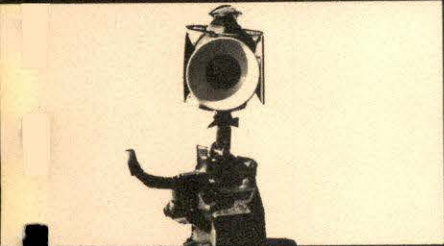
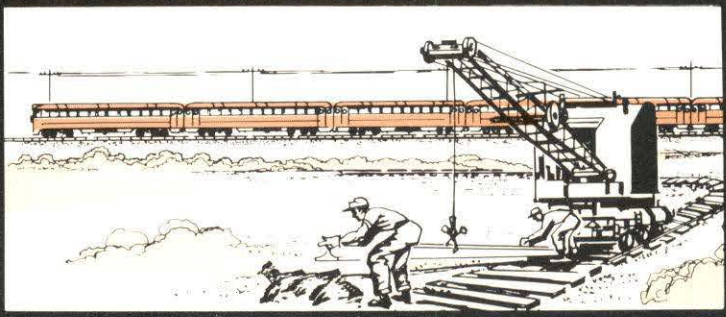


T764
1968f

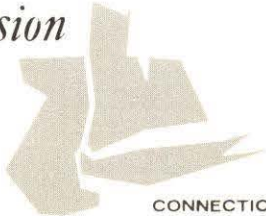
90
T764
68f
extra

DEPARTMENT LIBRARY
N. J. DEPT. OF TRANSPORTATION
TRENTON, NEW JERSEY

REGIONAL TRANSIT IMPROVEMENTS



Tri-State Transportation Commission



OCTOBER 1968

CONNECTICUT • NEW JERSEY • NEW YORK

New Jersey State Library

3.013
T6M2

TRI-STATE TRANSPORTATION COMMISSION

The Tri-State Transportation Commission, an interstate planning agency, defines and seeks solutions to immediate and long-range transportation and land-use problems of the New York metropolitan region covering 22 counties in New York and New Jersey and six planning regions in southwest Connecticut.

Established by legislative action of the states of Connecticut, New Jersey and New York in 1965, the Commission succeeds the Tri-State Transportation Committee formed by the governors of these three states in 1961.

Although regional planning is its primary task, the Commission is also a central supporting resource for local planning. It provides assistance in solving problems that spread beyond local jurisdictional control. It also encourages coordination among all agencies charged with planning or providing transportation and related public facilities within the Tri-State Region.

The three states and the Federal government finance the work of the Commission. Federal funds come from highway planning aid administered by the U. S. Bureau of Public Roads and also from planning and mass transportation grants provided by the U. S. Department of Housing and Urban Development.

Commissioners representing the three states are appointed by the governors in accordance with the laws of their respective states. Federal representatives are appointed by the appropriate officer holding such authority within the Executive branch.

THE COMMISSION MEMBERS ARE:

Louis I. Gladstone, Chairman, *State Comptroller, State of Connecticut*

Charles T. Lanigan, Vice-Chairman, *Director, New York State Office of Planning Coordination*

Paul N. Ylvisaker, Vice-Chairman, *Commissioner, Department of Community Affairs, State of New Jersey*

Donald H. Elliott, Secretary, *Chairman, New York City Planning Commission*

David J. Goldberg, Past Chairman, *Commissioner, Department of Transportation, State of New Jersey*

Frank A. Carboine, Chief, *Airports Division, Eastern Region, Federal Aviation Administration, U. S. Department of Transportation*

Michael N. Danielson, Professor, *Woodrow Wilson School of Public and International Affairs, Princeton University*

Judah Gribetz, *Regional Administrator, U. S. Department of Housing and Urban Development*

John A. Hanson, *Regional Federal Highway Administrator, U. S. Department of Transportation*

Howard S. Ives, *Commissioner of Highways, State of Connecticut*

Roscoe P. Kandle, *Commissioner, Department of Health, State of New Jersey*

Richard C. Lee, *Mayor of New Haven, State of Connecticut*

J. Burch McMorran, *Commissioner, Department of Transportation, State of New York*

Ronald B. Peterson, *Commissioner, Department of Commerce, State of New York*

Frank M. Reinhold, *Chairman, Connecticut Transportation Authority*

William J. Ronan, *Chairman, Metropolitan Transportation Authority*

Graham R. Treadway, *Chairman, Connecticut Development Commission*

J. Douglas Carroll, Jr., *Executive Director*

TRI-STATE TRANSPORTATION COMMISSION

100 CHURCH STREET

NEW YORK, NEW YORK 10007

TELEPHONE: (212) 433 - 4200

3019-8334-1M

9/68

The preparation of this report was financed in part through Federal funds made available by the U. S. Department of Transportation, Federal Highway Administration, Bureau of Public Roads; an urban planning grant from the U. S. Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended; and in cooperation with the states of Connecticut, New Jersey and New York.

REGIONAL TRANSIT IMPROVEMENTS

The Tri-State Transportation Commission is an interstate planning body charged with the responsibility of advising its three sponsoring states, and local communities, on matters affecting transportation, land use, and other aspects of urban development in the New York metropolitan region. This report covers a major updating of the Commission's regional transit plan. These changes were formally adopted by the Commission at its meeting on September 12, 1968.

Detailing The Interim Plan

In May 1966, the Commission published an interim plan for regional transit improvements. This report outlined for the first time a regional transit plan for suburban rail, rapid transit, bus and ferry services. Since that report was issued and sent to the governors, the three states have made great strides in organization, in finding funds and in detailing parts of this plan.

Since 1966, the State of New York has combined the New York City Transit Authority, the Metropolitan Commuter Transportation Authority—owner of the Long Island Rail Road—and the Triborough Bridge & Tunnel Authority into a single new agency—the Metropolitan Transportation Authority. In November 1967 a state bond issue authorizing \$1 billion for mass transit improvements was approved by New York voters. A major portion of these funds, together with local and Federal funds, provide the means for building the elements of the Tri-State plan that fall within New York. New York has also consolidated all of its state-wide transportation activities into the New York State Department of Transportation—so that highway and transit planning will be fully coordinated.

In Connecticut the Connecticut Transportation Authority has by law been assured access to tax revenues that can be used to support bond issues for transit improvements. These financial resources are adequate to modernize the New Haven Railroad's commuter service, to help support new intercity rail service on this line and to provide other needed transport improvement in the state as well. In carrying this work forward, the CTA is empowered to represent the State of Connecticut.

In New Jersey, the state has created the nation's first department of transportation. It includes a Commuter Operating Agency with full power to own and operate public transportation facilities. Early in 1968, the New Jersey Department of Transportation, at the request of Governor Hughes, prepared a program of needed improvements for all transit facilities in the state. A bond issue has been proposed to fund the improvements, including transit improve-

ments in the northern part of New Jersey within the Tri-State Region. The legislature has reviewed the bond issue proposal, and it will be submitted to the voters in November 1968.

The Tri-State Transportation Commission has also made much progress since it issued the 1966 transportation plan. It has given much study and thought to the future land development of this Region—both what is likely to happen and what is a desired alternative. The Commission has availed itself of more information for accurately weighing the transport requirements of a particular regional development pattern. Conversely, the possibility of a particular choice of transport improvements being able to encourage desired development patterns is also more sharply understood.

At this time, then, it is useful to revise and sharpen the plan for a future transit system into more exact objectives. First, the plan will be mapped and described. This will be followed by a recommended program wherein capital improvement costs are listed according to the agency having financial responsibility. Urgent needs are designated first priority.

It is estimated that the work outlined in this plan can be accomplished in 15 to 20 years. While work continues toward completion of this schedule of improvements, the Commission will continually be watching for changes in usage, shifting needs and new opportunities that are not apparent at this time. This is a prime task of a regional planning agency—to watch continuously to see if plans must be adjusted to serve better the public need. The Commission expects to monitor land development changes, to revise future traffic estimates regularly, and particularly, to be aware of new technology that can provide a desirable addition to the Region's transportation system.

Commitments of state and local funds have been made, and borrowing programs are being arranged to implement the transit program. Federal assistance at a greater level of funding than in the past will be required to complete the program on schedule.



TRI-STATE TRANSPORTATION COMMISSION



REGIONAL TRANSIT IMPROVEMENTS

- SUBURBAN RAIL
- IMPROVEMENTS TO EXISTING FACILITIES

The Updated Interim Plan

Suburban Railroads

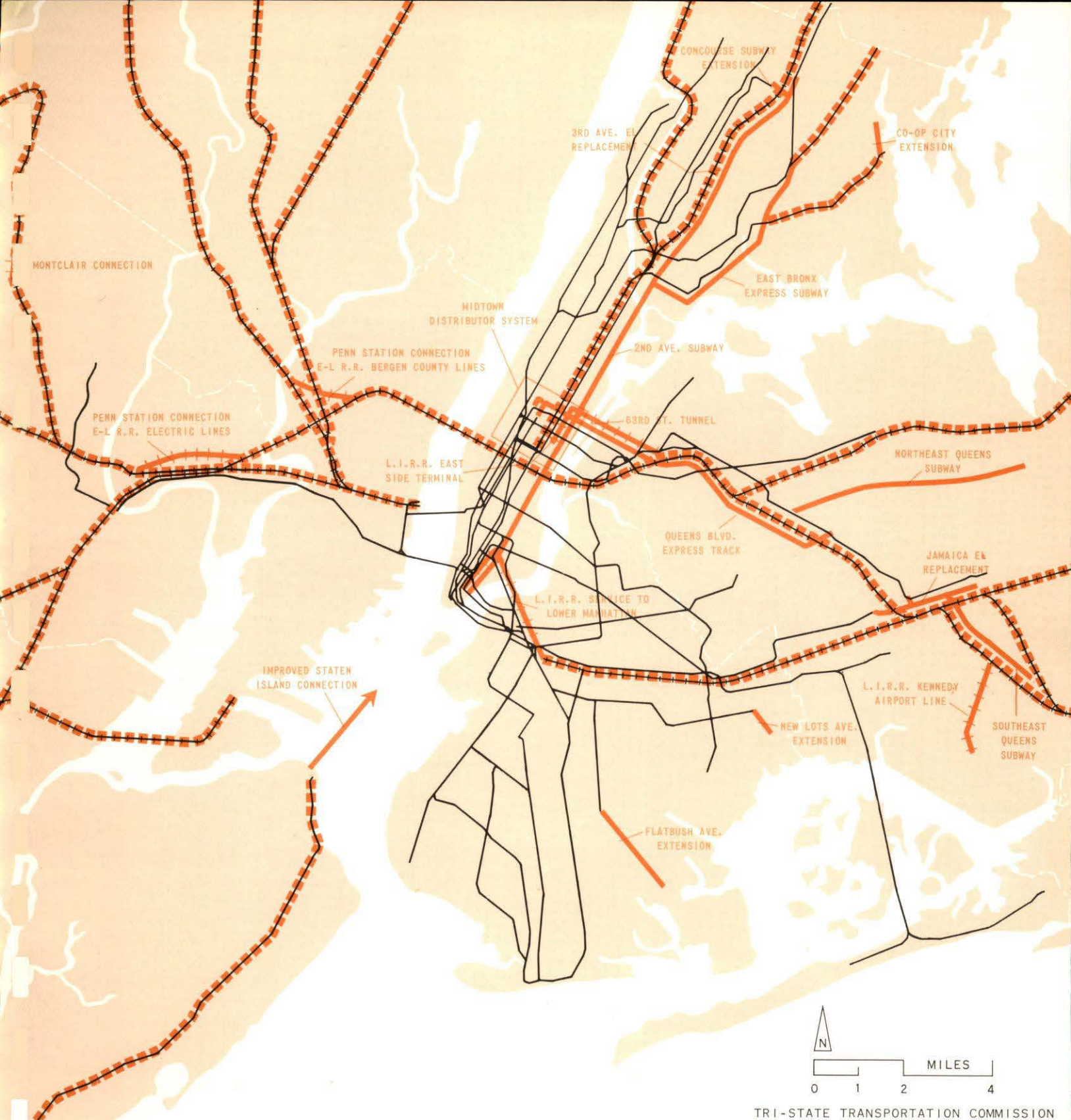
Modernization of the suburban railroads is a major component of the transit plan. Equipment and facilities have become obsolete. Both catch-up and modernization expenditures are needed to provide faster, more comfortable service and to reduce maintenance and operating costs.

New rolling stock is needed for all suburban lines—new multiple-unit cars for the electrified portions of the rail lines and high-performance,

self-propelled equipment for the low-volume lines for which electrification is not warranted.

Electrification will be extended to cover additional portions of the suburban rail lines. Thus through service can be provided on a larger part of the system without the necessity for passenger transfer or the engine change that occurs with the use of low-performance, locomotive-hauled equipment as exists today.

Improvements will be made to existing electric distribution systems, signal systems



TRI-STATE TRANSPORTATION COMMISSION

REGIONAL TRANSIT IMPROVEMENTS CENTRAL AREA ENLARGEMENT

- RAPID TRANSIT
- +++++ SUBURBAN RAIL
- IMPROVEMENTS TO EXISTING FACILITIES
- NEW CONSTRUCTION

and trackage in order to prepare the physical plant for faster service. Station improvements will include high-level platforms, automatic fare collection equipment and improvements to station buildings, shelters and lighting.

Improvements by Sector

The Eastern Sector, including all of Long Island, will obtain substantial improvements in access to Manhattan. Two new Manhattan terminals are included in the program. One is in the east midtown area, at 48th Street and Third Avenue, which will be reached through two tracks of a new four-track 63rd Street tunnel, to be built jointly for railroad and subway use. The other is in lower Manhattan, which will be reached by an extension of the existing Long Island Rail Road Brooklyn route. Both of these facilities will deliver railroad passengers within walking distance of substantial employment concentrations. In addition, improvements in the track layout at Jamaica will speed travel for the majority of Long Island passengers.

Electrification in this sector is to include the Port Jefferson Branch, the Main Line as far as Ronkonkoma, and the Montauk Branch to Patchogue.

The Northern Sector, including Westchester, Putnam and Dutchess counties in New York, and the entire Connecticut portion of the Region, will receive several improvements, including a third express track between Mount Vernon and White Plains to provide faster service to the northern part of the Penn Central Harlem Division, and a major new station at 149th Street in the Bronx to improve access to the Bronx and upper Manhattan.

Electrification will be extended from North White Plains to Brewster and from Harmon to Peekskill.

The Western Sector, including the entire New Jersey portion of the Region as well as Rockland and Orange counties in New York State, will receive several projects designed to improve access to Manhattan as well as to the Newark area. Access to midtown Manhattan via Penn Station will be provided for the Morris and Essex Division of the Erie-Lackawanna Railroad by means of a connection in the Meadows east of Harrison. The Bergen County lines of the Erie-Lackawanna will be given Penn Station access either by means of a trans-

fer station at Secaucus, or a direct connection if track capacity is available. In addition, a connection at Montclair between the Montclair Branch and the Greenwood Lake Branch of the Erie-Lackawanna will provide the Greenwood Lake-Boonton Branch with access to Newark and Manhattan Penn stations, as well as eliminate a duplicate facility east of Montclair.

Electrification will be extended on the New York and Long Branch south from South Amboy and on the Erie-Lackawanna north from Montclair. Also, the Jersey Central from the Penn Central connection at Newark to Raritan will be electrified.

To provide access from Manhattan to the improved suburban system, the upgrading program for PATH will continue, including station modernization and renewal of signal and power systems and trackage.

Rapid Transit—New York City

Emphasis in the rapid transit expansion program is being placed on two areas of improvement; the reduction of crowded conditions on the most heavily traveled lines by provision of parallel facilities, and the expansion of service into areas of high travel demand not now served. The most pressing need is the relief of overcrowded conditions on the East Side of Manhattan and in the Manhattan-Queens corridor. New trackage there will reduce travel time from these areas by eliminating the bus-to-subway transfer as well as by the increase in speed possible with an exclusive right of way. To further reduce travel times to outlying areas, increased capacity will be provided in the form of express bypass tracks in areas where route coverage is presently adequate.

Improvements by Sector

The Manhattan-Bronx Sector. The principal improvement will be a Second Avenue subway extending the length of the East Side of Manhattan to provide badly needed additional capacity in this area. Connections in the Bronx will be necessary to utilize this capacity adequately. An express bypass route will be built to connect the Second Avenue subway with the Dyre Avenue line and the upper portion of the Pelham Bay lines, and to provide a transfer connection for the upper part of the White Plains Road line.

In order to provide a facility adequate for through Manhattan service, the Third Avenue

elevated in the Bronx will be replaced with a route sharing the Penn Central right of way along Park Avenue. Also, two short extensions are proposed, including one to provide service to Co-Op City and another to provide a transfer connection between the White Plains Road and Grand Concourse lines.

The East-of-Manhattan Sector will receive a major addition in capacity with the construction of the 63rd Street tunnel. To utilize this capacity, a subway across Manhattan's 63rd Street will be built to enable both Queens and Second Avenue trains to reach the west midtown area. On the Queens end, an express bypass track is to be added, using the LIRR right of way, to improve capacity on the Queens Boulevard subway west of Forest Hills. Extensions to new areas will take place in Southeast Queens, using the right of way of the Long Island Rail Road Atlantic Branch, and in North Central Queens, adjacent to the Long Island Expressway.

Subway extensions in Brooklyn will include an extension of the Nostrand Avenue subway along Flatbush Avenue and a short extension of the New Lots Avenue route south to Flatlands Avenue.

Finally, in order to aid the redevelopment of the Jamaica business center, the Jamaica Avenue elevated line will be replaced by additional trackage along the southeast Queens route, including a short eastward extension.

Ongoing Improvement Program

In addition to the expansion program described above, the New York City transit system will continue to have existing facilities and services upgraded by the purchase of new equipment, station modernization and the renewal of signal and power systems and trackage.

Other Transportation Improvements

Midtown Distribution. Development of a short-haul circulation system for midtown Manhattan is proposed. This system would serve internal travel within a large, high-density area as well as feed passengers to the subway and rail systems. It would expand the service area of existing rapid transit and railroad stations and would encourage the development of the presently inadequately served area west of Eighth Avenue.

Staten Island. While direct rail service to Staten Island is a desirable long-term objective, in the more immediate future efforts should be concentrated on the improvement of the existing Staten Island Rapid Transit service with new equipment and physical plant modernization, and the improvement of the ferry service, seeking means of reducing travel time to and within the Island.

Bus Operations. As part of the New York City transit system's ongoing improvement program, the bus fleet and associated service facilities will be kept in up-to-date condition with a regular replacement program. Other bus operations are privately owned. While they are not included in a plan dealing with public investment requirements, it is expected that the private bus operators will continue to replace equipment and facilities as required to maintain service.

Airport Access. A Long Island Rail Road link to Kennedy Airport is proposed, running from the new East Side terminal. The other major commercial airports, being much smaller than Kennedy, are best initially served by nonstop bus connections to nearby rail lines, with direct rail service possible at a later date.

The Capital Improvement Program

The following list of items covers the capital investment in transit that is proposed to be committed within the next five years.

Costs are allocated to the agency responsible for carrying out the program. Therefore no record is made in this table of the major share contributed by the City of New York nor does

it show the share that would be expected from the Federal Government. Two thirds of this program would be eligible for Federal assistance, however, Federal funding would have to be at a much higher level than in the past to provide that much assistance. Federal aid may affect the speed of this program.

SUMMARY OF COSTS AND PRIORITIES

all figures in millions of dollars

SUBURBAN RAILROAD	
Priority I New York...	\$ 795.2
Priority I New Jersey...	233.0
Priority I Connecticut	45.0
Priority I Other**....	5.0
SUBTOTAL.....	\$1078.2
PRIORITY II.....	420.0
TOTAL.....	\$1498.2
RAIL RAPID TRANSIT	
Priority I New York (incl. N. Y. City)*.	\$1443.5
Priority I Port of N. Y. Authority.....	82.1
SUBTOTAL.....	\$1525.6
PRIORITY II.....	814.0
TOTAL.....	\$2339.6
BUS TRANSIT	
Priority I New York (incl. N. Y. City)*.	\$ 53.7
Priority I Port of N. Y. Authority.....	46.7
Priority I Other**....	77.1
SUBTOTAL.....	\$ 177.5
PRIORITY II.....	131.8
TOTAL.....	\$ 309.3
Grand Total....	\$4147.1

* New York City is expected to provide a large share of the rail rapid transit costs out of municipal funds.
 ** Private Capital.

BUS TRANSIT CAPITAL IMPROVEMENT PROGRAM

all figures in millions of dollars

	EQUIPMENT	OTHER	TOTAL
NEW YORK CITY			
Priority I New York (incl. N. Y. City).	\$ 48.8	\$ 4.9	\$ 53.7
Priority I Other.....	7.5	.8	8.3
SUBTOTAL.....	\$ 56.3	\$ 5.7	\$ 62.0
PRIORITY II.....	56.3	5.7	62.0
TOTAL.....	\$112.6	\$11.4	\$124.0
WESTERN SECTOR (N. J. & Rockland County)			
Priority I Port of N. Y. Authority....	\$ --	\$46.7 ^m	\$ 46.7
Priority I Other.....	47.3	4.7	52.0 ^v
SUBTOTAL.....	\$ 47.3	\$51.4	\$ 98.7
PRIORITY II.....	47.3	5.7 ^x	53.0
TOTAL.....	\$ 94.6	\$57.1	\$151.7
EASTERN SECTOR (L. I.)			
Priority I Other.....	\$ 5.2	\$.5	\$ 5.7 ^v
PRIORITY II.....	5.2	.5	5.7
TOTAL.....	\$ 10.4	\$ 1.0	\$ 11.4
NORTHERN SECTOR (Conn. & Westchester County)			
Priority I Other.....	\$ 10.1	\$ 1.0	\$ 11.1 ^v
PRIORITY II.....	10.1	1.0	11.1
TOTAL.....	\$ 20.2	\$ 2.0	\$ 22.2

v. Expenditures by private bus companies.
 w. PABT expansion \$40.0; bus terminal share of Journal Square \$8.7.
 x. New City transportation center \$1.0; expenditures by private bus companies \$4.7.

RAIL RAPID TRANSIT CAPITAL IMPROVEMENT PROGRAM

all figures in millions of dollars

	EQUIPMENT	ELECTRIFICATION	STATIONS	OTHER	NEW LINES & EXTENSIONS				TRANSPORTATION CENTERS	TOTAL
					BROOKLYN	QUEENS	MANHATTAN-BRONX	MANHATTAN CBD		
NEW YORK CITY TRANSIT										
Priority I New York (incl. N. Y. City).	\$210.0 ^l	\$75.0 ^m	\$50.0 ^m	\$180.0 ⁿ	\$72.0 ^o	\$402.5 ^d	\$229.0 ^q	\$200.0 ^r	--	\$1418.5
PRIORITY II.....	70.0	--	--	100.0	--	135.0	134.0	365.0	--	804.0
TOTAL.....	\$280.0	\$75.0	\$50.0	\$280.0	\$72.0	\$537.5	\$363.0	\$565.0	--	\$2222.5
STATEN ISLAND TRANSIT										
Priority I New York (incl. N. Y. City).	--	--	--	--	--	--	--	--	--	\$ 25.0 ^s
PRIORITY II.....	--	--	--	--	--	--	--	--	--	10.0
TOTAL.....	--	--	--	--	--	--	--	--	--	\$ 35.0
P.A.T.H.										
Priority I Port of N. Y. Authority....	--	\$ 6.8	\$21.5 ^t	\$ 25.5	--	--	--	--	\$28.3 ^u	\$ 82.1

l. Cars for new lines \$70.0; replacement cars \$140.0.
 m. Priority II expenditures for ongoing items on existing lines cannot be completely determined at this time.
 n. Yards, shops, miscellaneous tracks \$145.0; Rogers Ave. Jct. improvement \$15.0; 149th Street improvement \$20.0.
 o. New Lots extension \$12.0; Nostrand extension \$60.0 (footnotes o-r include electrification but not cars).
 p. 83rd Street tunnel Queens connections for rapid transit \$45.0; express track \$70.0; Northeast Queens \$150.0; Southeast Queens \$100.0; rapid transit share of 83rd Street tunnel \$37.5 (ready for contract award).
 q. Northeast Bronx extension \$60.0; Upper Pelham connection \$19.0; Second Avenue (83rd to 138th) \$150.0.
 r. 83rd Street crosstown and connections \$130.0; Second Avenue (83rd to 34th) \$70.0.
 s. Expenditures unallocated; engineering studies underway.
 t. Stations other than Journal Square.
 u. PATH share of Journal Square transportation center.

SUBURBAN RAILROAD CAPITAL IMPROVEMENT PROGRAM

all figures in millions of dollars

	EQUIPMENT	ELECTRIFICATION	STATIONS	OTHER	NEW LINES & EXTENSIONS	TRANSPORTATION CENTERS	AIRPORT ACCESS	SPECIAL	TOTAL
LONG ISLAND RAIL ROAD									
Priority I New York..	\$141.3 ^A	\$ 59.4 ^B	\$120.0 ^C	\$105.0 ^D	\$136.5 ^E	--	\$100.0 ^F	--	\$ 662.2
PRIORITY II.....	178.0	48.0	16.0	40.0	65.0	25.0	--	--	372.0
TOTAL.....	\$319.3	\$107.4	\$136.0	\$145.0	\$201.5	\$25.0	\$100.0	--	\$1034.2
NEW HAVEN RAILROAD									
Priority I New York..	\$ 21.0	\$ 3.0	\$ 4.0	\$ 7.0	--	\$ 3.0 ^K	--	\$ 8.0	\$ 46.0
Priority I Connecticut	21.0	9.0	5.0	10.0	--	--	--	--	45.0
TOTAL.....	\$ 42.0 ^G	\$ 12.0 ^H	\$ 9.0	\$ 17.0 ^I	--	\$ 3.0	--	\$ 8.0 ^L	\$ 91.0
PENN CENTRAL (NYCRR)									
Priority I New York..	\$ 30.0 ^M	\$ 24.0 ^N	\$ 5.0	\$ 21.0 ^O	--	\$ 3.0 ^R	--	--	\$ 83.0
Priority I Other.....	--	--	5.0	--	--	--	--	--	5.0
SUBTOTAL.....	\$ 21.5	\$ 24.0	\$ 10.0 ^P	\$ 21.0	--	\$ 3.0	--	--	\$ 88.0
PRIORITY II.....	10.0	5.0	2.0	6.0	--	13.0	--	--	36.0
TOTAL.....	\$ 31.5 ^S	\$ 29.0	\$ 12.0	\$ 27.0	--	\$16.0	--	--	\$ 124.0
ERIE-LACKAWANNA (northwest)									
Priority I New York..	\$ 2.0	--	--	--	--	\$ 2.0	--	--	\$ 4.0
Priority I New Jersey	19.5	--	6.6 ^T	--	--	--	--	--	26.1
SUBTOTAL.....	\$ 21.5	--	\$ 6.6	--	--	\$ 2.0	--	--	\$ 30.1
PRIORITY II.....	10.0	--	--	--	--	2.0	--	--	12.0
TOTAL.....	\$ 31.5 ^S	--	\$ 6.6	--	--	\$ 4.0 ^U	--	--	\$ 42.1
ERIE-LACKAWANNA (western)									
Priority I New Jersey	\$ 40.7 ^V	\$ 20.0 ^W	\$ 9.0 ^X	--	\$ 9.2 ^Y	--	--	\$12.5 ^Z	\$ 91.4
CENTRAL RR OF NEW JERSEY									
Priority I New Jersey	\$ 15.0 ^a	\$ 12.0 ^b	\$ 2.1 ^c	--	\$ 3.0 ^d	--	--	--	\$ 32.1
PENN CENTRAL (PRR)									
Priority I New Jersey	\$ 21.0 ^e	--	\$ 5.1 ^f	--	--	--	--	\$12.5 ^Z	\$ 38.6
NEW YORK & LONG BRANCH									
Priority I New Jersey	\$ 11.0 ^g	\$ 20.2 ^h	\$ 10.4 ⁱ	\$ 3.2 ^k	--	--	--	--	\$ 44.8

- A. 270 multiple-unit cars \$57.3; 350 MU cars \$84.0 (all 620 cars presently on order).
- B. Rehabilitation of existing facilities and extension to Huntington (underway) \$45.4; Northport, Pinelawn electrification extensions \$14.0.
- C. 48th Street terminal \$98.0; Penn Station modernization \$6.0; Jamaica improvements \$13.0; Brooklyn \$5.0.
- D. Yard and shop \$60.0; signal improvements \$20.0; track improvements \$25.0.
- E. 63rd Street tunnel connections \$99.0; LIRR share of 63rd Street tunnel \$37.5 (ready for contract award).
- F. Kennedy Airport extension including modification to existing facilities and new equipment.
- G. 144 new MU cars \$36.0; 100 MU cars rehabilitated \$6.0.
- H. Modernization and conversion to commercial frequency, signal work.
- I. Preliminary estimate of additional modernization cost; allocation subject to revision.
- K. Rye transportation center.
- L. Allocation for purchase.
- M. 130 MU cars.
- N. Modernized electrical system \$12.0; extension from White Plains North to Brewster (including high-level platforms) \$12.0.
- P. Station improvements \$5.0; Penn Central expenditure for northern pedestrian access Grand Central Terminal \$5.0.
- Q. Signal improvements and train control installation \$13.0; third track (Mt. Vernon-White Plains) \$8.0.
- R. White Plains transportation center \$2.0; Tarrytown transportation center \$1.0.
- S. 24 locomotives \$6.0; 80 coaches \$13.5; 6 dual-powered cars \$2.0. Priority II 25 dual-powered cars plus allowance for Secaucus connection.
- T. Station and parking \$0.8; platforms \$3.8; Secaucus transfer \$0.5; ticket validation \$1.3.
- U. Transportation centers at Orangeburg and Pearl River at \$1.0 each. Priority II transportation centers, Goshen and Suffern.
- V. 4 locomotives \$1.0; 15 coaches \$2.2; 150 MU cars \$37.5.
- W. Extension \$10.0; rehabilitation \$10.0.
- X. Montclair connection \$3.2; PC connection \$6.0.
- Y. Station and parking \$1.3; platforms \$5.8; ticket validation \$1.9.
- Z. Special facilities; additional equipment and maintenance facilities.
- a. 50 MU cars.
- b. Extension of electrification.
- c. Stations, parking, platforms \$1.4; ticket validation \$0.7.
- d. Improved Aldene connections.
- e. 80 MU cars.
- f. Stations, parking, platforms \$4.1; ticket validation \$1.0.
- g. 38 MU cars.
- h. Extension of electrification.
- i. Stations, parking, platforms \$4.8; ticket validation \$5.6.
- k. Track improvements.

In preparing this program and its costs the Commission has not proposed any sequence of work. All elements in the first priority category are badly needed to meet today's requirements and, hopefully, can be at least started in the next five years. With approval of the bond issue proposed for New Jersey, the key funds would be in sight, and all agencies are anxious to make progress.

Additional transit-related capital expenditures will be made that have not been included

in this list, such as separations of dangerous grade crossings. These will be mainly achieved within the highway program. Also not shown are expenditures that will be made by localities for parking and station improvements.

This list is large but the task has been long delayed. The Commission intends to watch carefully the progress made over the next year and to review this priority program regularly each year thereafter.