authority legal for investment, as defined and limited in said statutes, and

“WHEREAS, by the aforesaid statutes, The Port of New York Authority is authorized to pledge the moneys in said general reserve fund as security for the repayment with interest of any moneys heretofore or hereafter raised by it upon its bonds, legal for investment, as defined and limited in said statutes, and to apply said moneys to the fulfillment of any other undertakings heretofore or

hereafter assumed to or for the benefit of the holders of any such bonds.

“*Now, Therefore*, after due consideration had, it is . . .

“*Resolved*, that the Port of New York Authority hereby irrevocably pledges the said general reserve fund and all moneys which may be or become part thereof as security for the repayment with interest of moneys heretofore or hereafter raised by it upon bonds, legal for investment as defined and limited in said statutes, and as security for the fulfillment of any other undertakings heretofore or hereafter assumed by it to or for the benefit of the holders of such bonds, and it is further . . .

“*Resolved*, that the said pledge is made and shall be deemed to be subject to the right, which the Port of New York Authority hereby reserves to itself, to pledge the said general reserve fund or any part thereof in its sole discretion, as security for the fulfillment of any obligations heretofore or hereafter assumed by it under or in connection with any other of its bonds whatsoever, by which is meant bonds other than those described, specified or mentioned in said Chapter 48 of the Laws of New York of 1931 and said Chapter 5 of the Laws of New Jersey of 1931 and to apply the said general reserve fund or any part thereof to the fulfillment of such obligations, the intent thereof being to reserve the right to use the said general reserve fund to support such other and additional bonds or types of bonds as the States of New York and New Jersey may hereafter determine or authorize, provided that the right hereby reserved to pledge the said general reserve fund as security for such other bonds, not described, specified or mentioned in said statutes, and to apply the moneys therein to the fulfillment of obligations under or in connection with such bonds shall be exercised only if and to the extent that the said two States may hereafter authorize its exercise, and provided, further, that no greater rights in or to the said general reserve fund shall be granted to or conferred upon the holders of any other bonds of the Port of New York Authority than are hereby or are hereafter granted to or conferred upon holders of the bonds in support of which said general reserve fund is hereby pledged.”

In view of the provisions of the Consolidated Bond Resolution and of the Resolution Establishing General Reserve Fund, above set forth, and of the Laws of New York and New Jersey cited therein, it is clear that the Port Authority has the power to issue Bonds for rapid transit purposes under the Consolidated Bond Resolution provided that both States approve.

FINANCIAL AND OTHER CONSIDERATIONS

Although, subject to concurrent legislative approval on the part of New York and New Jersey, the Port Authority may *legally* finance and operate a rapid transit rail system within the New York-New Jersey Port District, certain financial obstacles exist.

First, Article VII of the Compact provides that "the Authority shall *not* pledge the credit of either State except by and with the authority of the legislature thereof." The Authority has never been authorized to pledge the credit of either State. Consequently its bonds and other obligations are *not* obligations of the two States or of either of them, and they are *not* guaranteed by the States.

Although the Authority has in the past received relatively small federal and state contributions from time to time, its credit is based entirely on the net revenues derived from its operations. Therefore such operations, considered over-all, *must* be self-supporting or the credit base of the Authority would be destroyed. Section 3 of the Consolidated Bond Resolution, generally speaking, limits the amount of bonds which the Authority may issue to that amount on which the annual debt service will, together with that on outstanding bonds, be covered 1.3 times by net revenues.

Rapid transit operations in New York and elsewhere have on the whole *not* been self-supporting operations and have, in fact, often sustained large deficits. Since such operations would tend to impair its credit, the Port Authority's policy is against undertaking such operations. Austin Tobin, Executive Director of the Port Authority, in a speech delivered before the Municipal Forum, November 20, 1952, stated:

"As we go forward with these plans for new trans-Hudson connections and with other airport and terminal work for which we are responsible, I think we should make it clear also that the Port Authority cannot assume any responsibility for the financing, construction or operation of rail transit operations between New Jersey and Manhattan or elsewhere in the Port District. Our studies indicate that rapid transit by rail is a deficit operation, whereas the principle of self-supporting public projects is the entire strength of the Port Authority and the entire measure of its capacity for usefulness."

Furthermore the projects to which the Authority has committed itself during the period from 1957 to 1966 include, among others, the construction of:

- (1) Major improvements and additions to the Authority's several airports,
- (2) Marine terminals in Brooklyn, Newark and Elizabeth,
- (3) The Narrows Bridge,
- (4) Major improvements and additions to the Holland and Lincoln Tunnels and the George Washington Bridge. The aggregate cost of the Authority's construction program over the next decade amounts to over one *billion* dollars.

To finance such a huge program probably will require nearly all of the Authority's borrowing power during that period even though state and federal grants should be forthcoming and even though the projects constructed are, or will become, self-supporting. It seems reasonable to believe, indeed it seems essential, that the Port Authority should conserve its borrowing power during the ensuing decade in order to be able to apply it to the successful consummation of the huge improvement program which the Authority has planned. To undertake additionally to finance a large project for rapid transit purposes would jeopardize the conclusion of the program which the Authority itself has outlined.

It is therefore believed very unlikely that the Port Authority, despite its legal power to do so, will, as a practical matter, engage in a rapid transit operation during the next decade if ever.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

The Act

Certain provisions of the Triborough Bridge and Tunnel Authority Act (Title 3 of Article 3 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York, as amended) are as follows:

1. Subdivision 6 of Section 551 defines "projects" as "any project or one or more projects" described in subdivision 9 of Section 553 or in Section 553-a cited below.

2. Subdivision 9 of Section 553 empowers the Authority "to design, construct, maintain, operate, improve and reconstruct" certain enumerated *projects* as follows:

- (1) Triborough Bridge.
- (2) Bronx Whitestone Bridge.
- (3) Henry Hudson Bridge.
- (4) Marine Parkway Bridge.
- (5) Cross Bay Parkway Bridge.
- (6) Queens Midtown Tunnel.
- (7) Brooklyn Battery Tunnel.
- (8) "A *vehicular* tunnel or tunnels or bridge . . . called the Brooklyn Richmond project, under or across New York Bay from the Borough of Richmond to the Borough of Brooklyn, together with such incidental tunnels, bridges and such other structures, appurtenances, facilities and approaches as shall be necessary or convenient."

(9) "A *vehicular* tunnel or tunnels or arterial highway across the Borough of Manhattan connecting the Queens Midtown Tunnel with the Lincoln (Midtown Hudson) Tunnel, together with such incidental tunnels and such other structures, appurtenances, facilities and approaches as shall be necessary or convenient."

(10) "Bus stations or terminals or automobile parking garages at or in the vicinity of the Columbus circle in the Borough of Manhattan and of the Manhattan plazas of the Queens Midtown and Brooklyn Battery Tunnel. Any such project may, subject to zoning restrictions, include space and facilities for any or all of the following: public recreation, business, trade and other exhibitions, sporting and athletic events, public meetings, conventions and all kinds of

assemblages, and in order to obtain additional revenues, space and facilities for business and commercial purposes." The Authority is also empowered to lease all or part of any such project for not more than ten years, or, if the revenues thereof are pledged to secure bonds, for a period ending not more than one year from the last maturity of such bonds.

(11) "Subject to and in accordance with all contract provisions with respect to any bonds and the rights of the holders of bonds, a *vehicular* bridge across the East River between the Boroughs of the Bronx and Queens, east of the Bronx Whitestone Bridge, together with such incidental bridges and other structures, appurtenances, facilities and approaches as shall be necessary or convenient (herein collectively referred to as the 'Throgs Neck Bridge Project')." This project requires the consent of the United States of America if any portion passes over Fort Schuyler and the Authority requires the prior consent of the Board of Estimate of New York City before acquiring any lands, easements, or rights in land for such project.

3. Section 553-a of the act authorizes the Authority to make certain agreements with the Port of New York Authority "relating to the construction, ownership, maintenance and operation of the Brooklyn Richmond project as a bridge (herein sometimes collectively referred to as the 'Narrows Bridge Project')."

4. Subdivision 10(d) of the act also authorizes the Authority with the consent of New York City "to construct and develop for the purpose of public parks so much of the area of lands, selected as in this title provided, or otherwise acquired or to be acquired and used in connection with the project and with new or existing roads, streets, parkways or avenues connecting with such projects, as shall be agreed upon under a contract or contracts hereby authorized to be entered into between the Authority and the City, at the sole expense of the Authority and done under construction contracts let and supervised by

the Authority, pursuant to plans and specifications prepared by the Authority, the Commissioner of Parks of the City or other agency." The City shall maintain the connecting roads and the Park Department of the City shall maintain the parks and parkways. The appropriate Borough President shall maintain "service roads appurtenant to said parkways."

5. Subdivision 11 of Section 553 authorizes the Authority "to design and with the consent of the City to construct new parks, parkways or highways or improvements to existing parks, parkways or highways either connecting directly or indirectly with the project or for the purpose of attracting or facilitating traffic or improving approaches to and connections with the project."

6. Subdivision 14 of Section 553 authorizes the Authority "to construct and maintain facilities for the public, *not inconsistent with the use of the project*, to contract for such construction, and to lease the right to construct and/or use such facilities on such terms and for such considerations as it shall determine, provided, however, that no lease shall be made for a period of more than five years from the date when it is made except with the approval of the Board of Estimate of the City."

As to the existing projects operated by the Authority, there is no question. As to future projects authorized but not in existence, it should be noted that all such projects consist either of *vehicular tunnels* or *bridges* or of *highways*. The term "vehicular" does not generally apply to a rapid transit rail system. In *Conder vs. Griffith*, 61 Ind. App. 218, the term "vehicle" is defined as follows:

"A 'vehicle' is any carriage or conveyance, used or capable of being used as a means of transportation on land, and the word, 'vehicle' will not ordinarily include locomotives, cars, and street cars which run and are operated only over and upon a permanent track or fixed way, and will not be held to include them unless the context of the ordinance or statute clearly indicates an intention to do so." (See *Whitney vs. City of Seattle*, 40 Wash. 2d 228.)

Clearly, a rapid transit system is not comprehended within the term "project" as defined in the present Act.

It is worth noting that Subdivision 3 of Section 563, which section contains a covenant by the State of New York to the Authority's bondholders against construction of *vehicular* facilities which shall be competitive with the Queens Midtown Tunnel, Brooklyn Battery Tunnel, Brooklyn Richmond Tunnel, or the Narrows Bridge, provides that "the covenant herein contained restricting competitive traffic connections with any project or projects shall be only for the benefit of the holders of bonds secured in whole or in part by the pledge of the revenues of such project or projects and subject to and in accordance with all contract provisions with respect to any bonds outstanding on January first, nineteen hundred fifty-five and the rights of the holders of such bonds, *the covenant herein contained shall not be deemed to prevent the construction of any bridge or tunnel exclusively for railway rapid transit purposes.*"

Not only does this section draw a clear distinction between the Authority's present operations and the operation of a rapid transit system, but also indicates a desire on the part of the Authority to leave the door open for such operation should it become desirable in the future. However, in view of the constitutional objections elsewhere referred to and the language of the section itself, it would be impossible for the Authority to issue bonds for rail transit purposes under its present bond resolution.

THE RESOLUTION

Section 205 of the General Bond Resolution of the Authority, adopted January 22, 1952, authorizes the Authority to issue additional bonds for refunding and for certain purposes specified in Section 506. These purposes are:

- (a) The construction, improvement or reconstruction of any Project, including the acquisition of land and interests in land in connection therewith,
- (b) The payment of operating deficits of any Project other than a Pledged Project,
- (c) Any purpose authorized by paragraph (d) of subdivision 10, by subdivision 11, or

by subdivision 14, of Section 553 of the Act (including in the definition of 'project' as used in said subdivisions any Project which the Authority may hereafter be authorized by law to operate) including the acquisition of land and interests in land in connection therewith,

(d) The payment of any expenses and liabilities in connection with the issuance of the Bonds, and of any amount in excess of the proceeds of sale of Additional Bonds issued pursuant to Sections 205 and 206 to redeem Bonds which is required to effect such redemption.

(e) The purchase or redemption of any Bonds, other than pursuant to Sections 205 and 206, and

(f) Payments on or in connection with any debt, other than the Bonds, incurred by the Authority for any one or more of the foregoing purposes, whether or not such debt shall be a Subordinated Loan."

The Resolution defines the term "Projects" as including:

- (1) The Triborough Bridge.
- (2) The Bronx Whitestone Bridge.
- (3) The Henry Hudson Bridge.
- (4) The Marine Parkway Bridge.
- (5) The Cross Bay Parkway Bridge.
- (6) The Queens Midtown Tunnel.
- (7) The Brooklyn Battery Tunnel.
- (8) The Battery Parkway Garage.
- (9) The East Side Airlines Terminal.
- (10) "Any vehicular toll bridge or toll tunnel crossing the East River in the City . . . which the Authority may hereafter be authorized by law to operate," i. e., an "East River Crossing."
- (11) The Coliseum.
- (12) The Brooklyn Richmond Project.
- (13) "A vehicular tunnel or tunnels or arterial highway across the Borough of Manhattan connecting the Queens Midtown Tunnel with the Lincoln Tunnel, together with incidental tunnels and approaches . . ."
- (14) "Any vehicular toll bridge or toll tunnel located in the City" (other than projects (1), (2), (3), (4), (5), (6), (7), (10), (12) or (13) mentioned above), "or any vehicular toll road located in the City,

which the Authority may hereafter be authorized by law to operate together with the approaches thereto."

The Resolution defines "Pledged Project" as projects 1 to 10, inclusive, of those numerated under the definition of Projects "and any other Project the revenues of which shall be pledged under the Resolution."

It is manifestly impossible to bring a rapid transit rail system within the definition of "Project," as defined in the Resolution. Consequently, the Authority may not issue additional bonds for rapid transit purposes under the present Resolution.

THE AUTHORITY'S BORROWING POWER AND OTHER FINANCIAL CONSIDERATIONS

According to the Authority's 1956 Annual Report, the outstanding indebtedness of the Authority as of February 2, 1957 consists of (1) \$215,000,000 of Series A Bonds and (2) \$2,000,000 of short-term notes. The Series A Bonds, which bear interest at an average rate of 1.97 per cent, mature serially from July 1, 1957 to July 1, 1969, inclusive. The total debt service from 1957 to 1968, inclusive, averages about \$18,200,000 annually, and the final large maturity in 1969, approximately \$28,750,000, will be provided for through the General Fund Reserve. Owing to the low rates of interest which the Series A Bonds bear, in comparison with currently prevailing interest rates on bonds of comparable quality, it would probably not be financially feasible to refund such Series A Bonds. In addition, the Authority will need to conserve its borrowing power for financing (1) the proposed Throgs Neck Bridge, and (2) the Narrows Bridge which, according to present plans, will initially be financed and constructed by the Port Authority, then leased and operated by the Authority at rentals sufficient to cover the total expenses of the Port Authority in connection therewith, including debt service, and finally will be purchased by the Authority from the Port Authority not later than 1969.

NEW JERSEY TURNPIKE AUTHORITY

The Act

Certain provisions of the New Jersey Turnpike Authority Act of 1948 (Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented) are as follows:

1. Section 1 of the Act, "in order to facilitate vehicular traffic and remove the present handicaps and hazards on the congested highways in the State and to provide for the construction of modern express highways embodying every known safety device including center divisions, ample shoulder widths, long-sight distances, multiple lanes in each direction and grade separations at all intersections with other highways and railroads," "empowers the Authority to construct, maintain, repair and operate *turnpike projects* (as hereinafter defined) . . . and to issue turnpike revenue bonds of the Authority, payable solely from tolls, other revenues, and proceeds of such bonds to finance such projects." As defined in Section 4 of the Act, "the word 'project' or the words '*turnpike projects*' shall mean any express highway, super highway or motorway at such locations and between such termini as may hereinafter be established by law, and constructed or to be constructed under the provisions of this Act by the Authority and shall include, but not be limited to all bridges, tunnels, overpasses, underpasses, interchanges, entrance plazas, approaches, toll houses, service areas, service stations, service facilities, communications facilities, and administration, storage and other buildings which the Authority may deem necessary for the operation of such project, together with all property, rights, easements and interests which may be acquired by the Authority for the construction or the operation of such project."

2. Section 5.2 of the Act (Chapter 40 of the Laws of New Jersey of 1949) authorizes the Authority "to construct, repair and maintain any feeder road which in the opinion of the New Jersey Turnpike Authority will increase the use of a turnpike to which the said road is a feeder." Section 5.1 of the Act defines a feeder road as "any road which in the opinion of the New Jersey Turnpike Authority is needed to create or facilitate access to

a turnpike project upon which toll is charged for transit."

3. Section 5.3 of the Act authorizes the Authority "to take over for maintenance and repair any existing road which is needed as a feeder road," and "to realign any such existing road and to build additional sections of road over new alignment in connection with such existing road or roads." Section 5.4 grants the Authority the same powers concerning the construction of a feeder road over new alignment as is (Sic) granted in connection with the construction of a turnpike project and defines "new feeder road" as "any feeder road, eighty per centum (80%) or more of which is built over new alignment."

4. Section 9 of the Act authorizes the Authority "to fix, revise, charge and collect tolls for the use of each turnpike project and the different parts or sections thereof, and to contract with any person, partnership, association or corporation desiring the use of any part thereof, including the right-of-way adjoining the paved portion, for placing thereon telephone, telegraph, electric light or power lines, gas stations, garages, stores, hotels, and restaurants, or for any other purpose *except for tracks for railroad or railway use*, and to fix the terms, conditions, rents and rates of charges for such use."

It would seem impossible under this statute to bring any rapid transit rail system within the terms "project," "turnpike project," "feeder road," or "new feeder road," as such terms are defined in the Act.

THE RESOLUTION

Furthermore, the amended Resolution, under which the 1950 and 1951 issues of General Bonds were issued, defines, in Section 101 (f), the term "Turnpike" in substantially the same manner as the words "turnpike project" are defined in the Act.

Also, the term "Feeder Road," as defined in Section 101 (i) of the Resolution is similarly tied down to the definition of "feeder road" in the Act.

Section 201, subdivision 4, of the Resolution authorizes the issuance of Extension Bonds "for the purpose of financing the construction and acquisition of one or more Extensions, defined in Section 101 (h) as meaning either the Pennsylvania Extension or the New York Extension, including "any Feeder Road . . . not exceeding ten miles in length required to provide adequate access to the Extension and the cost of which is to be paid out of the Extension Construction Fund." "New York Extension" is defined in terms of Section 23 of the Act as "beginning at the . . . point as selected by the Authority at State Highway Route No. 6, and thence in such general northerly direction as shall hereafter be specifically designated by the Legislature, through the

county of Bergen to the boundary line between the State of New Jersey and the State of New York at a point which will connect with the proposed New York State Thruway or with a suitable connection to said Thruway," and in Section 101 (h) as "including, but not limited to, all bridges, tunnels, overpasses, underpasses, interchanges, entrance plazas, approaches, toll houses, service areas, service stations, service facilities, communications facilities and administration, storage and other buildings which the Authority may deem necessary for the operation of such extension, together with all property, rights, easements and interests which may be acquired by the Authority for the construction or the operation of such extension."

NEW YORK STATE THRUWAY AUTHORITY

General Revenue Bond Resolution and First Supplemental Revenue Bond Resolution, both adopted June 7, 1954.

Such resolutions constitute the contract between the Authority and the holders of its bonds (and certain other obligations).

No agreement may be made by the Authority which would impair the obligation of the contract, nor may the State of New York enact any legislation of such effect.

The Authority may issue bonds only for certain purposes, and substantially only for the purposes for which its Construction Fund may be used.

General Revenue Bond Resolution, Sec. 202, subsection 1, (2).

The Construction Fund may be used only for designated purposes, which are restricted to the following:

- (i) the cost of construction of the Thruway Project.
- (ii) the cost of construction of any extension thereto or connection therewith authorized by the enabling Act.
- (iii) the cost of construction of any other extension thereto or connection there-

with, or of any other expressway or highway, authorized by Law after the date of adoption of the General Revenue Bond Resolution, provided in each case that the Authority shall have furnished to the Trustee an engineer's certificate setting forth that such extension, connection, expressway or highway will not have an adverse effect upon the net revenues.

- (iv) the cost of construction of any improvement to, or of reconstruction of any portion of, the Thruway Project, or to any extension, connection, expressway or highway, referred to in clauses (ii) or (iii) above, which the Authority deems will not have an adverse effect upon the net revenues.
- (v) to the extent permitted by law and to the extent that other moneys are not available, the Authority's expenses of operation and maintenance of any such extension, connection, expressway or highway, the operation of which shall have been assumed by the Authority and which shall not at the time be included in the pledged facilities.
- (vi) payments when due on indebtedness.

General Revenue Bond Resolution, Sec. 511.

The term Thruway Project is defined to mean certain Thruway sections and connections as set forth and authorized in the enabling Act.

General Revenue Bond Resolution, Sec. 101, p. 10.

Such definitions do not include a rapid transit system.

In substance, the General Revenue Bond Resolution provides that all Revenues of the Pledged Facilities are and shall be pledged for the payment only of:

Operating Expenses of the Pledged Facilities;

Accrued Debt Service on the Revenue Bonds of the Authority and the Authority's bonds guaranteed by the State of New York;

Certain reserves for such Debt Service;

Reserves for insurance;

Any remainder to the Construction Fund.

General Revenue Bond Resolution, Secs. 501 to 511, inclusive.

The Authority may issue Subordinated Loans, but such shall be payable solely out of such amounts as may be payable to the Construction Fund; provided, that such indebtedness may be incurred only for a purpose for which amounts in the Construction Fund could be applied (General Rev. Bd. Res., Sec. 512).

Therefore, the Authority may not legally issue bonds or other obligations to finance the construction or acquisition of a rapid transit system which would be payable from the Revenues of the Thruway, since any attempt to apply such Revenues directly or indirectly to the payment of rapid transit indebtedness would be a violation of the pledge of the Revenues to the holders of the outstanding Revenue Bonds of the Authority.

For financial reasons, it is impracticable to assume that the Authority's outstanding Revenue Bonds and Guaranteed Bonds could be called and redeemed in order to free them from

the existing pledge. Among these reasons are the following:

- (a) The Revenue Bonds now outstanding in the total amount of \$350,000,000 could not now be refinanced at interest rates as low as those obtained when the Bonds were issued in 1954. The interest rates on such Bonds range from $2\frac{1}{4}$ per cent to 3.10 per cent per annum, and such Bonds are presently offered in the secondary market at discounts.
- (b) The Guaranteed Bonds now outstanding in the total amount of \$40,000,000 could not now be refinanced at interest rates as low as those obtained when such Bonds were issued in prior years. The net average interest costs on such Bonds were below $2\frac{3}{4}$ per cent per annum.
- (c) In order to complete construction of the Thruway it will be necessary for the Authority to issue \$100,000,000 additional Guaranteed Bonds, which heretofore have been authorized, and an estimated amount of \$125,000,000 additional Revenue Bonds. The addition of such amounts to the presently outstanding amounts of Bonds will cause the total bond service requirements so closely to compare to the net revenues (as estimated in the Authority's Official Statement of December 7, 1954) that the excess of net revenues would be insufficient to support indebtedness for rapid transit system purposes if such indebtedness could legally be issued.

In other words, it is impossible for the New York State Thruway Authority to issue bonds legally to finance a rapid transit system if its outstanding bonds remain in the hands of investors, and it is impracticable for the Authority to attempt to refinance such outstanding bonds and complete the financing of the Thruway under any new bond resolution which legally would permit financing of a rapid transit system.

NEW JERSEY HIGHWAY AUTHORITY

The Act

Section 2 of the New Jersey Highway Authority Act (Chapter 16 of the Laws of 1952, of the State of New Jersey, as amended and supplemented) authorizes the Authority to acquire, construct, maintain and operate highway projects (as defined in the Act) at the locations established in the Act and at such other locations as shall be established by law.

Section 5(e) of the Act empowers the Authority "to acquire, construct, maintain, repair and operate projects."

"Project" or "highway project" is defined in Section 3(d) as "any express highway, super-highway or motorway at such locations and between such termini as herein established or as may hereafter be established by law, and acquired or to be acquired or constructed or to be constructed under the provisions of this Act by the Authority . . . , together with such adjoining park or recreational areas and facilities as the Authority, with the concurrence of the Department of Conservation and Economic Development, shall find to be necessary and desirable to promote the public health and welfare and feasible for development pursuant to this Act, and shall include but not be limited to all bridges, tunnels, overpasses, underpasses, interchanges, traffic circles, grade separations, entrance plazas, approaches, toll houses, service areas, service stations, service facilities, communications facilities and administration, storage and other buildings which the Authority may deem necessary for the operation of such project, together with all property, rights, easements and interests which may be acquired by the Authority for the construction or the operation of such Project."

"Project" or "ferry project" is also defined in Section 3(d) of the Act as "a ferry service for the transportation of passengers and freight between such termini as are herein established or as may hereafter be established by law, and shall include but not be limited to ferries and other craft, bulkheads, docks, piers, wharves, warehouses, ferry terminals and stations, parking areas, service stations, service facilities,

communications facilities and administration and other buildings which the Authority may deem necessary for the operation of such project, together with all property, rights, easements and interest, including land under water and riparian rights, which may be acquired by the Authority for the construction or operation of such project."

Section 5(p) of the Act authorizes the Authority "to construct, maintain, repair and operate any feeder road or any public highway connecting parts of a project or two or more projects which in the opinion of the Authority will increase the use of a project or projects, to take over for maintenance, repair, and operation any existing public highway as a feeder road, and to realign any such existing public highway and build additional sections of road over new alignment in connection with such existing public highway."

"Feeder road" is defined in Section 3(g) of the Act as "any road which in the opinion of the Authority is necessary to create or facilitate access to a project."

"Public highway" is defined in Section 3(f) of the Act as "any public highway, road or street in the State, whether maintained by the State or by any county, city, borough, town, township, village, or other political subdivision."

It would seem impossible to stretch the definition of any of the terms "project," "feeder road," as defined in the Act, to cover a rapid transit railway system.

THE RESOLUTION

Section 302 of the General Bond Resolution of the Authority, adopted July 8, 1953, authorizes the issuance of bonds for:

- (1) Paying for financing costs in connection with the Parkway Project (i. e., the Garden State Parkway) which is defined in the Resolution in substantially the same terms as "project" or "highway project" is defined in the Act.

- (2) Paying or refunding principal of Outstanding Bonds.
- (3) Paying or financing costs of repair or reconstruction necessary to restore or prevent physical damage to the Parkway Project.
- (4) Paying or financing costs in connection with the construction of the Thruway Feeder Road, defined in the Resolution as "a road between the Parkway Project and the boundary of the State of New York," etc.
- (5) Paying or financing cost in connection with the acquisition from the State of New Jersey of any acquired parkway, defined in the Resolution as "any section of an existing highway which (a) has heretofore been constructed or is now under construction by the State of New

Jersey, (b) the Authority is or may be authorized by law and may determine to acquire and operate, (c) constitutes an integral connection between portions of the highway included in the Parkway Project, and (d) is acquired by the Authority in whole or in part with the proceeds of Bonds or with Revenues (including moneys from the General Fund)."

A rapid transit system does not fall within any of the terms "Parkway Project," "Thruway Feeder Road," or "Acquired Parkway" as defined in the Resolution.

Therefore, it would seem impossible, under the provisions of the Resolution, to issue bonds under the present Resolution for rapid transit purposes.

APPENDIX D

TOTAL AND PER CAPITA GROSS DEBT AND FULL VALUE REAL ESTATE IN MUNICIPALITIES
BY GROUPS OF GROSS DEBT AS PER CENT OF FULL VALUE REAL ESTATE*Bergen County*

<i>Gross Debt as Per Cent of Full Value Real Estate</i>	<i>Number</i>	<i>Gross Debt December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Gross Debt Per Capita</i>
No Debt	1	.....	1,962,799	200	.....
Under 1%	9	2,436,015	326,654,717	67,330	36.18
1.00- 1.99	14	10,348,707	692,855,927	119,000	86.96
2.00- 2.99	15	16,661,924	636,887,571	118,700	140.37
3.00- 3.99	14	27,678,168	768,248,390	140,400	197.14
4.00- 4.99	9	27,980,368	619,210,498	108,500	257.88
5.00- 5.99	7	22,285,885	404,282,186	65,200	341.81
6.00- 6.99 .....	..	.....	.....	.....	.....
7.00- 7.99 .....	..	.....	.....	.....	.....
8.00- 8.99	1	5,016,389	57,440,666	11,200	447.89
9.00- 9.99 .....	..	.....	.....	.....	.....
13.00-13.99 .....	..	.....	.....	.....	.....
Total	70	112,407,456	3,507,542,754	630,530	.....
Avg. 3.20%					Avg. 178.27

APPENDIX D—Continued

TOTAL AND PER CAPITA GROSS DEBT AND FULL VALUE REAL ESTATE IN MUNICIPALITIES
BY GROUPS OF GROSS DEBT AS PER CENT OF FULL VALUE REAL ESTATE*Essex County*

<i>Gross Debt as Per Cent of Full Value Real Estate</i>	<i>Number</i>	<i>Gross Debt December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Gross Debt Per Capita</i>
No Debt .....	..	.....	.....	.....	.....
Under 1% .....	..	.....	.....	.....	.....
1.00- 1.99	1	254,000	23,920,968	2,200	115.45
2.00- 2.99	6	19,147,746	717,471,277	227,400	84.20
3.00- 3.99	7	28,167,888	832,903,737	164,900	170.82
4.00- 4.99	5	18,016,700	406,818,598	80,400	224.09
5.00- 5.99 .....	..	.....	.....	.....	.....
6.00- 6.99	2	79,477,773	1,164,386,183	452,200	175.76
7.00- 7.99 .....	..	.....	.....	.....	.....
8.00- 8.99	1	7,839,510	93,416,179	13,000	603.04
9.00- 9.99 .....	..	.....	.....	.....	.....
13.00-13.99 .....	..	.....	.....	.....	.....
Total	22	152,903,617	3,238,916,942	940,100	.....
Avg. 4.72%					Avg. 162.65

APPENDIX D—Continued

TOTAL AND PER CAPITA GROSS DEBT AND FULL VALUE REAL ESTATE IN MUNICIPALITIES
BY GROUPS OF GROSS DEBT AS PER CENT OF FULL VALUE REAL ESTATE*Hudson County*

<i>Gross Debt as Per Cent of Full Value Real Estate</i>	<i>Number</i>	<i>Gross Debt December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Gross Debt Per Capita</i>
No Debt .....	..	.....	.....	.....	.....
Under 1%	1	31,000	12,138,762	5,500	5.64
1.00- 1.99	1	414,400	35,633,731	10,700	38.73
2.00- 2.99	3	2,042,078	92,456,722	30,000	68.07
3.00- 3.99 .....	..	.....	.....	.....	.....
4.00- 4.99 .....	..	.....	.....	.....	.....
5.00- 5.99	2	14,519,843	263,378,969	94,000	54.47
6.00- 6.99 .....	..	.....	.....	.....	.....
7.00- 7.99	2	46,376,700	638,254,370	340,600	36.16
8.00- 8.99	1	16,257,250	193,383,699	76,600	212.24
9.00- 9.99	1	6,013,253	66,327,142	36,800	163.40
13.00-13.99	1	10,948,000	81,656,616	50,600	216.36
Total	12	96,602,524	1,383,200,011	644,800	.....
Avg. 6.98%					Avg. 149.82

APPENDIX D—Continued

TOTAL AND PER CAPITA GROSS DEBT AND FULL VALUE REAL ESTATE IN MUNICIPALITIES
BY GROUPS OF GROSS DEBT AS PER CENT OF FULL VALUE REAL ESTATE*Middlesex County*

<i>Gross Debt as Per Cent of Full Value Real Estate</i>	<i>Number</i>	<i>Gross Debt December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Gross Debt Per Capita</i>
No Debt	2	.....	10,904,734	1,900	.....
Under 1%	1	302,200	43,893,165	8,900	33.96
1.00- 1.99	6	2,020,699	138,501,244	30,200	66.91
2.00- 2.99	4	8,913,975	340,145,863	55,700	160.04
3.00- 3.99	8	16,493,258	486,708,591	110,400	149.40
4.00- 4.99 .....	..	.....	.....	.....	.....
5.00- 5.99	3	23,040,435	437,475,567	101,600	226.78
6.00- 6.99	1	3,316,966	54,024,461	11,100	298.83
7.00- 7.99 .....	..	.....	.....	.....	.....
8.00- 8.99 .....	..	.....	.....	.....	.....
9.00- 9.99 .....	..	.....	.....	.....	.....
13.00-13.99 .....	..	.....	.....	.....	.....
Total	25	54,087,533	1,511,653,625	319,800	.....
Avg. 3.58%					Avg. 169.13

APPENDIX D—Continued

TOTAL AND PER CAPITA GROSS DEBT AND FULL VALUE REAL ESTATE IN MUNICIPALITIES
BY GROUPS OF GROSS DEBT AS PER CENT OF FULL VALUE REAL ESTATE*Monmouth County*

<i>Gross Debt as Per Cent of Full Value Real Estate</i>	<i>Number</i>	<i>Gross Debt December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Gross Debt Per Capita</i>
No Debt	2	.....	2,190,630	2,100	.....
Under 1%	5	312,800	68,338,997	18,000	17.38
1.00- 1.99	14	6,061,407	406,323,815	82,900	73.12
2.00- 2.99	9	2,974,860	119,259,176	23,100	128.78
3.00- 3.99	10	8,192,794	230,529,523	58,400	140.29
4.00- 4.99	6	4,262,194	97,883,539	17,800	239.45
5.00- 5.99	3	6,120,590	115,083,968	38,300	159.81
6.00- 6.99	1	832,619	12,800,030	7,500	111.02
7.00- 7.99	1	605,500	8,434,693	3,300	183.48
8.00- 8.99 .....	..	.....	.....	.....	.....
9.00- 9.99 .....	..	.....	.....	.....	.....
13.00-13.99	1	8,263,500	63,474,632	18,300	457.56
Total	52	37,626,264	1,124,319,003	269,700	.....
Avg. 3.35%					Avg. 139.51

APPENDIX D—Continued

TOTAL AND PER CAPITA GROSS DEBT AND FULL VALUE REAL ESTATE IN MUNICIPALITIES
BY GROUPS OF GROSS DEBT AS PER CENT OF FULL VALUE REAL ESTATE*Morris County*

<i>Gross Debt as Per Cent of Full Value Real Estate</i>	<i>Number</i>	<i>Gross Debt December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Gross Debt Per Capita</i>
No Debt	1	Victory Gardens	.....	.....	.....
Under 1%	5	1,032,209	121,470,475	19,300	53.48
1.00- 1.99	10	2,820,889	191,188,219	29,900	94.34
2.00- 2.99	8	4,901,326	214,319,274	29,600	165.59
3.00- 3.99	2	2,459,207	68,794,701	8,100	303.61
4.00- 4.99	8	15,708,587	349,686,062	66,900	234.81
5.00- 5.99	3	3,254,295	57,480,912	11,000	295.85
6.00- 6.99	1	5,238,734	75,813,180	16,900	309.98
7.00- 7.99	1	3,774,000	52,229,929	8,300	454.70
8.00- 8.99 .....	..	.....	.....	.....	.....
9.00- 9.99 .....	..	.....	.....	.....	.....
13.00-13.99 .....	..	.....	.....	.....	.....
Total	39	39,189,245	1,130,982,752	190,000	.....
Avg. 3.47%					Avg. 206.26

APPENDIX D—Continued

TOTAL AND PER CAPITA GROSS DEBT AND FULL VALUE REAL ESTATE IN MUNICIPALITIES
BY GROUPS OF GROSS DEBT AS PER CENT OF FULL VALUE REAL ESTATE*Somerset County*

<i>Gross Debt as Per Cent of Full Value Real Estate</i>	<i>Number</i>	<i>Gross Debt December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Gross Debt Per Capita</i>
No Debt	2	.....	8,269,843	900	.....
Under 1% .....	..	.....	.....	.....	.....
1.00- 1.99	8	3,713,800	261,598,125	44,600	83.27
2.00- 2.99	3	896,000	40,866,201	7,500	119.47
3.00- 3.99	6	5,627,191	172,699,657	35,800	157.18
4.00- 4.99	1	1,870,237	46,059,626	11,800	158.49
5.00- 5.99 .....	..	.....	.....	.....	.....
6.00- 6.99 .....	..	.....	.....	.....	.....
7.00- 7.99	1	2,322,100	32,675,937	9,500	244.43
8.00- 8.99 .....	..	.....	.....	.....	.....
9.00- 9.99 .....	..	.....	.....	.....	.....
13.00-13.99 .....	..	.....	.....	.....	.....
Total	21	14,429,328	562,169,389	110,100	.....
Avg. 2.57%					Avg. 131.06

APPENDIX D—Continued

TOTAL AND PER CAPITA GROSS DEBT AND FULL VALUE REAL ESTATE IN MUNICIPALITIES
BY GROUPS OF GROSS DEBT AS PER CENT OF FULL VALUE REAL ESTATE*Passaic County*

<i>Gross Debt as Per Cent of Full Value Real Estate</i>	<i>Number</i>	<i>Gross Debt December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Gross Debt Per Capita</i>
No Debt .....	..	.....	.....	.....	.....
Under 1%	3	632,561	90,774,966	11,600	54.53
1.00- 1.99	3	915,780	59,627,860	14,400	63.60
2.00- 2.99	2	2,608,665	96,098,321	21,400	121.90
3.00- 3.99	2	1,987,792	56,882,109	13,700	145.09
4.00- 4.99	4	22,917,985	543,044,389	108,100	212.01
5.00- 5.99	1	23,076,120	389,241,669	142,600	161.82
6.00- 6.99 .....	..	.....	.....	.....	.....
7.00- 7.99	1	13,138,763	183,181,037	58,200	225.75
8.00- 8.99 .....	..	.....	.....	.....	.....
9.00- 9.99 .....	..	.....	.....	.....	.....
13.00-13.99 .....	..	.....	.....	.....	.....
Total	16	65,277,666	1,418,850,351	370,000	.....
Avg. 4.60%					Avg. 176.43

APPENDIX D—Continued

TOTAL AND PER CAPITA GROSS DEBT AND FULL VALUE REAL ESTATE IN MUNICIPALITIES
BY GROUPS OF GROSS DEBT AS PER CENT OF FULL VALUE REAL ESTATE*Union County*

<i>Gross Debt as Per Cent of Full Value Real Estate</i>	<i>Number</i>	<i>Gross Debt December 31, 1955</i>	<i>Full Value Real Estate October 1, 1956</i>	<i>Population 1954</i>	<i>Gross Debt Per Capita</i>
No Debt	1	.....	1,371,685	2,800	.....
Under 1%	1	128,578	21,799,587	4,900	26.24
1.00- 1.99	2	2,606,135	147,699,118	33,000	78.97
2.00- 2.99	4	14,137,147	544,363,837	91,500	154.50
3.00- 3.99	5	20,541,690	607,179,763	83,200	246.90
4.00- 4.99	5	13,875,753	330,445,364	67,500	205.57
5.00- 5.99	2	18,856,070	355,222,792	114,700	164.39
6.00- 6.99	1	11,682,479	178,323,107	42,000	278.15
7.00- 7.99 .....	..	.....	.....	.....	.....
8.00- 8.99 .....	..	.....	.....	.....	.....
9.00- 9.99 .....	..	.....	.....	.....	.....
13.00-13.99 .....	..	.....	.....	.....	.....
Total	21	81,827,852	2,186,405,253	439,600	.....
Avg. 3.74%					Avg. 186.14

APPENDIX E

SAMPLE MATURITIES OF SELECTED REVENUE BOND ISSUES

Electric

\$52,000,000	(Oakdale Irrigation District, Calif. (2 Issues). (South San Joaquin Irrigation Dist., Calif. (2 Issues). Tri-Dam Revenue Bonds.
Issued:	May 25 and November 30, 1955.
Dated:	July 1, 1955.
Maturity:	July 1, 2004 (all term bonds).
First Call:	As a whole—July 1, 1959 at 106%—In part—July 1, 1959 at 104%.
Payable from:	Electric revenues—Pacific Gas and Electric Company has entered into a contract to make fixed semi-annual payments which cover debt service.
\$166,000,000	Public Utility District No. 2 of Grant County, Washington. Columbia River-Priest Rapids Hydro Electric Production System $3\frac{7}{8}\%$ Revenue Bonds.
Issued:	June 1956.
Dated:	May 1, 1956.
Maturity:	November 1, 2005 (all term bonds).
First Call:	As a whole—May 1, 1966 at 103%—In part—May 1, 1961 at 100%.
Payable from:	Electric revenues—The District has entered into a contract with 12 public and private electric utilities who agree to purchase all power and pay a price adequate to cover debt service, reserves and operating and maintenance expenses.

*Water***Department of Water and Power of the City of Los Angeles, California.**

- Issued:** In various amounts about once a year.
- Maturity:** Generally issued in equal annual amounts to maturity serially in 1 to 30 years.
- First Call:** Generally in 3 years, in whole or in part, at par plus $\frac{1}{4}\%$ for each year from call date to maturity not to exceed 103%.
- Payable from:** Net revenues of the Water System.

Metropolitan Water District of Southern California.

- Issued:** In various amounts about once a year.
- Maturity:** Generally issued in equal annual amounts to maturity serially in 1 to 25 years.
- First Call:** Non callable.
- Payable from:** Unlimited ad valorem taxes to the extent operating revenues are insufficient therefor. The District supplies 23 municipal corporations who pay for water used, either from taxes or revenues.

\$12,600,000 Onondaga County Water Authority, New York. $3\frac{1}{4}\%$, 3.30%, $3\frac{1}{2}\%$ and 5% Water Revenue Bonds.

- Issued:** December 6, 1955.
- Dated:** December 1, 1955.
- Maturity:** Due serially in increasing amounts 1957 to 1995.
- First Call:** As a whole or in part December 1, 1958 at 105%.
- Payable from:** Net revenues of the water system.

Sewer

\$11,100,000 Miami, Florida 4.30% Sewer Revenue Bonds.

Issued: June 19, 1953.

Dated: January 1, 1953.

Maturity: Due January 1, 1993 (all term bonds).

First Call: As a whole or in part on January 1, 1959 at 104%.

Payable from: Net revenues of the sewer system and, if necessary, from surplus revenues of the water system. These bonds were issued concurrently with \$16,000,000 general obligation sewage system bonds.

\$35,000,000 Jersey City Sewerage Authority, New Jersey.
2.70% to 5% Sewer Revenue Bonds (2 Issues).

Issued: September 9, 1954 (\$22,000,000) and October 19, 1955 (\$13,000,000).

Dated: July 1, 1954 and July 1, 1955.

Maturity: Due serially in increasing amounts 1959 to 1993.

First Call: As a whole or in part January 1, 1962 at 104%.

Payable from: Net revenues of the sewerage system. The Authority has entered into a contract with the City whereby the latter agrees to pay any deficiency in revenues so as to cover current expenses, debt services and debt service reserve payments.

Gas

\$19,500,000 The Southeast Alabama Gas District.
 4½% First Mortgage Natural Gas Revenue Bonds.

Issued: October, 1954.

Dated: October 1, 1954.

Maturity: April 1, 1989 (all term bonds).

First Call: As a whole April 1, 1965 at 105%—In part April 1, 1960 at 105%.

Payable from: Closed first lien on the utility and pledge of net revenues.

Parking

\$4,000,000 City and County of Denver, Colorado.
 3¼% and 4% Off-Street Parking Revenue Bonds.

Issued: August 18, 1952.

Dated: August 1, 1952.

Maturity: Due serially in increasing amounts 1956 to 1982.

First Call: As a whole or in part on August 1, 1962 at 100%.

Payable from: Net revenues of three garages and three parking lots. The Bonds are additionally secured by a lien on the gross receipts from parking meters.

\$1,200,000 City of New Haven, Connecticut.
 3¼% Parking Revenue Bonds.

Issued: August 1, 1955.

Dated: July 1, 1955.

Maturity: Due serially in increasing amounts 1957 to 1985.

First Call: As a whole or in part on July 1, 1960 at 103%.

Payable from: Net revenues from one garage and three lots and the gross receipts from parking meters.

Turnpike

\$326,000,000	State of Ohio, Turnpike Project No. 1. 3 $\frac{1}{4}$ % Revenue Bonds.
Issued:	June 3, 1952.
Dated:	June 1, 1952.
Maturity:	June 1, 1992 (all term bonds).
First Call:	As a whole June 1, 1959 at 103%—in part June 1, 1956 at 103%.
Payable from:	Net revenues of Project No. 1.
\$350,000,000	New York State Thruway Authority. 2 $\frac{1}{4}$ % to 3.10% Revenue Bonds (2 Issues).
Issued:	\$300,000,000 June 16, 1954—\$50,000,000 December 7, 1954.
Dated:	July 1, 1954.
Maturity:	Serial bonds due January 1, 1964 to 1979, and term bonds due July 1, 1994.
First Call:	As a whole or in part July 1, 1960 at 103 $\frac{1}{2}$ % for \$300MM and at 103% for \$50MM.
Payable from:	Net revenues of the project.
\$400,000,000	(\$500,000,000 authorized) New York State Thruway Authority. 2 $\frac{1}{4}$ % to 4% State Guaranteed Bonds (5 Issues).
Issued:	5/5/53, 9/15/53, 10/11/55, 12/7/55 and 2/15/56.
Dated:	6/1/53, 10/ 1/53, 10/ 1/55, 1/1/56 and 1/ 1/56.
Maturity:	Due serially in increasing amounts 1958 to 1995.
First Call:	1963 at 103% and 103 $\frac{1}{2}$ %.
Payable from:	In practice from net revenues, however, revenues are not pledged. Unconditionally guaranteed by State of New York.

Bridge

\$21,000,000	New York State Bridge Authority. 2¼% to 5% Bridge Revenue Bonds.
Issued:	March 9, 1955.
Dated:	January 1, 1955.
Maturity:	Serial bonds due January 1, 1956 to 1979, and term bonds due January 1, 1989.
First Call:	As a whole or in part January 1, 1960 at 103%.
Payable from:	Net revenues pooled from four bridges.
\$99,800,000	Mackinac Bridge Authority, Michigan. \$79,800,000 4% Bridge Revenue Bonds, Series A. \$20,000,000 5¼% Bridge Revenue Bonds, Series B.
Issued:	January 15, 1955.
Dated:	July 1, 1953.
Maturity:	January 1, 1994.
First Call:	As a whole or in part immediately at 108% ; January 2, 1964 at 105%.
Payable from:	Net revenues of the Bridge. However, the State of Michigan has agreed to pay operating and maintenance expenses and repairs up to \$417,000 annually from other funds over the life of the bonds.

Tunnel

\$17,000,000 City of Mobile, Alabama.
3.80% Bankhead Tunnel Revenue Refunding and Improvement Bonds.

Issued: August 9, 1955.

Dated: May 1, 1955.

Maturity: May 1, 1995 (all term bonds).

First Call: As a whole on November 1, 1963 at 104%—In part on November 1, 1956 at 104%.

Payable from: Net revenues of the project.

\$215,000,000 Triborough Bridge and Tunnel Authority.
1 $\frac{5}{8}$ % to 2 $\frac{1}{8}$ % General Revenue Bonds.

Issued: January 22, 1952.

Dated: January 1, 1952.

Maturity: Due serially in increasing semi-annual amounts July 1, 1957 to January 1, 1969 and \$28,450,000 due July 1, 1969.

First Call: As a whole or in part on January 1, 1957 at par plus $\frac{1}{4}$ % for each year from call date to maturity not to exceed 102%.

Payable from: Net revenues pooled from two tunnels, five bridges, one garage, two air lines terminals and the New York Coliseum.

Port Authority

Port of New York Authority, Consolidated Bonds.

Issued: In various amounts once or twice a year.

Maturity: Generally issued as term bonds due in 30 years.

First Call: Generally in 5 years at 103%.

Payable from: Net revenues from two tunnels, four bridges, four airports, one heliport, one grain terminal, two groups of piers, four terminals (truck and bus), and one port facility. Consolidated Bonds are subordinate to General and Refunding Bonds as to certain revenues.

APPENDIX F

PRICES AND CHARACTERISTICS SELECTED METROPOLITAN RAPID TRANSIT BOND ISSUES
 BOSTON METROPOLITAN DISTRICT, MASSACHUSETTS

Total Debt (000's)	Net Debt (000's)	Facilities	Plant		Operator	Type of Bond	Rating	
			(000's)	(000's)			Moody's	S & P's
\$135,179 as of 1/13/56	\$132,259	Elevated Subway Surface	Plant Dep.	\$112,877 46,015	Metropolitan Transit Authority District issues own bonds and buys the Au- thority's bonds with proceeds.	General Obligation of District, sup- ported by ad valorem taxes on 14 Municipalities within the District.	Aa	A1
			Net Pl.	\$66,862 as of 12/31/55				

Call Feature	Sale Date	Coupon	Average Life	Net Interest Cost	Bond Buyer Average Sale Date	Offering Price	Current Price (11/15/56)
About \$18,870,000 due 1975-84 callable at par beginning 1974 through 1979	1/26/56 1/27/55 1/29/54 1/29/53 1/8/52	2.40%	Not applicable Final Maturity 1986	2.395% 2.347% 2.273% 2.700% 2.081%	2.48 2.41 2.50 2.42 2.09	1.60-2.50% .90-2.50% 1.00-2.45% 1.15-2.80% 1.10-2.10%	3.40% (30 year bond)

Fiscal Year Ending Dec. 31	Passenger Traffic (000's)	Revenues (000's)	Operation and Maintenance (000's)	Net Revenues (000's)	Deficiency* (000's)	Fares
1955	.....	\$38,302	\$37,240	\$1,062	\$6,715	20c. and 15c. local 10/31/55
1954	244,112	38,625	37,384	1,241	6,473	Aug. 15.4c.
1953	268,286	37,068	38,721	-1,653	8,351	Aug. 13.4c.
1952	277,713	39,043	40,697	-1,654	7,829	Aug. 13.6c.
1951	288,973	40,716	39,520	1,196	5,315	Aug. 13.6c.

* After taxes, rents, depreciation, debt service and miscellaneous items.

Assistance or Subsidy

The Authority, in addition to semi-annual payments of \$500,000, is to pay interest to the District equal to interest payable by it on its own outstanding bonds. Trustees of District certify to State Treasurer amount required to meet obligations of District not otherwise provided for, and Commonwealth pays District amount certified. Commonwealth then assesses said amount upon municipalities constituting the District. Each municipality's share is payable from unlimited ad valorem taxes on all taxable property within such municipality.

Remarks

All debt, including that owing to City of Boston, to be retired by 2024.

APPENDIX F—Continued
CHICAGO TRANSIT AUTHORITY
(City of Chicago, Illinois)

Total Debt (000's)	Net Debt (000's)	Facilities	Plant (000's)	Operator	Type of Bond	Rating	
						Moody's	S & P's
\$141,891 (12/31/55)	\$130,611 (12/31/55)	Street railway Motor buses Trolley buses	\$168,865 35,435 <hr/> \$133,430	Authority	Revenue		Ba

Call Feature	Sale Date	Coupon	Average Life	Net Interest Cost	Bond Buyer Average Sale Date	Offering Price	Current Price (11/15/56)
1947 bonds callable	10/16/53	4½ %	28¾ yrs. avg.	-----	2.74	All held by the Chicago Milwaukee R. R.	
1958 by lot at 105	9/30/52	4½ %	30 yrs. avg.	4.78%	2.32	99½ %	97¼ %
1952 bonds callable	8/5/47	3¼ to 3¾ %	due 1958-1978	3.69%	1.51	2.50-3.59%	84¼ %
1954 by lot at 105							
1953 bonds callable							
1954 by lot at 105							

Fiscal Year Ending Dec. 31	Passenger Traffic (000's)	Revenues (000's)	Operation and Maintenance (000's)	Net Revenues (000's)	Deficiency* (000's)	Fares	
						Surface	Rapid Transit
1955	623,494	\$120,897	\$102,488	\$18,409	\$833	-----	-----
1954	641,167	121,140	103,412	17,728	817	20c. (4/22/54)	20c. (4/22/54)
1953	686,560	124,104	106,297	17,807	539	-----	-----
1952	658,254	117,123	100,716	16,406	+98	20c. or 5/85c. (6/1/52)	20c. or 5/90c. (6/1/52)
1951	696,948	112,534	99,995	12,538	596	17c. (8/1/51)	18c. (8/1/51)

* After depreciation, debt service, and (1952 only) municipal compensation.

Assistance or Subsidy

Original capital subsidy from City's Traction Fund and U. S. grants. The Authority is apparently not paying City for use of subway. City has issued \$10,000,000 general obligation bonds for extending the subway system, and \$15,000,000 are authorized in addition.

Remarks

Of the total funded debt, \$15,000,000 consists of equipment trust certificates bearing coupons ranging from 3¼% to 5% rated "B" by Moody's. Possible contractual obligations to the City on account of the subway have not been included in the Deficiency figure shown above.

APPENDIX F—Continued
CLEVELAND TRANSIT AUTHORITY
(City of Cleveland, Ohio)

Total Debt (000's)	Net Debt (000's)	Facilities	Plant (000's)	Operator	Type of Bond	Rating	
						Moody's	S & P's
\$27,898 (12/31/55)	\$26,113 (12/31/55)	Rapid Transit Trolley buses Motor buses	Dep. \$67,253 23,675 Net \$43,578 (12/31/55)	Five-man Com- mission appointed by Mayor.	Revenue		Ba

Call Feature	Sale Date	Coupon	Average Life	Net Interest Cost	Bond Buyer Average Sale Date	Offering Price	Current Price (11/15/56)
Callable 1955 at 104	1/11/54	4%	17¼ yrs. avg.	2.764%	2.54	2.00-99.50%	1974-100%

Fiscal Year Ending Dec. 31	Passenger Traffic (000's)	Revenues (000's)	Operation and Maintenance (000's)	Net Revenues (000's)	Surplus* (000's)	Fares**
1955	Not	\$28,389	\$23,304	\$5,085	\$125	(20c. local, 25c. express, 3c. transfer (7/22/56) Previously 15c.
1954	Available	27,534	22,442	5,092	101	
1953	.....	29,763	23,821	5,942	529
1952	.....	29,799	24,813	4,985	555
1951	.....	28,684	23,887	4,996	8

* After taxes, depreciation, debt service, etc.

** Cash.

Assistance or Subsidy	Remarks
Original capital subsidy.	

APPENDIX F—Continued
CITY OF DETROIT, MICHIGAN

Total Debt (000's)	Net Debt (000's)	Facilities	Plant (000's)	Operator	Type of Bond	Rating	
						Moody's	S & P's
\$22,724 (6/30/56)	-----	Street cars Trolley coaches Motor coaches	\$42,319 20,293 ----- \$22,026 (6/30/56)	City Department of Street Railways	General Obligation	A	A

Call Feature	Sale Date	Coupon	Average Life	Net Interest Cost	Bond Buyer Average Sale Date	Offering Price	Current Price (11/15/56)
About \$12,748,000 due 1956—63 now callable at from 101½ to 102	8/28/56	4% & 3%	Final Maturity 1968 8¼ yrs. avg.	3.019%	2.90	2.50-3.00%	3.25% (12 year bond)

Fiscal Year Ending June 30	Passenger Traffic (000's)	Revenues (000's)	Operation and Maintenance (000's)	Net Revenues (000's)	Surplus* (000's)	Fares
1956	Not Available	\$38,257	\$33,874	\$4,383	\$359	
1955	215,839	40,060	40,060	4,833	537	
1954	231,960	43,210	37,345	5,865	1,133	20c. and 25c. Express
1953	259,356	46,049	37,417	8,633	2,509	(9/22/52)
1952	272,092	39,384	35,908	3,475	-2,327	15c. (5/15/50)

* After taxes, depreciation and debt service.

Assistance or Subsidy

Bonds are payable from unlimited ad valorem taxes. General Funds reimbursed in full by Department in recent years.

Remarks

APPENDIX F—Continued
MONTREAL TRANSPORTATION COMMISSION
(City of Montreal, Quebec)

Total Debt (000's)	Net Debt (000's)	Facilities	Plant (000's)	Operator	Type of Bond	Rating	
						Moody's	S & P's
\$44,180 (Jan. 1956)	\$41,947 (Jan. 1956)	Tramway Buses	Dep. \$59,732 25,806 Net \$33,925 (11/30/55)	Commission	General Obligation	A	A

Call Feature	Sale Date	Coupon	Average Life	Net Interest Cost	Bond Buyer Average Sale Date	Offering Price	Current Price (11/15/56)
Due 1973—callable 1957 at 102	5/18/54	4¼ %	20 year Sinking Fund Debentures	3.93%	2.49	.....	5% (20 year Sinking Fund Bond)

Fiscal Year Ending Nov. 30	Passenger Traffic (000's)	Revenues (000's)	Operation and Maintenance (000's)*	Net Revenues (000's)	Deficiency** (000's)	Fares
1955	.....	\$30,427	\$27,070	\$3,457	\$1,238	
1954	327,515	31,427	27,237	4,189	755	
1953	342,894	32,857	28,001	4,856	47	Central Zone 3/30c. or 12c. cash
1952	368,395	30,646	27,895	2,751	1,616	Other Zones 5/25c. or 7c. cash
1951	370,053	29,330	.....	.....	.....	(9/26/52)

* Including taxes.

** After depreciation and debt service.

Assistance or Subsidy

City of Montreal, by endorsement, unconditionally guarantees payment of principal, interest, and sinking fund.

Remarks

3¼% Bonds due 1974, payable in Canadian Funds, rated Baa by Moody's also outstanding (4/30/55) in amount of about \$26,000,000.

APPENDIX F

APPENDIX F—Continued
CITY OF NEW YORK, NEW YORK

Total Debt (000's)	Net Debt (000's)	Facilities	Plant (000's)	Operator	Type of Bond	Rating	
						Moody's	S & P's
\$1,394,191 (8/1/56)	\$1,019,598 (8/1/56)	Subways Elevated Motor coach Trolley coach	\$1,783,400 (approx.)	New York City Transit Authority (6/15/53)	General Obligation	A	A

Call Feature	Sale Date	Coupon	Average Life	Net Interest Cost	Bond Buyer Average Sale Date	Offering Price	Current Price (11/15/56)
Non-callable	9/12/56	3.30%	7 yrs. avg. (due 1957-71)	3.28%	2.96	2.25-3.30%	98½% for 3's due 6/1/80 (3.10%)

Fiscal Year Ending June 30	Passenger Traffic (000's)	Revenues (000's)	Operation and Maintenance (000's)*	Net Revenues (000's)	Deficiency** (000's)	Fares
1955	1,797,611	\$267,921	\$261,965	\$5,956	\$74,690	
1954	1,864,889	273,503	267,978	5,524	109,047	
1953	2,098,604	212,413	258,802	-46,389	145,650	15c. (7/25/53)
1952	2,144,852	208,129	233,207	-25,078	96,734	Previously 10c.
1951	2,225,737	216,433	219,784	-3,351	73,379	

* Includes deferred maintenance.

** After debt service and amortization.

Assistance or Subsidy

City comptroller pays debt service on bonds, which are payable from unlimited ad valorem taxes. Capital program financed as part of City's capital budget.

Remarks

Depending on depreciation policies pursued, deficits may be greater than indicated above.

APPENDIX F—Continued
CITY OF PHILADELPHIA, PENNSYLVANIA

Total Debt (000's)	Net Debt (000's)	Facilities	Plant (000's)	Operator	Type of Bond	Rating	
						Moody's	S & P's
\$128,828 (3/15/56)	-----	Subway Elevated Street cars Buses Trolley cars	Dep. \$128,369 44,527 Net \$83,842 (12/31/55)	Philadelphia Transportation Co. (affiliated National City Lines, Inc.) leases city's transit system.	General Obligation	A	A

Call Feature	Sale Date	Coupon	Average Life	Net Interest Cost	Bond Buyer Average Sale Date	Offering Price	Current Price (11/15/56)
Call provisions vary. Generally callable from 15 to 30 years after issue at par.	10/23/56	3¼ to 4%	14¼ yrs. avg.	3.45%	2.96	2.40-3.75%	3.55% (30 year bond surface railway)

Fiscal Year Ending Dec. 31	Passenger Traffic (000's)	Revenues (000's)	Operation and Maintenance (000's)*	Net Revenues (000's)**	Rental Payments to City (000's)	Fares
1955	622,426	\$70,453	\$65,107	\$5,346	\$2,989	5/90c. or 20c. (12/18/55)
1954	655,030	72,666	68,698	3,958	2,989	Previously 2/35c. or 18c.
1953	704,902	73,285	71,650	1,635	3,124	
1952	775,521	71,050	68,673	2,377	3,347	
1951	790,454	72,618	68,298	4,320	3,400	

* Includes rental payments to city.

** Before interest on Co's funded debt and before taxes.

Assistance or Subsidy

City's revenues from lease of the Broad Street Subway averages \$2,366,000 which (capitalized at 5%) is adequate to service a debt of about \$47,000,000 whereas City Subway debt (3/15/56) was over \$87,000,000.

Remarks

There is at present a dispute between the City and the Transportation Company over the amount of rental payments to the City. The Company wishes a reduction.

APPENDIX F—Continued
CITY OF SEATTLE, WASHINGTON

Total Debt (000's)	Net Debt (000's)	Facilities	Plant (000's)	Operator	Type of Bond	Rating Moody's S & P's
None	None	Trolley coaches Motor coaches	\$11,127 8,119	City	Revenue	Baa
			Net \$3,008 (12/31/54)			

Call Feature	Sale Date	Coupon	Average Life	Net Interest Cost	Bond Buyer Average Sale Date	Offering Price	Current Price (11/15/56)
Callable as a whole 1948 at 101½ and at 101 thereafter. Redeemable inversely from excess bond fund from 1946 on at from 100½ to 101½.	None	1¾ %	Due 1945-1956	-----	-----	-----	No longer outstanding

Fiscal Year Ending Dec. 31	Passenger Traffic (000's)	Revenues (000's)	Operation and Maintenance (000's)	Net Revenues (000's)	Surplus* (000's)	Fares
1955	-----	\$10,268	\$9,423	\$845	\$342	4/75c. or 20c. + 5c. zone—Nov. 1955
1954	59,525	10,270	9,977	293	-402	3/50c. or 20c. + 5c. zone—Nov. 1954
1953	64,730	10,718	9,762	956	205	
1952	73,185	10,650	9,687	963	166	6/1.00 or 20c. —Nov. 1952
1951	77,755	10,689	9,274	1,415	665	7/1.00 or 15c. —Nov. 1951

* After taxes and depreciation.

Assistance or Subsidy

City pledged to "Bonds and Interest Retirement Fund" sufficient amount of gross revenues of the municipal transit system to pay principal and interest on the bonds. Also City maintained "Bond Reserve Fund" equal to principal and interest due in next ensuing year.

Remarks

APPENDIX F—Continued

METROPOLITAN MUNICIPALITY OF TORONTO, ONTARIO

Total Debt (000's)	Net Debt (000's)	Facilities	Plant (000's)	Operator	Type of Bond	Rating Moody's S & P's
\$68,543 (12/31/55)	\$66,397 (12/31/55)	Street cars Subway Buses Trolley coaches Ferry	\$140,468 52,299 \$88,169 (12/31/55)	Toronto Transit Commission	General Obligation	(generally) Aa

Call Feature	Sale Date	Coupon	Average Life	Net Interest Cost	Bond Buyer Average Sale Date	Offering Price	Current Price (11/15/56)
Callable on 30 days notice at premiums of ¼ % for each year between redemption and maturity but not to exceed 2% or 3%.	11/18/53	3% 3½ % 3¼ % 3¾ % 3½ %	3 yrs. avg. 7 yrs. avg. 12¾ yrs. avg. 18¾ yrs. avg. 25 yrs. avg.	Not Available	2.60	2.75-3.50%	4.75% (20 year bond)

Fiscal Year Ending Dec. 31	Passenger Traffic (000's)	Revenues (000's)	Operation and Maintenance (000's)*	Net Revenues (000's)	Surplus** (000's)	Fares
1955	.....	\$31,337	\$27,737	\$3,600	—\$2,309	7/1/56 fares increased from
1954	320,249	29,402	27,141	2,261	—2,356	2½c. to 5c. and zones merged
1953	286,851	30,537	27,080	3,457	288	11/1/54 Central Zone 10c.
1952	273,350	29,342	25,616	3,726	700	Suburban 10c. or 4/30c.
1951	302,890	28,746	26,405	2,341	—1,240	Previously 10c. or 3/25c.

* Includes taxes and ferry deficit.

** After depreciation and debt service.

Assistance or Subsidy

Metropolitan Toronto assumed liabilities of the Commission 1/1/54 and pays each area municipality all principal and interest charges on outstanding debt issued on behalf of the Commission. Commission is to pay the Metropolitan Corporation principal and interest charges on such debt and fix fares sufficient to make facilities self-supporting after proper provision for maintenance, depreciation, and reserves.

Remarks

\$28,000,000 of bonds dated 4/1/55 (part of proceeds to rapid transit) are non-callable.

APPENDIX G

CLASS II PROPERTY TAX IN NEW JERSEY COUNTIES BY MUNICIPALITY AND RAILROAD—1955

Bergen County

	<i>Penn.</i>	<i>C. of N. J.</i>	<i>D. L. & W.</i>	<i>Erie</i>	<i>N. Y. Cen.</i>	<i>N. Y. S. & W.</i>	<i>Total</i>
Allendale Borough				\$150			\$150
Bergenfield Borough					\$560		560
Bogota Borough					74	\$240	314
Carlstadt Borough				58			58
Closter Borough				476			476
Cresskill Borough				109			109
Demarest Borough				165			165
Dumont Borough					1,585		1,585
East Paterson Borough				26		78	104
East Rutherford Borough				29			29
Edgewater Borough							
Emerson Borough				20			20
Englewood City				416			416
Fair Lawn Borough				20			20
Fairview Borough							
Franklin Lakes Borough						111	111
Garfield City				183			183
Glen Rock Borough				849			849
Hackensack City				805		1,672	2,477
Harrington Park Borough					614		614
Hasbrouck Heights Borough				168			168
Haworth Borough					352		352
Hillsdale Borough				494			494
Ho-ho-kus Borough				569			569
Leonia Borough				409			409
Lodi Borough							
Lyndhurst Township			\$3,814				3,814
Mahwah Township				262			262
Maywood Borough							
Midland Park Borough						329	329
Montvale Borough				231			231
North Arlington Borough							
Northvale Borough				112			112
Norwood Borough				33	232		265
Oakland Borough						152	152
Oradell Borough				106			106
Palisades Park Borough				56			56
Park Ridge Borough				43			43
Ramsey Borough				633			633
Ridgefield Borough				305		1,061	1,366
Ridgefield Park Township					4,428		4,428
Ridgewood Township				2,160			2,160
River Edge Borough				253			253
Rochelle Park Township						120	120
Rutherford Borough				850			850
Saddle River Township						49	49
South Hackensack Township				3			3
Teaneck Township					3,145		3,145
Tenafly Borough				301			301
Teterboro Borough							
Waldwick Borough				770			770
Wallington Borough				6			6
Westwood Borough				894			894
Woodcliff Lake Borough				41			41
Wood-Ridge Borough				61			61
Wyckoff Township						112	112
Total Bergen County			\$3,814	\$12,066	\$10,990	\$3,924	\$30,794

APPENDIX G—Continued

CLASS II PROPERTY TAX IN NEW JERSEY COUNTIES BY MUNICIPALITY AND RAILROAD—1955

Essex County

	<i>Penn.</i>	<i>C. of N. J.</i>	<i>D. L. & W.</i>	<i>Erie</i>	<i>N. Y. Cen.</i>	<i>N. Y. S. & W.</i>	<i>Total</i>
Belleville Town				\$1,142			\$1,142
Bloomfield Town			\$2,818	619			3,437
Caldwell Borough				593			593
Cedar Grove Township				21			21
East Orange City			13,812	191			14,003
Essex Fells Borough				277			277
Glen Ridge Borough			510	330			840
Irvington Town							
Maplewood Township			1,596				1,596
Millburn Township			1,804				1,804
Montclair Town			10,263	2,284			12,547
Newark City	\$340,580	\$29,769	16,752	4,824			391,925
Nutley Town				868			868
Orange City			10,708	297			11,005
Roseland Borough							
South Orange Village			6,682				6,682
Verona Borough				55			55
West Orange Town				8			8
Total Essex County	\$340,580	\$29,769	\$64,945	\$11,509			\$446,803

APPENDIX G—Continued

CLASS II PROPERTY TAX IN NEW JERSEY COUNTIES BY MUNICIPALITY AND RAILROAD—1955

Hudson County

	<i>Penn.</i>	<i>C. of N. J.</i>	<i>D. L. & W.</i>	<i>Erie</i>	<i>N. Y. Cen.</i>	<i>N. Y. S. & W.</i>	<i>H. & M.</i>	<i>Total</i>
Bayonne City		\$7,956						\$7,956
Harrison Town	\$5,827		\$730	\$110				6,667
Hoboken City			321,767				\$7,073	328,840
Jersey City	125,949	359,657	151,797	254,074			80,733	972,210
Kearny Town	44,739		686	805				46,230
North Bergen Township	17,679			196	\$166	\$622		18,663
Secaucus Town	954		24	4,353				5,331
West Hoboken—Union City								
Town of Union—Union City								
Weehawken Township					31,081			31,081
West New York Town								
Total Hudson County	\$195,148	\$367,613	\$475,004	\$259,538	\$31,247	\$622	\$87,806	\$1,416,978

APPENDIX G—Continued

CLASS II PROPERTY TAX IN NEW JERSEY COUNTIES BY MUNICIPALITY AND RAILROAD—1955

Mercer County

	<i>Penn.</i>	<i>C. of N. J.</i>	<i>D. L. & W.</i>	<i>Erie</i>	<i>N. Y. Cen.</i>	<i>N. Y. S. & W.</i>	<i>Total</i>
East Windsor Township .....	.....	.....	.....	.....	.....	.....	.....
Ewing Township .....	.....	.....	.....	.....	.....	.....	.....
Hamilton Township	\$1,548	.....	.....	.....	.....	.....	\$1,548
Hightstown Borough .....	.....	.....	.....	.....	.....	.....	.....
Hopewell Borough .....	.....	.....	.....	.....	.....	.....	.....
Hopewell Township .....	.....	.....	.....	.....	.....	.....	.....
Lawrence Township	22	.....	.....	.....	.....	.....	22
Pennington Borough .....	.....	.....	.....	.....	.....	.....	.....
Princeton Borough	1,614	.....	.....	.....	.....	.....	1,614
Princeton Township	546	.....	.....	.....	.....	.....	546
Washington Township .....	.....	.....	.....	.....	.....	.....	.....
West Windsor Township	4,956	.....	.....	.....	.....	.....	4,956
City of Trenton	17,294	.....	.....	.....	.....	.....	17,294
Total Mercer County	\$25,980	.....	.....	.....	.....	.....	\$25,980

APPENDIX G—Continued

CLASS II PROPERTY TAX IN NEW JERSEY COUNTIES BY MUNICIPALITY AND RAILROAD—1955

Middlesex County

	<i>Penn.</i>	<i>C. of N. J.</i>	<i>D. L. & W.</i>	<i>Erie</i>	<i>N. Y. Cen.</i>	<i>N. Y. S. & W.</i>	<i>Total</i>
Carteret Borough .....	.....	.....	.....	.....	.....	.....	.....
Cranbury Township .....	.....	.....	.....	.....	.....	.....	.....
Dunellen Borough .....	.....	\$823	.....	.....	.....	.....	\$823
East Brunswick Township .....	.....	.....	.....	.....	.....	.....	.....
Edison Township	\$3,164	.....	.....	.....	.....	.....	3,164
Helmetta Borough	47	.....	.....	.....	.....	.....	47
Highland Park Borough	119	.....	.....	.....	.....	.....	119
Jamesburg Borough	227	.....	.....	.....	.....	.....	227
Madison Township .....	.....	.....	.....	.....	.....	.....	.....
Metuchen Borough	6,039	.....	.....	.....	.....	.....	6,039
Middlesex Borough .....	.....	175	.....	.....	.....	.....	175
Milltown Borough .....	.....	.....	.....	.....	.....	.....	.....
Monroe Township .....	.....	.....	.....	.....	.....	.....	.....
New Brunswick City	7,038	.....	.....	.....	.....	.....	7,038
North Brunswick Township	1,359	.....	.....	.....	.....	.....	1,359
Perth Amboy City .....	.....	8,722	.....	.....	.....	.....	8,722
Piscataway Township .....	.....	.....	.....	.....	.....	.....	.....
Plainsboro Township	584	.....	.....	.....	.....	.....	584
Sayreville Borough .....	.....	6	.....	.....	.....	.....	6
South Amboy City	5,194	57	.....	.....	.....	.....	5,251
South Brunswick Township	5,338	.....	.....	.....	.....	.....	5,338
South Plainfield Borough .....	.....	.....	.....	.....	.....	.....	.....
South River Borough .....	.....	.....	.....	.....	.....	.....	.....
Spotswood Borough	2,342	.....	.....	.....	.....	.....	2,342
Woodbridge Township	4,893	648	.....	.....	.....	.....	5,541
Total Middlesex County	\$36,344	\$10,431	.....	.....	.....	.....	\$46,775

APPENDIX G—Continued

CLASS II PROPERTY TAX IN NEW JERSEY COUNTIES BY MUNICIPALITY AND RAILROAD—1955

Monmouth County

	<i>Penn.</i>	<i>C. of N. J.</i>	<i>D. L. & W.</i>	<i>Erie</i>	<i>N. Y. Cen.</i>	<i>N. Y. S. & W.</i>	<i>Total</i>
Asbury Park City	\$6,091	\$6,091	.....	.....	.....	.....	\$12,182
Atlantic Highlands Borough .....	.....	2,035	.....	.....	.....	.....	2,035
Allenhurst Borough	644	644	.....	.....	.....	.....	1,288
Avon-by-the-Sea Borough	501	501	.....	.....	.....	.....	1,002
Belmar Borough	707	707	.....	.....	.....	.....	1,414
Bradley Beach Borough	675	675	.....	.....	.....	.....	1,350
Brielle Borough .....	.....	.....	.....	.....	.....	.....	.....
Deal Borough	353	353	.....	.....	.....	.....	706
Eatontown Borough .....	.....	.....	.....	.....	.....	.....	.....
Englishtown Borough .....	.....	.....	.....	.....	.....	.....	.....
Freehold Township .....	.....	.....	.....	.....	.....	.....	.....
Farmingdale Borough .....	.....	.....	.....	.....	.....	.....	.....
Freehold Borough .....	.....	.....	.....	.....	.....	.....	.....
Howell Township .....	.....	.....	.....	.....	.....	.....	.....
Highlands Borough .....	.....	326	.....	.....	.....	.....	326
Interlaken Borough .....	.....	.....	.....	.....	.....	.....	.....
Keyport Borough .....	.....	352	.....	.....	.....	.....	352
Keansburg Borough .....	.....	267	.....	.....	.....	.....	267
Little Silver Borough	227	227	.....	.....	.....	.....	454
Long Branch City	2,072	2,072	.....	.....	.....	.....	4,144
Manalapan Township .....	.....	.....	.....	.....	.....	.....	.....
Marlboro Township .....	.....	.....	.....	.....	.....	.....	.....
Matawan Township	12	12	.....	.....	.....	.....	24
Middletown Township	65	310	.....	.....	.....	.....	375
Manasquan Borough	209	209	.....	.....	.....	.....	418
Matawan Borough	220	220	.....	.....	.....	.....	440
Neptune Township	217	217	.....	.....	.....	.....	434
Ocean Township .....	.....	.....	.....	.....	.....	.....	.....
Oceanport Borough	135	135	.....	.....	.....	.....	270
Raritan Township	40	40	.....	.....	.....	.....	80
Red Bank Borough	662	662	.....	.....	.....	.....	1,324
Sea Girt Borough	150	150	.....	.....	.....	.....	300
Shrewsbury Borough .....	.....	.....	.....	.....	.....	.....	.....
Spring Lake Borough	439	439	.....	.....	.....	.....	878
Spring Lake Heights Borough .....	.....	.....	.....	.....	.....	.....	.....
Upper Freehold Township .....	.....	.....	.....	.....	.....	.....	.....
Union Beach Borough .....	.....	556	.....	.....	.....	.....	556
Wall Township .....	.....	.....	.....	.....	.....	.....	.....
Total Monmouth County	\$13,419	\$17,200	.....	.....	.....	.....	\$30,619

APPENDIX G—Continued

CLASS II PROPERTY TAX IN NEW JERSEY COUNTIES BY MUNICIPALITY AND RAILROAD—1955

Morris County

	<i>Penn.</i>	<i>C. of N. J.</i>	<i>D. L. & W.</i>	<i>Erie</i>	<i>N. Y. Cen.</i>	<i>N. Y. S. & W.</i>	<i>Total</i>
Boonton Town			\$1,078				\$1,078
Butler Borough						\$309	309
Chatham Borough			2,275				2,275
Chester Borough							
Denville Township			11,123				11,123
Dover Town			2,794				2,794
East Hanover Township							
Hanover Township							
Jefferson Township			2				2
Kinnelon Borough							
Lincoln Park Borough			123				123
Madison Borough			3,523				3,523
Montville Township			1,030				1,030
Morris Plains Borough			700				700
Morristown Town			5,688				5,688
Morris Township			1,004				1,004
Mountain Lakes Borough			843				843
Mt. Arlington Borough			29				29
Mt. Olive Township			16				16
Netcong Borough			265				265
Parsippany-Troy Hills Township			21				21
Passaic Township			615				615
Pequanock Township				\$199			199
Randolph Township			39				39
Riverdale Borough				110			110
Rockaway Borough							
Rockaway Township			7				7
Roxbury Township			1,366				1,366
Washington Township							
Wharton Borough			24				24
Total Morris County			\$32,565	\$309		\$309	\$33,183

APPENDIX G—Continued

CLASS II PROPERTY TAX IN NEW JERSEY COUNTIES BY MUNICIPALITY AND RAILROAD—1955

Passaic County

	<i>Penn.</i>	<i>C. of N. J.</i>	<i>D. L. & W.</i>	<i>Erie</i>	<i>N. Y. Cen.</i>	<i>N. Y. S. & W.</i>	<i>Total</i>
Bloomington Borough				\$3			\$3
Clifton City			\$1,806	3,598			5,404
Hawthorne Borough				496		\$1,347	1,843
Little Falls Township				428			428
Passaic City			2,018	4,587			6,605
Paterson City			3,075	13,322		1,268	17,665
Pompton Lakes Borough				52		685	737
Totowa Borough			116				116
Wanaque Borough				359			359
Wayne Township			52	78			130
West Milford Township							
West Paterson Borough			4				4
Total Passaic County			\$7,071	\$22,923		\$3,300	\$33,294

APPENDIX G—Continued

CLASS II PROPERTY TAX IN NEW JERSEY COUNTIES BY MUNICIPALITY AND RAILROAD—1955

Somerset County

	<i>Penn.</i>	<i>C. of N. J.</i>	<i>D. L. & W.</i>	<i>Erie</i>	<i>N. Y. Cen.</i>	<i>N. Y. S. & W.</i>	<i>Total</i>
Bernards Township	\$1,122	.....	.....	.....	\$1,122
Bernardsville Borough	6,607	.....	.....	.....	6,607
Bound Brook Borough	\$3,815	.....	.....	.....	.....	3,815
Branchburg Township	268	.....	.....	.....	.....	268
Bridgewater Township	453	.....	.....	.....	.....	453
Far Hills Borough	400	.....	.....	.....	400
Franklin Township
Hillsborough Township
Manville Borough
Montgomery Township
Peapack-Gladstone Borough	292	.....	.....	.....	292
Raritan Borough	3,629	.....	.....	.....	.....	3,629
Somerville Borough	8,406	.....	.....	.....	.....	8,406
South Bound Brook Borough
Total Somerset County	\$16,571	\$8,421	.....	.....	.....	\$24,992

APPENDIX G—Continued

CLASS II PROPERTY TAX IN NEW JERSEY COUNTIES BY MUNICIPALITY AND RAILROAD—1955

Union County

	<i>Penn.</i>	<i>C. of N. J.</i>	<i>D. L. & W.</i>	<i>Erie</i>	<i>N. Y. Cen.</i>	<i>N. Y. S. & W.</i>	<i>Total</i>
Berkeley Heights Township	\$40	.....	.....	.....	\$40
Clark Township
Cranford Township	\$14,599	.....	.....	.....	.....	14,599
Elizabeth City	\$5,960	13,680	.....	.....	.....	.....	19,640
Fanwood Borough	1,029	.....	.....	.....	.....	1,029
Garwood Borough	122	.....	.....	.....	.....	122
Hillside Township
Kenilworth Borough
Linden Township
Linden City	5,395	148	.....	.....	.....	.....	5,543
New Providence Borough	102	.....	.....	.....	102
Plainfield City	6,455	.....	.....	.....	.....	6,455
Rahway City	15,698	.....	.....	.....	.....	.....	15,698
Roselle Borough	509	.....	.....	.....	.....	509
Roselle Park Borough	571	.....	.....	.....	.....	571
Scotch Plains Township
Springfield Township
Summit City	6,995	.....	.....	.....	6,995
Union Township
Westfield Town
Total Union County	\$27,053	\$37,113	\$7,137	.....	.....	.....	\$71,303

