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STATE OF NEW JERSEY
DEPARTMENT OF ECONOMIC DEVELOPMENT
CHARLES R. ERDMAN, JR., Commissioner
520 EAST STATE STREET, TRENTON 7, N. J.

To the Honorable Governor
and Legislature
of the State of New Jersey

DIVISION OF STATE & REGIONAL PLANNING
TRENTON 25, N. J.
30 SOUTH MONTGOMERY STREET

Report on Plan For Bringing the Railroads in New Jersey Into a Union Passenger Terminal in Mid-Manhattan, New York, N. Y.

New Jersey State Library

BY
L. ALFRED JENNY
CONSULTING ENGINEER
DUMONT, N. J.

STATE OF NEW JERSEY
DEPARTMENT OF ECONOMIC DEVELOPMENT
CHARLES R. ERDMAN, JR., COMMISSIONER
TRENTON 7

December 23, 1946

To the Honorable Governor and Legislature
of the State of New Jersey
Executive Department
State House
Trenton, New Jersey

Dear Sirs:

You are, of course, familiar with the needs of the South Jersey-Camden Area of our State for better transit facilities into Philadelphia. Three systems are utilized by the commuters to get to business -- the Pennsylvania and Reading Railroad; the bridge facilities; and the subway system of Philadelphia; with changes being necessary to and from each system. The New Jersey Area suffers in development with the Philadelphia Area because of the one fare no change subway system of Philadelphia which runs out into the suburbs.

It is not generally recognized that North Jersey suffers precisely in the same way. One coming in from our suburbs there by train changes to the Hudson Tube or the ferry, and then takes other transportation on the New York side. The need of this area for a continuous ride into the heart of Manhattan has long been under study by Col. L. Alfred Jenny, who has made the results of his research available to the State. His report, in view of our work in South Jersey, is very timely, and so the Council has felt impelled to procure this report and make it available. The report quite aptly demonstrates the need for a unified system into New York, such as is recommended by the Day and Zimmermann report for South Jersey.

The advantages to be achieved would be somewhat as follows:

a. A freer intercourse of railroad traffic within the State.

b. A direct railroad link between this State and the City of New York, permitting an uninterrupted passage of railroad trains from any point in New Jersey into the heart of the City of New York.

c. A possibility of opening up to profitable development the vast unused area comprising the Hackensack Meadows.

d. The distribution of our vast, and growing, army of commuters, residing in New Jersey but working in New York, in the City of New York, with supplemental transportation arteries there, if need be.

e. The freeing of vast New Jersey waterfront areas, now serving primarily as a transit facility for New York passengers, for more profitable industrial and waterfront development. Furthermore, public safety would

seem to require the removal of these fire hazards, including the ferry boats, if a calamity even worse than the recent waterfront fire at Staten Island is to be avoided.

f. The reduction of traveling time between points within New Jersey, as well as between New Jersey and New York City.

g. The interest of the largest possible number of people and the greatest possible area in our State, and thus help in promoting the economic wellbeing of our people, which is the specific concern of this Council.

h. The common development and operation of such a project by all interested parties, each accepting its respective responsibility.

If the thoughts of Col. Jenny should bear fruition, an authority might be necessary to administer the project.

The plan is submitted to the State by the Economic Council at the request of the New Jersey Transportation Committee, which interested itself in the making of the report. We recommend its study because it so nearly parallels the needs in South Jersey and may contain a suggestion for the solution of that problem. We recommend the plan for careful study and such action as the situation warrants.

Respectfully submitted,

Charles R. Erdman, Jr.

Charles R. Erdman, Jr.
Commissioner

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REPORT ON THE PLAN

FOR BRINGING THE NEW JERSEY RAILROADS

INTO A

UNION PASSENGER TERMINAL

IN NEW YORK

By

L. Alfred Jenny

Consulting Engineer

Dumont, N. J.

L. ALFRED JENNY AND COMPANY

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REPORT ON THE PLAN
FOR BRINGING THE NEW JERSEY RAILROADS
INTO A
UNION PASSENGER TERMINAL
IN NEW YORK

Introduction

For decades consideration has been given to the problem of bringing the New Jersey railroads into a Union Passenger Terminal in mid-Manhattan. Many plans have been prepared, much money has been spent and many efforts made to point out the need for such a development and its great benefit to New Jersey as well as New York City, and even the country as a whole. It is believed that the present time is most opportune for a re-consideration of this project.

This country has had its phenomenal growth and development because of the encouragement given to a dynamic free economy. During the last one or two decades we have seen a retrogression of development in many fields because of an undermining of the spirit of many of our leaders of thought and action, and a consequent softening of the stamina and intestinal fortitude of those to whom we normally look to lead us in carrying out many much needed developments. That has been particularly noticeable in the railroad field. Through the impoverishment of many of our railroads, with many receiverships, and consequent black outlook, many of them did not dare to even think of doing anything that would cost considerable money, even though they knew that, ultimately, they would benefit very materially.

The transportation facilities between New Jersey and New York are no better today than when they were created 100 years ago. New Jersey, as well as New York, have suffered very materially as a consequence. The present facilities are so archaic that, if Rip van Winkle had gone over these facilities when they were created about a century ago, and upon being awakened today, he would find himself perfectly at home. However, instead of finding the same new looking structures which he saw then he would find them in a dillapidated and unsanitary condition.

The failure of public authorities and the railroads to provide adequate transportation facilities between New Jersey and New York City is both amazing and deplorable, and is a serious discrimination against a great area which should no longer be tolerated.

Improved transportation brings with it a development of the region served. That has been very noticeable in Long Island since 1910 when electrified railroad operation to Penn. Station in New York was inaugurated. The region served, particularly Queens and Nassau counties, has gained very materially in population, real estate values and passenger travel, while in other regions, and particularly in New Jersey, real estate values dropped considerably from 1930 to 1940. During this same period real estate values in Queens and Nassau counties kept rising steadily. In fact Nassau County has had an extraordinary growth. This rise in general can be attributed largely to the support given to real estate values by improved transportation.

Lack of adequate transportation results in stagnation. Discriminating purchasers will not acquire real estate in a community that is not adequately served by transportation. As a result real estate values decrease, because of a lack of demand.

In order to bring about an improvement in this situation many leaders have tried to interest the railroads, the public, public authorities and financiers in the construction and development of railroad facilities linking New Jersey with mid-Manhattan and the construction there of a Union Passenger Terminal serving all of the New Jersey railroads, with the exception of the Pennsylvania R.R. (for a history of efforts made see attached Appendix)

With such a development it would be possible for all passengers to save considereble time and much inconvenience. The primary beneficiaries would naturally be the vast army of daily commuters, gaining about 1 hour per day in traveling time. It must be realized, however, that such a project will not only benefit the region in New Jersey adjacent to New York, but also the vast hinterland stretching as far as Buffalo or even Chicago, because all passengers, from any point on these various railroads, could then travel in comfort directly into the heart of Manhattan. The railroads themselves will gain very materially from this. For this combination of reasons this project assumes a national character and deserves recognition accordingly.

The Pennsylvania Railroad, and the regions served by it, have benefitted very materially by the fact that a direct electrified line to mid-Manhattan has been available to the public. The growth in passenger travel on this railroad has been very strong, both in commuters and other passengers, whereas, the other railroads in New Jersey, during the same period, have lost many millions of passengers annually.

By comparison with other New York metropolitan regions, New Jersey, because of a lack of adequate means of transportation, has lost much of its former dominant position.

The percentages of total railroad passengers carried into New York by each of the 3 Sectors, i.e., New Jersey, Westchester and Long Island, have been as follows:

	New Jersey	Westchester	Long Island
1910	68 %	13 %	19 %
1920	56	17	27
1930	48	18	34
1940	49	17	34
1944	45	21	34

In other words, New Jersey used to furnish 5 times as many railroad passengers for New York as did Westchester and 3 1/2 times as many as did Long Island. In 1920 New Jersey still furnished 3 1/2 times as many passengers as did Westchester and twice as many as Long Island. But now New Jersey is furnishing only twice as many passengers as does Westchester and only 1 1/2 times as many as does Long Island. Long Island has had the greatest growth in railroad passengers, having nearly doubled its ratio during the

period shown. It has done this because a direct rail link with mid-Manhattan has been available to its people.

No attempt is made here to minimize the value and potentialities of bus competition. The bus is here to stay. But the railroads and the public can, and should, do something to help themselves and thus improve their mutual interests. We are here confronted with a mass transportation problem. All competent authorities agree that mass transportation, as is represented by our commuter problem, can only be solved through the construction of high speed railroad tunnels, thus bringing our trains directly into New York, and not by an over-extension of buses.

In elaboration of this universally accepted premise, the Port of New York Authority states on page 9 of its March 1, 1937 report:

" 40 per cent of the inbound traffic movement occurs in the morning rush hours, with a similar outbound peak hour in the evening. A rapid transit system, therefore, must be equipped to handle rush hour loads as well as provide frequent service twenty-four hours a day. Thus, an expanded motorbus service, while highly desirable for collection and distribution purposes and for furnishing service in areas not yet ripe for rapid transit, cannot meet a mass transportation need"

On this same question, the Regional Plan Association of New York, states in its Bulletin No. 25 of June 17, 1935, page 14 :

" Motor vehicles cannot supplant rail facilities as a means of commuter transportation between New Jersey and Manhattan".

On this same page appears also the following statement :

" Time is opportune to renew a thorough study of the passenger problem between New Jersey and Manhattan by all official agencies concerned".

That was in 1935. There is now more reason than ever to take prompt action and to provide for the people of New Jersey this improvement which will do more for the economic development of the State than would the expenditure of any other similar sum of money in any other development. That a properly planned railroad transportation system will be of great value to the region served was also recognized by the Port Authority, when it states in its March 1, 1937 report, page 7 :

" A real demand now exists for speedier and more convenient access to Manhattan, and there is a growing demand for better intrastate transit. An adequate system of suburban transit (meaning railroad) would meet the needs of northern New Jersey, and should, at the same time, be capable of expansion which would extend its benefits to areas throughout the state. Experience has shown that the sound development of transit facilities adds millions of dollars in economic value to the communities served. Thus it is evident that the development of rapid transit facilities for northern New Jersey will meet an existing need for the people of the district, that it will provide the means of improved communications for the State, and prove of economic benefit to the various communities. The results will contribute to the sound development

of the Port District as a whole. The development of rapid transit facilities for northern New Jersey is necessary and desirable".

That was in 1937, or 9 years ago. What are we waiting for ? It must be apparent to anyone who is studying this problem that it now is a matter to be taken up by the State Authorities in New Jersey. It is not a matter than can, or will, originate in New York. The people of New Jersey are the ones who are suffering and it is up to the peoples representatives in Trenton to take such broad steps as may be necessary to push this undertaking to conclusion without any further delay. We have suffered altogether too long by a lack of positive action. We do not need any more analyses. We have these. We do not need any more reports. We have plenty of them. We need action, positive action, the kind of action that will transform blueprints into railroad tracks and tunnels and terminals. That is the crying need of our people today.

It must be very evident that new leadership is needed here with the same foresight and courage as was exhibited by our forefathers. The problem can be solved, if we will but dedicate ourselves wholeheartedly to this task.

THE PLAN

The plan presented herewith has been originally conceived in 1935. It has recently been revised somewhat. It represents the development of modern electrified railroad connections with the various railroads in New Jersey and the bringing of these lines into a most compact, modern Union Passenger Terminal in mid-Manhattan. (see attached general plan).

The first link in New Jersey, outside of the tunnel portal at North Bergen, would be a short connection with New Durham, serving the Northern Railroad of New Jersey, the West Shore Railroad and the New York Susquehanna and Western Railroad, running side by side at this point. From North Bergen the other lines spread, one going West and the other South.

The second, or westerly link, is a new railroad across the Hackensack Meadows to Kingsland, a station on the Boonton Branch of the Delaware, Lackawanna and Western Railroad, south of Lyndhurst, and is here called the Lyndhurst Line. There is a connection provided with the main line of the Erie Railroad and with the New Jersey and New York Railroad at a place designated as "Meadows".

The third link is a new railroad going South across the Hackensack Meadows to a point south-east of Newark, and is here called the Newark Line. It makes connections with the Newark Branch of the Erie Railroad, the main line of the Delaware, Lackawanna and Western Railroad, the Baltimore and Ohio Railroad, the Lehigh Valley Railroad and the Central Railroad of New Jersey.

These are all arteries built in the open. From North Bergen the line is underground under the Palisades, the Hudson River and in New York. The whole Terminal is also underground.

In contrast with other plans for solving merely the North Jersey commuter problem between that region and the City of New York, the plan presented herewith also provides for better intra-state communication. A transfer station is provided at North Bergen, permitting people from the northeastern section of New Jersey to go to Newark and other points beyond without loss of time. As an example, I have frequent occasion to go to Newark. I have to take the West Shore Railroad to Weehawken, then the ferry to Cortland Street, New York, then the Hudson and Manhattan to Newark. The trip takes about 1 3/4 hours. With the proposed plan the actual traveling time would be reduced to about 1/2 hour. This arrangement should prove of particular benefit to Newark.

In order to reduce the cost of real estate needed for the Terminal, the plan contemplates a two level railroad development, with incoming trains using the lower level and outgoing trains the upper level. (see attached Plan, Scheme "B".) Incoming trains, after unloading, will procede over loop tracks to the upper level where they will be immediately available for outbound service. If not needed immediately, they may be stored temporarily there, or moved to the yard in the Hackensack Meadows. Each level has 14 tracks with 7 platforms, long enough to hold from 10 to 14 cars.

The entire project has been planned so as to obtain the maximum possible facility at a minimum cost.

Since many of the passenger trains in New Jersey have fewer cars per train than the platforms at the Terminal provide, it will be possible to consolidate two such trains into one at North Bergen and thus reduce the number of trains to be carried by the tunnels. That is extremely important, particularly as an early economy measure and during commuter rush hours. It has been estimated that, with such an arrangement (at least until the traffic should grow considerably) it will be possible to handle all the traffic in two one track tunnels, instead of building three or four tunnels now as would otherwise be necessary. Provisions have been made in the plans to simplify the construction of one or two more tracks in the future, when needed. Should this need arise it will be a foregone conclusion that there will then be traffic enough to warrant their construction.

Escalators and stairways are provided to bring passengers from the two track levels up to the Concourse, or the Waiting Room and Cab levels. Direct and very short connections are provided with the 6th Avenue, 7th Avenue and Broadway subways.

In order to take full advantage of the underwater connections with New Jersey it is contemplated to bring freight trains of limited size through these tunnels during off-rush hours. For that reason a freight connection is planned with the New York Central Railroad West Side tracks. One or two Union Freight Terminals could be erected along this line. Considerable time and money could be saved.

If, at some future time, the subways available would become overcrowded, it is contemplated to build a new subway from the Terminal to the Grand Central Terminal, then to Fifth Avenue and down to the Battery, with an extension under the Hudson River to Jersey City, connecting with the Central Railroad of New Jersey. Where this subway crosses over the Long Island tracks in 33rd Street, a new station would be provided for the Long Island trains, thus affording direct connections from the new Terminal with the Grand Central Terminal

and the Long Island Railroad. The Seventh Avenue subway would connect the Terminal with the Pennsylvania Railroad station.

Plans to a scale of one inch equals two hundred feet have been prepared for all of these lines to prove their feasibility and to permit the making of relatively accurate estimates of cost of construction and, consequently, the carrying charges.

At a meeting of the American Society of Civil Engineers, held in New York on October 16, 1935, I presented the plan for improved transportation between New Jersey and New York. Commenting on my plan, and particularly on the pains taken to prepare detail plans, the Consulting Engineer for the Regional Plan Association stated:

> " He did not tell you the extent to which he has worked up detail plans * * *, but I understand he has gone into that in greater detail than it has been gone into before. Consequently, through his definite study I think he has gone a long way towards establishing the financial justification for rapid transit between New Jersey and Manhattan".

COST OF CONSTRUCTION

The cost of construction, exclusive of Terminal Real Estate, which must be carried by the buildings to be erected thereon, but including preliminary expenses, cost of financing and interest during construction, is estimated to be approximately as follows:

Newark Line	$ 18,430,000
Lyndhurst Line	10,280,000
New Durham Connections	2,460,000
Meadows Yard, Line from New Durham to Terminal and Terminal	83,310,000
Freight Connection with NYCRR.	3,360,000
Total	$ 117,840,000

CARRYING CHARGES

The interest rate to be paid is here assumed to be 3%, although it may be possible now to obtain money at a lesser rate of interest. It is also assumed that the cost will be amortized in 50 years. Accordingly, the total annual carrying charges for the entire project, are estimated to be . . . . . $ 4,580,000
(exclusive of Terminal real estate)

METHOD OF FINANCING AND OPERATION

There are several ways in which this project could be financed, built and operated. It could be done:

1. By the railroads themselves.
2. By private interests.
3. A combination of private interests, the railroads with operation by them, and the public.
4. By a public Authority.
5. A combination of Public Authority, the railroads and the public.

1. It is believed that no progress can be made if this matter is left to the railroads to settle. They have too many other problems to handle requiring their full attention and financing. Furthermore, there are jealousies among these railroads and it would be most difficult to obtain united action by them alone, now or in the near future, on so important an undertaking. The railroads have claimed in the past, perhaps erroneously, that the public would gain more than would the railroads and that, if someone would accept the responsibility for financing and building such a project, they would be glad to use the facilities thus created. So let us eliminate this plan from consideration for the time being.

2. The second plan, that of undertaking this entirely by private interests, may have more chances of success today than it had 10 years ago when such an attempt was made. The hire of money was too high at that time. It was shown then that the project could be made self-supporting if money could be had at 3% or less, if created by a tax-free public authority. Today, with vast sums of money lying idle, or bringing in less than 1%, it may be possible to induce private capital to underwrite such a project at, say 2 or 2 1/2%. It would naturally be necessary in return to give some concessions, such as the development of the air-rights over the Terminal, etc. The disadvantage would be the fact that taxes would have to be paid, running from 2 1/2 to 3 million dollars per annum. That would materially increase the rates which would have to be charged to the users of this facility and that may be so high as to discourage them in the use of these facilities. That problem has received consideration for many years and can not be dismissed lightly.

3. The third plan is that of a kind of partnership between private capital, the railroads and the public. It has long been recognized that, since the traveling public and the region served would be the prime beneficiaries, they should share in the cost of meeting interest and amortization charges. On the other hand, since the railroads would use these facilities, and benefit by their use, they too should bear their share of the cost of creating facilities which have been paid for by others, and pay a rental for the use of such facilities. It is believed that the following plan may possess merit deserving serious consideration.

This plan introduces a new theory, or a new way of handling this by private interests. There may be difficulties to overcome, as there always are when something new is tackled, but it is believed that, if it is tackled aggressively and objectively, such difficulties may not be insurmountable.

To carry this out it would be necessary to create a non-profit corporation which would, a) finance and direct the construction of the project, b) lease it to a Terminal Company (an operating company) composed of the various railroads who would operate and maintain these facilities, c) be responsible for meeting interest and amortization charges and d) when amortized, say in 50 years, turn the property over to the railroads as trustees for the public (or some other agency) who would give the public the benefit of reduced fares only sufficient to meet operating and maintenance costs at that time.

In order not to create a heavy burden either upon the railroads or the traveling public, both must share in paying the carrying charges. The principle of the public paying its share has long been recognized, and extra rates, or terminal charges, have been added to each fare, in return for which the public enjoys vastly improved traveling facilities. The Pennsylvania Station in New York is a typical example.

An estimate has been made of the division of these carrying charges between the railroads and the public. It was felt that they should share equally in these costs. In other words, the railroads should pay 1/2 of the carrying charges (exclusive of Terminal real estate) in annual rentals for the use of these facilities operated and maintained by them, and the traveling public should pay 1/2. It has been assumed that such a non-profit corporation, owning these facilities merely as trustees for the public, would be tax-exempt. Accordingly, these charges would be divided as follows:

The Railroads	Annual Rental
Newark Line	$ 370,000
Lyndhurst Line	210,000
New Durham Connection	50,000
New Durham to Terminal, Terminal and Freight Connection .	1,740,000
Total	$ 2,370,000

The Public — Surcharges, per Trip

To Terminal From:	Surcharges Commuters Cents	Surcharges Others Cents	Total Railroad Fares including surcharges Commuters Cents	Total Railroad Fares including surcharges Others Cents
Lyndhurst	4	6	14	24
Newark	7	11	23	38
New Durham	3	5	9	15
North Bergen	3	5	10	15
Union City	3	5	Min. 10	Min. 10

Possible Passenger Traffic and Surcharge Revenues

Under the Chapter, titled "Estimate of Possible Passenger Traffic" a complete explanation is given of how this estimate was prepared and what assumptions were made. Actual railroad passenger traffic, as reported by the various railroads, has been used. Using that passenger estimate, and the above Surcharge rates, we obtain the following:

	Average number of Passengers for periods as indicated		
	Commuters	Others	Surcharge Revenue
1945	29,940,000	18,410,000	$ 2,681,000
1941-45	30,610,000	18,050,000	2,665,000
1936-45	32,350,000	17,170,000	2,624,000
1931-45	36,040,000	16,460,000	2,692,000
1936-40	35,330,000	16,310,000	2,640,000

These figures include the following estimated North Bergen and Union City passengers:

12,000,000	8,000,000

The above spread provides for a very broad base of comparison, wholly avoiding peak or valley periods and using broad averages instead. It was believed that future traffic may be similar to any one of the past periods shown, or a combination of these periods and, therefore, this estimate may be considered as a valid guide regarding possible future returns.

It is interesting to note from the above table that the revenues for the various periods are almost identical, in spite of the fact that the number of commuters varies about 6 million and the total number of other passengers about 2 million. When the total number of commuters is down, the number of other passengers seems to be up, thus compensating each other. The rate charged to commuters is less than for other passengers. This shows that there is a considerable advantage in having so many railroads share these facilities, thus assuring a relatively uniform income.

The total revenues to be collected, from the railroads as well as the traveling public, are thus estimated at about $ 5,000,000

And the total carrying charges, at . . . . . $ 4,580,000

As outlined before, the above is based upon the premise that a 3% interest rate may have to be paid. If the railroads guarantee to underwrite all carrying charges, as these carriers should do, with permission to assess Surcharges to the traveling public, then it would seem a foregone conclusion that this would so strengthen the bonds as to very materially reduce the interest rate to be paid,

and it is quite possible that not more than 2%, or at least not more than 2 1/2%, would have to be paid. Other recent public works financing at about 1 1/2 % points to a much lower interest rate for such undertakings than had been assumed in the above calculations, provided that there is a certain quarantee, which is possible here.

If the interest rate should be 2 %, the total carrying charges would be reduced from $ 4,580,000 to $ 3,750,000 per annum. This would reduce the Surcharge rates as well as the rental to be paid by the railroads by about 1/5 from which everybody would benefit.

The charges to be paid by the railroads and the public, as indicated above, are all very reasonable. In return for the $ 2,370,000 to be paid by the railroads they would be granted the use of the lines and facilities in New Jersey, the line to the Terminal, as well as the Terminal itself. Over these lines they can carry passengers, baggage, mail, express and freight. They can charge regular fares to passengers, in accordance with public tariffs for the various distances to be traveled. They would also collect from the public the surcharges which the passengers are to pay. The railroads would receive the revenues from baggage, mail and express charges accruing to this portion of the total haul (including one terminal allowance) They would also save the cost of ligthering freight to mid-Manhattan, estimated at a minimum saving of $ 1.00 per ton. It is estimated that about 600,000 tons of freight could thus be brought to Manhattan per annum, making a saving of . . . . . $ 600,000

At the Terminal the railroads would also collect rentals from stores and other concessions, erected in the space assigned to the railroads, estimated to bring annually . . . . . $ 250,000

It is estimated that the total railroad revenues and savings will approximately equal the total rentals to be paid by them, plus their out-of-pocket costs of operation.

In addition to the earnings and savings outlined above, consideration must also be given to another very important element of present cost to the railroads, namely their ferry operations. These railroads have now for decades been having annual deficits on their ferry operations, amounting to, for each railroad, from $ 250,000 to $ 750,000 per annum. Many of these ferry operations could then be severely cut, while others could be completely eliminated and the vehicular traffic carried by the Port Authority trans-Hudson vehicular facilities. A notable example of the last class is the West Shore ferry. All passengers, including local Union City passengers, could use the new line to the Terminal and all vehicles could use the Lincoln Tunnel.

It may very well be that the total savings to the railroads would be in excess of all charges. As this new development is to be a non-profit undertaking, that principle should apply to all. Consequently, some pre-arranged formula of accounting by the railroads should be instituted and any savings, over and above the out-of-pocket costs of operation of the railroads over these facilities, and any other indirect savings, as shown by the application of this formula, should be credited to, 1). Either the Corporation owning the facility in trust for the public so as to permit it to reduce its bonded debt, from which the public would benefit ultimately, or 2). Credited to the traveling public in reduced surcharges.

In any undertaking of this kind there is naturally always some kind of a gamble which someone will have to take. Since it has been shown that the railroads are well protected, they should be asked to take this gamble by guarenteeing to the owning Corporation the payment of a total rental sufficient to pay interest and amortization charges on the cost of these facilities, plus a nominal overhead cost on the part of the owning Corporation.

In return for this, the railroads should be authorized to collect surcharges from the traveling public, estimated, as near as that can be done in advance, to bring in about 1/2 of the total rental of these facilities.

If, at any time, these revenues, plus savings to the railroads, as outlined above, should not cover all of the rental charges, as might well be the case in the first few years of operation until the full benefit of this undertaking can be materialized, the overall loss to the railroads should, indeed, be very nominal, particularly when that is divided properly among all of the railroads using the Terminal. Any such small initial loss would be offset very materially by increased prestige in being able to bring their passengers into a new and modern Terminal in the heart of Manhattan, plus a satisfied public, from which the railroads are bound to benefit ultimately.

In this connection it may be of interest to make a few observations.

When the Baltimore and Ohio Railroad ran its passenger trains into the Pennsylvania Station in New York, it paid an annual rental of $ 720,000, plus some trackage charges. Its present bus service may be equally costly. It must be apparent that considerable savings would result to this carrier under the proposed plan.

The Lehigh Valley Railroad paid about $ 600,000 per annum as a premium for the privilege of using the Pennsylvania Station in New York.

The amounts paid by these two railroads in the middle thirties would indicate that it cost these carriers more than $ 1.20 for every passenger brought into or taken out of that station per annum.

Now both of these railroads enjoy a high reputation. Their managements are conservative. It is certain, therefore, that both of them could see large benefits accruing to their systems as a whole from the privilege afforded of bringing their passenger trains into a Terminal in mid-Manhattan, instead of terminating at the antiquated terminals on the west shore of the Hudson River, or else they would not have paid that price.

Under the proposed plan the railroads are asked to guarantee less than 10 cents per passenger brought into or taken out of the proposed Terminal, based upon the reasonable traffic prognostication made here, as compared with the large sum paid for the use of the Pennsylvania Station shown above, and with the added strong possibility of being able to actually recoup all or most of the payments to be made for the use of the new Terminal.

The Central Railroad of New Jersey, the Delawara, Lackawanna and Western and the Erie Railroad passenger terminal-facilities occupy very large and costly waterfront areas in Hoboken and Jersey City which could be used to much better advantage for freight and industrial purposes. None of these waterfront facilities should be used for railroad passengers whose destination is New York City. All of these passengers should be brought directly into Manhattan on rails. Hoboken and Jersey City would thus gain from a proper development and better use of these waterfront areas. The same thing holds true for the West Shore Railroads terminal at Weehawken.

As an example of the small share which each railroad would have to pay if there should be a deficit of $ 100,000, the following statement has been prepared on the basis of 1945 traffic.

West Shore	$ 13,600
N.Y.O.& W.	200
Susquehanna	4,200
Erie	19,300
D.L.& W.	31,250
B & O	4,250
L. V.	5,850
C.R.R. of N.J.	21,350
Total	$ 100,000

When compared with the amounts paid by the B.& O. and the L.V. Railroads for the use of the Pennsylvania Station, even total amounts several times as great as indicated above would pale into insignificance, and even a total deficit of $ 500,000 would not be enough to seriously hurt any of these railroads, when properly divided. But, as has been shown above, there is reasonable assurance that if there should be any deficit, it would be very nominal because of the advantage offered of being able to recoup most of the actual carrying charges either through collections from passengers, or in several other ways.

As may be seen from the above table, the D.L & W.R.R., according to the traffic prognostication, would become the most important user of the Terminal, with the C.R.R.of N.J. second, the Erie third, and the West Shore fourth.

Such a plan as is proposed here would naturally require concurrent legislation in the States of New Jersey and New York, giving the owning Corporation the right of eminent domain, so as to enable it to acquire property at a reasonable cost, and to resort to condemnation if need be. Such legislation should also make the undertaking tax-free. If that is not done, all charges would have to be increased by about 50%. If the project is not tax-free, then some contribution should be asked for from the States, or the Federal Government. In the above an attempt has been made to refrain from asking for any grants.

4. Failing in the plan outlined under Plan 3, above, a Public Authority could be created, whose facilities would be tax-free, and who could undertake to operate its own facilities, if desired, plus other similar facilities in New Jersey, if found to be in the public interest.

5. If a Public Authority is created, it too might find it advantageous to have the railroads jointly operate and maintain this property on some rental basis similar to the one outlined under Plan 3, above, and providing for the same kind of division of charges and benefits as outlined there.

The question of creating a Transportation Authority in New Jersey is not a new proposal. It has been discussed before as one of the crying needs of New Jersey and such a proposal was made in Assembly Bill 414, 1940, which had the backing of the Bergen County Board of Freeholders.

New Jersey must have someone who can, and will, work for the interests of the people of New Jersey and who has no other interests to serve. New Jersey has many transportation problems requiring a solution. South Jersey too has its problems, the same as has North Jersey, and many plans have been made in an endeavor to solve those problems. Unless we have one Authority that can, and will, work solely for our interests and push projects to conclusion, we will never succeed.

We must begin to plan a proper co-ordination between railroad, highway and air transportation. We have many very great advantages if we will but dedicate ourselves to the task of solving these in the interest of our State, and of our people. We must have someone who can deal with these problems authoritatively for the State as a whole and who can provide for the effectuation of plans so as to transform these into steel and concrete structures. As long as that is not done, the people of New Jersey will suffer and we remain stagnant.

In order to carry out the proposed plan, even with the creation of a New Jersey Transportation Authority, concurrent action would be needed in the State of New York. Whether a New Jersey Authority should be created first and its North Jersey members represent it on a New Jersey-New York Transportation Authority, or whether a New Jersey-New York Transportation Authority should be created now, with the understanding that the New Jersey members will also handle the stricly New Jersey problems, is a matter for our State Authorities to decide. Whatever is done should be done promptly, and we must never forget that New Jersey must take the lead.

WORK FOR MANY

It is estimated that it will take about 5 years to build this project and that about 16,000 men will be engaged in its construction, and that, in addition, possibly over 50,000 men will be given work indirectly.

As a "job" producer this project takes a number one rank. It is hard to conceive of any other project, even those costing much more than this one, that will have such a far-reaching effect upon the economy of the regions served as this project will. It will vitally affect the building industry in the whole area covered. It will not only encourage the construction of new houses to serve those now living in that region; but it will bring an influx of new residents who will rent or purchase houses. It is a well recognized

fact that an improvement in the building industry will have a more far-reaching effect upon a much larger number of people than would a similar expenditure of money in any other field. First it will give work to many men in the various building trades in the many communities served, thus spreading the benefit over the whole area, and bring increased commerce to such communities, thus benefitting many other trades and professions. Second its effect will also be felt far beyond the immediate region served as the whole building materials and supply industry will benefit.

HOUSING

An attempt was made to obtain from New Jersey State authorities authentic data on the actual number of housing units erected in the 9 Northeast Counties of the State during the last 5 or 10 years, but without much success, as only incomplete data was available.

It is well known, however, that this region, in common with all of the United States, has had a very serious lag in housing developments. As a consequence vast sums of money will have to be spent, during the next 5 or 10 years or more, in catching up with this housing shortage, to say nothing of building new houses to meet the normal growth in population in that area.

The normal growth in population in the 9 Northeast Counties in New Jersey has been about 50,000 per annum. From 1930 to 1940 the growth has been only about 10,000 per annum.

From the best available information it would appear that there was a housing shortage in this region of New Jersey of from 60,000 to 80,000 housing units, representing an investment of from $ 150,000,000 to $ 250,000,000. If the growth in population of this region is compared with the growth in population in the United States as a whole, and the estimate made by Federal authorities, that the housing lag for the whole country amounted to about 5,000,000 units, and that there was need for immediately building about 3 1/2 million such housing units at an estimated cost of from 12 to 15 Billion dollars, it will be seen that the above estimate seems reasonable.

When it is considered that the transportation improvements planned here are to cost considerably less than the minimum cost of merely catching up with the North Jersey housing lag alone, it must be realized that, when this relatively small sum is compared with the total actual value of all real estate in these 9 Northeast Counties, all of which would have their values enhanced by the creation of this transportation facility, it becomes evident that, for this reason alone, this transportation development should receive active support in New Jersey.

THE TAX-FREE PROVISION AND BENEFIT TO REAL ESTATE

By making this undertaking tax-free, only that property which is actually devoted to railroad operation is to be included. Any buildings to be erected on such property, and used for other than railroad operation purposes, should be taxed the same as any other real estate. In view of some recent critizism of certain tax-free enterprises, where tax-free buildings are used for other than public purposes, the plan recommended here is deemed to be fair to all

concerned and is the policy followed in this recommendation.

The tax-free provision is asked for as a matter of necessity, because of the fact that none of the railroads involved are financially strong enough to undertake this improvement. That fact has greatly retarded progress in New Jersey and has had the effect of even lowering real estate values there. The whole northwest quadrant of the New York metropolitan area has suffered as a consequence, and it is in support of that quadrant that this project is proposed.

Unlike many of our great highways, who do provide unfair competition with the railroads and often to the detriment of the people of our State, and which highways rarely add much to actual real estate values of the territory through which they pass, a railroad development of the type proposed here is bound to add very considerably to real estate values and, where railroad Right of Way is acquired, will more than offset any losses in taxes sustained by the making of this Right of Way tax-free.

From North Bergen to the Terminal in New York, and the Terminal itself, the whole project is underground and for that reason does not take away any taxes received today. On the contrary, where stations are provided a very considerable area around such stations will find its value enhanced.

Coming to the open lines across the Hackensack Meadows, vast new industrial possibilities are opened, permitting industries to establish their plants in the Meadows, while still retaining their offices in New York which can then be reached over the new arteries in from 10 to 20 minutes, a situation impossible of accomplishment today. On the other hand, should any firm desire to have its factory in the Meadows and the offices at Newark, that too will then become feasible and even less time would be required between factory and office than would be the case of New York. No one will deny that this fact will very greatly enhance real estate values all along these arteries and at Newark, an enhancement that would not obtain if such a facility were not created.

The statement has been made elsewhere that the cost of the land to be acquired for the Terminal in New York is not included in the cost of this project and that the land must be carried by the buildings to be erected thereon. Accordingly, taxes would have to be paid on that land as well as the buildings erected thereon. Only the structure below the buildings, actually assigned to public use in connection with the railroad operation, would be tax-free.

The real benefit of the proposed development, however, does not lie in the narrow benefit that will be obtained along the new arteries to be provided, but in the very much larger benefit to be derived by all of the 9 Northeast counties in New Jersey and the lower New York State counties on the west side of the Hudson River, whose people will save about 1 hour each day in traveling time to and from mid-town New York, and where all real estate values in these counties will be benefitted very materially. The fact that improved transportation will enhance real estate values does not need any further elaboration here. The benefit will reach every town and hamlet in that large area. A glance at the graph showing the rise in real estate values in Queens and Nassau counties should furnish convincing proof

of the existence of such improved values, brought about by improved transportation, even in the face of a depression which has lowered values elsewhere.

The possibilities are unlimited and they will be in proportion to the ingenuity and energy displayed by interested people in that region to take full advantage of the opportunities offered.

The tax-free provision is made so as to help make this undertaking possible without placing any undue burden upon the users of the facility, and without penalizing communities through which the lines pass. It is in the interest of the State and of our people to make this provision.

REAL ESTATE VALUES IN NEW YORK

So far only the benefits that would accrue to the users of this transportation facility, or the benefit to the region in New Jersey served by these carriers, have been dwelled upon. There is, however, one other important element of benefit that must not be overlooked, that is the enhancement of real estate values in the City of New York. Here we have some facts by which to judge possible future benefits.

An aerial photograph, or a view from Rockefeller Center looking West, will give immediate and convincing proof of what I am going tosay. Such a view will indicate that the building sky line forms a deep valley around 48th to 50th Streets, where the average height of buildings is only 2 to 5 stories, with a sharp and distinct rise in this sky line towards 42nd Street in the South and 57th Street in the North, where building heights of from twenty to over forty stories exist. It is for this reason that the site for the Terminal has been selected in this "valley", where real estate values are lowest.

In 1933 I made an analysis of the rise in real estate values, taking as a base the Grand Central Terminal region and comparing this with an area of similar size in the region where it was planned to locate this new Terminal. The new terminal region studied covered an area from 5th to 8th Avenues and included a total of 14 City blocks. The purpose of the study was to see how much real estate values had risen over the Grand Central Terminal region from 1904, when the new improvement there was undertaken, to 1932, and comparing the rise in value there during that same period in the new Terminal region. The result was as follows:

Rise in Values, 1904 to 1932 inclusive

	Grand Central Terminal Region	New Terminal Region
Land	996 %	310 %
Land and Improvements . .	1,434 %	340 %

Sight should not be lost of the fact that during this period the new Terminal area has had the benefit that accrues to real estate from the development of subways, having seen the construction of 3

main subway lines, with stations in that region, namely the 7th Avenue, Broadway and 8th Avenue lines.

Because of the construction of many new and large buildings in the Grand Central Terminal region, it was quite natural that the value of buildings there should show a rise of about 500%. However, a rise in land values of about 1,000% during that period, or ten times what they were before the improvement was made, is noteworthy.

It may thus be seen that real estate values in the new Terminal region can look forward to a somewhat similar rise from which the owners, as well as the City of New York, will derive material benefits which they would not obtain if such a development were not constructed.

ESTIMATE OF POSSIBLE PASSENGER TRAFFIC

In order to determine the possible passenger traffic, it is necessary to bear in mind that there has been a decided movement towards mid-Manhattan in recent years, at the expense of lower Manhattan. In other words, Manhattan's growth seems to have been largely confined to the mid-town region. That is clearly brought out in certain railroad passenger trends from New Jersey which will be explained later, and which must form a guide in determining future traffic possibilities.

A census taken of railroad passengers from New Jersey on a specific day in 1924, and again in 1938, indicates that in 1924 48% of all New Jersey passengers traveled to mid-Manhattan, that is the area between 11th and 62nd Streets; whereas this same percentage was reduced to only 40% in 1938. The lowering of the 1924 percentage in 1938 was due primarily to the losses sustained by the North Jersey railroads to buses going directly to mid-Manhattan. The total percentage of all passengers from New Jersey, going to mid-Manhattan, was higher in 1938 than it was in 1924, but no accurate bus-count had been taken to clearly determine the exact percentage.

Individual figures of railroad passenger travel habits since 1938 show quite a different trend, as may be seen from the analysis made below.

W.S.R.R., Passengers

Year	Percent going to mid-Manhattan	
1938	60	While West Shore travel has declined, due to heavy bus competition, it is important to note that 3/4 of all passengers who still continue to patronize this railroad did have mid-manhattan destination in recent years.
1942	63	
1943	74	
1944	75	

P.R.R. Commuters to Penn. Sta. in N.Y.

Year	% of total Commuters of this railroad
1925	14
1930	16
1935	15
1936	22
1937	39
1938	40
1939	46
1940	47
1941	52
1942	63
1943	70
1944	75
1945	75

While several theories exist as to the main reason for this tremendous growth in that roads mid-Manhattan commuter business, and while early records of actual commuters going to Penn. Sta. may not have reflected the total number of commuters actually going there, more recent figures are accurate and clearly demonstrate the fact that in recent years 3/4 of all commuters of that railroad have gone to mid-Manhattan, as compared with considerably less than 1/4 up to 1935.

While other railroads have had a decline in their commuter business, the P.R.R. has had a very substantial increase. In 1933 the total number of commuters carried by this road was 1.80 million, in 1940 it was 3.38 million and in 1945 6.23 million, of which 3/4 did go to mid-Manhattan.

This tremendous growth in commuter travel to the Penn. Sta. in New York must be attributed to two reasons; first there does exist a very definite trend towards mid-Manhattan, and second, this railroad is the only one of the New Jersey railroads which offers its patrons a direct railroad link with mid-Manhattan and in addition to that it furnishes electrified service on its whole line, thus offering every possible advantage to the travelers. In spite of the heavy bus competition which exists, and which has been felt very seriously by every other railroad in New Jersey, the P.R.R. has had a very remarkable growth in all passengers traveling to Penn. Sta. in New York, including commuters, and this in spite of the fact that this railroad charges a 15 cent terminal charge to all suburban passengers going to Penn.Sta., and 10 cents to all commuters. This is clear evidence that people are willing to pay the extra fare, provided the railroad furnishes the kind of service which the needs of these people demand.

Susquehanna Railroad

Year	Percent going to mid-Manhattan
1943	66
1944	69
1945	70

The 1938 census showed that about 35 % of the passengers of this carrier were going to mid-Manhattan. Responding to the need of its patrons this road instituted a bus service from a new station on its line in the Meadows to mid-Manhattan via the Lincoln Tunnel, with the result indicated at the left. Today twice as many passengers of this carrier go to mid-Manhattan than was indicated in the 1938 census.

However, the arrangement provided here can only be regarded as a stop-gap provision and not as a cure for our ills. Any arrangement that makes railroads feed buses at the heavy end of the traffic is illogical and improper and could never be applied to our much larger problem of trying to help all of our railroads. Such a mass transportation problem can only be solved by bringing the railroads directly into a Union Passenger Terminal in mid-Manhattan.

Bus Traffic Between New Jersey and New York

Year	Passengers carried
1925	939,000
1930	8,710,000
1935	16,719,000
1940	32,313,000
1944	58,989,000

In studying possible railroad traffic to mid-Manhattan, one must also consider the present bus traffic and its growth, much of which would return to the railroads if they provided a direct mid-Manhattan link, such as exists on the P.R.R. While some of these bus passengers used down-town trans-Hudson arteries, a very large percentage had ultimate mid-Manhattan destination as may be seen in the next statement.

Geo. Washington Bridge and Lincoln Tunnel Bus Traffic

Year	G.W.Bridge	Linc.Tunnel
1940	13,457,000	13,969,000
1941	13,535,000	16,166,000
1942	15,743,000	24,886,000
1943	18,999,000	30,262,000
1944	17,844,000	33,778,000
1945	17,893,000	34,931,000

Comparing these figures with the total bus traffic shown above it will be noted that about 90% of all bus traffic is coming into New York via the Geo. Wash. Br., or the Lincoln Tunnel and thus may quite logically be considered as potential future Terminal passengers, irrespective of what their ultimate destination may be. What percentage of these that would continue to use the buses, and how many would use the proposed railroad is quite naturally speculative. However, having lived in that New Jersey region for 37 years, and having addressed scores of mass meetings there on the question of improved transportation for Northeastern New Jersey, and having obtained first hand information and opinions from many hundreths of commuters traveling regularly to New York, I can safely say that a very considerable percentage of present bus travelers will use the new railroad link, instead of the buses, if they can thus be brought directly into mid-Manhattan.

Union City and Other Local Traffic

At Union City there is a total of from 12 to 15 million annual New York passengers. Formerly the West Shore ferry carried all of these, but now the ferry carries only about 4 million, the balance going to New York by bus via the Lincoln Tunnel.

In addition to that there are many bus lines converging on Union City on their way to the Lincoln Tunnel carrying a very considerable number of passengers, as the above figures clearly show. The total traffic is about 40 million per annum, about 90% of which have mid-Manhattan destination. It would seem reasonable to assume that at least 50% of all of this traffic would be carried by the proposed new railroad link with mid-Manhattan. Some of these would take the new railroad from North Bergen and others at Union City. A bus terminal is planned at North Bergen where many of the buses would no doubt terminate their jouneys, instead of going into New York. In addition to the Lincoln Tunnel traffic, if such a railroad link were established, a very considerable percentage of the 18 million bus passengers using the Geo. Washington Bridge, would return to the railroads at their home towns and travel entirely by rail, and would become Terminal passengers.

It has been accordingly estimated that, on a minimum basis, about 12 million passengers would come from the station at Union City and about 8 million from the station at North Bergen, including here some of the present Geo.Washington Bridge passengers. It is also estimated that about 25 % of these passengers would be commuters. Having given this problem intensive study for many years, and having studied population trends and travel habits, and having talked to hundreths of commuters from that region, I believe that the above estimate is conservative.

Possible Percentage of Railroad Passengers Estimated to use the New Facilities

Of the railroads which would use this new facility, either all of the passengers of such carriers, or certain percentages of their passengers, would become Terminal passengers. In the estimate made here the following percentages have been assumed:

	Commuters	Others
West Shore	100 %	100 %
N.Y.O.& W.	-	100 %
B & O	-	100 %
L. V.	100 %	100 %

It is considered that all of the traffic of these roads will go to the new Terminal.

N.R.R.of N.J.	75 %	75 %
Susquehanna	75 %	75 %

In view of the present West Shore's 75 %, and the Susquehanna's 70 % mid-Manhattan traffic, this is deemed a reasonable assumption. The other passengers would continue to go to Jersey City.

Erie, Main Line	60 %	75 %
N.J.& N.Y.	60 %	75 %
Erie, Newark Br.	50 %	60 %

The Erie has lost very much of its traffic to buses going to mid-Manhattan. Many of the former Erie passengers will return to that road and swell its mid-Manhattan quota, since about 90% of these did come into New York through the Lincoln Tunnel or the Geo. Washington Bridge. Accordingly it is estimated that at least 2/3 of the commuters and 3/4 of the other Erie passengers would become Terminal passengers. The balance would continue to go to Jersey City. In view of a somewhat different situation regarding the Erie's Newark Branch, a lesser percentage has been assumed.

D. L. & W.	50 %	60 %

In the 1938 census about 47 % of the D.L.& W. Boonton Branch passengers had mid-Manhattan destination. Although there has been a growth to mid-Manhattan, and probably a very much larger percentage of the passengers of this carrier would use the Terminal once it is in operation, it was felt that, in order to be conservative, about 1/2 of the commuters, and about 2/3 of the other passengers of this road could safely be considered as Terminal passengers, the balance would continue to go to Hoboken.

	Commuters	Others
C.R.R.of N.J.	40 %	50 %

The 1938 census shows that about 38 % of the C.R.R.of N.J. passengers had mid-Manhattan destination. As pointed out above there has been a decided trend towards mid-Manhattan since, and consequently a much larger percentage of the passengers of this carrier could today be considered as mid-Manhattan passengers, but, in order to be on the conservative side, the above assumptions have been made. The balance of the passengers of this road would continue to go to Jersey City.

Railroads Using the Various New Lines and Connections in New Jersey

New Durham Connection	Lyndhurst Line	Newark Line
West Shore	Erie, Main Line	B & O
N.Y.O & W.	N.J.& N.Y.	L. V.
N.R.R.of N.J.	D.L.& W.	D.L.& W., Main Line
Susquehanna	Boonton Br.	C.R.R.of N.J.
		Erie, Newark Br.

ESTIMATED RAILROAD TRAFFIC COMING INTO THE TERMINAL

With the above data and percentages as a basis, and using the actual railroad passenger records, the following passenger traffic possibilities have been developed as coming over the new lines and connections to be provided in New Jersey.

Averages for years shown, in millions

	1945		1941-45		1936-45		1931-45		1936-40	
	C	O	C	O	C	O	C	O	C	O
New Durham	4.2	1.5	4.3	1.6	5.5	1.5	6.6	1.6	6.6	1.4
Lyndhurst	4.2	1.2	4.3	1.3	4.3	1.6	5.9	1.6	5.6	1.9
Newark	9.6	7.7	10.0	7.2	10.6	6.1	11.5	5.3	11.1	5.0
Total	18.0	10.4	18.6	10.1	20.4	9.2	24.0	8.5	23.3	8.3

C - Commuters

O - Other than commuter passengers.

GRAPHS AND PLANS

Many statements and assumptions have been made in this report which have been based largely upon the very extensive statistical data which had been collected. This data has been prepared in simple graphical form on 14 graphs and each graph is briefly described, pointing out items of special interest. These graphs, and explanations

are attached hereto and made a part of this report. They are as follows:

Graph No.	Title
	General Graphs
1.	Growth of Population, by States, Regions and Counties.
1-a	Percent of Growth of Population. (a chart)
2.	Assessed Valuation of Real Estate by Counties.
2-a	Percent of Growth of Assessed Valuation. (a chart)
3.	Railroad Passengers Carried Into New York.
4.	Percentage of Total Railroad Passengers Carried Into New York from New Jersey, Long Island and Westchester.
5.	Rise and Fall of Railroad Passengers Carried Into New York with Relation to Peak Year of 1929.
6.	Rate of Growth of Passenger Traffic and Population.
	Graphs on Railroad Traffic Between New Jersey and New York
7.	Total Annual Passenger Traffic Between New Jersey and New York.
8.	Annual Railroad Commuters Between New Jersey and New York.
9.	Annual Railroad Passengers, Other than Commuters, between New Jersey and New York.
10.	Total Annual Railroad Passengers, Commuters and Others, Between New Jersey and New York.
11.	Percent of 1929 Traffic, Commuters.
12.	Percent of 1929 Traffic, All Passengers.
13.	Pennsylvania Railroad, Pennsylvania Station and Downtown Passenger Traffic.
14.	P.R.R., Penn. Sta. and Downtown Pass. Traffic, Rate of Growth with Relation to Low Year of 1933.

Attached hereto, and made a part of this report, are also:

a. An Appendix, giving history of previous efforts made to provide improved transportation for Northeast New Jersey

b. General Plan of Project, titled "Proposed Union Terminal Project"

c. General Plan of Layout of the proposed Terminal in New York, titled "Proposed Union Passenger Terminal for Railroad and Rapid Transit Trains from New Jersey, Scheme B "

Respectfully presented

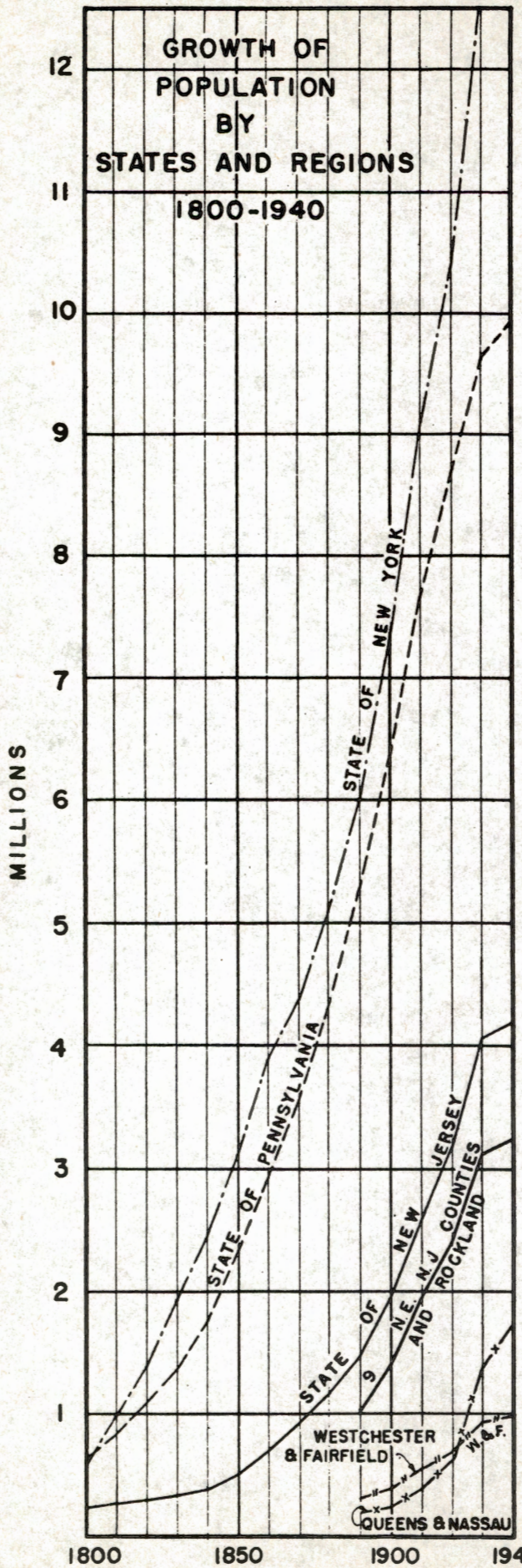
L. A. Jenny 5/3/46

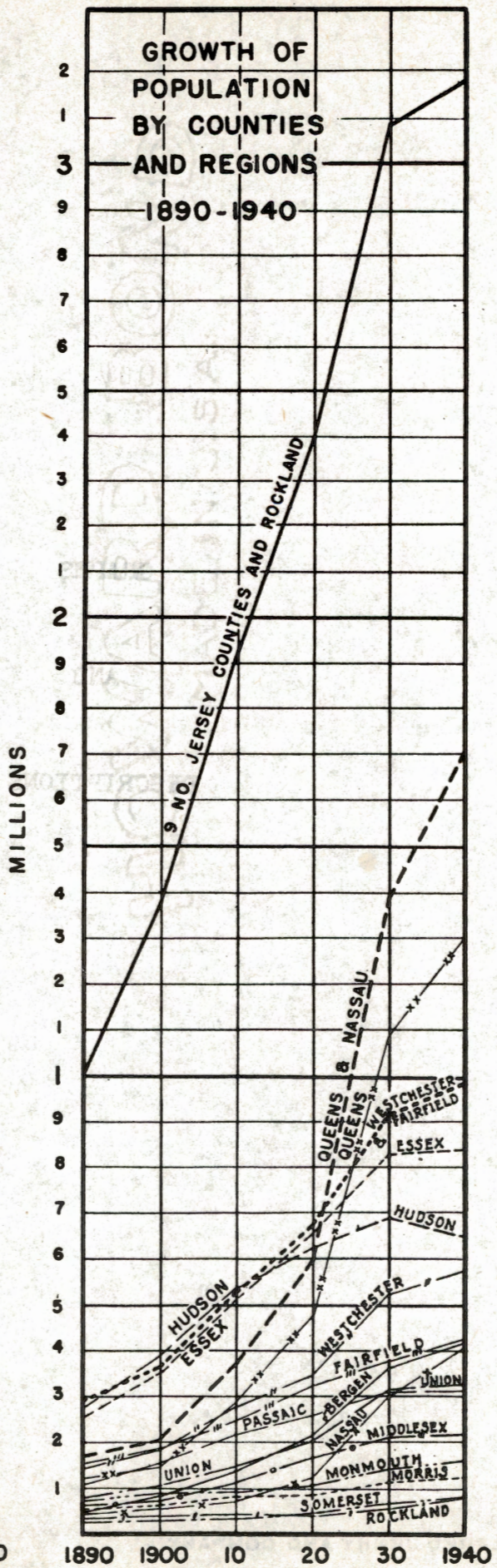
GRAPHS

AND

DESCRIPTIONS

L. ALFRED JENNY AND COMPANY


GROWTH OF POPULATION BY STATES AND REGIONS 1800-1940
MILLIONS
STATE OF NEW YORK
STATE OF PENNSYLVANIA
STATE OF NEW JERSEY
9 N.E. N.J. COUNTIES AND ROCKLAND
WESTCHESTER & FAIRFIELD
QUEENS & NASSAU
W. & F.
1800
1850
1900
1940


GROWTH OF POPULATION BY COUNTIES AND REGIONS 1890-1940
MILLIONS
9 NO. JERSEY COUNTIES AND ROCKLAND
QUEENS & NASSAU
QUEENS
WESTCHESTER & FAIRFIELD
ESSEX
HUDSON
WESTCHESTER
FAIRFIELD
UNION
BERGEN
PASSAIC
NASSAU
MIDDLESEX
MONMOUTH
MORRIS
SOMERSET
ROCKLAND
1890
1900
10
20
30
1940

GRAPH NO. 1.

This Graph shows the growth in population for the States of New Jersey, New York and Pennsylvania from 1800 to 1940 inclusive, and for local counties and regions from 1890 to 1940 inclusive.

The outstanding feature is the phenomenal growth in population of the counties in Long Island after 1910. The reason for this growth is the fact that in 1910 the Long Island Railroad opened its electric train service into the Pennsylvania Station in New York. Coincident with this development, and in later years, the City of New York extended its subways into Queens, thus giving this county exceptional service.

This would seem to give convincing proof that direct transportation lines into New York City, without the former ferry transfer, have been the cause of this population growth.

It is of interest to note that the Westchester Sector, having had direct rail connections with the heart of Manhattan for decades, has not grown any faster, generally speaking, since 1890, than has the New Jersey Sector.

Among the New Jersey counties, Bergen County has had the most outstanding rate of growth, and during the last twenty years Hudson and Monmouth counties have had, relatively, the lowest rate of growth, in fact from 1930 to 1940 Hudson County has actually had a decrease in population.

PERCENT OF GROWTH OF POPULATION FROM ONE CENSUS TO THE NEXT

1800 to	UNITED STATES	STATE OF NEW YORK	STATE OF PENNSYLVANIA	STATE OF NEW JERSEY
1810	36.4	62.8	34.4	16.3
1820	33.2	43.2	29.5	13.1
1830	33.7	39.7	28.5	15.6
1840	32.7	26.6	27.9	16.4
1850	35.9	27.5	34.1	31.2
1860	35.6	25.3	25.7	37.3
1870	22.6	12.9	21.2	34.9
1880	30.0	16.0	21.6	24.8
1890	25.5	15.3	22.7	27.7
1900	20.8	21.1	19.9	30.4
1910	21.1	25.4	21.6	34.7
1920	15.0	14.0	13.8	24.4
1930	16.1	21.2	10.5	28.0
1940	7.2	7.1	2.7	2.9

BY SPECIFIC NEW YORK METROPOLITAN REGIONS

	1890 to 1900	1900 to 1910	1910 to 1920	1920 to 1930	1930 to 1940
North Jersey Sector	36.9	39.1	25.1	29.1	3.2
Westchester Sector	24.1	43.4	25.9	36.4	9.3
Long Island Sector	18.5	76.5	62.0	132.2	23.4

BY COUNTIES

Bergen	66	76	53	73	12
Passaic	48	39	20	17	2
Hudson	40	28	17	10	- 6
Essex	40	43	27	28	5
Morris	20	15	11	34	14
Union	37	41	43	53	8
Somerset	16	18	24	36	14
Middlesex	29	44	43	31	2
Monmouth	19	16	11	40	10
Rockland	9	22	- 3	31	25
Westchester	26	54	22	51	10
Fairfield	23	33	31	21	8
Queens	19	86	65	130	20
Nassau	15	51	50	140	34

TABLE 1-a

This table has been prepared to show the rate of growth from one census to the next from 1800 to 1940 for the United States and the States of New Jersey, New York and Pennsylvania; also the rate of growth of certain metropolitan regions and counties from 1890 to 1940 inclusive.

Up to about 1860 the United States has shown a growth of about 1/3 from one census to the next. In other words, each succeeding census has shown a growth of about 33% over the previous census. From 1870 on there has been a leveling off of this growth and since 1880 the growth from one census to the next has been only about 1/5, or less, of the previous population record. The slowest growth has been from 1930 to 1940 when the total population in 1940 was only 7% above that of 1930, or only about 1/5 of the previously recorded growth for the first half of the century.

New York and Pennsylvania have generally followed the pattern set by the country as a whole, whereas New Jersey has had a lesser rate of growth for the first half of the 19th century and a materially greater rate of growth since 1860 than that recorded for the United States as a whole, or the States of New York and Pennsylvania, except from 1930 to 1940.

The rate of growth of the 9 Northeast counties in New Jersey plus Rockland County, has been slightly greater than that for the State of New Jersey since 1890, whereas the Westchester Sector has shown a rate of growth considerably above that recorded for the State of New York, and Long Island has shown a rate of growth very much greater than Westchester, or the State of New York as a whole. In fact from 1900 to 1910 the growth of the Long Island Sector has been 3 times greater than that for the State, from 1910 to 1920 - 4.4 times greater, from 1920 to 1930 6.3 times greater and from 1930 to 1940 3 times greater than that for the State of New York.

Of the New Jersey counties from 1900 to 1910, Bergen County is the only one which has equaled the rate of growth shown for the Long Island counties, but it has had only about one half of the rate of growth in Long Island since 1920. The growth of the other New Jersey counties has been very considerably less.

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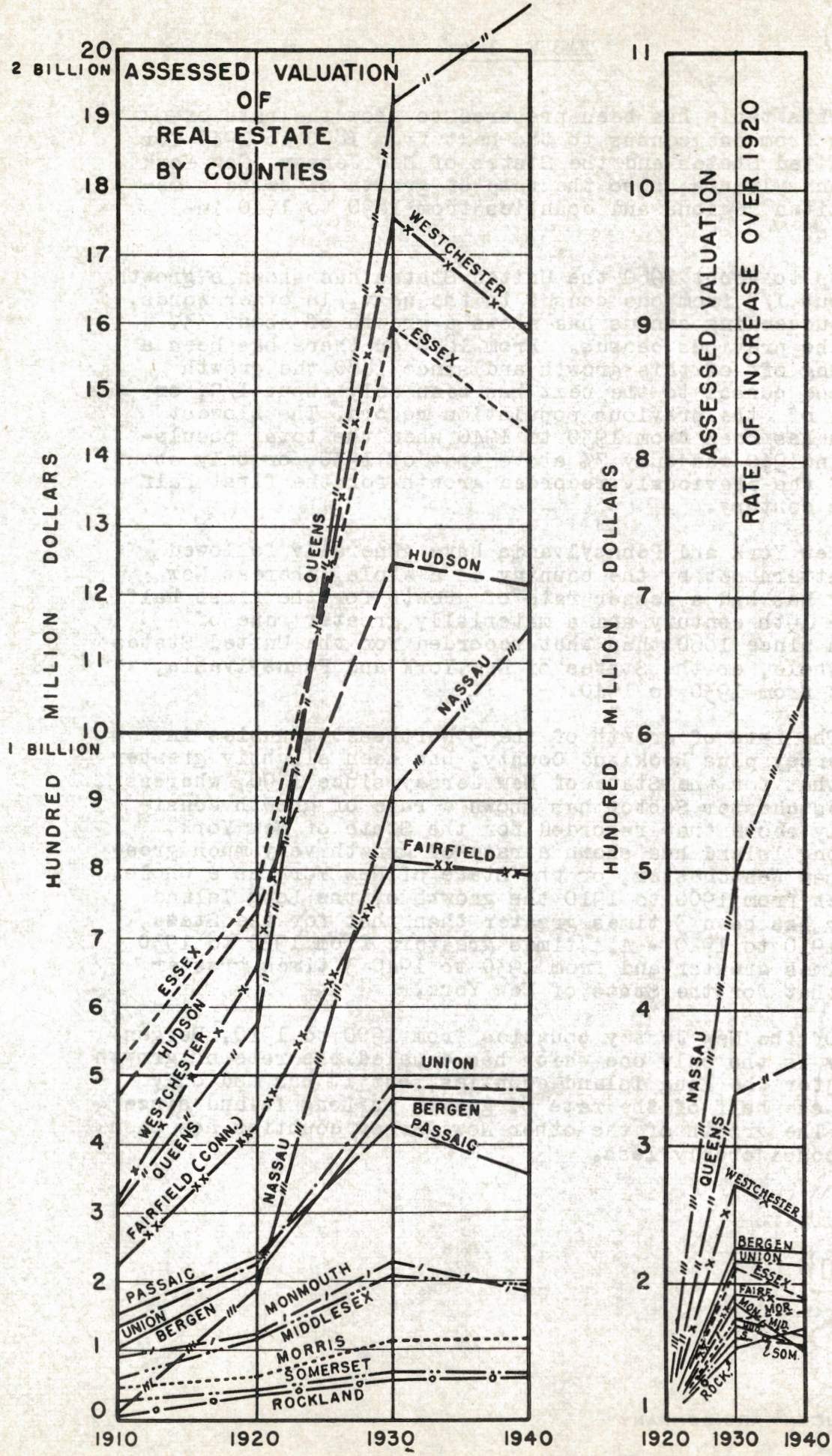


GRAPH NO. 2.

In connection with any study of population and transportation, it is always of interest to note the effect which improved transportation has had upon real estate values. Graph 2 shows the growth in the Assessed Valuation of Real Estate in the Westchester, Long Island and New Jersey Sectors.

It is of interest to note that the growth in real estate values has been very much greater in the Long Island Sector than for any other Sector, particularly New Jersey. The Westchester Sector follows, generally, the Long Island Sector.

The tax valuations in some of the counties in New York, particularly Rockland and Nassay, had been so low in 1910 as to make any comparison of growth since 1910 seem way out of proportion. However, by 1920 these valuations had been raised very considerably, making them more nearly comparable with those of the other regions. Therefore, a graph has been prepared to show the relative rate of growth by counties since 1920.

The growth in real estate values in Nassau County has been extraordinary. In 1930 the value was 5 times greater than it was in 1920, and in 1940 it was 6.3 times greater than in 1920. Queens comes next with a growth in 1930 of 3.4 times that of 1920 and 3.6 times greater in 1940.

With the exception of Rockland and Morris counties all other counties have shown a loss in real estate values from 1930 to 1940.

While Westchester County has fared better than the New Jersey counties, it too has had a considerable loss in real estate values from 1930 to 1940.

Essex County in New Jersey has had the highest valuation of any of the New Jersey counties and it has closely paralleled that of Westchester County, but of the New Jersey counties, Bergen County has had the greatest rate of growth.

PERCENT OF GROWTH OF ASSESSED VALUATION FROM ONE CENSUS PERIOD TO THE NEXT

	1910 to 1920	1920 to 1930	1930 to 1940
Westchester Sector	101%	139%	- 7%
New Jersey Sector	56	93	- 9
Long Island Sector	143	278	13
BY COUNTIES			
Bergen	102%	227%	- 2%
Passaic	52	82	- 17
Hudson	57	70	- 10
Essex	48	110	- 10
Morris	34	77	2
Union	65	116	- 1
Somerset	41	63	- 4
Middlesex	100	82	- 7
Monmouth	34	84	- 19
Rockland	3500	55	9
Westchester	11	170	- 10
Fairfield (Conn.)	91	92	- 2
Queens	85	237	74
Nassau	10000	400	26

	RATE OF GROWTH OVER 1910			RATE OF GROWTH OVER 1920	
	1920	1930	1940	1930	1940
Westchester Sector	2.01	4.80	4.45	2.37	2.21
New Jersey Sector	1.58	3.05	2.79	1.92	1.76
Long Island Sector	2.10	9.48	10.38	3.77	4.28
BY COUNTIES					
Bergen	2.02	4.57	4.53	2.27	2.24
Passaic	1.53	2.77	2.31	1.82	1.51
Hudson	1.57	2.66	2.41	1.70	1.54
Essex	1.48	3.10	2.79	2.10	1.89
Morris	1.34	2.36	2.43	1.76	1.80
Union	1.65	3.57	3.54	2.16	2.14
Somerset	1.41	2.29	2.20	1.62	1.56
Middlesex	2.00	3.47	3.24	1.74	1.62
Monmouth	1.34	2.46	2.01	1.84	1.50
Rockland	36.60	56.60	61.40	1.55	1.68
Westchester	2.08	5.62	5.06	2.70	2.43
Fairfield (Conn)	1.90	3.65	3.58	1.92	1.88
Queens	1.85	6.24	6.71	3.39	3.62
Nassau	104.50	524.00	659.00	5.01	6.30

TABLE 2-a

In order to show what the actual rate of growth in real estate values has been from one census to the next, or over a certain base period, this chart has been prepared.

These figures clearly show that, as a general rule, the growth for the Westchester Sector has been about 25% greater than that of the New Jersey Sector, and Long Island from 100 to nearly 300% greater, depending upon the base period used.

As pointed out before, the valuations of Rockland and Nassau counties were so low in 1910 as to make comparisons with that year unreasonable insofar as these two counties were concerned. However, for the sake of comparison, tables have been prepared to show the rate of growth in real estate values of all of these counties since 1910 and since 1920. As can be seen the rate of growth for the Long Island Sector has been very much greater than that for Westchester or New Jersey.

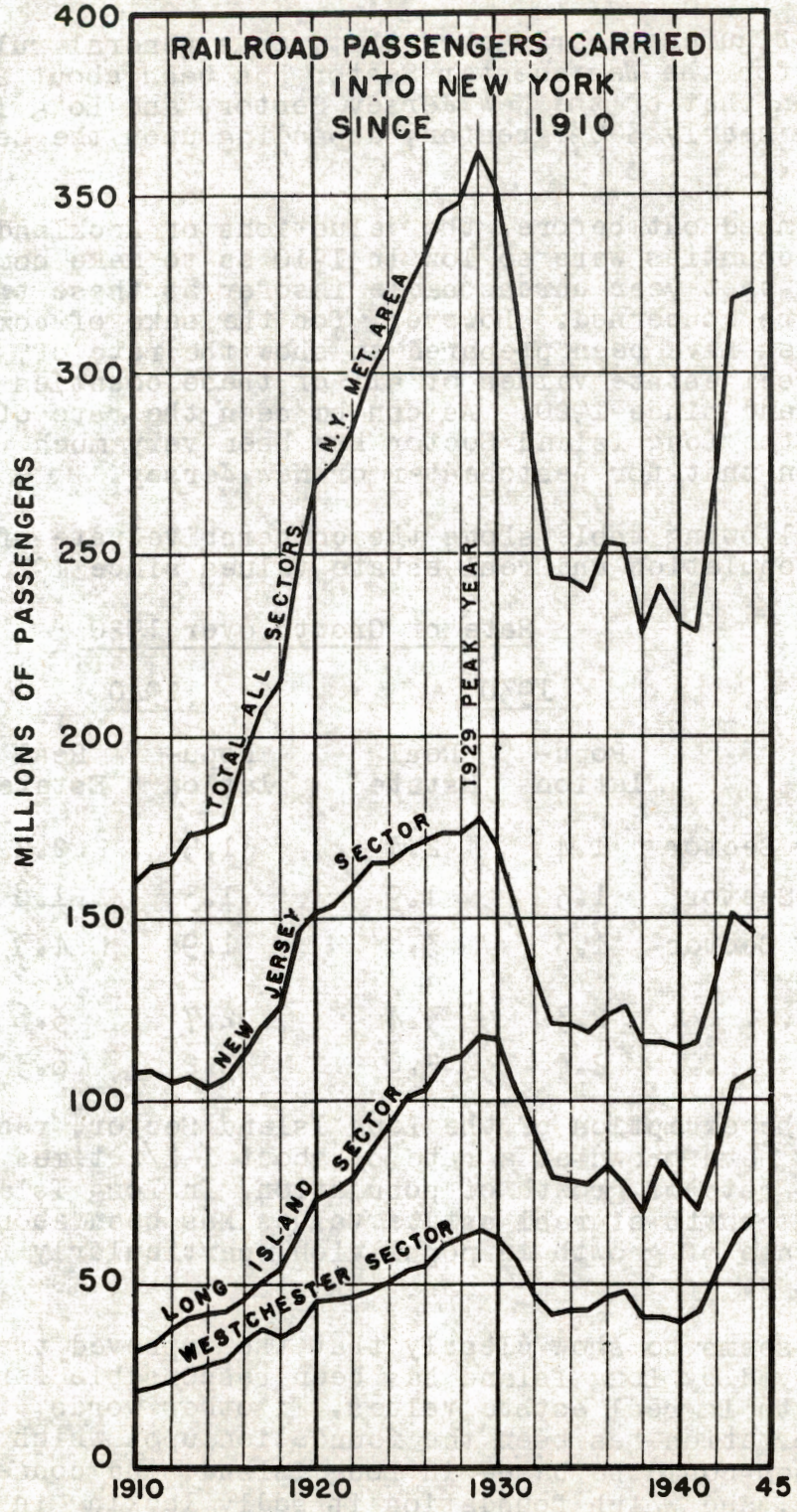
The following table shows the comparative rate of growth in population and real estate values since 1920.

Rate of Growth over 1920

	1930		1940	
	Population	Real Estate	Population	Real Estate
Westchester Sector	1.4	2.4	1.5	2.2
New Jersey Sector	1.3	1.9	1.3	1.8
Long Island Sector	1.3	3.8	1.9	4.3
Queens	2.3	3.4	2.7	3.6
Nassau	2.4	5.0	3.2	6.3

With the exception of the Long Island Sector, real estate values have grown at a rate of about 1 1/2 times greater than the rate of growth of population. In Long Island the rate of growth of real estate values has been about twice the rate of growth in population, particularly for Nassau County.

This seems to show clearly that the improved transportation enjoyed by Long Island has been responsible for the steady growth in real estate values. In other words, improved transportation has been the foundation upon which real estate values could be based in Long Island, and consequently improved, and which foundation is sadly lacking in New Jersey.

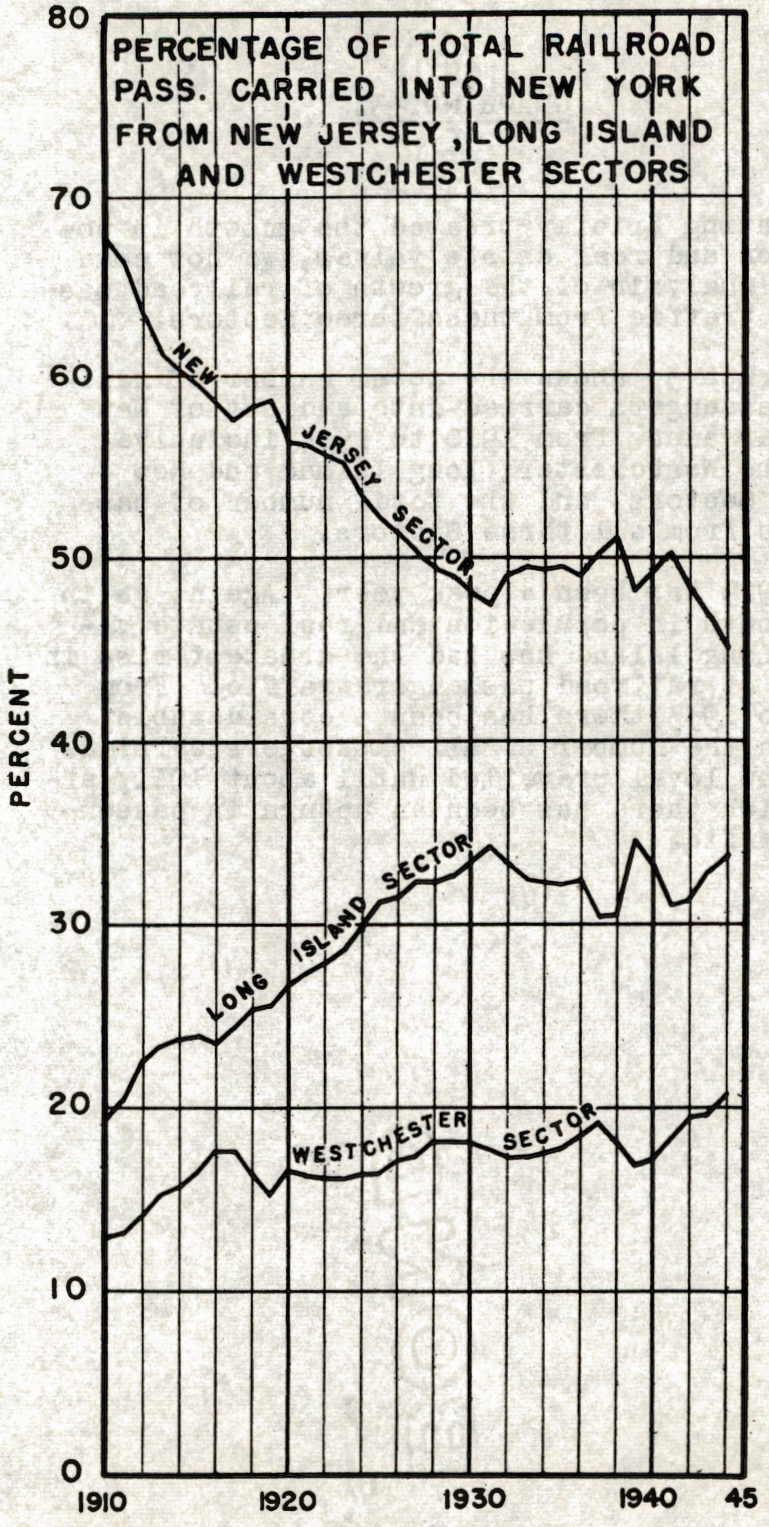

RAILROAD PASSENGERS CARRIED
INTO NEW YORK
SINCE 1910
MILLIONS OF PASSENGERS
400
350
300
250
200
150
100
50
0
1910
1920
1930
1940
45
TOTAL ALL SECTORS
N.Y. MET. AREA
1929 PEAK YEAR
NEW JERSEY SECTOR
LONG ISLAND SECTOR
WESTCHESTER SECTOR

GRAPH NO. 3.

Having briefly treated the growth in population and real estate values, we now come to the analysis of the growth of railroad passenger traffic from these three Sectors.

Graph 3 shows the total number of railroad passengers carried into and out of New York per annum from 1910 to 1944 inclusive, from the Westchester, Long Island and New Jersey Sectors, and the total number of passengers from all three Sectors.

1929 has been a peak year. Again, as in the growth in population and real estate values, Long Island has had the greatest rise in growth of railroad passenger traffic. From 1929 to 1933 there has been a considerable drop in the number of all passengers carried. This low level prevailed until about 1941, after which there has been an upturn in passenger traffic.


PERCENTAGE OF TOTAL RAILROAD PASS. CARRIED INTO NEW YORK FROM NEW JERSEY, LONG ISLAND AND WESTCHESTER SECTORS
PERCENT
80
70
60
50
40
30
20
10
0
1910
1920
1930
1940
45
NEW JERSEY SECTOR
LONG ISLAND SECTOR
WESTCHESTER SECTOR

GRAPH NO. 4.

This Graph shows the percentages of the total railroad passengers coming into New York as coming from the Westchester, Long Island and New Jersey Sectors.

It is of interest to note that in 1910 the New Jersey Sector handled 2/3 of the total number of passengers coming into New York, whereas the Long Island Sector carried about 20% and the Westchester Sector only 13%.

New Jersey has dropped to a point where, today, it is handling only about 45% of the total passengers in and out of New York, whereas Long Island now furnishes 1/3 of the total and Westchester about 20%.

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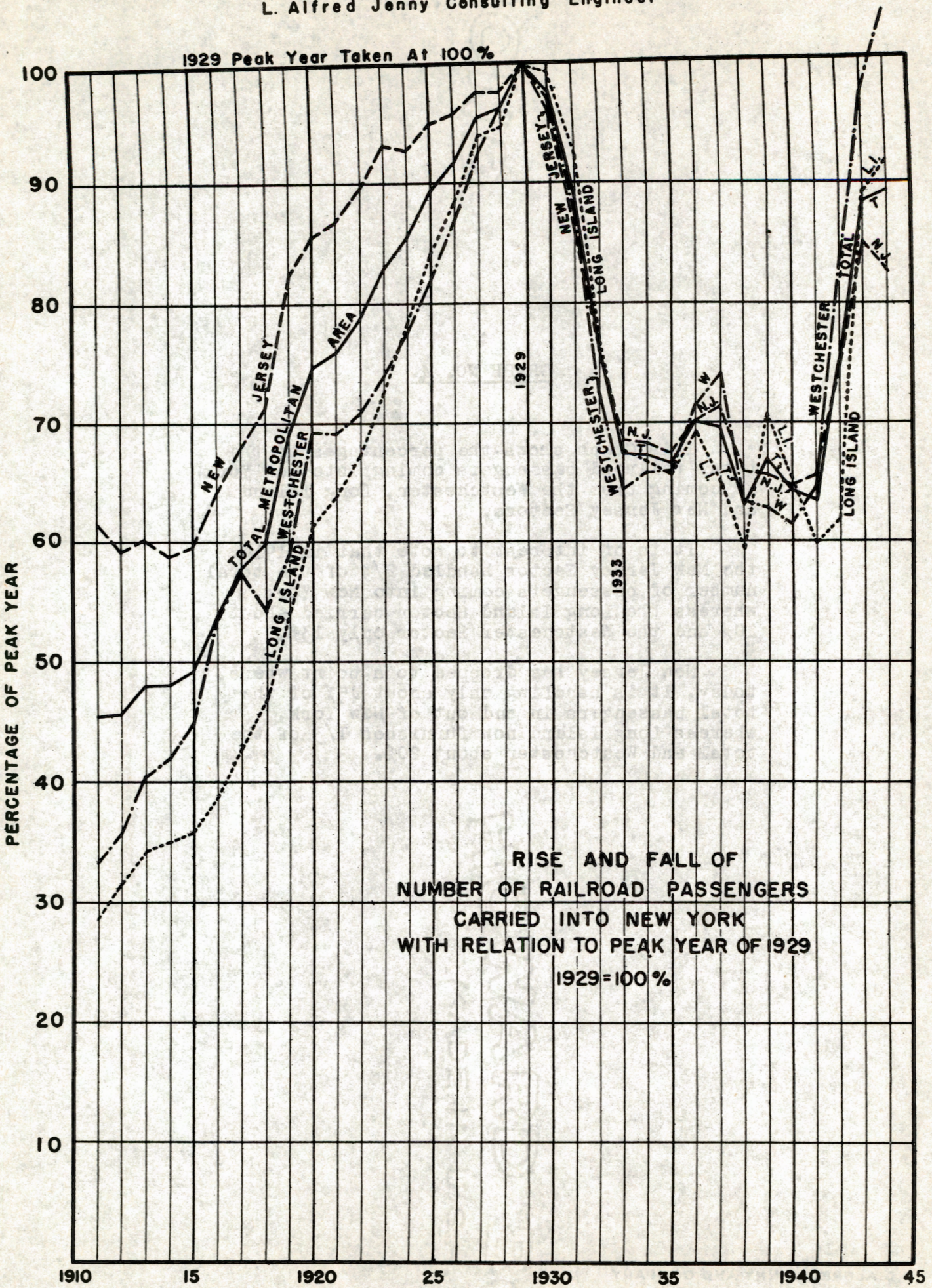
NO. 5.



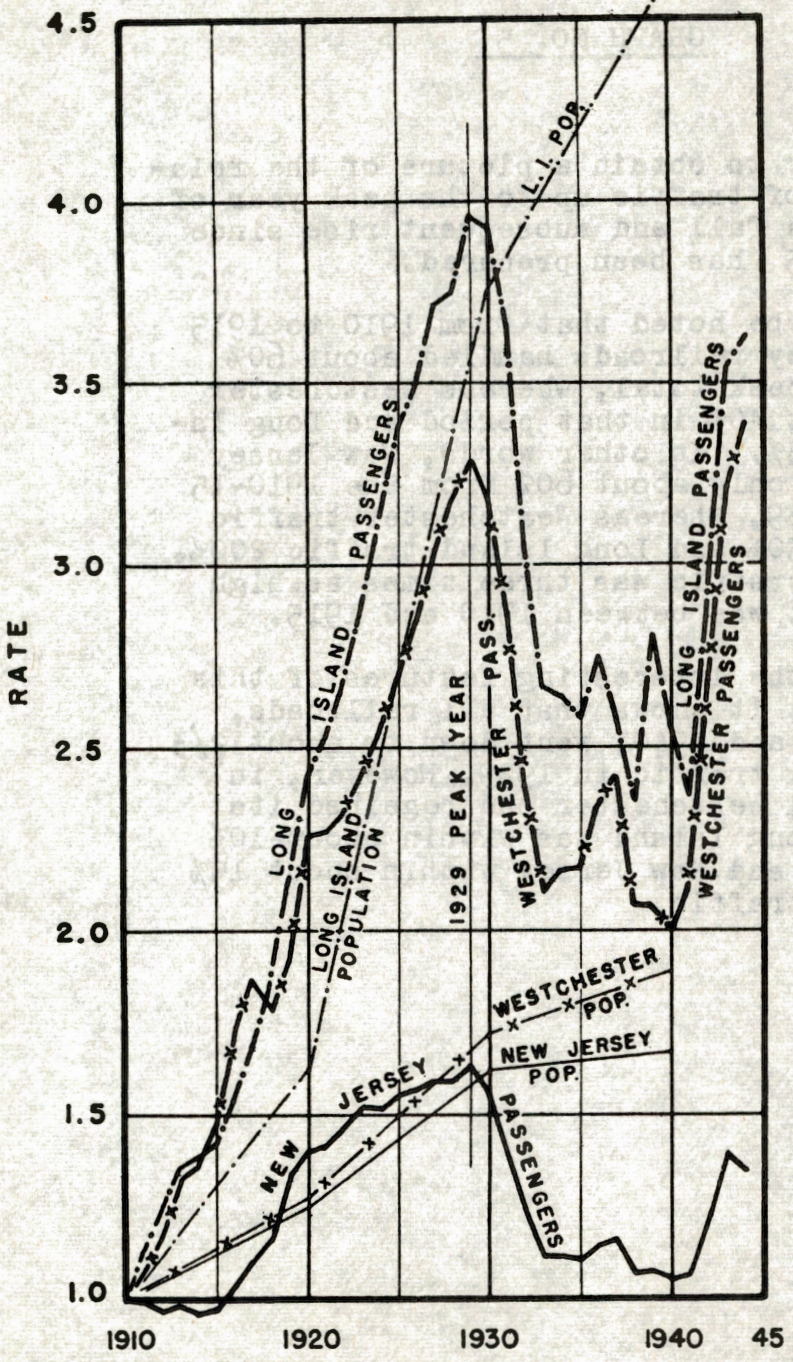
GRAPH NO. 5

In order to obtain a picture of the relative growth of traffic up to the peak year of 1929, and the fall and subsequent rise since 1929, Graph 5 has been prepared.

It will be noted that from 1910 to 1915 the New Jersey railroads handled about 60% of the 1929 peak total, whereas Westchester handled about 40% in that period and Long Island about 35%. In other words, New Jersey traffic grew only about 60% from the 1910-15 period to 1929, whereas Westchester traffic grew about 150% and Long Island traffic 200%. Long Island traffic was three times as high in 1929 as it was between 1910 and 1915.

One of the interesting features of this graph is that it shows that all railroads, between 1933 and 1940, went down to about 2/3 of their peak traffic in 1929. However, in 1943 and 1944 Westchester had regained its 1929 peak, Long Island was within about 10% of that peak and New Jersey within about 15% of its 1929 traffic.

RATE OF GROWTH OF PASSENGER TRAFFIC AND POPULATION OVER 1910



TRAVEL HABITS

Passenger Trips Per Population Per Annum.

	Westchester Sector	Long Island Sector	New Jersey Sector
1910	38	82	57
1920	68	122	64
1930	70	86	55
1933	45	54	39
1940	40	46	36
1944	66	59	46

NOTE: Populations are:

L. I. = Queens & Nassau

N.J. = 9 N.E. Counties & Rockland

W. = Weschester & Fairfield Counties

GRAPH NO. 6.

This Graph shows the rate of growth of population and passenger traffic since 1910, of the Westchester, Long Island and New Jersey Sectors.

With the exception of the Westchester Sector, passenger travel followed generally the rate of growth in population from 1910 to 1930. In Westchester the rate of growth of passenger traffic considerably exceeded the rate in growth of population.

Since 1930 the rate in growth of population in Long Island and New Jersey has been considerably above the rate in growth of passenger travel on the railroads. First the depression of the early thirties has had a serious effect upon all passenger travel, and, secondly, since 1930, there has been a very great growth in the number of buses competing with the railroads in New Jersey. The number of passengers carried by these buses in New Jersey has increased very strongly ever since 1930, and is today 7 times greater than it was in 1930, and 60 times greater than it was in 1925.

The development of rapid transit lines in Queens has naturally also cut very heavily into the railroad passenger traffic on the Long Island Railroad since 1930.

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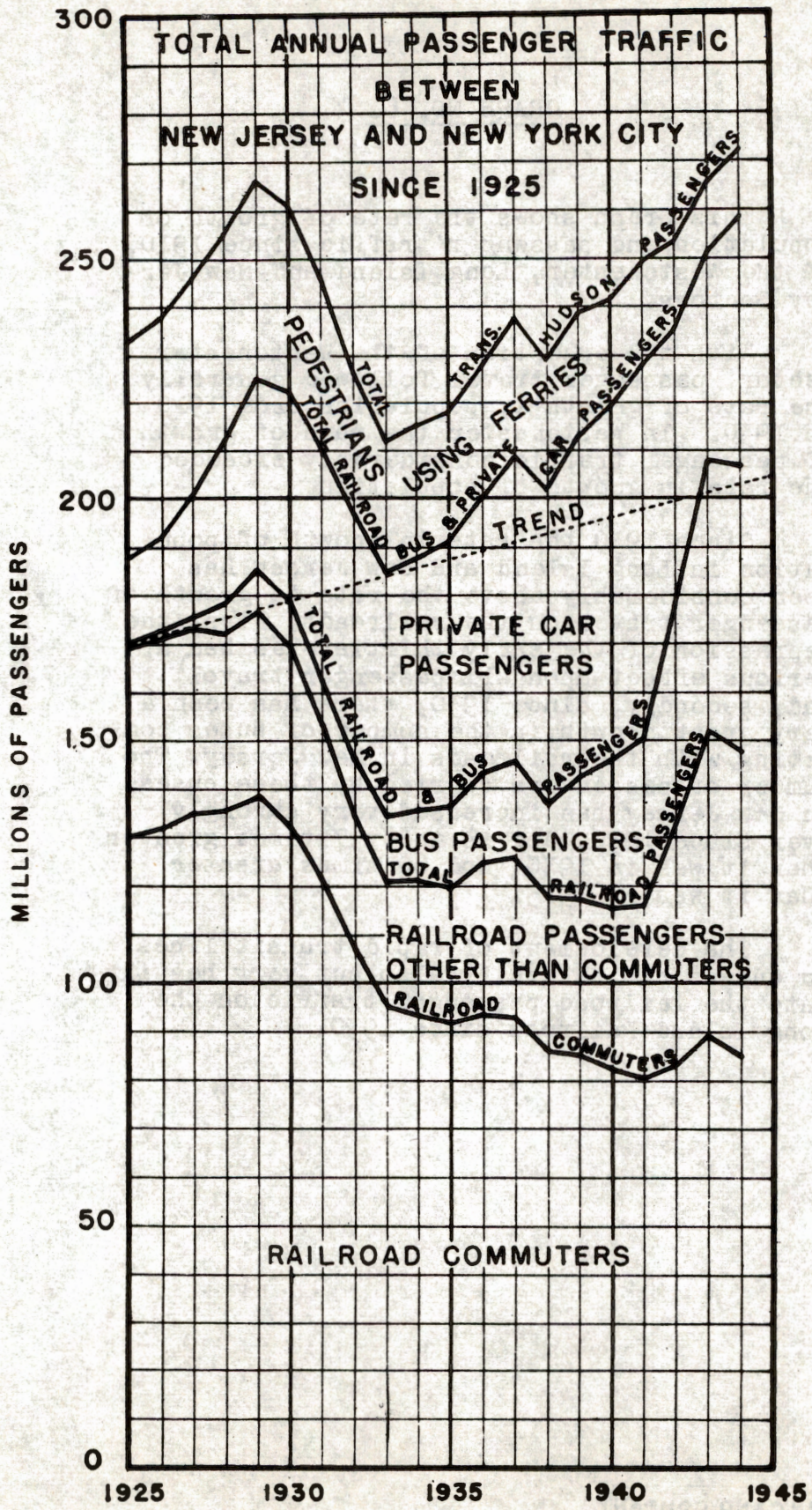


GRAPH NO. 7.

Graphs 1 to 6 inclusive have shown comparative data between the so-called Westchester, Long Island and New Jersey Sectors, or railroad transportation regions from which railroad passengers come regularly into New York.

Graph 7, is the first of a series of graphs showing in detail the passenger traffic between New Jersey and New York from 1925 to 1945 inclusive.

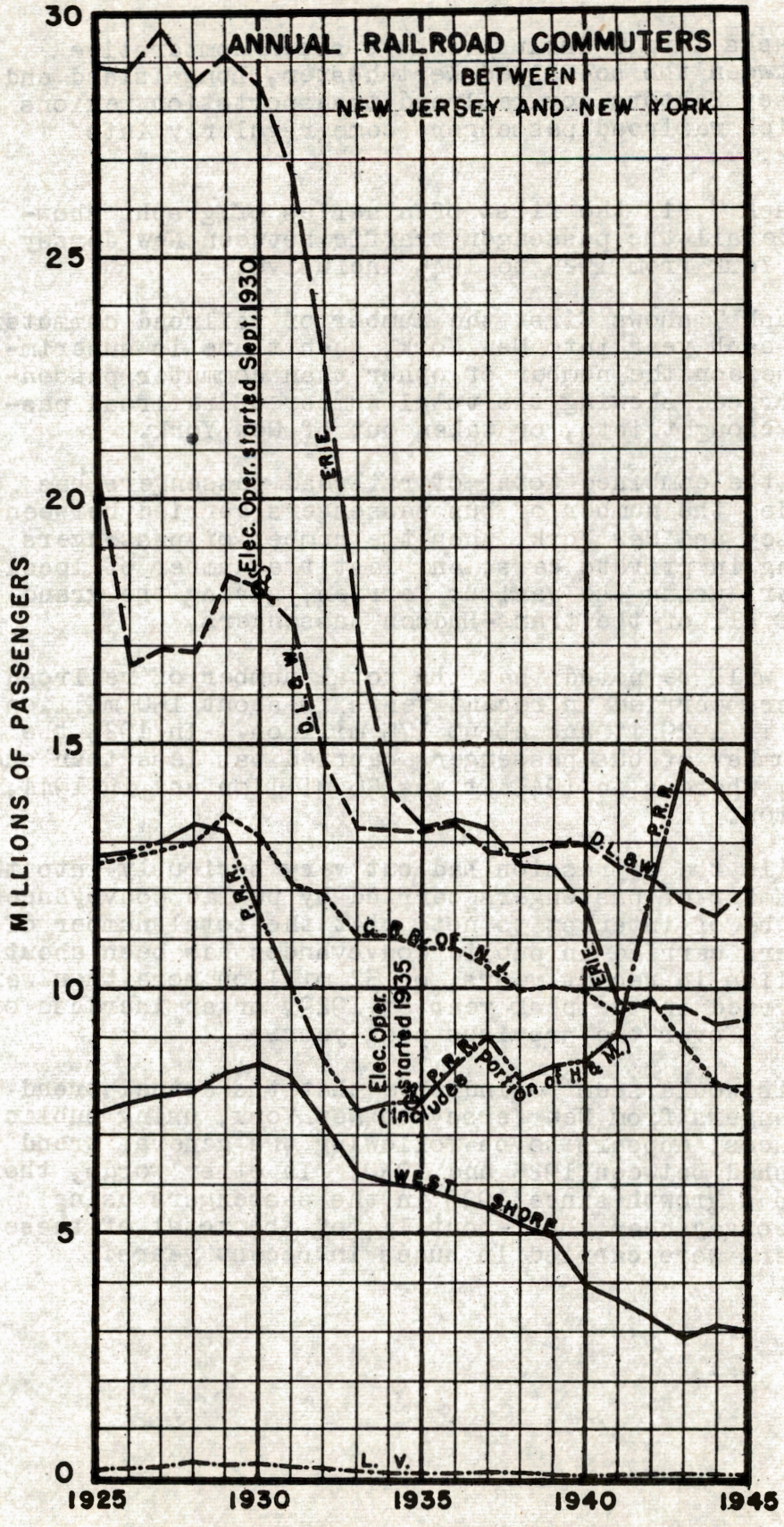
Graph 7 shows first the number of railroad commuters carried each year into New York, then there is superimposed thereon the number of other than commuter passengers carried, showing the total number of railroad passengers brought into, or taken out of New York.

To the combined total of railroad passengers has been added the number of bus passengers carried between New Jersey and New York, then the number of passengers traveling in private cars, and last the number of local passengers using the various ferries, giving the grand total of all of the trans-Hudson passengers.

It will be noted that the total number of railroad passengers carried in recent years is about 150 million, whereas in 1929 it was about 175 million. In 1925 the total number of bus passengers carried was less than one million, whereas in 1943 it was 56 million and in 1944, 59 million.

While the depression had cut very seriously into the total number of passengers carried by public conveyances, it will be of interest to note that the total number of passengers carried in public conveyances has been about 207 million in recent years, or 32 million more than were thus carried in the peak year of 1929, or an increase of about 18 % over the previous peak year.

This would seem to indicate that the actual trend of passengers from New Jersey to New York, using public conveyances, appears to be following the general trend established between 1925 and 1930. In other words, there has been a growth since 1929 in the passengers using public conveyances, but about 1/4 of the total of these passengers were carried in buses in recent years.


ANNUAL RAILROAD COMMUTERS
BETWEEN
NEW JERSEY AND NEW YORK
MILLIONS OF PASSENGERS
30
25
20
15
10
5
0
1925
1930
1935
1940
1945
Elec. Oper. started Sept. 1930
ERIE
D. L. & W.
P. R. R.
D. L. & W.
P. R. R.
C. R. R. OF N. J.
ERIE
Elec. Oper. started 1935
Includes P. R. R. Portion of H. & M.
WEST SHORE
L. V.

GRAPH NO. 8.

This Graph shows the total number of annual commuters carried by each of the New Jersey railroads between New Jersey and New York from 1925 to 1945 inclusive.

It is of interest to note that all of the railroads had a serious drop in their commuter traffic from 1930 to 1935. As explained before, that drop was due largely to the depression. There was, however, also the serious enchroachment of bus competition, already mentioned. While the number of railroad commuters carried kept going down steadily, the number of passengers carried by the buses kept going up. The only railroad which did have a rise in commuter traffic was the Pennsylvania Railroad, whose traffic increased very much, because it brought its passengers directly into mid-Manhattan, where an ever increasing number of New Jersey commuters have their destination. This would seem to indicate that the solution of the other New Jersey railroads lies in the plan presented herewith of bringing all of them directly into mid-Manhattan so as to permit them to recoup some of their passenger losses and to regain the good will of the people.

The greatest loss in commuter traffic has been suffered by the Erie, which probably has to compete with more buses going directly into mid-Manhattan than any other railroad, while it continues to bring its passengers to Jersey City, and down-town New York, a destination of ever fewer New Jersey passengers from year to year.

A glance at that graph should give convincing proof that if the other roads brought their commuters into mid-Manhattan, as does the Pennsylvania Railroad, they too could recoup much of the traffic now lost to buses, the same as did the P.R.R.

NO. 9.

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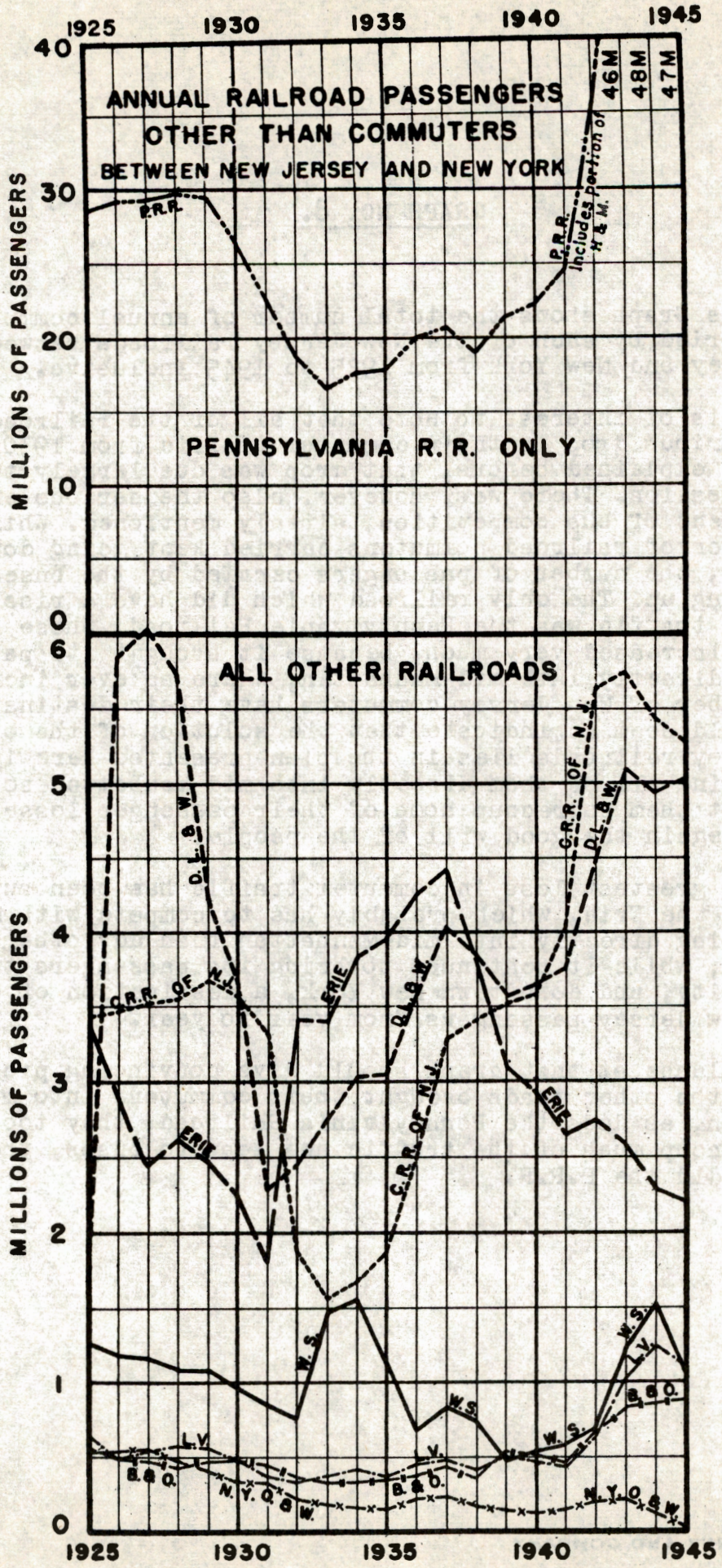


GRAPH NO. 9.

This Graph shows all other than commuter passengers carried per annum by the New Jersey railroads between New Jersey and New York.

The volume of traffic on the Pennsylvania Railroad is so great that it could not be shown on the scale used for the other railroads, and a scale 10 times greater than that of the other roads has been used.

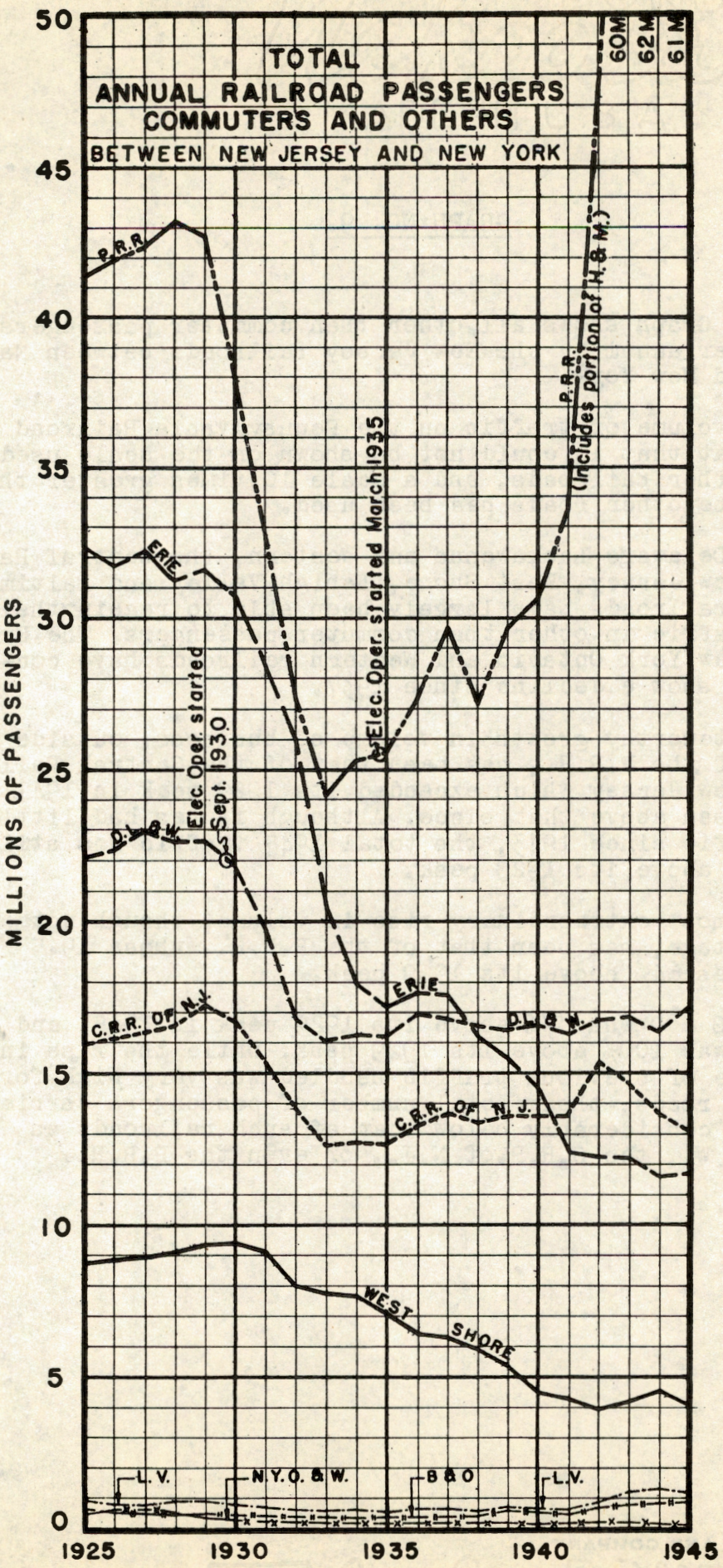
The Delaware Lackawanna and Western, the Central Railroad of New Jersey, West Shore, Lehigh Valley and Baltimore and Ohio railroads have largely been able to regain their former traffic in other than commuter passengers. The Erie and the New York Ontario and Western railroads have continued to show a decline since 1937.

A noteworthy growth in volume of business, outside of that of the P.R.R., has been that of the Central Railroad of New Jersey which exceeded its 1929 peak in 1941 and has been above that since. Although it has had little less traffic since 1943, the total 1945 traffic was still about 44% above its 1929 peak.

The most extraordinary rise in volume, though not in percentage, has been that of the P.R.R., whose 1945 traffic was 64% above its 1929 peak.

The B & O was 87% above its 1929 peak in 1945, and the L.V. was 100% above its 1929 peak. While the rise in percentage of previous traffic handled was very high for these two roads, their total number of passengers carried was still considerably below that of such railroads as the D.L.& W., the C.R.R.of N.J., or even the P.R.R..

L. Alfred Jenny Consulting Engineer



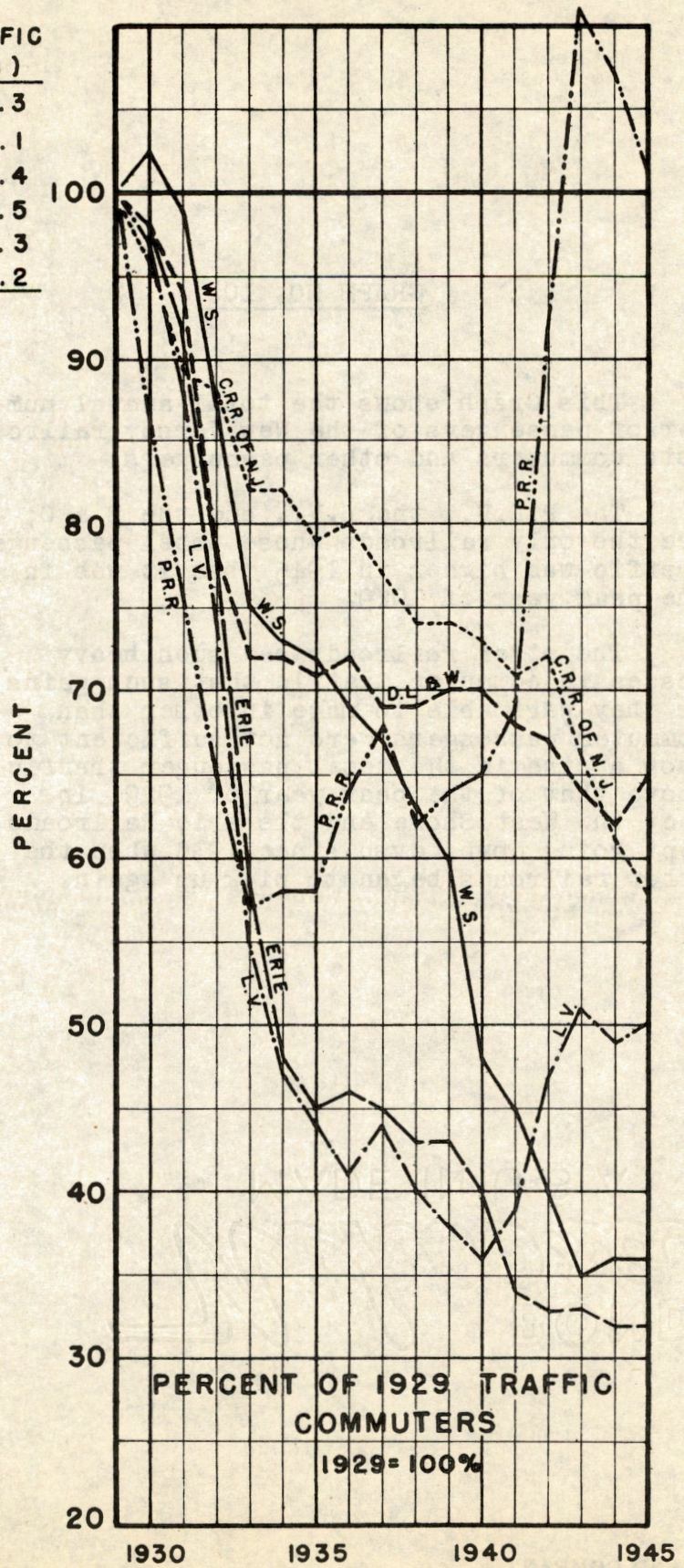
GRAPH NO. 10.

This Graph shows the total annual number of passengers of the New Jersey railroads, both commuters and other passengers.

The P.R.R., the L.V., and the B & O, are the only railroads whose total passenger traffic was higher in 1945 than it was in the peak year of 1929.

The other railroads had such heavy losses in commuter traffic that such gains as they were able to make in other than commuter passengers were not sufficient to show a rise in the total passenger traffic above that of the peak year of 1929, in fact thw West Shore and the Erie Railroads kept going down, even since 1935 when the other railroads began to pick up again.

1929 TRAFFIC (In Millions)	
W S	8.3
Erie	29.1
D.L.&W.	18.4
C. of N.J.	13.5
L.V.	.3
P.R.R.	13.2



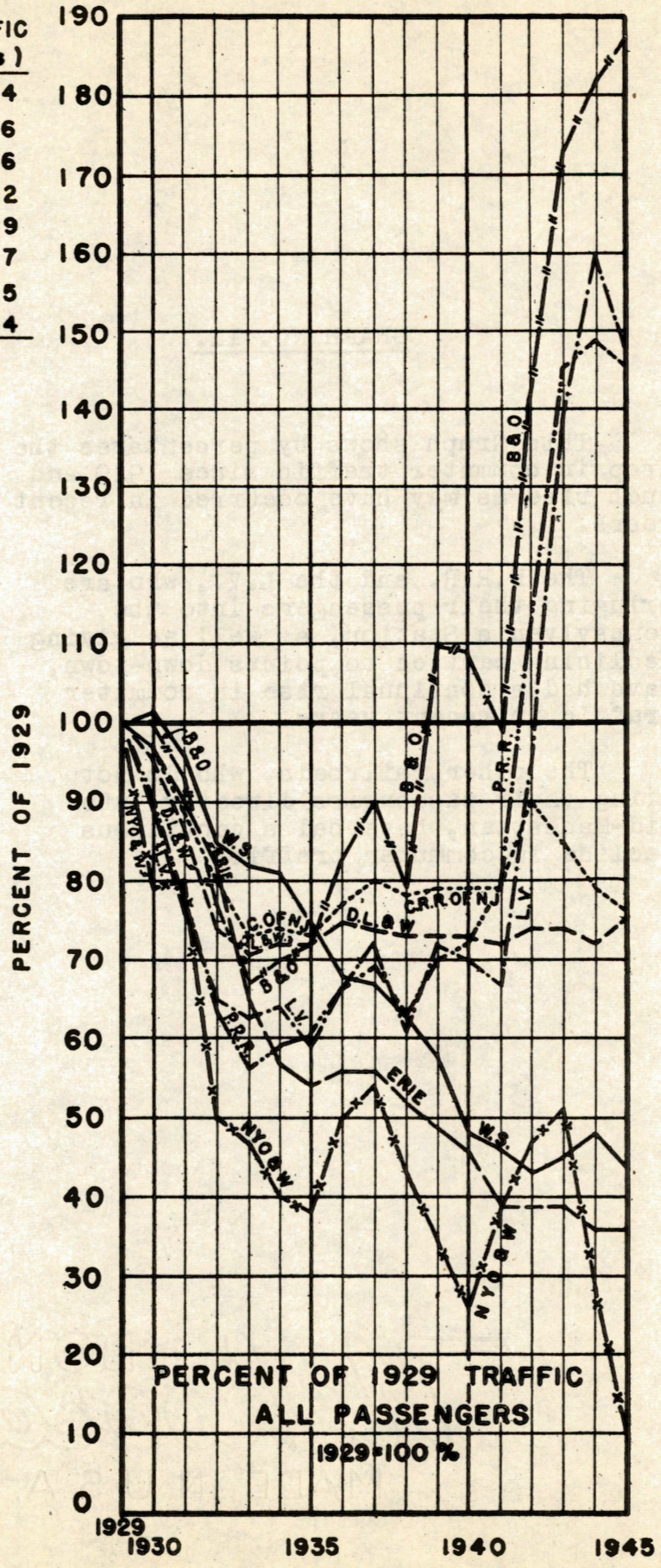
GRAPH NO. 11.

This Graph shows by percentages the drop in commuter traffic since 1929 and such rise as may have occurred in recent years.

The P.R.R. and the L.V., who are bringing their passengers into the Pennsylvania Station, as well as giving declining service to points down-town, have had a continual rise in commuter traffic in recent years.

The other railroads, who do not bring their passengers directly into mid-Manhattan, have had a continuous decline in commuter traffic.

1929 TRAFFIC (In Millions)	
WS	9.4
Erie	31.6
D.L.&W.	22.6
C of N.J.	17.2
L.V.	.9
P.R.R.	42.7
B&O	.5
O&W	.4

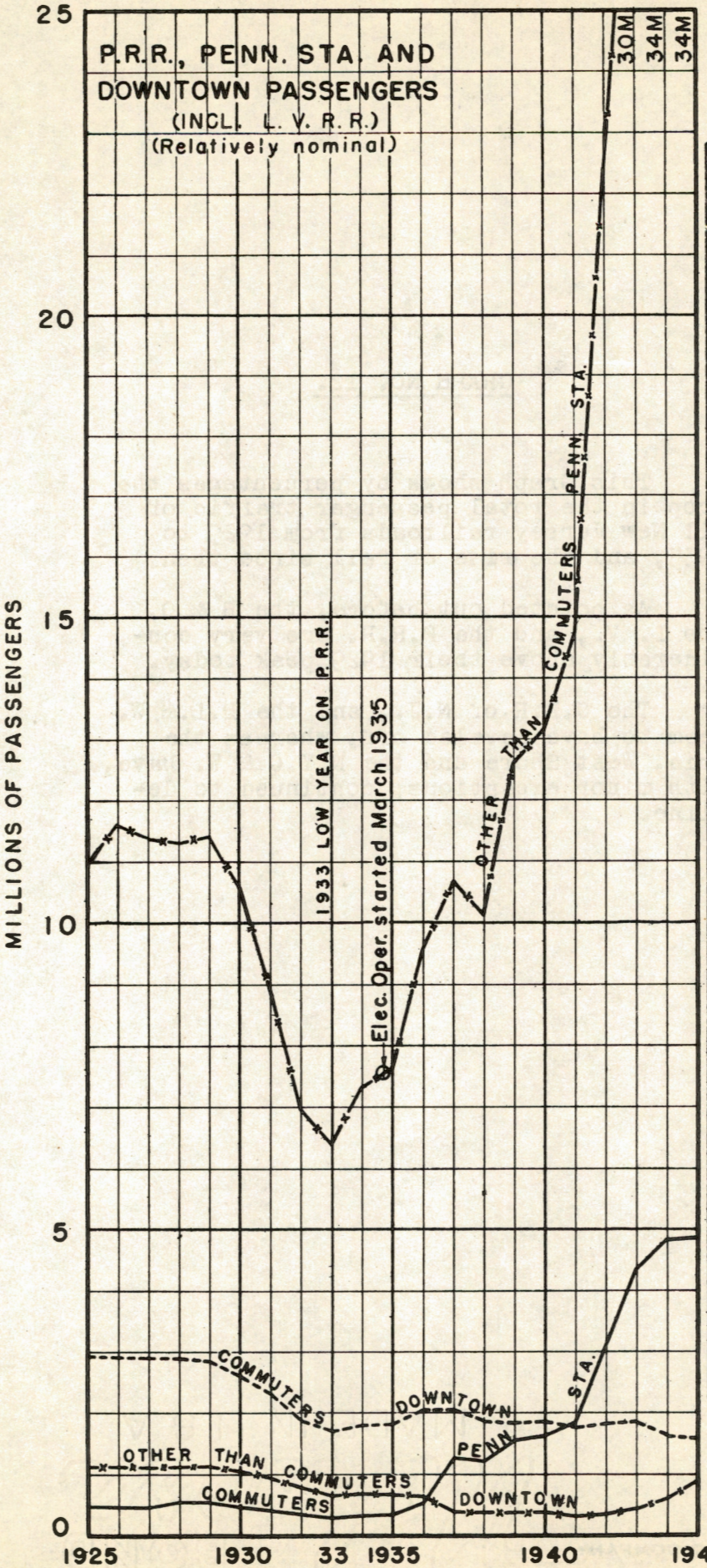


GRAPH NO. 12.

This Graph shows by percentages the drop in the total passenger traffic of all New Jersey railroads from 1929 to 1935, and the rise or fall since then.

As pointed out before, the B & O, the L. V., and the P.R.R. are very considerably above their 1929 peak today.

The C.R.R.of N.J., and the D.L.& W. seem to have leveled off, whereas the Erie, West Shore and the N.Y.O & W. have, with minor exceptions, continued to decline.



Growth of Commuter Traffic	1933 In Thousands			1945 In Thousands			Ratio of Increase
	P.R.R.	L.V.	Total	P.R.R.	L.V.	Total	
Commuters to Penn. Sta.	217	48	265	4705	115	4820	18.2
Commuters to Downtown	1578	114	1692	1526	30	1556	- 0.1
Commuters, Total	1795	152	1957	6231	145	6376	3.3

GRAPH NO. 13.

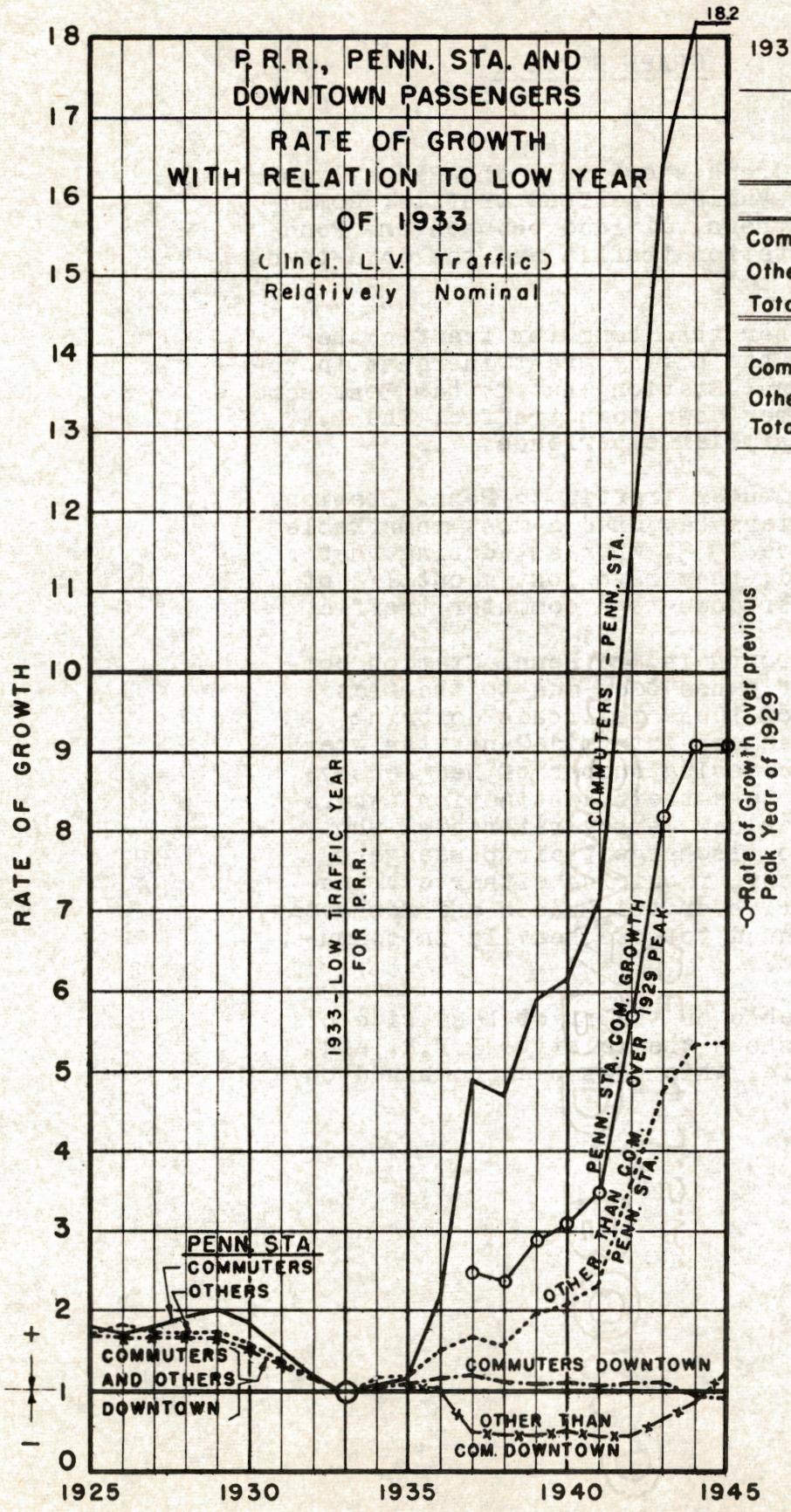
This Graph shows only the Pennsylvania and Lehigh Valley railroad traffic, commuters and others, divided between the Pennsylvania Station traffic and the down-town traffic.

In other than commuter traffic the P.R.R. has had a very great increase in volume to Penn. Station, but it has lost some of its former down-town traffic. The L.V. has had a similar experience.

In commuter traffic to Penn. Station, these carriers have had a most remarkable growth since 1935, whereas, during that same period, they have lost about 1/2 of their former down-town commuter traffic.

The growth in the Penn. Station commuter traffic has been due to the fact that both of these railroads do bring their passengers into mid-Manhattan where an ever increasing number of New Jersey passengers have their destination, whereas the other New Jersey railroads, who continue to discharge their passengers in New Jersey, requiring either a transfer to ferries or the Hudson and Manhattan, have continued to lose heavily in commuter traffic.

The table on the right hand side of the graph shows the relative P.R.R. and L.V. traffic, which has been combined on the graph.



1933 & 1945 TRAFFIC (In Millions)

	1933	1945	Ratio Increase 1945
PENN. STA.			
Com.	0.27	4.82	+18.2
Others	6.38	34.14	+ 5.4
Total	6.65	38.96	+ 5.9
DOWNTOWN			
Com.	1.69	1.56	− 0.08
Others	0.68	0.87	+ 0.27
Total	2.37	2.43	+ 0.03

GRAPH NO. 14.

This Graph covers both the P.R.R. and the L.V. railroads and shows by percentages their relative rise and fall in traffic from 1933, their low year.

This graph shows that the commuter traffic to Penn. Station rose over 18 times of what it was in 1933, and over 9 times what it was in the peak year of 1929, whereas the growth in other than commuter traffic, although much greater in volume, only rose to about 5 times what it was in 1933.

This graph seems to show convincingly that commuters did return to the railroads, after the early depression years, when such railroads brought them directly into mid-Manhattan, and that other railroads will be able to do the same thing if they too provide such a mid-Manhattan Terminal. It should be stated again that this rise in traffic to Penn. Station was made in spite of the fact that the P.R.R. charges a 10 cent Terminal charge for every commuter trip, inbound and outbound.

HISTORY OF PREVIOUS EFFORTS MADE

TO PROVIDE IMPROVED PASSENGER TRANSPORTATION

BETWEEN NEW JERSEY AND NEW YORK CITY

By

L. Alfred Jenny

Consulting Engineer

Dumont, N. J.

HISTORY OF PREVIOUS EFFORTS MADE TO PROVIDE IMPROVED PASSENGER TRANSPORTATION BETWEEN NEW JERSEY AND NEW YORK CITY

BY

L. ALFRED JENNY

Consulting Engineer

Numerous efforts have been made during the present century to improve the "intolerable" passenger transportation situation between the New York Metropolitan area of New Jersey and the City of New York. Invariably the problem has been called "intolerable" or "acute", yet, in spite of the many studies made, and several hundred thousand dollars in public and private funds spent on these studies, no plan has been brought to fruition. Some of the plans were unrealistic, others were too elaborate and others lacked proper support.

My first connection with this problem was in 1908, while working on the Grand Central Terminal Development in New York, when I was asked to make studies for bringing the West Shore Railroad passengers through a tunnel into the Grand Central Terminal. This project was later abandoned.

Next the McAdoo brothers, who had a franchise for building a rapid transit line from Passaic to Times Square, New York, had asked the N.Y.C.R.R. to work out plans for a West Shore Transfer Station at New Durham, N.J., and I was assigned this task. This project too was later abandoned.

In 1920 the Port of New York Authority presented a plan for bringing freight into New York by means of some small cars, automatically controlled. This plan was criticised by many as impracticable, and nothing came of it. In 1921, I criticised this plan for not also trying to solve our serious passenger transportation problem and I submitted a plan for a rapid transit loop, intersecting all of the New Jersey railroads from Jersey City to New Durham, then going over to mid-town New York, then down to the Battery and over again to Jersey City, the place of beginning; also an outer belt line railroad to divert through freight traffic around the congested New York Terminal District.

Several organizations in New Jersey became interested in my proposal and I was asked to address several meetings on this subject. As a result of these activities, in 1922, the State of New Jersey created the "North Jersey Transit Commission" for the purpose of studying this problem and of bringing about a solution thereof. After several years of study, this Commission made a report, but its plans remained in the blueprint stage.

In 1927 this Commission was abolished (after spending considerable money) and its activities were taken over by the Port of New York Authority, who organized the "Suburban Transit Engineering Board", composed of Chief Engineers of the various railroads, representatives of Westchester, Long Island, New Jersey, New York City and the Port Authority. On March 25, 1930 this Board made a progress report, dealing primarily with the Westchester and Long Island situation, and with it the Board ceased to function for all practical purposes.

Parallel with these various activities several other interested groups and individuals had made studies and reports, but only along general lines.

One important activity was that of Mr. G. Lindenthal, who kept alive his plan for building a bridge over the Hudson River and for which he was issued a franchise sometime in the nineties. His first plan was for a bridge at 23rd Street, New York, and later at 57th Street. There was considerable opposition to this plan from the Port Authority, because such a bridge would also have vehicular traffic and compete with Port Authority projects. There was also some objection from certain New York City sources. They claimed that the bridge, being about 20 stories up in the air, would be most unsightly and the ramp approaches would cover a long distance of the New York City sky line and would lower real estate values in that region. Then too the War Department wanted a bridge clearance of 200 ft. and, Mr. Lindenthal, finding this impractical, wanted a 175 ft. clearance and offered to provide telescopic masts for all vessels that would have to pass under this bridge and could not do so because of the heights of the masts. This proposal was rejected.

In 1933 I was engaged by a private group in New York to make an extended study of this problem, resulting in plans being prepared for bringing all of the so-called "orphan" railroads in New Jersey into a Union Passenger Terminal west of Rockefeller Center in New York. That site was selected because of the relatively low value of real estate and the presence there of four main subway lines, all of which could serve this Terminal. Plans were also prepared at the same time for a new subway line down 5th Avenue to the Battery and extending under the Hudson River to the Central Railroad of New Jersey at Jersey City. In connection with this work we had full cooperation from the Port Authority, the City of New York and some of the railroads. These studies were completed late in 1934, but no action was taken because it was then found to be too costly to be made a private undertaking which would have to pay full taxes.

Interest in this problem was also shown by the Regional Plan Association of New York, which had on several occasions issued statements concerning this problem, in connection with its reports, or made special reports on this subject. As this question was being actively discussed in 1935, the Regional Planning Association issued its Information Bulletin No. 25, dated June 17, 1935, dealing wholly with this subject and calling attention to the need for finding a satisfactory solution. On numerous occasions since then this Association has published reports dealing with the problem of developing North Jersey

as a whole, pointing out the great advantages of that section and calling attention to the fact that the lack of adequate transportation facilities there was retarding the progress of that region.

In 1935 and 1936 I undertook the task of revising the relatively large plans proposed in 1933 and 1934 and of presenting a compact minimum plan, obtaining the maximum benefit at a minimum cost. That plan was published in 1936.

Early in 1935 the North Jersey Transit Committee was organized in Bergen County for the purpose of presenting these plans to the people of Northeastern New Jersey in the hope that public sentiment would be roused sufficiently to permit official action to bring these projects from plan to reality. Several hundred mass meetings were organized throughout Northeastern New Jersey and Rockland County where this plan was presented and this whole problem discussed. As a result this Committee did receive very considerable public support.

In 1936 this Committee requested the New Jersey Legislature to ask the Port Authority to make a study of this problem and report to the Legislature. A report was made on March 1st. 1937. While the Port Authority stressed the need of improved passenger transportation by railroad into New York, and the benefits to be derived, it had unfortunately included certain objectionable features, particularly the acquisition of the Hudson and Manhattan Railroad in its plan which met with very strong opposition in many sections and circles in Northeastern New Jersey. These provisions had the effect of increasing the financial burden to be carried and the Port Authority had asked for a public subsidy if its project were to be adopted. As a result this report had the effect of greatly retarding this improvement.

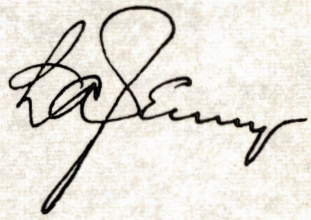
In the early fall of 1937, seeing the plight in which we found ourselves, Mr. J. Binder, Manager of the Bergen County Chamber of Commerce, organized the various County Chambers of Commerce in NortheasternNew Jersey into what was called the "Inter Chamber of Commerce Conference Committee". This Committee held meetings in September and October of 1937 at Elizabeth, Jersey City, Newark, Hackensack and Passaic, where this "acute" problem was presented to the members of these Chambers of Commerce. A report was made of these hearings, but no further action was taken.

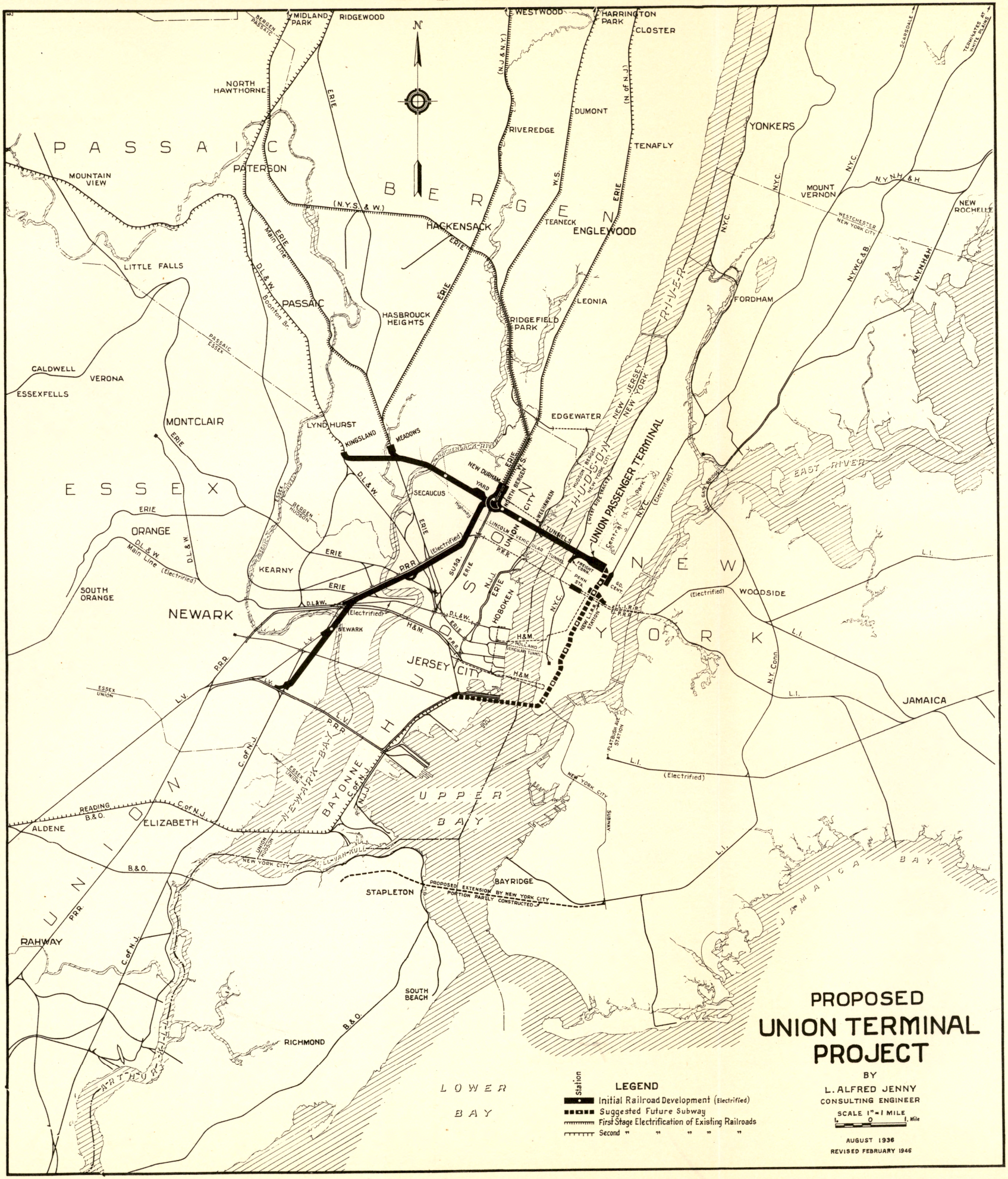
In making estimates of possible traffic from New Jersey we lacked authentic data on passenger travel and habits, routes used, destination, location in New York, etc. So early in 1938 the North Jersey Transit Committee again took action to have the New Jersey Legislature request the Port Authority to make a survey. In Joint Resolution No. 1., Laws of New Jersey for 1938 the Legislature made such a request. That survey was made and a report rendered to the Legislature, dated March 1st, 1938.

In 1939 the Bergen County Planning Board made an extensive survey, through the W.P.A., of all forms of transportation within the County, and out of the County, and a report was made in June 1939.

We had now acquired much basic data, had held many meetings, wrote reams of reports, had requested many reports, but still there was no definite action. In a final effort to bring about some real action, in conference with members of the Bergen County Board of Freeholders, that Board went on record in 1940 to request the New Jersey Legislature to pass a law creating a North Jersey Transit Authority with power to do all of the things necessary to bring about the construction of this project. It was felt then that New Jersey had to have a separate Authority who would make it its duty to carry out such a project, and which Authority did not have any other interests to serve. As a consequence, Assembly Bill 414 was introduced by Assemblyman Freund of Bergen County on April 15, 1940 and this Bill was referred to the Committee on Transportation. It rested there, until one hectic evening, when the Legislators were anxious to close for the summer, it was decided to take up only non-controversial bills, and this Bill, with some 150 others, simply died. While this Bill was in the hands of the Transportation Committee some conferences were held with representatives of South Jersey and a general agreement had been reached as to the need for the proposed action and the creation of such an Authority, which could also serve South Jersey interests.

It may thus be seen that there has been much activity and that we do not lack plans or data. The plan presented herewith incorporates the best thoughts expressed on this subject and it has been brought up to date. What we lack is official action to transform this project from plan to reality so as to give the people of Northern New Jersey the transportation means they have asked for for so many years.




PROPOSED
UNION TERMINAL
PROJECT
BY
L. ALFRED JENNY
CONSULTING ENGINEER
SCALE 1" = 1 MILE
AUGUST 1936
REVISED FEBRUARY 1946
LEGEND
Station
Initial Railroad Development (Electrified)
Suggested Future Subway
First Stage Electrification of Existing Railroads
Second " " " " "
PASSAIC
BERGEN
ESSEX
HUDSON
NEW YORK
UNION
UPPER BAY
LOWER BAY
EAST RIVER
HUDSON RIVER
UNION PASSENGER TERMINAL
PROPOSED EXTENSION BY NEW YORK CITY PORTION PARTLY CONSTRUCTED
MIDLAND PARK
RIDGEWOOD
WESTWOOD
HARRINGTON PARK
CLOSTER
NORTH HAWTHORNE
DUMONT
RIVEREDGE
TENAFLY
YONKERS
MOUNTAIN VIEW
PATERSON
HACKENSACK
TEANECK
ENGLEWOOD
MOUNT VERNON
NEW ROCHELLE
LITTLE FALLS
PASSAIC
HASBROUCK HEIGHTS
RIDGEFIELD PARK
LEONIA
FORDHAM
CALDWELL
VERONA
ESSEXFELLS
MONTCLAIR
LYNDHURST
KINGSLAND
MEADOWS
EDGEWATER
SECAUCUS
NEW DURHAM
YARD
NORTH BERGEN
WEEHAWKEN
TUNNELS
ORANGE
KEARNY
SOUTH ORANGE
NEWARK
HOBOKEN
WOODSIDE
JERSEY CITY
JAMAICA
BAYONNE
NEWARK BAY
ELIZABETH
ALDENE
BAYRIDGE
STAPLETON
RAHWAY
SOUTH BEACH
RICHMOND
ARTHUR KILL
JAMAICA BAY
ERIE
D.L.&W.
P.R.R.
L.V.
H&M.
N.Y.C.
N.Y.N.H.&H.
N.Y.W.C.&B.
N.Y.C.
L.I.
N.Y. Conn.
C. of N.J.
B.&O.
READING
(N.Y.S. & W.)
(N.J. & N.Y.)
(N. of N.J.)
W.S.
SUSQ.
N.J.J.
(Electrified)
Main Line
Boonton Br.
PASSAIC ESSEX
BERGEN HUDSON
ESSEX UNION
NEW YORK CITY
SUBWAY
FLATBUSH AVE STATION
WESTCHESTER NEW YORK CITY
SCARSDALE
TERMINATES AT WHITE PLAINS
HACKENSACK RIVER
HOLLAND TUNNEL
LINCOLN TUNNEL
VEHICULAR TUNNEL
FREIGHT CONN.
PENN STA.
GO. CENT.
NEW L.I.R.R. STATION
L.I.R.R.
EL. P.R.R.
WELL GATE BRIDGE
Central Park
(West Side Tracks)
HUDSON BERGEN NEW YORK CITY
NEW JERSEY
NEW YORK

SCHEME "B"

PROPOSED UNION PASSENGER TERMINAL

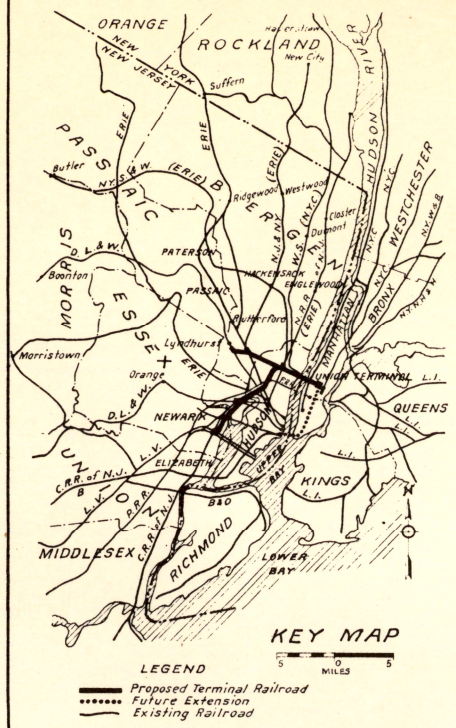
FOR RAILROAD AND RAPID TRANSIT TRAINS FROM NEW JERSEY

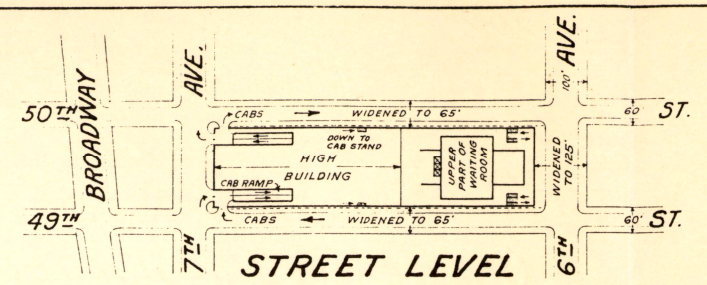
SCALE 1" = 200'

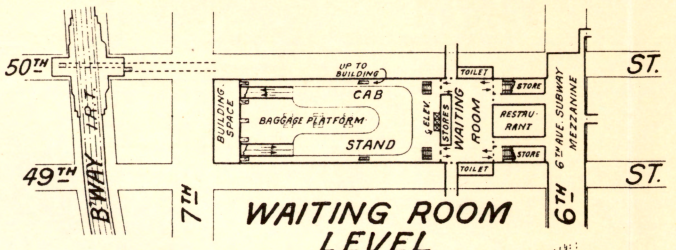
L. ALFRED JENNY & CO.
CONSULTING ENGINEERS

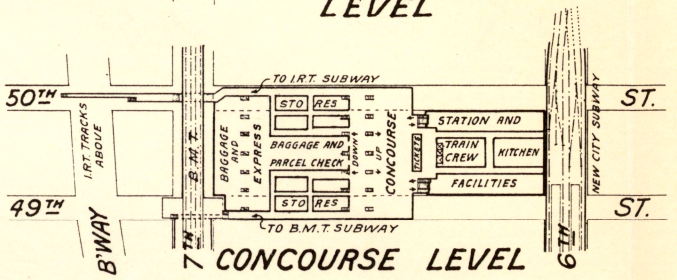
AUGUST 7TH 1936

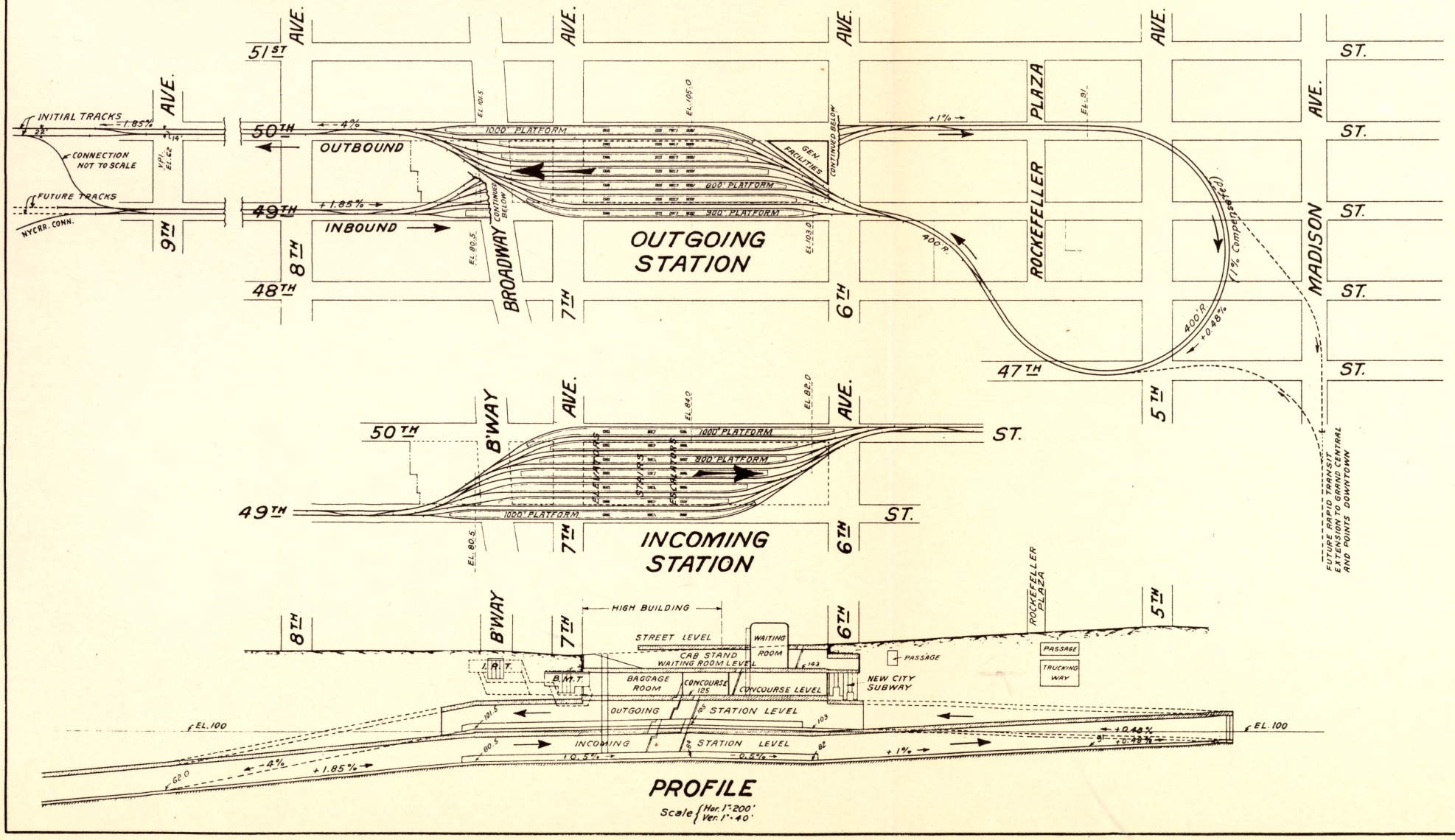
REVISED JANUARY 1946











PROFILE

Scale { Hor. 1" = 200'
Ver. 1" = 40'