

# *Transit* *Fact Book*

1946

AMERICAN

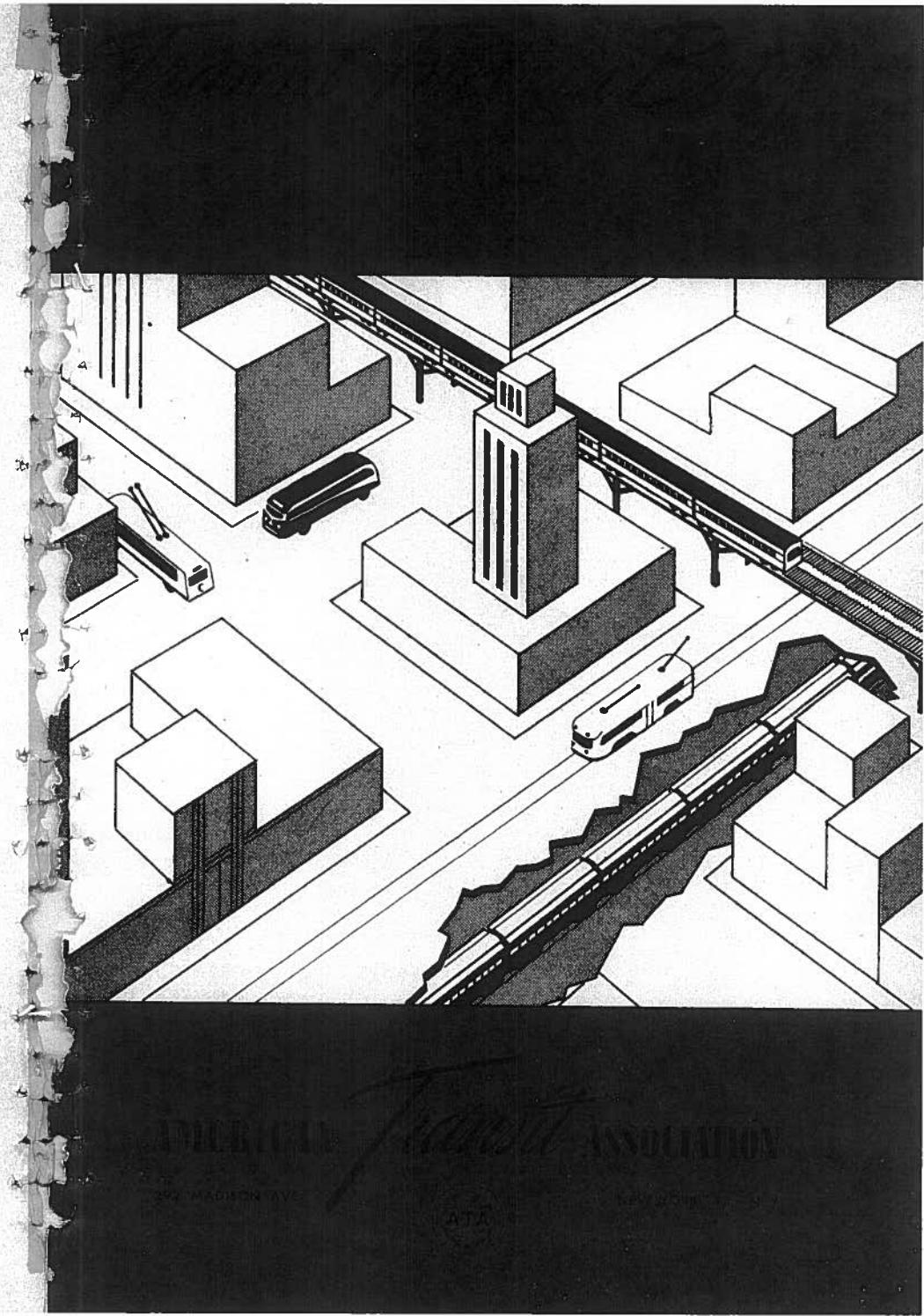
*Transit* ASSOCIATION

292 MADISON AVE.



NEW YORK 17, N.Y.

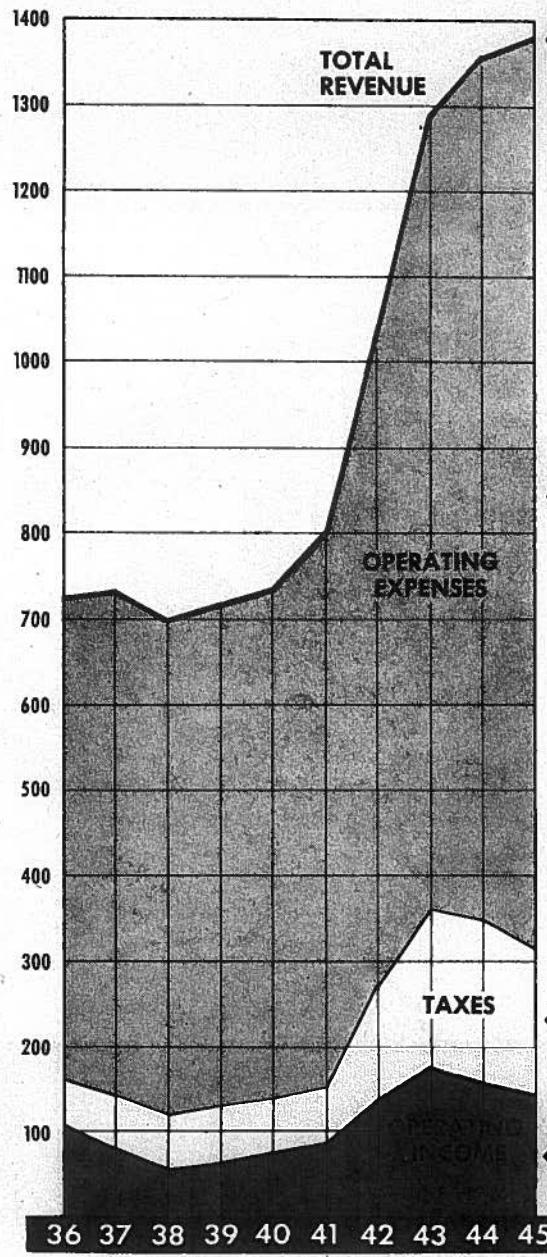
Annual Summary of Basic Data  
and Trends in the Transit Industry  
of the United States



252 MADISON AVENUE

## TEN YEARS OF TRANSIT OPERATIONS...

MILLIONS OF DOLLARS

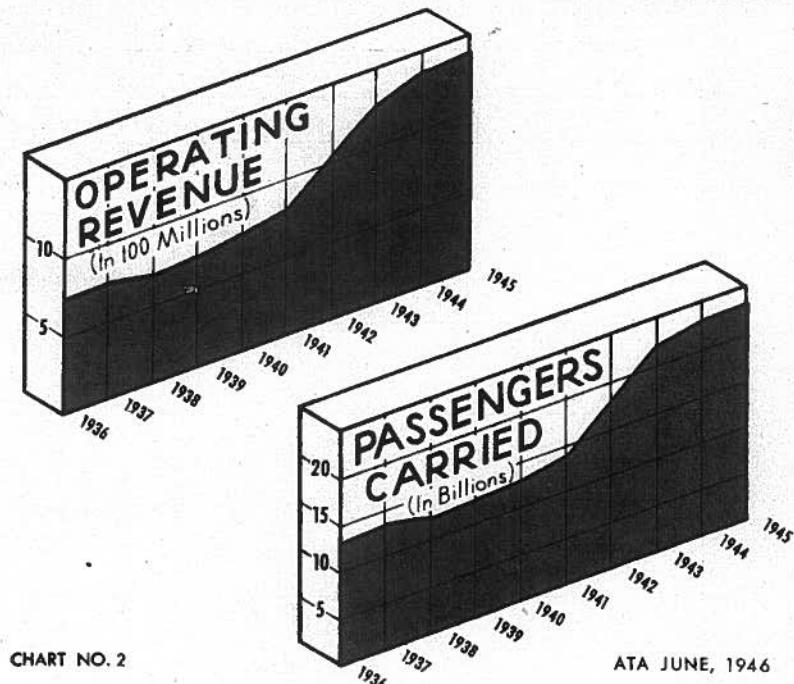


DOUBLED

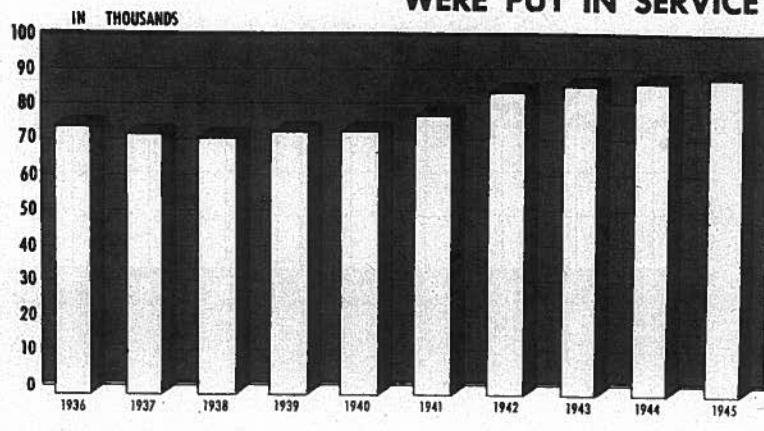
DOUBLED

INCREASED  
3 TIMES

INCREASED REVENUE CAME FROM INCREASED TRAFFIC - MUCH OF IT DUE TO WAR DEMANDS...



FOR WHICH ALL AVAILABLE VEHICLES  
WERE PUT IN SERVICE



GREATEST TRAFFIC INCREASES HAVE OCCURRED  
IN THE SMALLER CITIES...

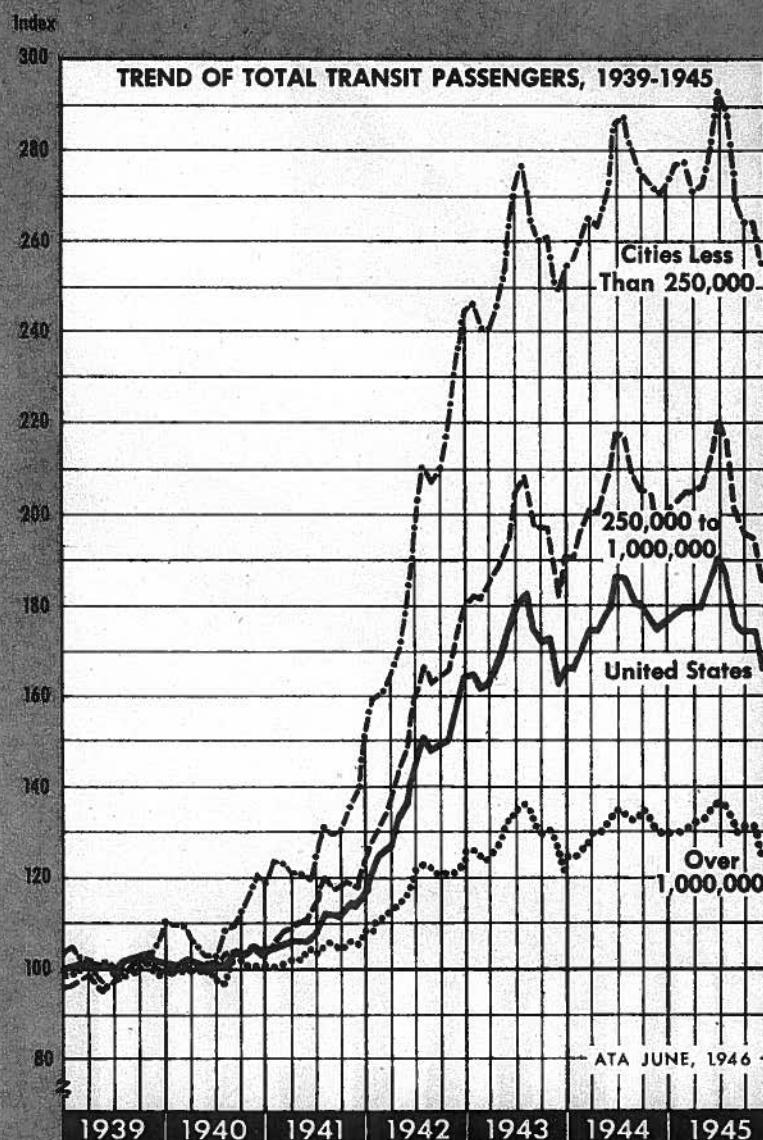


CHART NO. 4

RAILWAYS CARRY MOST OF THE TRAFFIC IN THE  
LARGE CITIES...

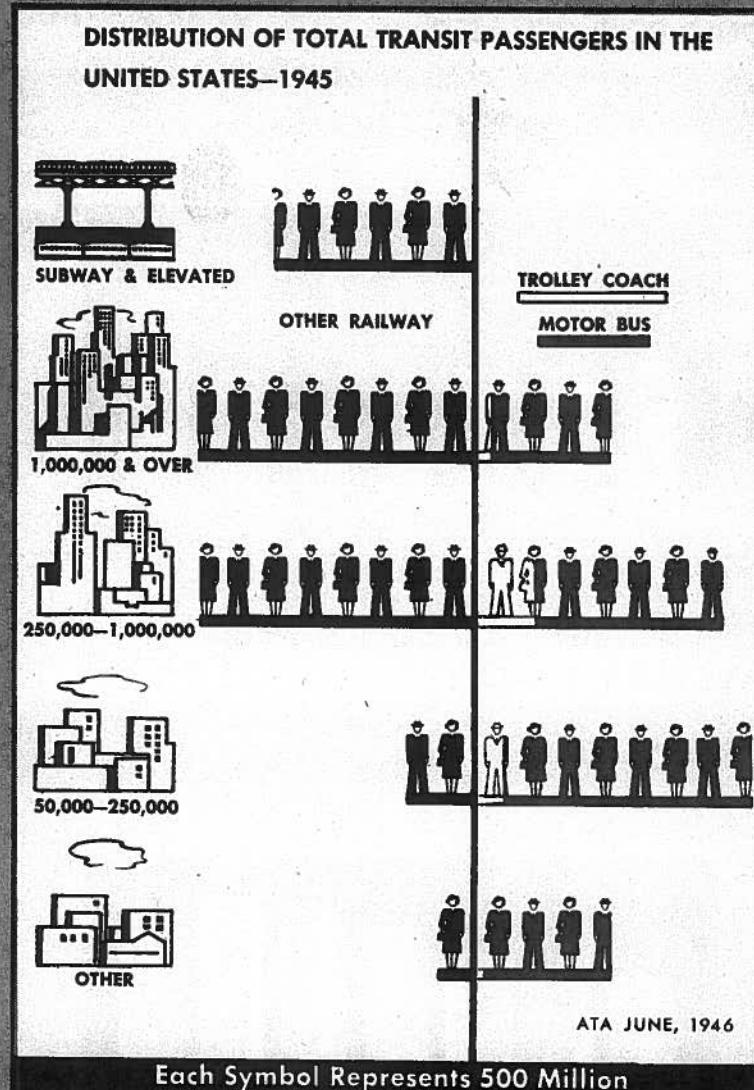


CHART NO. 5

**THE BURDEN OF EXTRA TRAFFIC HAS DEVELOPED  
DURING A PERIOD WHEN LITTLE NEW EQUIPMENT  
COULD BE PURCHASED...**

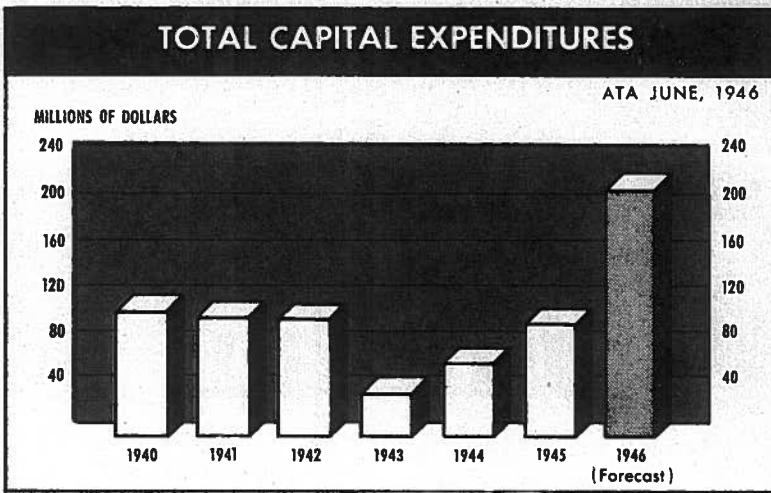


CHART NO. 6

**WITHOUT NEW EQUIPMENT MAINTENANCE COSTS  
HAVE RISEN STEADILY...**

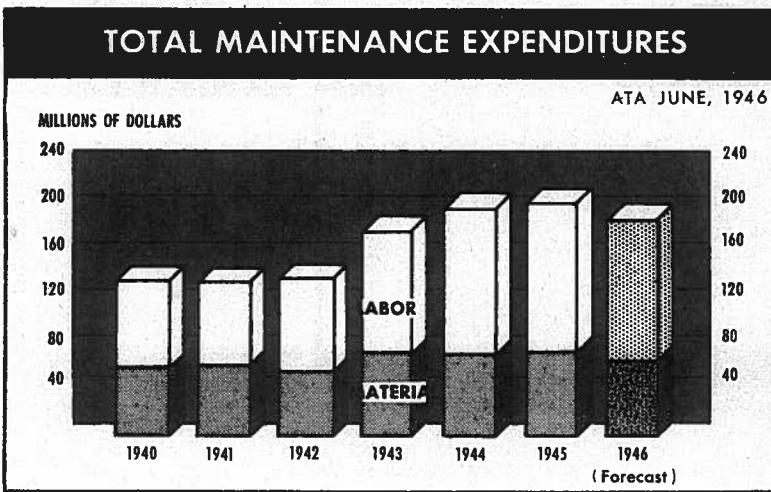


CHART NO. 7

**DURING 1945 PRACTICALLY ONE-HALF OF  
THE TRANSIT DOLLAR WAS SPENT ON WAGES  
AND SALARIES**

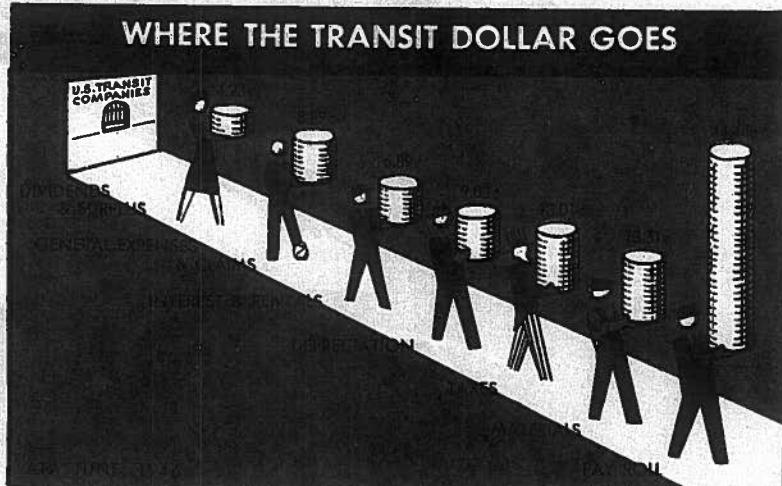


CHART NO. 8

**AVERAGE PAY OF EMPLOYEES HAS INCREASED 64%  
IN TEN YEARS...**

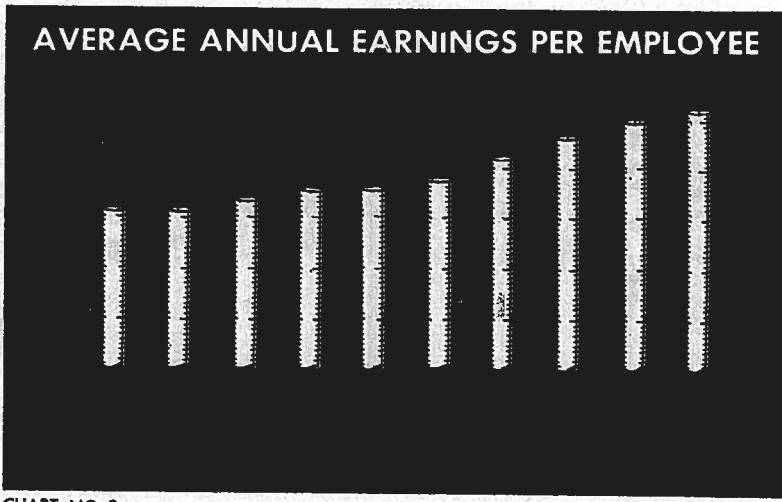
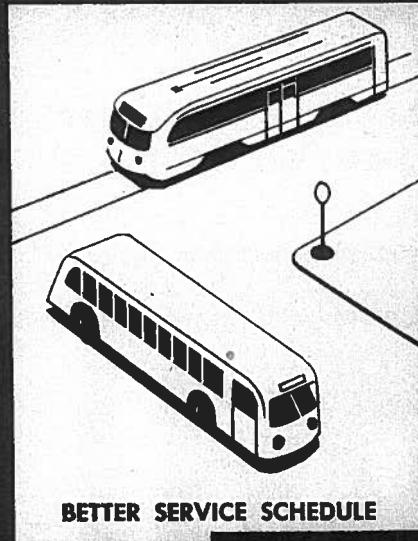
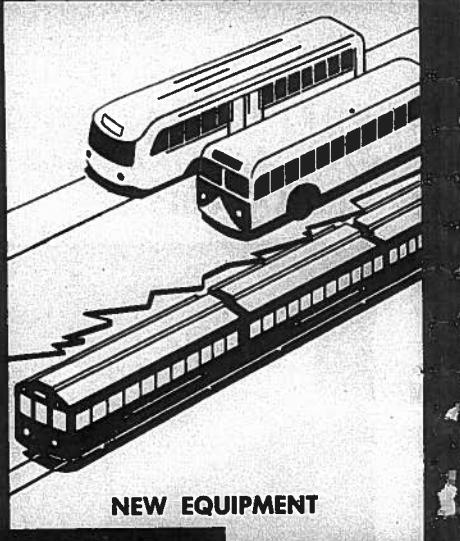


CHART NO. 9



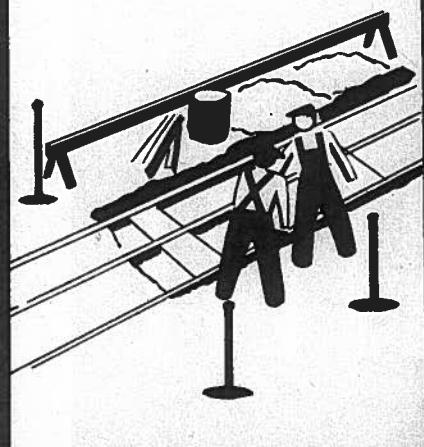
BETTER SERVICE SCHEDULE



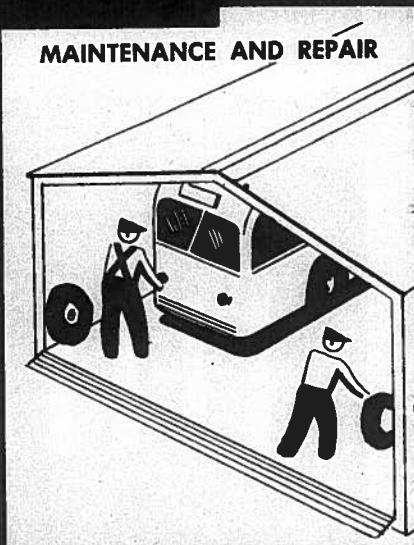
NEW EQUIPMENT

## Transit PROGRAM FOR 1946

LAYOUT OF NEW LINES



MAINTENANCE AND REPAIR



## TRANSIT FACT BOOK

*Annual Summary of Basic Data and Trends  
in the Transit Industry of the United States*

1946

THIS IS THE fourth annual edition of the Transit Fact Book compiled by the statistical department of the American Transit Association. It is identified as the 1946 edition and covers the operations of the industry through the year 1945 with the latest plant and equipment data as of December 31, 1945. The figures given are in all cases totals for the whole transit industry of the United States.

The transit industry herein represented comprises all organized local passenger transportation agencies except taxicab and suburban railroads, sightseeing buses and school buses. Included are (1) electric street railways, (2) elevated and subway lines, (3) interurban electric railways, (4) local motor bus lines and (5) trolley coach lines.

The primary sources of the data herein developed are the financial and statistical reports received by the American Transit Association from transit companies representing 85 to 95 per cent of the transit industry.

*Prepared by*

AMERICAN TRANSIT ASSOCIATION  
292 MADISON AVENUE, NEW YORK 17, N. Y.

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## THE TRANSIT INDUSTRY 1945

1. Number of Operating Companies (Dec. 31, 1945) : Total	1,253
(a) Electric Railway Companies (Total) .....	172
Urban Surface Railway.....	91
Subway and Elevated Railway.....	5
Interurban Railway .....	76
Railway Exclusively .....	84
*Railway and Motor Bus Combined.....	60
Railway and Trolley Coach Combined.....	1
*Railway, Motor Bus and Trolley Coach Combined	27
(b) Trolley Coach Companies (Total) (All Urban) ..	45
Trolley Coach Exclusively .....	4
*Trolley Coach and Motor Bus Combined.....	13
(c) Motor Bus Companies (Total) .....	1,164
Urban Motor Bus.....	645
Suburban Motor Bus.....	519
Motor Bus Exclusively.....	1,064

\* Included also in item (c)

### Distribution of Transit Companies by Population Groups

(Note: Each company is counted only in the population group of the largest city it serves)

POPULATION GROUP	ELECTRIC RAILWAYS (INCL. JOINT TROLLEY COACH AND/OR MOTOR BUS OPERATIONS)	TROLLEY COACH AND MOTOR BUS OPERATIONS COMBINED	TROLLEY COACH EXCLUSIVELY	MOTOR BUS EXCLUSIVELY	GRAND TOTAL
Over 1,000,000.....	12	—	—	21	33
500,000 - 1,000,000....	10	—	—	2	12
250,000 - 500,000....	18	1	—	23	42
100,000 - 250,000....	21	7	3	42	73
50,000 - 100,000.....	21	3	1	81	106
Less Than 50,000.....	14	2	—	383	399
Suburban and Other....	76	—	—	512	588
<b>TOTAL.....</b>	<b>172</b>	<b>13</b>	<b>4</b>	<b>1,064</b>	<b>1,253</b>

2.	<i>Miles of Line and Miles of Route Operated</i> (Dec. 31, 1945)	
(a)	Electric Railway Line Mileage.....	9,212
	Surface Railway Line Mileage.....	8,830
	Subway and Elevated Line Mileage.....	382
(b)	Trolley Coach Line Mileage.....	1,211
(c)	Motor Bus Line Mileage.....	39,500
	Total Line Mileage.....	49,923
(d)	Electric Railway—Miles of Single Track.....	17,732
	Surface Railway—Miles of Single Track.....	16,480
	Subway and Elevated—Miles of Single Track..	1,252
(e)	Trolley Coach—Miles of Negative Overhead Wire	2,368
(f)	Motor Bus—Miles of Route Round Trip.....	90,400
3.	<i>Passenger Vehicles Owned</i> (Dec. 31, 1945) : Total....	90,141
(a)	Electric Railway Cars.....	36,755
	Surface Railway Cars.....	26,680
	Subway and Elevated Cars.....	10,075
(b)	Trolley Coaches .....	3,716
(c)	Motor Buses .....	49,670
4.	<i>Investment</i> (Dec. 31, 1945) : Total.....	\$4,262,400,000
(a)	Electric Railway .....	3,620,000,000
	Surface Railway .....	1,570,000,000
	Subway and Elevated.....	2,050,000,000
(b)	Trolley Coach .....	76,400,000
(c)	Motor Bus .....	566,000,000
5.	<i>Operating Revenue—1945—Total</i> .....	\$1,380,400,000
(a)	Electric Railway .....	709,500,000
	Surface Railway .....	558,200,000
	Subway and Elevated.....	151,300,000
(b)	Trolley Coach .....	68,400,000
(c)	Motor Bus .....	602,500,000
6.	<i>Passenger Revenue—1945—Total</i> .....	\$1,313,700,000
(a)	Electric Railway .....	655,700,000
	Surface Railway .....	504,900,000
	Subway and Elevated.....	150,800,000
(b)	Trolley Coach .....	68,000,000
(c)	Motor Bus .....	590,000,000

7.	<i>Vehicle Miles Operated—1945—Total</i> .....	3,253,800,000
(a)	Electric Railway Car Miles.....	1,398,200,000
	Surface Railway Car Miles.....	939,800,000
	Subway and Elevated Car Miles.....	458,400,000
(b)	Trolley Coach Miles.....	133,300,000
(c)	Motor Bus Miles.....	1,722,300,000
8.	<i>Total Passengers Carried—1945—Total</i> .....	23,254,000,000
(a)	Electric Railway .....	12,124,000,000
	Surface Railway .....	9,426,000,000
	Subway and Elevated.....	2,698,000,000
(b)	Trolley Coach .....	1,244,000,000
(c)	Motor Bus .....	9,886,000,000
9.	<i>Revenue Passengers Carried—1945—Total</i> ... .....	18,981,900,000
(a)	Electric Railway .....	9,636,000,000
	Surface Railway .....	7,080,900,000
	Subway and Elevated.....	2,555,100,000
(b)	Trolley Coach .....	1,001,200,000
(c)	Motor Bus .....	8,344,700,000
10.	<i>Number of Employees</i> (Average 1945)—Total	242,000
(a)	Electric Railway .....	129,200
	Surface Railway .....	95,500
	Subway and Elevated.....	33,700
(b)	Trolley Coach .....	8,500
(c)	Motor Bus .....	104,300
11.	<i>Payroll—1945—Total</i> .....	\$632,000,000
(a)	Electric Railway .....	351,000,000
	Surface Railway .....	265,200,000
	Subway and Elevated.....	85,800,000
(b)	Trolley Coach .....	20,600,000
(c)	Motor Bus .....	260,400,000
12.	<i>Expenditures for Materials—1945—Total</i> ....	\$184,020,000
(a)	Maintenance Materials .....	77,830,000
(b)	Operating Materials .....	106,190,000
	I. Coal .....	12,130,000
	II. Gasoline .....	46,500,000
	III. Diesel Oil .....	1,870,000

*Expenditures for Materials—1945—(continued)*

IV. Lubricants .....	3,340,000
V. Electric Power (Purchased) .....	42,350,000

13. *Electrical Energy Consumed (Kw-hr.)—1945* 6,928,000,000

14. *Urban Riding Habit—1945*

(Revenue Rides per capita of 1940 Population)

Cities over 1,000,000 Population .....	428
Cities 500,000-1,000,000 Population .....	421
Cities 250,000-500,000 Population .....	373
Cities 100,000-250,000 Population .....	303
Cities 50,000-100,000 Population .....	259
Cities 25,000-50,000 Population .....	126



## THE YEAR 1945 IN THE TRANSIT INDUSTRY

FOR THE TRANSIT INDUSTRY 1945 was a year of uncertainty tinged with apprehension. With the ending of the war the industry regarded its 23 billion riders, some 10 billion or 75 per cent above prewar levels, and wondered, with some misgiving, what was going to happen. Its operating costs were still going up. Labor, in fact, with government controls abolished, was insistently demanding further and substantial increases in pay. If traffic held up reasonably well, these demands, in some measure at least, could be met. If it did not, the squeeze threatened to extinguish the earnings of a large section of the industry.

However, the real test did not come in 1945. Until V-J Day, that is through the month of August, transit traffic continued to run above 1944, although with a steadily diminishing margin. In the month of September, the first full month of peace, it dropped nearly 5 per cent below September, 1944, and it seemed that the industry's worst fears were about to be realized. The subsequent months failed to confirm this trend, however. Traffic recovered in October almost to the level of 1944, and for the balance of the year it continued to run less than 3 per cent below the previous year.

The explanation of this unexpectedly good showing of transit traffic, after the end of the war, is *first* the quick shift which most industries were able to make from war to peace activities with very little unemployment resulting, and *second* the reduced registration of passenger automobiles and the inability of people to get new cars.

The decrease from 1944 in the number of passengers carried in the later months of 1945 was not great enough to offset the increase in the early part of the year, so that traffic for the whole year was one per cent above 1944 and registered a new yearly high at 23,254 million passengers, compared with 23,017 million in 1944.

The decline in the earning power of the industry which began in 1944 continued in 1945. Although gross revenues increased slightly more than the traffic did, due to a smaller proportion of the passengers using reduced token fares, higher operating costs more than wiped out the revenue increase and produced a substantial decrease in the net. The reduction in income and excess profits taxes alleviated the situation somewhat and held the decrease in earnings to less than 8 per cent.

After V-J Day the industry turned to the carrying out of the plans it had been maturing in the closing months of the war. These contemplated the complete rehabilitation and modernization of the physical properties that had become run down during the war, the retraining of personnel and the restoration of prewar standards of service, or better. Expansion of motor bus and trolley coach service was high on the list of projects of nearly all companies. On a number of small and medium-sized properties, programs for the conversion of railway lines to bus or trolley coach, interrupted by the war, were resumed and pushed energetically. All of the plans ran into delays, however. Equipment manufacturers did not have the capacity to meet all of the demands on them. They were slow in getting into production, due to scarcities of materials and industrial strikes. Shortages of parts were common. As the year ended, earnest efforts were being made to speed up production, but progress was barely perceptible.

## RESULTS OF OPERATION IN 1945

THE RESULTS OF TRANSIT operations in the United States in 1945 compared with 1944 are shown in Chart X. Operating revenue increased by 18 million dollars or 1.33 per cent bringing the total up to 1,380.4 millions—a new all-time high for the industry. However, operating expenses increased by 55.1 million or 5.44 per cent, thus more than offsetting the increase in revenue and producing a decrease of 37 million dollars or 10.56 per cent in net operating revenue.

Taxes were lower by 24.7 million dollars or 13.06 per cent. Practically all of this reduction was in the Federal income and excess profits taxes.

As a result of the decrease in taxes, operating income after taxes, the amount available for return on investment, was only 12.2 million dollars less than in 1944, a decline of only 7.61 per cent. In dollars the operating income was 148.7 million dollars in 1945 compared with 161 millions in 1944.

The operating ratio increased from 74.29 per cent to 77.31 per cent. The ratio of taxes to operating revenue, however, dropped from 13.89 per cent to 11.92 per cent. Operating expenses and taxes together absorbed 89.23 per cent of the revenue in 1945 as against 88.18 per cent in 1944, leaving 10.77 per cent for return on the investment in 1945 and 11.82 per cent in 1944.

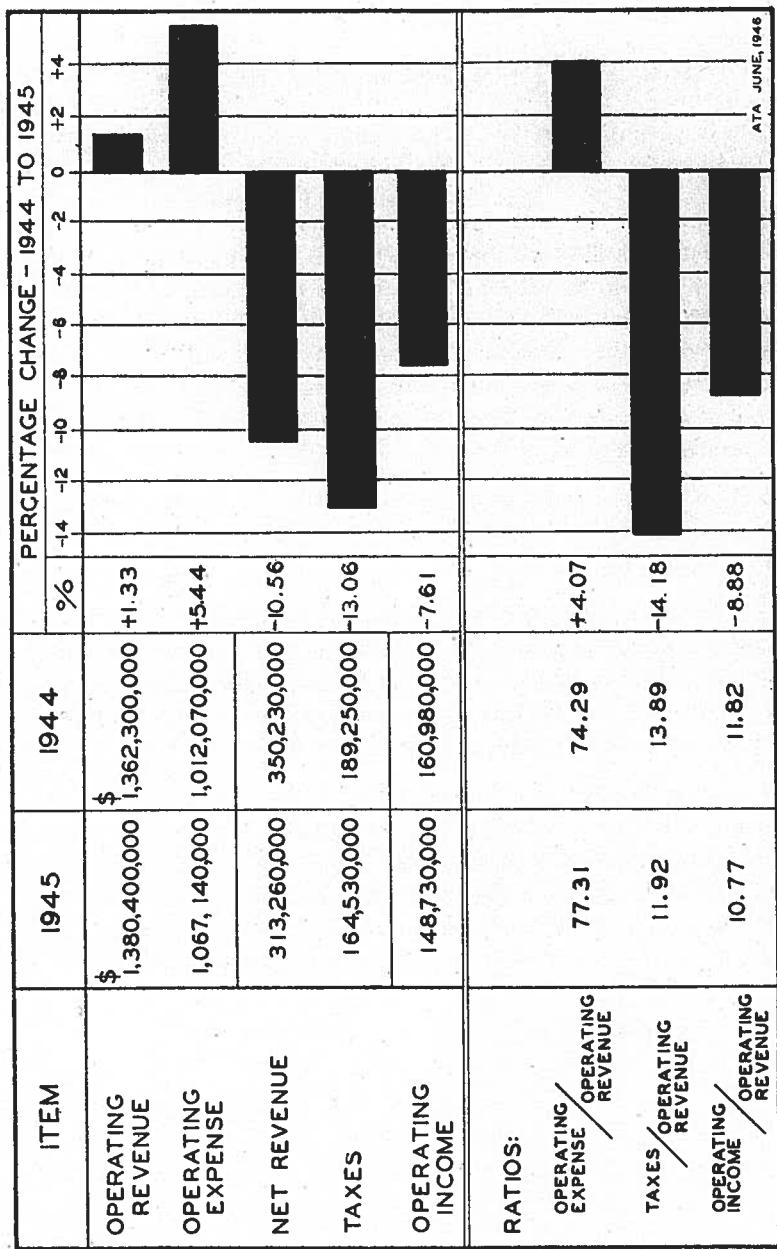


CHART X—Results of transit operations in 1945 compared with 1944.

## COMPARATIVE RESULTS OF OPERATION 1932-1945

THE COMPARATIVE RESULTS of operation in the years 1932 to 1945 inclusive are presented in Table 1. From the standpoint of efficiency and economy of operation, the best year in this period was 1934 when 14.85 per cent of the operating revenue was available for return on the investment. The poorest year in this regard was 1938, when only 7.90 per cent of operating revenue was available to pay a return.

From the standpoint of the total amount of money available to pay a return on the investment, 1943 was the best year of the 14 covered in this table. In that year 174.7 millions of dollars were earned over and above operating expenses and taxes. This compares with 100.2 millions in 1934 and 55.4 millions in 1938. The 1943 earnings amounted to only 13.50 per cent of the total operating revenue in that year. The failure to equal the 1934 record in this respect was due to the sharp increase in taxes in 1943. The operating ratio in 1943 was well below that of 1934, 72.10 per cent, compared with 77.86 per cent. The 1943 operating ratio was, in fact, the lowest of any year in the whole period, 1932 to 1945. After that year it began to climb again as operating costs rose and by 1945 it was back to 77.31 per cent. The 1945 revenues were the highest in the history of the industry, however, and although the expenses also reached a new high, the net operating revenue remaining after their deduction exceeded all but the immediately preceding two war years.

**TABLE NO. 1**  
**Results of Transit Operations in the United States**  
**1932 to 1945 Inclusive**  
**(THOUSANDS OF DOLLARS)**

YEAR	OPERATING REVENUE	OPERATING EXPENSES	NET REVENUE	TAXES
1932.....	\$696,490	\$562,850	\$133,640	\$51,021
1933.....	642,400	502,420	139,980	47,370
1934.....	674,900	525,490	149,410	49,183
1935.....	681,400	534,930	146,470	50,458
1936.....	727,900	565,180	162,720	56,920
1937.....	733,500	588,680	144,820	63,505
1938.....	700,800	579,690	121,110	65,723
1939.....	720,700	586,600	134,100	67,499
1940.....	737,000	598,030	138,970	62,688
1941.....	800,300	644,260	156,040	66,803
1942.....	1,040,000	769,390	270,610	128,650
1943.....	1,294,000	939,970	361,030	186,340
1944.....	1,362,300	1,012,070	350,230	189,250
1945.....	1,380,400	1,067,140	313,260	164,530

Table 1 Continued

YEAR	OPERATING INCOME	OPERATING RATIO	TAXES IN % OF REVENUE	OPERATING INCOME IN % OF REVENUE
1932.....	\$82,619	80.81%	7.33%	11.86%
1933.....	92,610	78.21	7.37	14.42
1934.....	100,927	77.86	7.29	14.85
1935.....	96,012	78.50	7.41	14.09
1936.....	105,800	77.65	7.82	14.53
1937.....	81,315	80.26	8.66	11.09
1938.....	55,387	82.72	9.38	7.90
1939.....	66,601	81.39	9.37	9.24
1940.....	76,282	81.14	8.51	10.35
1941.....	89,237	80.50	8.35	11.15
1942.....	141,960	73.98	12.37	13.65
1943.....	174,690	72.10	14.40	13.50
1944.....	160,980	74.29	13.89	11.82
1945.....	148,730	77.31	11.92	10.77

## TRANSIT TAXES IN 1945

TABLE 2 SHOWS the total taxes paid by the transit industry in 1945, divided into Federal taxes and state, county and local taxes.

Federal taxes amounted to a little more than 98 millions of dollars and constituted 59.7 per cent of the total taxes paid by the industry. The largest items in the Federal taxes were the income and excess profits taxes amounting to 46 million and 35 million dollars respectively,—28.2 per cent and 21.4 per cent of the total taxes. Other Federal taxes, comprising principally excise taxes and the capital stock tax, come to slightly more than 16.5 million dollars or 10.1 per cent of the total.

State, county and local taxes amounted to 66.4 million dollars and 40.3 per cent of total taxes. A further division of these taxes among state, county and municipal authorities might be made, but for the industry as a whole the figures would have little significance because of the variation in the taxing powers of the local divisions of government in the different states.

**TABLE NO. 2**  
**Transit Taxes in 1945**

	AMOUNT	PERCENT DISTRIBUTION
Federal Taxes (total).....	\$98,160,000	59.7%
Income Taxes.....	46,420,000	28.2
Excess Profits Taxes.....	35,160,000	21.4
Other Federal Taxes.....	16,580,000	10.1
State, County and Local Taxes.....	66,370,000	40.3
<b>TOTAL TAXES.....</b>	<b>\$164,530,000</b>	<b>100.0%</b>

## TRANSIT TRAFFIC

### Total Passengers in 1945

TABLE 3 SHOWS the total number of passengers carried on the transit lines of the United States in 1945. Total passengers include revenue passengers, revenue transfer passengers, free transfer passengers and all free passengers or deadheads.

More than half of all of the transit passengers were carried on the railway lines in 1945, including the subway and elevated lines in New York, Chicago, Philadelphia and Boston. The transit motor bus lines carried approximately 43 per cent of the total and the trolley coach lines accounted for slightly more than 5 per cent. Subway and elevated passengers comprised 12 per cent of the total railway traffic. If only surface street traffic is considered, then the motor bus passengers constituted the largest single group in 1945, exceeding the surface street railway traffic by 460 million passengers.

TABLE NO. 3

**Total Passengers Carried on Transit Lines of the United States in 1945  
Distributed by Type of Service and Population Groups**

	RAILWAY (Millions)	TROLLEY COACH (Millions)	MOTOR BUS (Millions)	GRAND TOTAL (Millions)
Subway and Elevated.....	2,698	—	—	2,698
Surface Lines: Population Group.				
Over 1,000,000.....	3,911	79	1,734	5,724
500,000 - 1,000,000.....	2,458	197	879	3,534
250,000 - 500,000.....	1,452	508	1,907	3,867
100,000 - 250,000.....	637	233	1,953	2,823
50,000 - 100,000.....	426	135	1,597	2,158
Less Than 50,000.....	216	92	694	1,002
Suburban and Other.....	326	—	1,122	1,448
<b>TOTAL.....</b>	<b>12,124</b>	<b>1,244</b>	<b>9,886</b>	<b>23,254</b>

Including subway and elevated traffic almost 87 per cent of all transit railway traffic is concentrated in cities of 250,000 population and over. Less than half, about 46 per cent, of the bus traffic is found in these cities. On the other hand 72 per cent of all of the traffic in cities below 250,000 is carried in buses, about 22 per cent in surface railway cars and the balance in trolley coaches.

### Comparison With 1944

CHART XI SHOWS a comparison of transit traffic in 1945 and 1944 for the country as a whole and for the several population groups. For the United States as a whole it increased 1.0 per cent, but the rate of increase was uneven in the various cities. The greatest increases were reported in the smallest cities and in the suburban areas, as was the case throughout the war period. Following them, in the order of increases, were the subway and elevated lines operated for the most part in the largest metropolitan centers. They increased 2.9 per cent, but the surface lines,

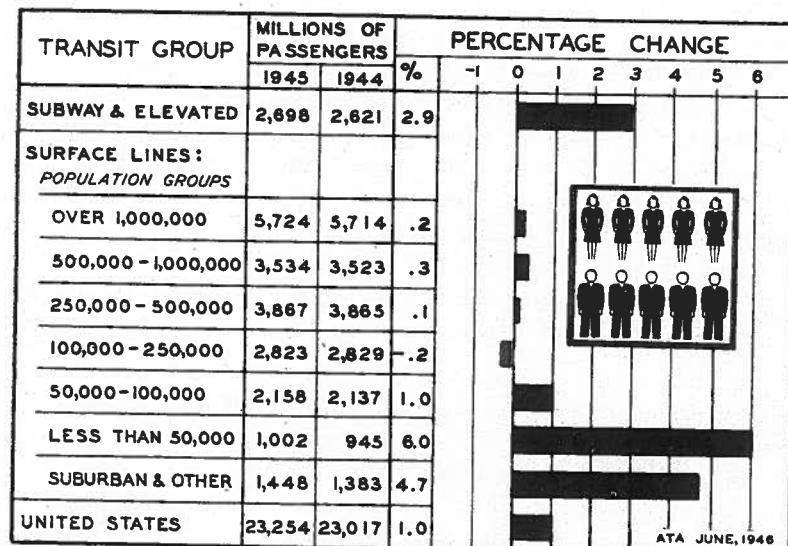


CHART XI—Percentage increases in total passengers in various population groups—1945 compared with 1944.

rail and bus together in the largest cities, increased only 0.2 per cent.

An actual decrease in traffic under 1944 was experienced by the cities between 100,000 and 250,000 and they were the only group reporting a decrease. However, the increases in the remaining groups did not exceed 1.0 per cent and in the case of the cities between 250,000 and 500,000 it was less than 0.1 per cent.

### **Monthly Traffic Index**

**I**N CHART No. 4\* the ATA monthly traffic index is recorded graphically from January 1939 to December 1945. The index is based on the averages of the months of the years 1936 to 1940, taken separately as 100, so as to eliminate the normal seasonal variation. It is also adjusted for variations in the number of working days in the month and also for fluctuations in the occurrence of Easter.

In addition to the index of traffic in the United States as a whole, separate indexes have been calculated for three groups of cities: those over 1,000,000 population, those between 250,000 and 1,000,000, and those under 250,000. The trend of each of these indexes is shown in the chart.

The recurring peaks which all of the indexes make in July, in each of the last four years, is due to abnormal wartime conditions which affected the seasonal trend. The usual summer drop in traffic did not occur in those years and in consequence the index, which is based on the normal seasonal pattern, rose abnormally during the summer months in the war years. It is expected that this abnormality will disappear with the full restoration of peace-time conditions, but if it does not, the index will have to be revised to fit the new postwar seasonal pattern.

In 1945, it will be noted, there was a slight hesitation in the upward trend of traffic in April which is most particularly evident in the cities under 250,000 population. It does not appear at all in the cities over 1,000,000 population. May showed a resumption of the rise which continued up to the year's peak in July. The indexes then dropped sharply to the year's low point, in December, in all of the indexes. Part of this decline is attri-

butable to the recession from seasonal high, already mentioned, but the depth of the decline was due to the decrease in traffic which set in after V-J Day.

### **Total Passengers 1922-1945**

**T**HE TOTAL NUMBER of passengers carried on the transit lines of the United States annually since 1922 is shown in Table 4. The surface railway, subway and elevated, motor bus, and trolley coach traffic over this period are shown separately.

The outstanding features of this 24-year record are the rapid increase in motor bus and trolley coach traffic and the decline of surface railway traffic. The subway and elevated traffic shows a steady but not spectacular increase. New peaks were established

**TABLE NO. 4**

**Total Transit Passengers in the United States  
by Types of Service—1922 to 1945**

CALENDAR YEAR	RAILWAY			TROLLEY COACH	MOTOR BUS	GRAND TOTAL
	SURFACE (Millions)	SUBWAY AND ELEVATED (Millions)	TOTAL (Millions)			
1922	13,389	1,942	15,331	—	404	15,735
1923	13,569	2,081	15,650	—	661	16,311
1924	13,105	2,207	15,312	—	989	16,301
1925	12,903	2,264	15,167	—	1,484	16,651
1926	12,875	2,350	15,225	—	2,009	17,234
1927	12,450	2,451	14,901	—	2,300	17,201
1928	12,026	2,492	14,518	3	2,468	16,989
1929	11,787	2,571	14,358	5	2,622	16,985
1930	10,513	2,559	13,072	16	2,479	15,567
1931	9,175	2,408	11,583	28	2,313	13,924
1932	7,648	2,204	9,852	37	2,136	12,025
1933	7,074	2,133	9,207	45	2,075	11,327
1934	7,394	2,206	9,600	68	2,370	12,038
1935	7,276	2,236	9,512	96	2,618	12,226
1936	7,501	2,323	9,824	143	3,179	13,146
1937	7,161	2,307	9,468	289	3,489	13,246
1938	6,545	2,236	8,781	389	3,475	12,645
1939	6,171	2,368	8,539	445	3,853	12,837
1940	5,943	2,382	8,325	534	4,239	13,098
1941	6,081	2,421	8,502	652	4,931	14,085
1942	7,290	2,566	9,856	899	7,245	18,000
1943	9,150	2,656	11,806	1,175	9,019	22,000
1944	9,516	2,621	12,137	1,234	9,646	23,017
1945	9,426	2,698	12,124	1,244	9,886	23,254

\* See *Transit Facts in Brief*.

in 1945 by the buses, the trolley coaches, and the subway and elevated lines, but not by the surface railways. Their peak was reached back in 1923. Total transit traffic established an all-time peak up to this time at least, in the upswing from 1939 to 1945, the previous peak being in 1926.

Modern trolley coaches made their first appearance in 1928 and the record of their traffic begins with that year. Old-style trolley coaches or "trackless trolleys" were operated in several places in the United States before that, but they seldom lasted long in one place and the small amount of traffic they carried fluctuated erratically.

The record of motor bus traffic shown in Table 4 covers most of the period since motor buses became important factors in the local transit field. The Fifth Avenue Coach Company in New York was motorized in 1907, and a few electric railways were experimenting with motor buses before the first World War, but prior to 1922 the total volume of motor bus traffic was comparatively unimportant.

Prior to the present war the peak year of transit traffic was 1926 when something more than 17 billion passengers were carried. The year 1926 marks an important mile post in the history of the transit industry or, with more accuracy perhaps, it might be said it dates the end of an era in the evolution of local transportation. It is the year in which the first great wave of expansion of transit traffic was finally arrested by the growth of private transportation. Its importance has been obscured by later, more spectacular developments, such as the effect of the great depression and that of the second world war. These great events, while exerting a profound influence on transit, may properly be classed as transient in their effects. They were temporary influences imposed on the industry from without. The culmination of the trend which occurred in 1926, on the other hand, was the product of underlying forces within the field of local transportation itself.

For nearly a generation before 1926, the means by which the individual could provide private transportation for himself, economically, had been developing simultaneously with the expansion of local public transportation and the multiplication and growth of cities. The price of the automobile was being brought

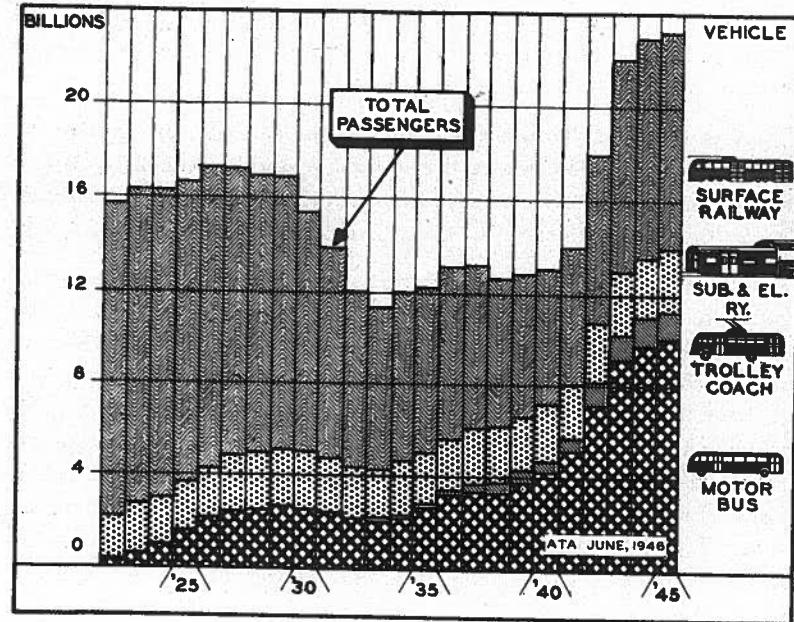


CHART XII—Total passengers carried by transit companies in the United States 1922-1945.

within the means of practically everybody and hard-surfaced roads were being extended practically everywhere. At the same time, however, cities were increasing in population and expanding in area. The necessity for transportation within cities and between cities kept increasing, with the result that the volume of both public and private transportation increased together. However, a certain portion of private transportation represented a shift from public transportation, and this portion increased as the cost of private transportation was reduced and parking space began to be provided around places of employment. Its effect was not apparent for some years, but after World War I it increased rapidly and the growth of traffic on transit lines came to a pause in 1926 with a peak of 17 billion passengers.

The total continued to hover around 17 billions until the big depression. For four years following 1929 it declined continuously, finally reaching its low point at 11 1-3 billions in 1933. Most of the loss was in the street car traffic, but even the buses, which had been rapidly expanding their operations prior to 1929, lost traf-

fic during this period, their total dropping from 2.6 billions in 1929 to about 2 billions in 1933. Trolley coaches were a negligible factor in the traffic total in those years.

After 1933, traffic increased slowly but steadily, except for the recession year 1938 when there was a slight setback. This is shown in Table 4. Recovery was resumed in 1940 and continued until the war boom took over and raised traffic to new high levels.

The feature of the traffic record during the last 10 years has been the expansion of the bus and to a lesser degree that of the trolley coach. From only slightly more than 2 billions at the bottom of the depression, the number of bus passengers has increased to over 9 billions in 1944. Similarly trolley coach traffic has increased from 68 millions to one and one-quarter billions during the same period. Although trolley coach traffic is smaller and its field of operation somewhat more restricted than that of the motor bus, its growth during this period has been, considered by itself, even more impressive than that of its automotive counterpart.

Surface railway traffic reached a low point in 1940 when slightly less than 6 billion passengers were carried. It represented a decline which had been going on, with some occasional interruptions, since before the depression. In addition to the effects of the depression, the principal cause of it was the conversions to bus operation which were going on steadily in the smaller cities. Reference to Table 22 (on page 55) will show that the amount of street railway track in service was reduced by more than 8,000 miles during the period shown in this table.

In 1941, however, street railway traffic turned upward and crossed the 6 billion line again even before the full war production program and the curtailment of private automobile use had set in. By 1943 it was back above 9 billion, a figure not reached since 1931.

Traffic on the subway and elevated lines—the rapid transit lines—has had a steady but rather slow increase in the last 10 years. There were small decreases in 1937 and 1938 in spite of the opening of new subway lines in New York, but in 1939 the traffic turned up again. Though not affected by the war as much as the other services the rapid transit lines carried increasing loads and reached a new high at 2,698 million passengers in 1945.

### *Annual Rate of Traffic*

**I**N CHART XIII is shown the annual rate at which passengers were being carried during each of the months of the years 1938 and 1941 to 1945 inclusive.

For the first time, during the period covered in the chart, the curve of one year has crossed that of another—in 1945 the curve dropped below 1944 and also below 1943, in September. It re-

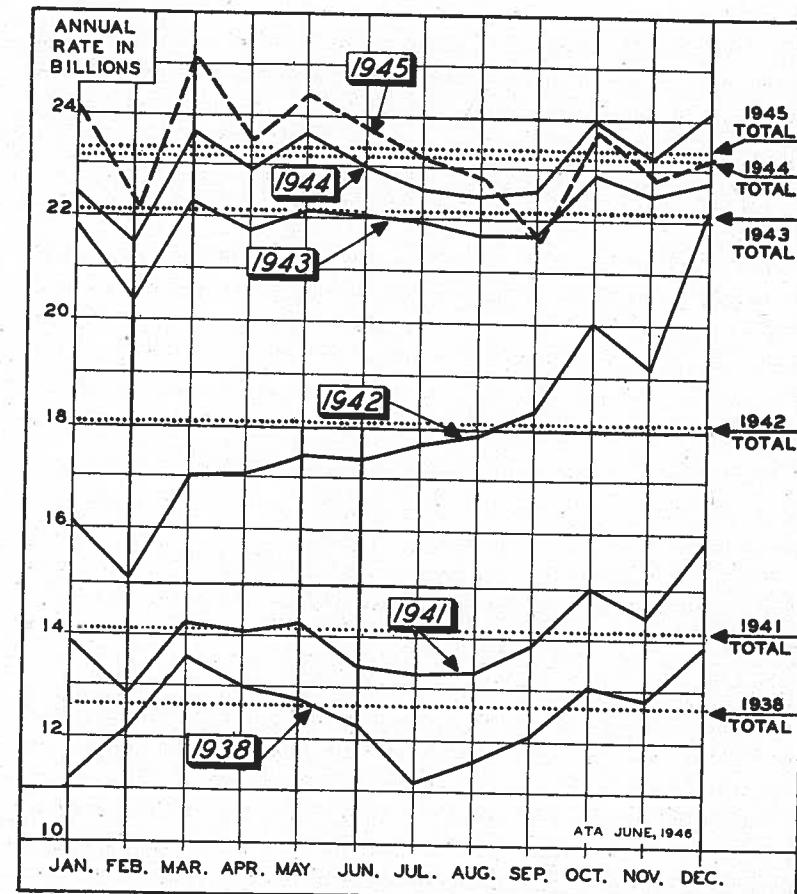


CHART XIII—Annual rate indicated by the number of passengers carried in each of the months of the years 1938 and 1941 to 1945 inclusive.

covered in October and recrossed 1943, but continued below 1944 for the remainder of the year.

One of the interesting features of Chart XIII is the variation in the seasonal pattern from year to year. With the rapid increase in traffic during the war years and the curtailment of normal vacation practices, the normal seasonal pattern of traffic was obliterated. In 1944, some evidence of it reappeared, but it still deviated from the prewar norm. In 1945, it appeared in July and August that the normal pattern was practically recovered, but the slump in September following V-J Day again disrupted the expected trend and produced an abnormal (under prewar standards) pattern for the year. It is assumed that the September traffic was the product of adjustment to war-end conditions and is not likely to recur in the same manner again, but we shall have to await the completion of the year 1946 to be sure of it.

### Rides Per Capita 1924-1945

CHART XIV SHOWS the trend of transit riding in relation to the urban population of the United States over the period from 1924 through 1945. The urban population used includes the population of all incorporated places of 2500 inhabitants and over and certain other areas included in the urban population, as defined by the U.S. Bureau of the Census.

To bring out the comparative trends the urban population, the total number of transit rides, and the number of rides per capita have been put on an index basis with the year 1924 taken as 100. The subsequent respective trends of the three indexes appear in the chart. The basic data used and the index numbers calculated therefrom are given in Table 5.

Starting at 100 in 1924 the index of rides per capita dropped to 99.6 in 1925 and then rose to 101.1 in 1926. This remained the high point until the year 1943 when the index rose to 106.6. In the intervening years it had registered a low of 59.0 at the bottom of the depression. From this low it rose to 67.2 in 1937 and then in 1938, in the business recession of that year, it dropped again to 63.8. Thereafter it rallied and under the impetus of the defense and war programs it finally, in 1943, went through the old 1926 high. In 1944 it rose further to 114.0, the high to date.

TABLE NO. 5

Urban Population, Total Rides and Rides per Capita  
1924 to 1945 Inclusive

YEAR	URBAN POPULATION (Millions)	TOTAL RIDES (Millions)	RIDES PER CAPITA OF POPULATION	INDEXES (1924 = 100)		
				POPULATION	RIDES	RIDES PER CAPITA
1924	60.1	16,301	271	100.0	100.0	100.0
1925	61.6	16,651	270	102.5	102.1	99.6
1926	63.0	17,234	274	104.8	105.7	101.1
1927	64.5	17,201	267	107.3	105.5	98.5
1928	66.0	16,989	257	109.8	104.2	94.8
1929	67.5	16,985	252	112.3	104.2	93.0
1930	69.0	15,567	226	114.8	95.5	83.4
1931	69.5	13,924	200	115.6	85.4	73.8
1932	70.0	12,025	172	116.5	73.8	63.5
1933	70.6	11,327	160	117.5	69.5	59.0
1934	71.1	12,038	169	118.3	73.8	62.4
1935	71.7	12,926	171	119.3	75.0	63.1
1936	72.2	13,146	182	120.1	80.6	67.2
1937	72.8	13,246	182	121.1	81.3	67.2
1938	73.3	12,645	173	122.0	77.6	63.8
1939	73.9	12,837	174	123.0	78.7	64.2
1940	74.4	13,098	176	123.8	80.4	64.9
1941	75.0	14,085	188	124.8	86.4	69.4
1942	74.4	18,000	242	123.8	110.4	89.3
1943	73.5	22,000	299	122.3	135.0	110.3
1944	74.6	23,017	309	124.1	141.2	114.0
1945	76.3	23,254	305	127.0	142.7	112.5

After 1941 the population used is the civilian population with the armed service personnel excluded.

In 1945 the index turned down to 112.5. The number of rides increased in 1945 over 1944, but the increase in population, due in part to returning service men, was proportionally greater and produced the decline in the rides per capita. At the 1945 level the index represents an average of 305 rides per capita compared with 309 in 1944.

The "rides per capita," as shown in the table, are not the equivalent of what is technically known as the "riding habit." They are the total number of transit rides, including revenue rides, transfer rides and free rides, divided by the urban population of the United States.

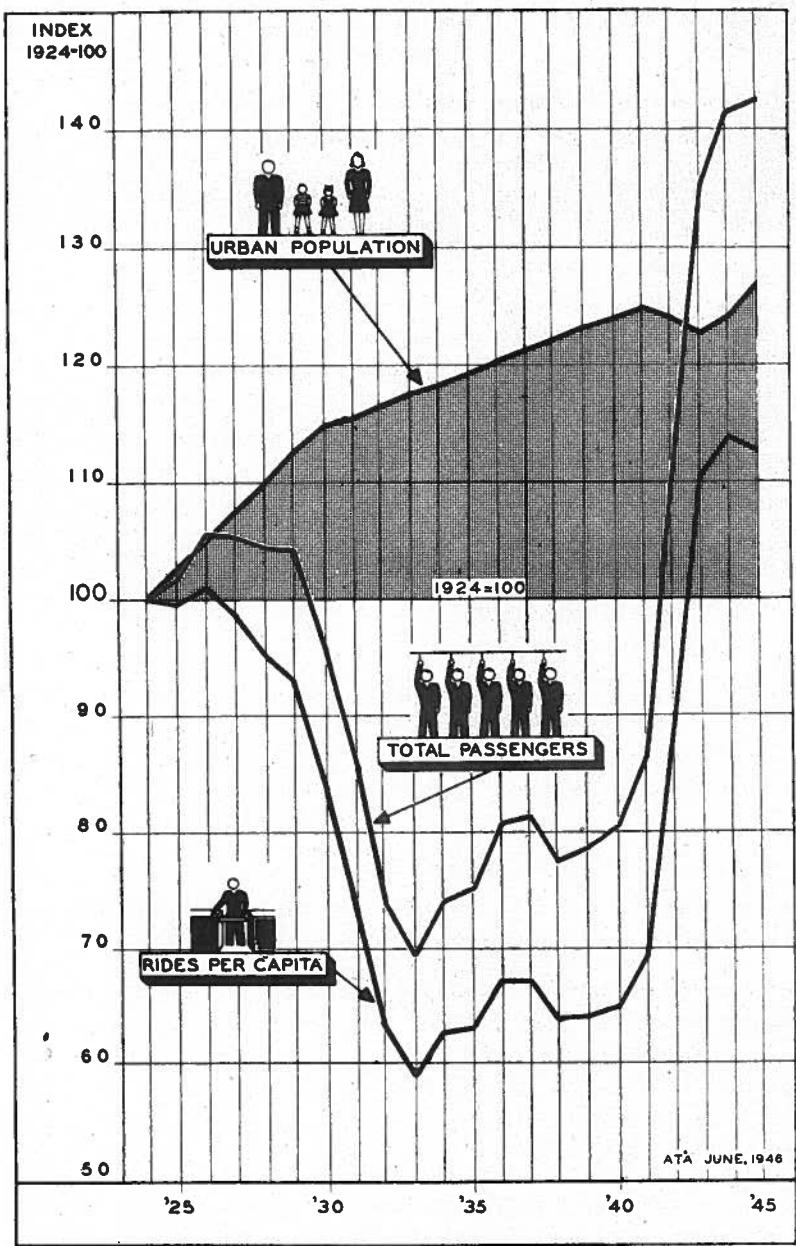


CHART XIV—Comparative trends of total passengers, urban population and rides per capita—1924-1945.

### Revenue Passengers in 1945

THE REVENUE PASSENGERS carried in 1945 are shown in Table 6, classified according to the type of service and population groups. The number of revenue passengers is equivalent to the number of completed journeys taken by paying passengers. Transfer rides on both revenue and free transfers are excluded, as are also all free rides.

With some slight exceptions revenue passengers are distributed among the three types of service and among the several population groups in the same proportions as the total passengers in Table 3. The principal exception is the subway and elevated passengers. They comprise 26 per cent of all the railway revenue passengers, but only 22 per cent of total railway passengers. This is because there are relatively fewer transfer passengers on the subway and elevated lines than on the surface railways. However, there is a large volume of physical transferring within pre-payment areas on the subway and elevated lines, particularly in New York, that is not recorded and hence is not reflected in the statistics.

TABLE NO. 6

Revenue Passengers Carried on Transit Lines of United States in 1945  
Distributed by Type of Service and Population Groups

	RAILWAY (Millions)	TROLLEY COACH (Millions)	MOTOR BUS (Millions)	GRAND TOTAL (Millions)
Subway and Elevated.....	2,555	—	—	2,555
Surface Lines: Population Group				
Over 1,000,000.....	2,833	46	1,540	4,419
500,000 - 1,000,000.....	1,793	145	612	2,550
250,000 - 500,000.....	1,047	408	1,465	2,920
100,000 - 250,000.....	520	206	1,633	2,359
50,000 - 100,000.....	382	117	1,400	1,899
Less Than 50,000.....	201	79	652	932
Suburban and Other.....	305	—	1,043	1,348
<b>TOTAL.....</b>	<b>9,636</b>	<b>1,001</b>	<b>8,345</b>	<b>18,982</b>

## Trend of Revenue Passengers 1926-1945

THE TREND OF REVENUE passengers since 1926 is shown in Table 7. Revenue passengers followed the same trend as total passengers. They constitute, in fact, more than 80 per cent of the total passengers.

TABLE NO. 7

Revenue Passengers Carried on Transit Lines of the United States  
Distributed by Types of Service—1926-1945

CALENDAR YEAR	RAILWAY			TROLLEY COACH	MOTOR BUS	GRAND TOTAL
	SURFACE (Millions)	SUBWAY AND ELEVATED (Millions)	TOTAL (Millions)			
1926	9,774.7	2,333.3	12,108.0	—	1,777.1	13,885.1
1927	9,404.7	2,440.4	11,845.1	—	2,027.9	13,873.0
1928	8,970.9	2,484.1	11,455.0	2.4	2,171.8	13,629.2
1929	8,728.1	2,570.9	11,299.0	4.0	2,300.8	13,603.8
1930	7,782.1	2,563.9	10,346.0	12.9	2,169.1	12,528.0
1931	6,751.0	2,415.0	9,166.0	22.5	2,018.1	11,206.6
1932	5,544.7	2,212.8	7,757.5	29.6	1,862.4	9,649.5
1933	5,107.7	2,147.2	7,254.9	35.1	1,815.6	9,105.6
1934	5,315.6	2,222.1	7,537.7	54.3	2,079.7	9,671.7
1935	5,156.2	2,252.3	7,408.5	76.5	2,297.3	9,782.3
1936	5,276.0	2,339.4	7,615.4	122.6	2,773.7	10,511.7
1937	4,979.4	2,228.2	7,207.6	230.8	2,997.1	10,435.5
1938	4,439.4	2,261.8	6,701.2	312.4	2,971.1	9,984.7
1939	4,310.4	2,289.8	6,600.2	357.8	3,294.3	10,252.3
1940	4,182.5	2,281.9	6,464.4	419.2	3,620.1	10,503.7
1941	4,276.3	2,298.1	6,574.4	521.0	4,206.1	11,301.5
1942	5,141.5	2,447.2	7,588.7	718.0	6,194.5	14,501.2
1943	6,893.7	2,516.3	9,410.0	938.0	7,570.0	17,918.0
1944	7,169.4	2,483.1	9,652.5	986.8	8,096.1	18,735.4
1945	7,080.9	2,555.1	9,636.0	1,001.2	8,344.7	18,981.9

## TRANSIT REVENUES

### Operating Revenue in 1945

TABLE 8 SHOWS the total operating revenue of the transit industry of the United States in 1945, distributed by type of service and population groups. Of the grand total revenue of 1,380.4 millions of dollars, 709.5 millions or 51.4 per cent was derived from railway operations, 602.5 millions, or 43.6 per cent from bus operations and 68.4 millions, or 5.0 per cent, from trolley coach operations. Rail operations include subway and elevated rapid transit service. Subway and elevated revenues amounted to 151.3 million dollars, or 11 per cent of the total revenue and surface railway operations to 558.2 millions or 40.4 per cent of the total.

Revenue from surface operation in cities over 250,000 population accounted for 51 per cent of the total transit revenue in 1945. If surface and elevated revenues are included in this group 62

TABLE NO. 8  
Transit Operating Revenue for Year 1945 Distributed by Types of Service and Population Groups

	RAILWAY (Millions)	TROLLEY COACH (Millions)	MOTOR BUS (Millions)	GRAND TOTAL (Millions)
Subway and Elevated .....	\$151.3	—	—	\$151.3
Surface Lines: Population Group				
Over 1,000,000.....	\$192.9	\$ 3.4	\$103.6	\$299.9
500,000 - 1,000,000.....	129.6	9.4	45.4	184.4
250,000 - 500,000.....	82.1	29.2	108.6	219.9
100,000 - 250,000.....	37.2	12.4	126.1	175.7
50,000 - 100,000.....	27.4	8.0	90.9	126.3
Less Than 50,000.....	11.6	6.0	40.6	58.2
Suburban and Other.....	77.4	—	87.3	164.7
<b>TOTAL.....</b>	<b>\$709.5</b>	<b>\$ 68.4</b>	<b>\$602.5</b>	<b>\$1,380.4</b>

per cent of the total transit revenue is accounted for. Actually some of the subway and elevated lines serve cities of less than 250,000 population located in metropolitan areas. Only a small fraction of the subway and elevated revenue is derived from the service in these cities, however, and no great error is made in crediting all of the subway and elevated revenues to cities above 250,000 population.

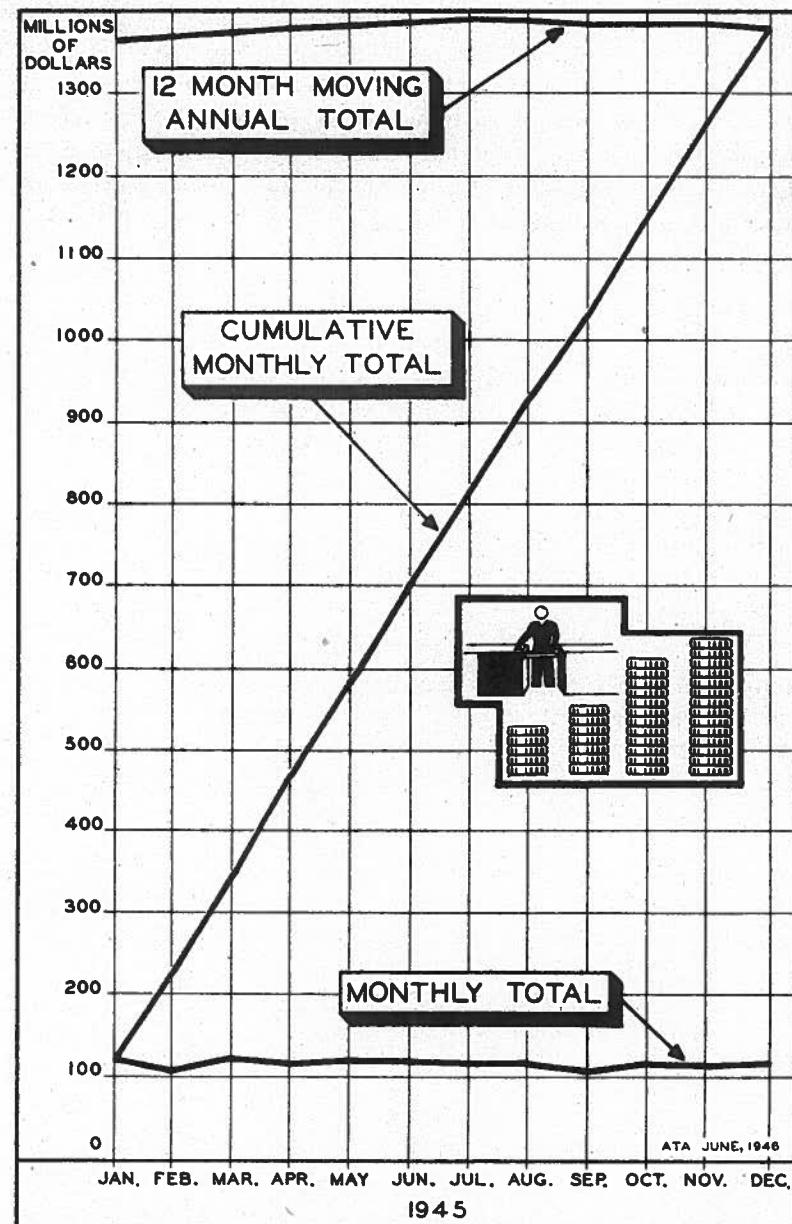
Cities of less than 250,000 population produced 26.1 per cent of the 1945 transit revenue and the remaining 11.9 per cent is derived from suburban and local intercity service.

### **Monthly Revenues**

TABLE 9 Shows the monthly record of transit revenues in 1945 and 1944 and the per cent change of each month of 1945 from the corresponding month of 1944. Increases were reported in the first 8 months of the year and decreases in the last 4 months. The greatest increases were reported in January, March and June, but there was a tendency for the rate of increase to taper off from January, and in September, the first full month after V-J Day, there was a sharp drop below September 1944. The decreases were not as great as this in the succeeding months, but the level of traffic continued below 1944 to the end of the year.

**TABLE NO. 9**  
**Transit Operating Revenue by Months—1945 and 1944**

	1945	1944	% CHANGE (1945-1944)
January.....	\$119,000,000	\$112,100,000	+6.16%
February.....	108,800,000	106,400,000	+2.26
March.....	120,100,000	114,400,000	+4.98
April.....	115,900,000	112,700,000	+2.84
May.....	120,800,000	116,600,000	+3.60
June.....	117,600,000	113,100,000	+3.98
July.....	114,500,000	111,700,000	+2.51
August.....	113,100,000	111,300,000	+1.62
September.....	106,100,000	111,900,000	-4.59
October.....	116,000,000	117,100,000	-0.94
November.....	111,200,000	113,600,000	-2.11
December.....	117,300,000	122,100,000	-3.93
TOTAL.....	\$1,380,400,000	\$1,362,300,000	+1.33



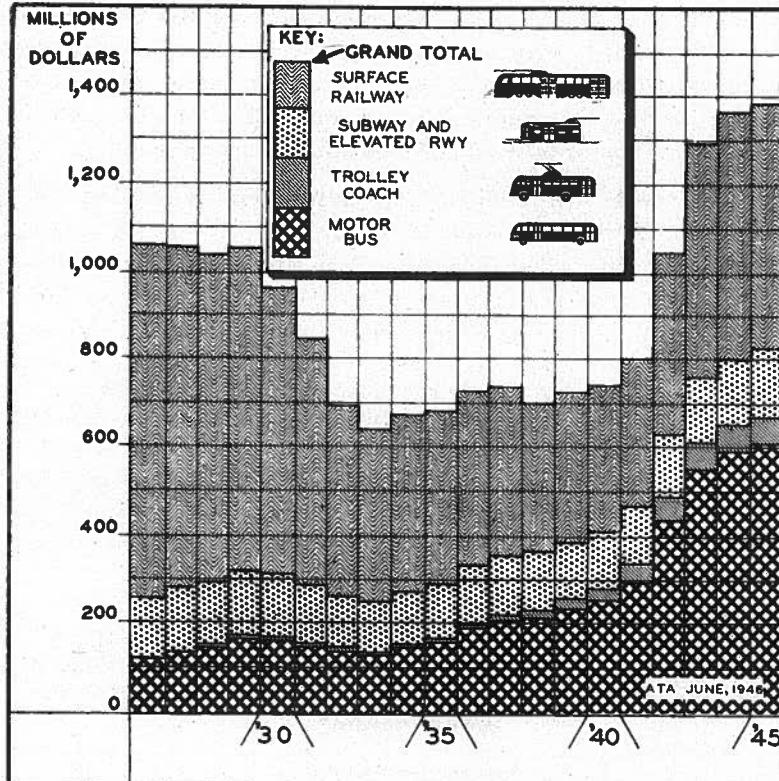
**CHART XV**—Trends of transit revenue in 1945 showing monthly trend, cumulative monthly trend and trend of 12-month moving total.

In Chart XV the monthly revenues in 1945 are plotted in the form of a "Z" chart. First, each month's revenue is plotted along the bottom of the chart. Then the cumulative total revenue in 1945, as of the end of each month, is plotted, the line rising diagonally from the lower left-hand corner to the upper right-hand corner. Finally, across the top of the chart is plotted the 12-month total revenue as of the end of each month of 1945 from January through December.

The most interesting feature of this chart is the way the 12-month moving total rose to a high of 1,393.8 million dollars in August, and then turned down to 1,380.4 million in December, as the revenue for each month, after August, declined below the corresponding month of the preceding year.

**TABLE No. 10**  
**Trend and Distribution of Transit Operating Revenue in the United States by Types of Service—1926-1945**

CALENDAR YEAR	RAILWAY			TROLLEY COACH	MOTOR BUS	GRAND TOTAL
	SURFACE (Millions)	SUBWAY AND ELEVATED (Millions)	TOTAL (Millions)			
1926	\$799.7	\$138.6	\$938.3	—	\$119.2	\$1,057.5
1927	773.9	145.0	918.9	—	135.3	1,054.2
1928	744.7	148.2	892.9	.3	146.9	1,040.1
1929	732.2	154.6	886.8	.6	165.1	1,052.5
1930	649.3	153.6	802.9	1.7	158.4	963.0
1931	548.9	144.1	693.0	2.2	146.9	842.1
1932	432.5	131.2	563.7	2.7	130.1	696.5
1933	388.9	126.4	515.3	3.0	124.1	642.4
1934	397.8	130.6	528.4	4.2	142.3	674.9
1935	388.0	131.8	519.8	5.5	156.1	681.4
1936	397.8	135.6	533.4	7.6	186.9	727.9
1937	380.7	134.8	515.5	14.2	203.8	733.5
1938	339.5	131.1	470.6	18.9	211.3	700.8
1939	332.8	132.9	465.7	21.7	233.3	720.7
1940	327.1	129.0	456.1	25.0	255.9	737.0
1941	332.9	133.6	466.5	34.5	299.3	800.3
1942	412.7	144.3	557.0	48.6	434.4	1,040.0
1943	537.0	149.0	686.0	63.7	544.3	1,294.0
1944	562.1	147.5	709.6	67.5	585.2	1,362.3
1945	558.2	151.3	709.5	68.4	602.5	1,380.4



**CHART XVI**—Trends and distribution of transit operating revenues—1926-1945 by types of service.

### Operating Revenue 1926 to 1945

THE TOTAL ANNUAL operating revenue of the transit industry since 1926 is shown in Table 10. It is subdivided into revenue from surface railways, subway and elevated railway, motor bus, and trolley coach service.

The revenue in 1945, 1,380.4 million dollars, was the largest in the history of the industry. At the low point of the depression in 1933 it was only 642.4 millions, while at the previous peak year, 1926, it had been 1,057.5 millions of dollars.

In 1926 approximately 89 per cent of the revenue had been derived from railway service and 11 per cent from bus service.

In the depression year 1933 the railways accounted for 80 per cent of the total of which about 60.5 per cent came from the surface railways and 19.7 from the subway and elevated railways. Trolley coaches contributed less than one-half of one per cent of the total and motor buses slightly less than 19.5 per cent.

In the peak year 1945 the railways accounted for only 51.4 per cent of the total revenue, of which 40.4 per cent came from the surface railways and 11 per cent from the subway and elevated rapid transit lines. The motor buses contributed 43.6 per cent of the revenue in 1945 and the trolley coaches accounted for the balance, or about 5 per cent.

These figures reflect the expansion of bus service and the shrinkage of railway service during this period. The bus was being extended into new territory and was also replacing the railway in old territories. Reference to Table 22 shows that the number of miles of railway track shrunk from 28,730 in 1933 to

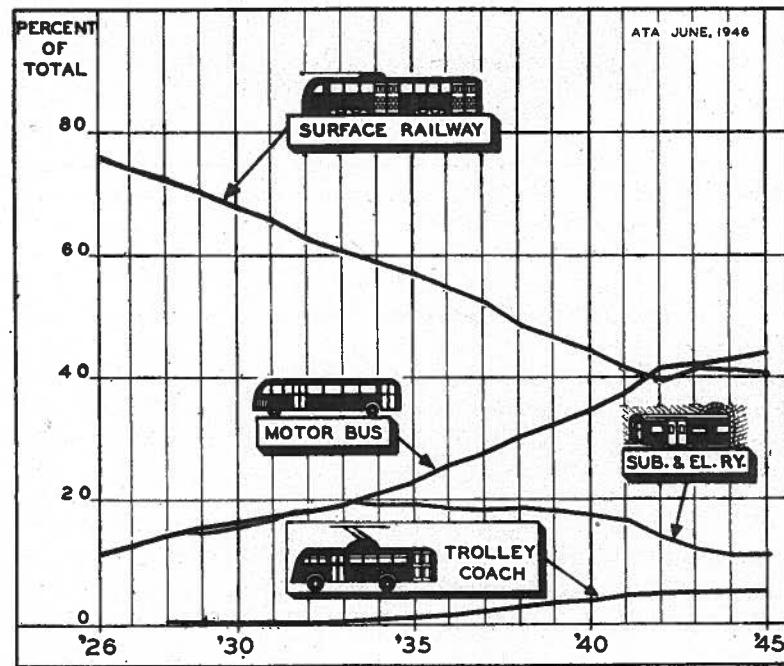


CHART XVII—Percentage distribution of transit revenue by types of service 1926-1945.

16,480 in 1945, while in the same time the round-trip miles of bus route increased from 52,700 to 90,400.

### Passenger Revenue 1926-1945

TABLE 11 SHOWS total passenger revenue of transit companies of the United States for the years 1926 to 1945, and shows the separate trends of railway, motor bus and trolley coach passenger revenue during this period. Passenger revenue consists of the total fares collected from revenue and revenue transfer passengers, for transportation. The difference between it and total operating revenue is made up principally by revenue from charter, mail, express and freight service; advertising and other concessions; sale of power, etc. As the passenger revenue comprises approximately 95 per cent of all operating revenue, and in the case of bus companies more than 98 per cent, there has been no material difference in their trends over the period covered.

TABLE NO. 11  
Trend and Distribution of Transit Passenger Revenue in the United States by Types of Service—1926-1945

CALENDAR YEAR	RAILWAY			TROLLEY COACH (Millions)	MOTOR BUS (Millions)	GRAND TOTAL (Millions)
	SURFACE (Millions)	SUBWAY AND ELEVATED (Millions)	TOTAL (Millions)			
1926	\$728.6	\$134.4	\$863.0	—	\$115.5	\$978.5
1927	705.1	140.6	845.7	—	131.1	976.8
1928	679.5	143.7	823.2	.3	142.3	965.8
1929	667.9	149.9	817.8	.6	159.9	978.3
1930	595.1	148.9	744.0	1.7	153.4	899.1
1931	506.1	139.7	645.8	2.2	142.3	790.3
1932	400.6	127.2	527.8	2.7	126.1	656.6
1933	360.5	129.6	483.1	3.0	120.2	606.3
1934	368.8	126.6	495.4	4.2	137.8	637.4
1935	357.8	127.8	485.6	5.5	151.2	649.3
1936	365.2	131.8	497.0	7.6	180.9	685.5
1937	347.1	130.8	477.9	14.1	197.7	689.7
1938	311.0	128.0	439.0	18.8	205.1	662.9
1939	303.7	130.0	433.7	21.6	226.2	681.5
1940	299.0	128.8	427.8	24.9	248.8	701.5
1941	301.8	131.7	433.5	34.3	291.0	758.8
1942	365.0	139.7	504.7	48.4	426.0	979.1
1943	490.6	147.5	638.1	63.3	534.2	1,235.6
1944	509.0	146.5	655.5	67.1	574.3	1,296.9
1945	504.9	150.8	655.7	68.0	590.0	1,313.7

## VEHICLE MILES

**I**N TABLE 12 is shown the number of revenue vehicle miles operated by all transit vehicles in the United States for the years 1926 to 1945 inclusive.

The total in 1945 was 3,253.8 million miles and of these 1,722.3 million, or 53 per cent, were motor bus miles. Railway miles amounted to 1,398.2, or 43 per cent, and this 43 per cent breaks down into 29 per cent surface railway miles and 14 per cent operated on subway and elevated lines. The remaining 4

per cent of the total vehicle miles were operated by trolley coaches.

For both the motor buses and the trolley coaches the number of vehicle miles operated in 1945 was the greatest in their respective histories, but the railway lines had their peaks in earlier years. The subway and elevated lines registered their peak car mileage in 1941 when they ran 472.8 million miles. In that same year, 1941, the surface railways touched a low point in their car mileage at 792.2 million, the lowest mileage reached by them in the period covered by the table.

Since 1941 subway and elevated car mileage has declined in each year, and in 1945 was 458.4 millions. Surface car mileage increased in 1942 and 1943, but began to decline again in 1944 and in 1945 was down to 939.8 million miles.

TABLE NO. 12

**Revenue Vehicle Miles Operated in the United States by Each Type of Transit Vehicle—1926-1945**

CALENDAR YEAR	RAILWAY			TROLLEY COACHES (Millions)	MOTOR BUSES (Millions)	GRAND TOTAL (Millions)
	SURFACE (Millions)	SUBWAY AND ELEVATED (Millions)	TOTAL (Millions)			
1926	1,821.9	398.1	2,220.0	—	449.7	2,669.7
1927	1,753.6	410.2	2,163.8	—	589.2	2,753.0
1928	1,679.1	434.3	2,113.4	1.2	633.4	2,748.0
1929	1,610.3	450.3	2,060.6	2.0	699.8	2,762.4
1930	1,540.4	454.8	1,995.2	6.0	705.8	2,707.0
1931	1,417.9	440.7	1,858.6	7.9	682.5	2,549.0
1932	1,266.7	423.5	1,690.2	9.5	663.3	2,363.0
1933	1,165.7	427.7	1,593.4	10.5	655.1	2,259.0
1934	1,147.7	438.6	1,586.3	14.6	711.1	2,312.0
1935	1,096.6	447.4	1,544.0	19.0	764.0	2,327.0
1936	1,080.9	461.6	1,542.5	26.3	864.2	2,433.0
1937	1,029.2	469.1	1,498.3	49.7	957.0	2,505.0
1938	922.3	457.4	1,379.7	67.9	986.4	2,434.0
1939	878.3	469.4	1,347.7	74.9	1,047.4	2,470.0
1940	844.7	470.8	1,315.5	86.0	1,194.5	2,596.0
1941	792.2	472.8	1,265.0	98.4	1,313.0	2,676.4
1942	850.4	469.6	1,320.0	115.7	1,619.0	3,047.7
1943	978.0	461.7	1,439.7	129.7	1,693.0	3,262.4
1944	977.9	461.0	1,438.9	132.3	1,713.3	3,284.5
1945	939.8	458.4	1,398.2	133.3	1,722.3	3,253.8

## ELECTRIC POWER

In TABLE 13 there is given the record of electrical energy consumed by the transit industry in the years 1920 to 1945 inclusive, showing the amount generated by the transit companies in their own plants, the amount purchased and the cost of the purchased power.

In 1926 the industry reached its peak in the consumption of electric power when 9,613 million kilowatt hours were consumed of which 3,108 million, or 32.3 per cent, were generated in the companies' own plants and 6,505 million kilowatt hours or 67.7 per cent were purchased. The cost of the purchased power in 1926 was 68.3 million dollars, an average cost of 1.05 cents per kilowatt hour.

Since 1926 the transit industry's consumption of electric power has declined steadily, with minor interruptions in 1934 and 1936 and in the war years 1942 to 1944 inclusive. By 1945 it had shrunk to 6,928 million kilowatt hours, of which 30.7 per cent were generated and 69.3 per cent purchased. The cost of the purchased power in 1945 was 42.3 million dollars, an average of 0.88 cents per kilowatt hour.

While the total consumption of electric power by the transit industry has declined since 1926, consumption by the rapid transit lines has increased steadily, with interruptions only in the depression years and during the war. It reached its peak in 1941 when 1,986 million kilowatt hours were used, about one-third of the total transit consumption in that year. It dropped to 1,940 million kilowatt hours in 1944 and increased again to 1,966 million in 1945.

Trolley coach consumption of electric power, while representing only an insignificant fraction of all transit power consumption, has increased rapidly and without interruption since the inauguration of modern trolley coach operation in 1928. In 1945

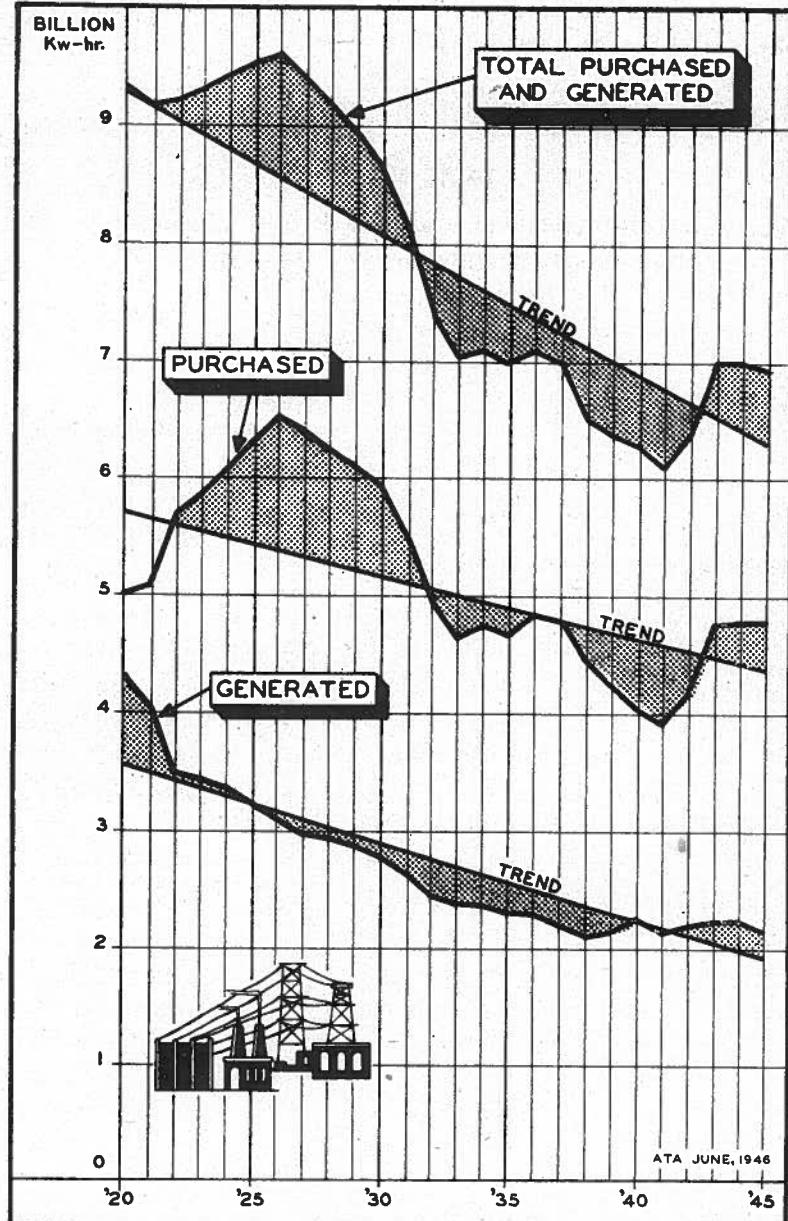


CHART XVIII—Trend and distribution of electric power consumed by the transit industry in the United States—1920-1945.

it amounted to 415 million kilowatt hours or about 6.0 per cent of the total for the transit industry.

TABLE NO. 13

**Source and Distribution of Electrical Energy Consumed by the Transit Industry of the United States and Cost of Purchased Power 1920-1945**

CALENDAR YEAR	KILOWATT HOURS (In Millions)				COST OF PURCHASED POWER	
	TOTAL CONSUMPTION			GENERATED	PURCHASED	(Thousands)
	RAPID TRANSIT	SURFACE RAILWAY	TROLLEY COACH			
1920	1,256	8,066	—	9,322	4,313	5,009
1921	1,278	7,863	—	9,141	4,031	5,110
1922	1,314	7,887	—	9,201	3,506	5,695
1923	1,416	7,894	—	9,310	3,441	5,869
1924	1,488	7,951	—	9,439	3,356	6,083
1925	1,548	7,995	—	9,543	3,237	6,306
1926	1,592	8,021	—	9,613	3,108	6,505
1927	1,641	7,749	—	9,390	2,976	6,414
1928	1,760	7,410	*	9,170	2,935	6,235
1929	1,824	7,121	*	8,945	2,863	6,082
1930	1,842	6,816	18	8,676	2,770	5,906
1931	1,785	6,283	24	8,092	2,621	5,471
1932	1,715	5,629	29	7,373	2,433	4,940
1933	1,736	5,973	32	7,041	2,377	4,664
1934	1,793	5,265	44	7,102	2,352	4,750
1935	1,852	5,096	57	7,005	2,309	4,696
1936	1,934	5,087	79	7,100	2,271	4,829
1937	1,970	4,894	150	7,014	2,197	4,817
1938	1,921	4,399	204	6,524	2,114	4,410
1939	1,971	4,203	225	6,399	2,164	4,235
1940	1,977	4,050	259	6,286	2,255	4,031
1941	1,986	3,808	296	6,090	2,167	3,923
1942	1,964	4,082	354	6,400	2,227	4,173
1943	1,939	4,658	403	7,000	2,237	4,763
1944	1,940	4,667	412	7,019	2,238	4,781
1945	1,966	4,547	415	6,928	2,130	4,798

\* Included with Surface Railway.

## CAPITAL AND MAINTENANCE EXPENDITURES

### *Expenditures in 1945*

**T**OTAL EXPENDITURES for new equipment and maintenance in 1945 were substantially higher than in 1944, but they fell short of the amount forecast at the beginning of the year. The comparative figures are presented in Table 14 and shown graphically in Chart XIX. It was in the expenditures for new equipment that the greatest discrepancy occurred between the forecast and the actual performance. Inability to get the new equipment wanted, principally new vehicles, was the underlying cause.

However, the expenditure for maintenance material and labor also failed to realize the forecast, but only by very small amounts. For both maintenance material and labor together, the amount spent was 1.4 millions or about one-half of one per cent less than the forecast. Total expenditure for new equipment and maintenance in 1945 was 19.5 millions or 6.1 per cent, under the forecast. The forecast was 308.8 millions and the actual expenditure was 289.3 millions of dollars.

The total expenditure of 289.3 million dollars in 1945 exceeded the corresponding expenditure in 1944 by nearly 21 million dollars. Most of this increase, 17.4 millions of the 21, was in capital expenditures. Included in it was an increase of 8.3 millions in expenditure for new buses, an increase of 2.2 millions in expenditure for new street cars and an increase of nearly 2 millions for new trolley coaches.

Expenditures for maintenance materials were only 1½ millions more in 1945 than in 1944. The largest increase in this class was in the item of way and structures materials amounting to 2.7 millions of dollars. There was a decrease of 1.8 millions in bus maintenance materials and an increase of 1.2 millions in expenditures for car maintenance materials. Expenditures for

TABLE NO. 14  
Capital and Maintenance Expenditures of Transit Companies in the United States  
1941 to 1945 Inclusive and Forecast for 1946

	1941 (Thousands)	1942 (Thousands)	1943 (Thousands)	1944 (Thousands)	1945 (Thousands)	1946 FORECAST (Thousands)
<b>CAPITAL EXPENDITURES</b>						
Way and Structures.....	\$ 29,890	\$ 11,850	\$ 13,600	\$ 15,450	\$ 18,480	\$ 50,000
Cars.....	10,614	5,680	1,800	6,800	8,980	22,000
Buses.....	55,250	66,900	19,000	39,162	47,500	125,000
Trolley Coaches.....	5,421	4,600	1,600	780	2,750	9,000
Power and Line.....	4,112	1,960	3,300	3,400	5,300	12,000
<b>TOTAL CAPITAL EXPENDITURES.....</b>	<b>\$105,287</b>	<b>\$ 90,990</b>	<b>\$ 39,300</b>	<b>\$ 65,592</b>	<b>\$ 83,010</b>	<b>\$218,000</b>
<b>MAINTENANCE EXPENDITURES—MATERIALS</b>						
Way and Structures.....	\$ 19,211	\$ 13,100	\$ 17,100	\$ 16,640	\$ 19,340	\$ 13,100
Cars.....	12,966	15,000	15,300	16,230	17,450	16,100
Buses.....	24,576	26,500	35,400	37,320	34,500	31,700
Trolley Coaches.....	1,915	2,120	2,300	2,493	2,580	2,650
Power and Line.....	6,736	4,100	7,200	3,878	3,960	3,800
<b>TOTAL MAINTENANCE—MATERIALS.....</b>	<b>\$ 65,404</b>	<b>\$ 60,820</b>	<b>\$ 77,300</b>	<b>\$ 76,561</b>	<b>\$ 77,830</b>	<b>\$ 67,350</b>
<b>MAINTENANCE EXPENDITURES—LABOR</b>						
Way and Structures.....	\$ 30,686	\$ 28,400	\$ 39,300	\$ 43,080	\$ 41,340	\$ 36,100
Cars.....	20,257	22,300	31,900	36,020	38,150	40,400
Buses.....	20,021	28,000	29,000	40,240	41,630	42,900
Trolley Coaches.....	1,310	1,290	1,700	1,994	2,200	2,400
Power and Line.....	3,124	4,700	6,100	5,009	5,180	5,500
<b>TOTAL MAINTENANCE—LABOR</b>	<b>\$ 75,398</b>	<b>\$ 84,690</b>	<b>\$108,000</b>	<b>\$126,343</b>	<b>\$128,500</b>	<b>\$127,300</b>
<b>TOTAL MAINTENANCE—MATERIALS &amp; LABOR</b>						
<b>GRAND TOTAL—CAPITAL &amp; MAINTENANCE EXPENDITURES</b>	<b>\$246,089</b>	<b>\$236,500</b>	<b>\$224,600</b>	<b>\$268,496</b>	<b>\$289,340</b>	<b>\$412,650</b>
Fuel and Lubricants.....	\$ 43,950	\$ 50,500	\$ 55,800	\$ 60,020	\$ 63,840	\$ 64,950

power and line and trolley coach maintenance materials were approximately the same as in 1944.

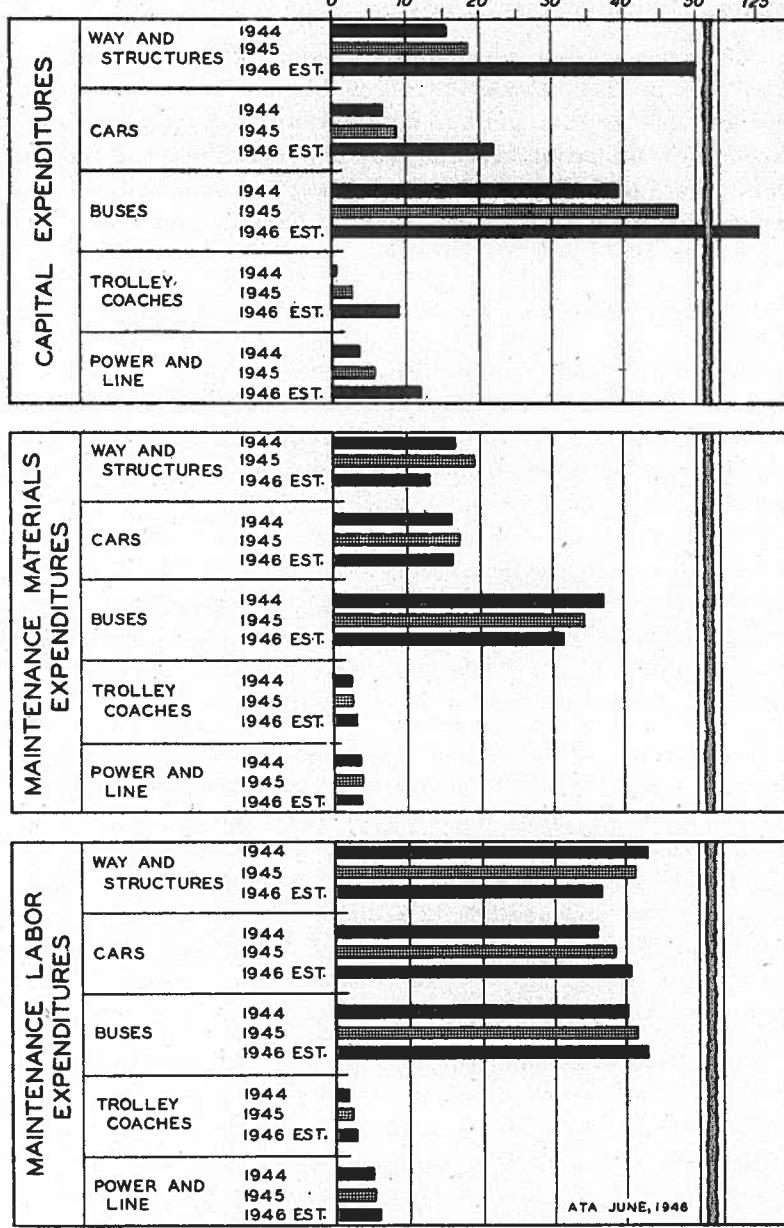
Maintenance labor expenditure was only 2.2 million dollars more than in 1944. Practically all of this increase was for maintenance labor on cars and buses. There was a decrease in labor expenditure for maintenance of way and structures, and for the maintenance of trolley coaches, and power and line facilities, the expenditure for labor was practically unchanged from 1944.

### *Forecast of Expenditures in 1946*

A HEAVY INCREASE in capital expenditures is forecast for 1946, but it is expected that the expenditure for maintenance will be less than in 1945. Since 1941 expenditures for new equipment have been below normal due to war restrictions, and now the programs for rehabilitation of worn out properties call for a heavy outlay of money to make up for the enforced neglect, and to bring them up to modern standards of efficiency. Maintenance expenditures under such a program are naturally reduced. Worn out equipment is being replaced rather than repaired as was the practice during the war when every available piece of equipment was being patched up to keep it serviceable.

Expenditure of 125 million dollars for new buses is forecast for 1946, a greater sum than was spent on all capital improvements in 1945. For new cars, it is anticipated that 22 millions will be spent, and 9 millions for new trolley coaches. Rehabilitation of roadway and buildings call for the spending of 50 million dollars in 1946 and another 12 millions will be spent for new power and line construction. The total anticipated outlay for new capital equipment in 1946 comes to 218 million dollars, which compares with 83 million spent in 1945.

For maintenance materials in 1946 it is estimated that 67.3 millions of dollars will be spent. In 1945 the amount was 77.8 millions. Only trolley coach maintenance materials run ahead of last year. For all other maintenance purposes, the expenditure for material will be less. This is especially true of roadway and building maintenance where material expenditures are expected to run 6 million dollars less than in 1945. Bus maintenance materials are also expected to be less by nearly 3 million



**CHART XIX**—Capital and maintenance expenditures of transit companies in the United States in 1944 and 1945 and forecast for 1946.

dollars. Maintenance materials for railway cars, power and overhead line facilities will call for expenditures only slightly less than in 1945.

The cost of maintenance labor in 1946 will be slightly less than in 1945, according to the forecast. All of the decrease is in maintenance of way and structures. Maintenance of cars, buses, trolley coaches and power and line facilities calls for slightly greater expenditure for labor than in 1945.

## TRANSIT EQUIPMENT

### New Equipment Delivered In 1945

**N**EWS TRANSIT EQUIPMENT delivered in 1945 is shown in Table 15 classified according to the size of the community to which the vehicles were delivered. The motor buses are further classified into three groups, according to their seating capacities.

Vehicles delivered in 1945 totaled 4,962, of which 4,441 were integral buses, 332 were surface street cars and 189 were trolley coaches. Practically all of the street cars, 294 out of the total of 332, were delivered to cities between 500,000 and 1,000,000 population. The greater part of the trolley coaches, 114 out of 189, went to cities between 250,000 and 500,000 population. However, there were 53 trolley coaches delivered to cities between 100,000 and 250,000.

A more even distribution of the new motor buses was effected. The greatest concentration of bus deliveries, 1,280 out of the

TABLE NO. 15

New Transit Equipment Delivered in 1945 Classified According to Population Group and Seating Capacity of Buses

POPULATION GROUP	STREET CARS	TROLLEY COACHES	MOTOR BUSES (INTEGRAL ONLY)				GRAND TOTAL ALL VEHICLES
			50-54 SEATS	44 SEATS	29 SEATS OR LESS	30-39 SEATS	
Over 1,000,000 . . .	2	—	46	—	271	317	319
500,000 - 1,000,000 . .	294	16	18	8	206	232	542
250,000 - 500,000 . . .	26	114	75	240	295	610	750
100,000 - 250,000 . . .	—	53	166	231	359	756	809
50,000 - 100,000 . . .	—	6	182	212	98	492	498
Less Than 50,000 . . .	—	—	531	202	21	754	754
Suburban and Other . . .	10	—	739	290	251	1,280	1,290
<b>TOTAL.....</b>	<b>332</b>	<b>189</b>	<b>1,757</b>	<b>1,183</b>	<b>1,501</b>	<b>4,441</b>	<b>4,962</b>

total of 4,441, was in the "suburban and other" territory outside of and between cities. Cities below 50,000 and cities between 100,000 and 250,000 took the next largest number, 754 and 756 respectively. A total of 610 buses went to cities between 250,000 and 500,000 and the rest were scattered fairly evenly among the other cities.

The smaller-sized buses were favored in 1945, buses of 29 seats or less. There were 1,757 of this class delivered. Next in favor were the large buses with 40 seats or more, of which 1,501 were delivered. The remaining 1,183 buses delivered had seating capacities between 29 and 40.

New class limits have been adopted in classifying the buses according to seating capacities. Heretofore the class limits have

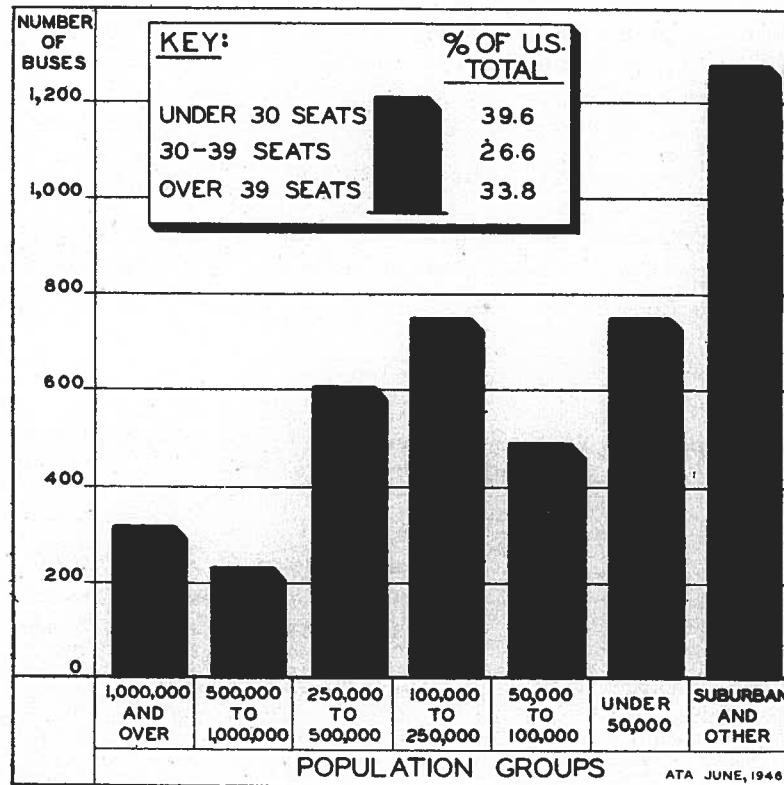


CHART XX—New motor buses delivered to transit companies in the United States in 1945.

TABLE NO. 16

Number of Buses in Each Size Class Delivered in the Years 1943 to 1945

YEAR	29 SEATS OR LESS	30-39 SEATS	40 SEATS OR MORE	TOTAL
1943.....	847	179	225	1,251
1944.....	2,423	369	1,015	3,807
1945.....	1,757	1,183	1,501	4,441

been 25 seats or less, 26 to 34 seats and 35 seats or more. Due to the very small number of buses of 25 seats or less, delivered in recent years, this classification has produced a very uneven distribution of the buses and accordingly, the new classification which distributes them more evenly has been substituted. In order to permit comparison with previous years the buses delivered in the years 1943-1944 inclusive, have been reclassified and are shown in the new grouping in Table 16.

### New Equipment Delivered 1936-1945

THE RECORD OF DELIVERIES of new transit passenger equipment in the last 10 years is given in Table 17. New motor bus deliveries predominate in this record throughout the period.

TABLE NO. 17

New Passenger Equipment Delivered to Transit Companies in the United States—1936 to 1945

CALENDAR YEAR	RAILWAY CARS			TROLLEY COACHES	MOTOR BUSES	GRAND TOTAL
	SURFACE	SUBWAY AND ELEVATED	TOTAL			
1936	573	0	573	538	4,572	5,683
1937	342	300	642	462	3,908	5,012
1938	145	53	198	184	2,498	2,880
1939	371	150	521	587	3,918	5,026
1940	463	15	478	310	3,984	4,772
1941	462	0	462	411	5,600	6,473
1942	284	0	284	336	7,200	7,820
1943	32	0	32	117	1,251	1,400
1944	284	0	284	55	3,807	4,146
1945	332	0	332	189	4,441	4,962

Throughout the 10-year period there were 48,174 new units of equipment delivered and of these 41,179, or over 85.5 per cent, were new buses. New street cars numbered 3,288 during the period and there were 518 subway cars, making a total of 3,806 railway cars, or 7.9 per cent of the total deliveries. The remaining 6.6 per cent of the new deliveries over the 10-year period were trolley coaches.

### Total Equipment Owned In 1945

THE TOTAL NUMBER of revenue passenger vehicles owned by transit companies at the end of 1945 is shown in Table 18. The number of vehicles of each type is shown and they are distributed among the population groups in which they are operated.

Considerably more than one-half of all the vehicles are motor buses, 49,670 out of 90,141. The number of railway passenger cars was 36,755, divided into 26,680 surface street cars and 10,075 subway and elevated cars. Trolley coaches to the number of 3,716 completed the total.

From the standpoint of the distribution of transit vehicles by population groups, the greatest concentration of railway cars and motor buses is in the cities of one million population and over.

TABLE NO. 18

Transit Passenger Equipment in 1945 Showing Types of Vehicles and Their Distribution by Population Groups

	RAILWAY CARS	TROLLEY COACHES	MOTOR BUSES	GRAND TOTAL
Subway and Elevated.....	10,075	—	—	10,075
Surface Lines:				
Population Group				
Over 1,000,000.....	9,620	234	9,270	19,124
500,000 - 1,000,000.....	6,420	495	5,650	12,565
250,000 - 500,000.....	4,420	1,647	6,520	12,587
100,000 - 250,000.....	1,960	724	8,730	11,414
50,000 - 100,000.....	1,610	373	7,680	9,663
Less Than 50,000.....	890	243	7,060	8,193
Suburban and Other.....	1,760	—	4,760	6,520
TOTAL.....	36,755	3,716	49,670	90,141

If we credit the subway and elevated cars to this population class the total approximates one-third of all transit vehicles. Trolley coaches on the other hand are even more solidly concentrated in the cities between 250,000 and 500,000 population, about 44 per cent of all trolley coaches being found in this group.

While the number of motor buses in cities over 1,000,000 is larger than in any other of the population groups, nonetheless the motor buses are distributed among all the population groups more uniformly than either of the other two transit vehicles. No one group has as much as 20 per cent of all the motor buses, while four of the seven groups have more than 14 per cent each and the smallest group has nearly 10 per cent.

There was only a small increase in the total number of transit vehicles between 1944 and 1945. Although 4,962 new vehicles were delivered during the year, the net increase in vehicles in service, at the end of the year, was only 895. The companies were using the new vehicles to replace the worn-out equipment which they had to operate during the war. This was especially true of the buses. Although 4,441 new buses were delivered during 1945 the increase over 1944 was only 1,270, which means that 3,171 buses had been retired.

There were 332 new street cars delivered in 1945, but the number in use at the end of the year had declined 500, indicating that 832 cars had been scrapped.

For the first time since the advent of the modern trolley coach in 1928 a substantial number of these vehicles, 34, were scrapped in 1945. As there were 189 new vehicles delivered, however, there was a net increase at the end of the year of 155 trolley coaches.

## *Distribution Of Equipment By Population Groups 1941-1945*

**I**N TABLE 19 is shown the number of railway cars, motor buses and trolley coaches in the United States in each of the years 1941 to 1945 inclusive, distributed by population groups.

In this 5-year period the total number of buses increased more than 10,000 and the trolley coaches increased 700. The rate of

TABLE NO. 19  
*Transit Passenger Equipment Showing Types of Vehicles and Their Distribution by Population Groups  
1941 to 1945 Inclusive*

YEAR	RAPID TRANSIT	SURFACE LINES				TOTAL
		OVER 1,000,000 POPULATION	500,000-1,000,000	250,000-500,000	100,000-250,000	
<b>RAILWAY CARS</b>						
1941	10,578	9,645	6,178	4,690	2,245	1,650
1942	10,278	9,744	6,249	4,685	2,231	1,644
1943	10,255	9,790	6,240	4,660	2,230	1,640
1944	10,105	9,700	6,380	4,570	2,220	1,630
1945	10,075	9,620	6,420	4,420	1,960	1,610
<b>TROLLEY COACHES</b>						
1941	—	218	362	1,413	567	282
1942	—	228	443	1,413	699	359
1943	—	228	473	1,496	699	363
1944	—	234	479	1,533	702	370
1945	—	234	495	1,647	724	373
<b>MOTOR BUSES</b>						
1941	—	8,770	4,681	5,356	6,331	6,205
1942	—	9,523	6,024	6,723	7,743	6,838
1943	—	9,600	6,050	6,900	8,150	7,100
1944	—	9,080	5,680	7,050	8,370	7,620
1945	—	9,270	5,650	6,520	8,730	7,680
<b>TOTAL ALL VEHICLES</b>						
1941	10,578	18,633	11,281	11,459	9,143	8,137
1942	10,278	19,495	12,716	12,821	10,673	8,841
1943	10,255	19,618	12,763	13,056	11,079	9,103
1944	10,105	19,014	12,539	13,153	11,292	9,620
1945	10,075	19,124	12,565	12,587	11,414	9,663

increase was about 25 per cent for both vehicles over the period. On the other hand there was a decrease of 925 railway cars. Only one group shows an increase in cars during this period, the cities between 500,000 and 1,000,000 population, where the increase was from 6,178 to 6,420. Even the rapid transit cars declined from 10,578 to 10,075 during this period, due to the scrapping of the elevated lines in New York.

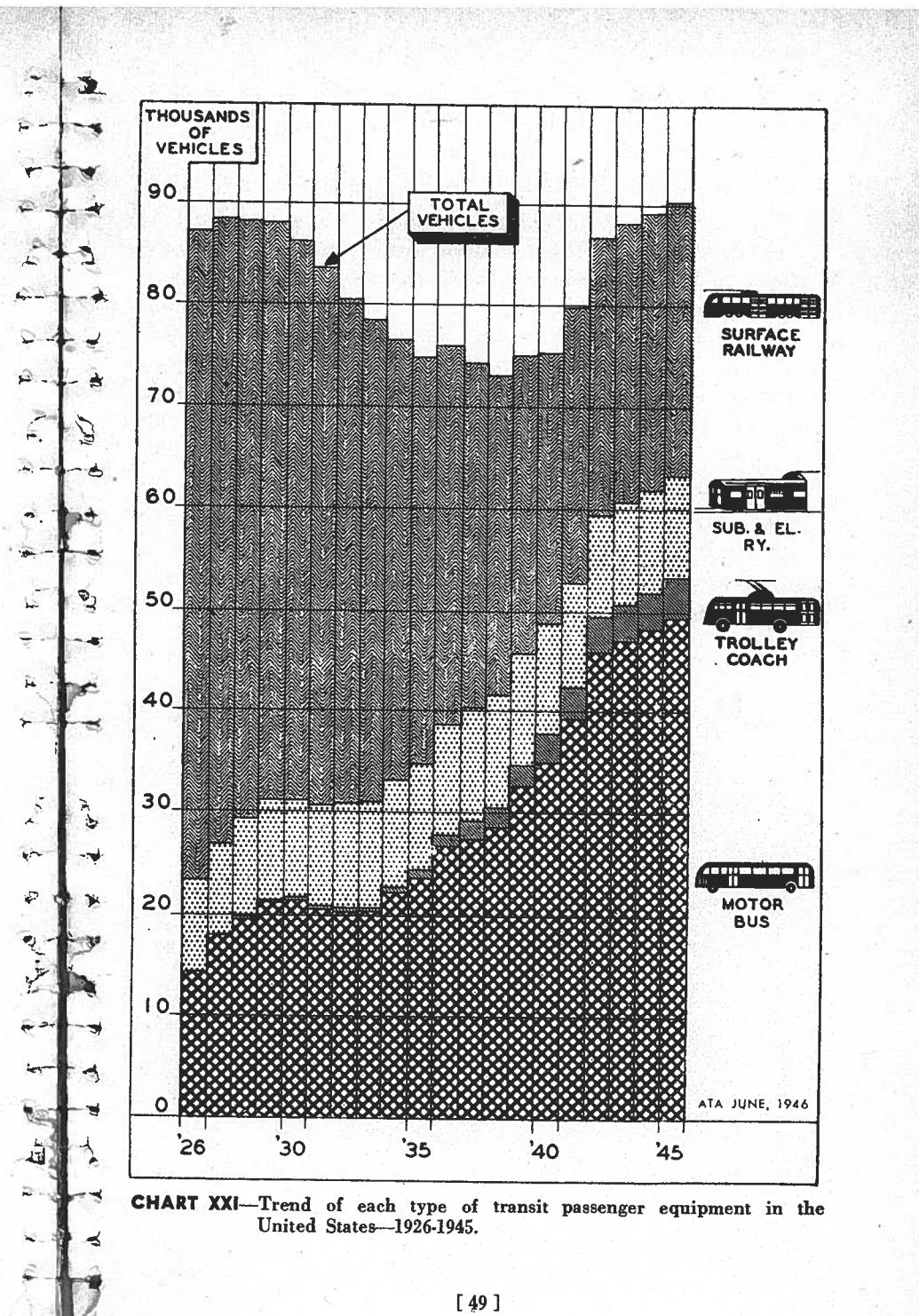
While the number of buses increased in all of the population groups, the greatest increase numerically, 2,399, was in the cities between 100,000 and 250,000 population. Percentage-wise the greatest increase was in the cities under 50,000 where the number of buses went from 4,775 in 1941 to 7,060 in 1945, an increase of 2,285 or nearly 48 per cent.

The number of trolley coaches increased in all of the groups where they are operated and naturally enough the greatest increase numerically was in the group having the largest number of trolley coaches, the cities between 250,000 and 500,000 population, where nearly half of all of the trolley coaches in the country are concentrated. The cities between 500,000 and 1,000,000 population had the largest percentage increase in trolley coaches, 37 per cent, but this was not greatly in excess of the per cent increase in several of the other groups.

In total vehicles of all types the smallest increase over the 5-year period was in the cities of more than 1,000,000 population where the number of surface vehicles increased only from 18,633 to 19,124, or less than 3 per cent. If the rapid transit cars were included in this group there would be a slight decrease in total vehicles in the 5 years. The largest increase over the period was in the cities of less than 50,000 population where the total number of vehicles rose from 5,863 to 8,193, or nearly 40 per cent.

### *Transit Equipment Since 1926*

THE RECORD OF THE NUMBER of transit vehicles in service at the end of each year since 1926 is shown in Table 20. The most significant feature of this record is the decline in the number of street cars and the increase in the number of buses. The surface street cars dropped from 62,800 in 1926 to 26,680 in 1945, while the number of buses climbed from 14,400 to 49,670 in the



same period. The year 1945 marks the low point in the number of street cars since their hey-day back in the years before the first world war even as it marks the high point in the number of buses since their inception, also just before the first world war.

Trolley coaches, in their modern form, made their first appearance in 1928 when there were 41 reported. Since then they have increased to 3,716 as of the end of 1945, almost matching the rate of increase of the motor bus in its early years. The number of subway and elevated cars increased from 8,909 in 1926 to 10,075 in 1945, but they reached their maximum number 11,205, in 1938. Their decline to the 1945 figure was due to the demolition of most of the elevated railways in Manhattan and Brooklyn in New York City.

The total number of all types of transit vehicles reached a new high at 90,141 in 1945. Prior to 1936 there had been a steady decline due to the effect of automobile competition and the great depression of 1929-1933. From 86,166 in 1926 the num-

**TABLE NO. 20**  
Trends of Transit Passenger Equipment in the United States  
1926 to 1945

AS OF DEC. 31	RAILWAY CARS			TROLLEY COACHES	MOTOR BUSES	GRAND TOTAL
	SURFACE	SUBWAY AND ELEVATED	TOTAL			
1926	62,857	8,909	71,766	—	14,400	86,166
1927	61,379	8,957	70,336	—	18,000	88,336
1928	58,940	9,611	68,551	41	19,700	88,292
1929	56,980	9,983	66,963	57	21,100	88,120
1930	55,150	9,640	64,790	173	21,300	86,263
1931	53,120	9,638	62,758	225	20,700	83,683
1932	49,500	10,434	59,934	269	20,200	80,403
1933	47,700	10,424	58,124	310	20,200	78,634
1934	43,700	10,418	54,118	441	22,200	76,759
1935	40,050	10,416	50,466	578	23,800	74,844
1936	37,180	10,923	48,103	1,136	26,800	76,039
1937	34,180	11,032	45,212	1,655	27,500	74,367
1938	31,400	11,205	42,605	2,032	28,500	73,137
1939	29,320	11,052	40,372	2,184	32,600	75,156
1940	26,630	11,032	37,662	2,802	35,000	75,464
1941	27,092	10,578	37,670	3,029	39,300	79,999
1942	27,230	10,278	37,508	3,385	46,000	86,893
1943	27,250	10,255	37,505	3,501	47,100	88,106
1944	27,180	10,105	37,285	3,561	48,400	89,246
1945	26,680	10,075	36,755	3,716	49,670	90,141

ber of equipment units had fallen to a low of 74,844 in 1935. It was a process of adjustment to the reduced volume of traffic. The upturn in traffic which began in 1934 made itself felt, however, and in 1936 transit equipment again began to increase in numbers, influenced in part, no doubt, by the fact that in the program of conversion from street cars to buses then taking place, a greater number of the latter vehicle was required to replace the former. There was another decline in the recession after 1936 and then a little later came the war, and the great expansion of transit traffic that followed produced the increase in transit equipment that brought it to its present high levels.

### Capacity Of Transit Vehicles

THE TOTAL PASSENGER capacity of all transit vehicles in the United States for the years 1922 to 1945 inclusive, is shown in Chart XXII. The total capacity of all vehicles is based on the average ratio of carrying capacity to seating capacity for the several types of vehicles in service.

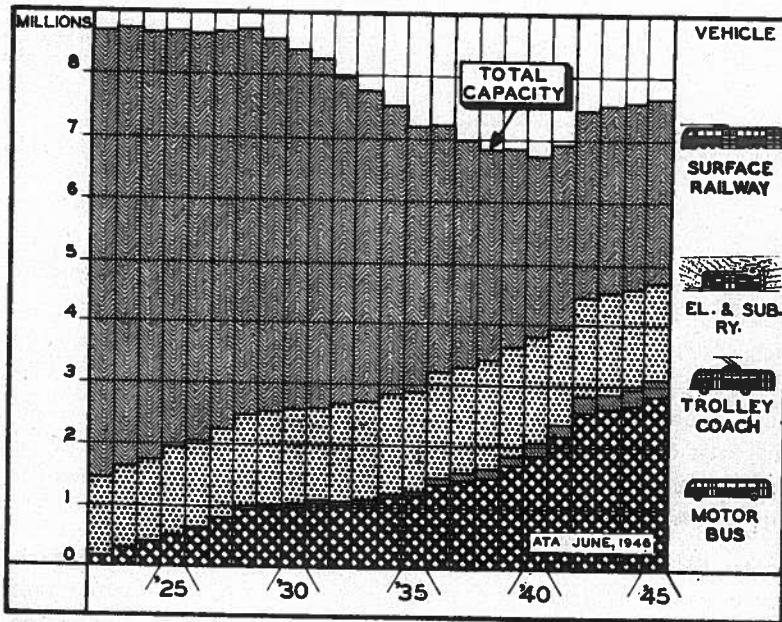


CHART XXII—Trend of total passenger-carrying capacity of all transit equipment in the U. S. 1922-1945.

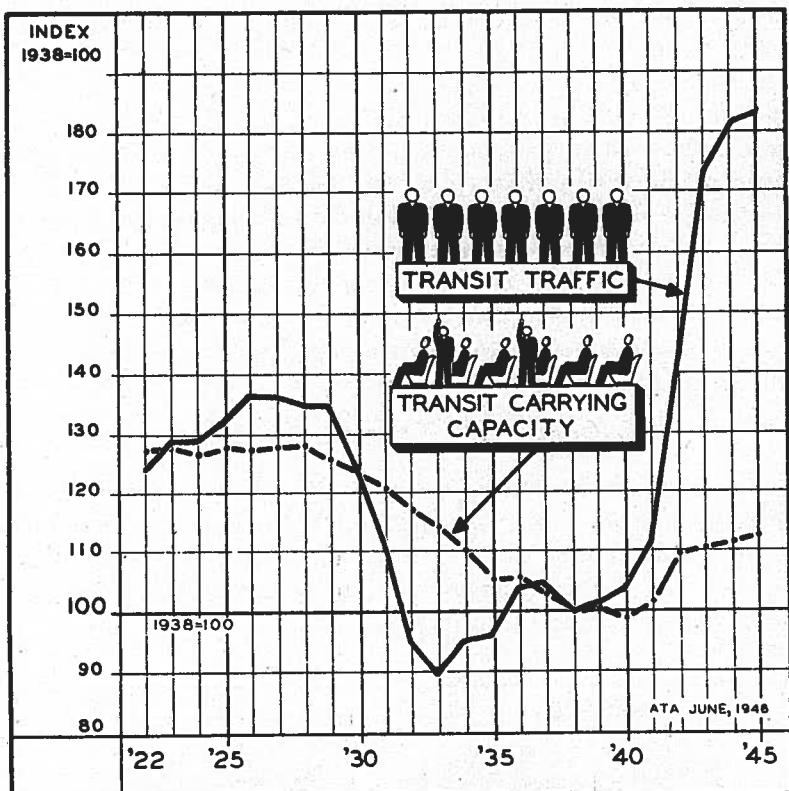


CHART XXIII—Comparative trends of total transit passengers and total carrying capacity of transit passenger vehicles, 1922-1945.

In 1928 the industry had a carrying capacity of 8.7 million passengers. This is the greatest capacity it ever had available. After 1928, it declined practically without interruption to 6.7 millions in 1940 as transit traffic was drained off by the great depression and the increasing use of the private automobile. During most of this period there was excess capacity, and its gradual reduction represented the efforts of the industry to adapt its equipment to the reduced volume of traffic.

In 1941, with the initiation of the national defense program, there was an expansion of traffic and it produced an immediate demand for additional vehicles. In the next year, however, this demand encountered the shortages of critical materials and gov-

ernment restrictions on production and was practically nullified. Some new vehicles were produced, but not nearly enough to match the soaring traffic. Between 1940 and 1944, while the number of passengers increased by 10 billions, the net increase in the carrying capacity of the industry was only 843 thousand. In 1945 a further increase of 80,000 was realized, practically all of it in bus capacity, but it still failed to keep pace with the traffic which increased by 337 million passengers.

The comparative trends of transit capacity and transit traffic during the years 1922-1945 are presented in Chart XXIII on an index number basis with the year 1938 taken as 100 for both factors. It is apparent in this chart that the increase in capacity since 1940 has not been adequate to meet the increase in traffic. The spread between the curve of traffic and the curve of capacity is now greater than it has ever been. The index of traffic in 1945 was 83.9 per cent above the 1938 base, while the index of capacity was up only 12.5 per cent.

The year 1938 was taken as the base for these curves because it was the year immediately preceding the upturn in traffic induced first by the defense program and then by the war.

In the period prior to 1938, as the chart shows, the industry's passenger-carrying capacity had been drastically reduced to adapt it to the reduction in traffic which followed the depression. Obviously, such an adjustment cannot be made immediately when traffic declines; it is a gradual process. The chart shows that the reduction in capacity was still going on after the traffic turned upward again in 1934. It is possible, therefore, that the process of adjustment was not completed by 1938, that there may still have been some excess capacity in that year. However, there is evidence that traffic and capacity were in approximate equilibrium by 1938, and that no serious error is involved in interpreting the subsequent trends of the curves as measuring the lag of capacity behind traffic.

## TRACK AND ROUTE MILEAGE

### Distribution In 1945

**I**N TABLE 21 is shown the total route mileage of electric railways, motor bus and trolley coach lines in the United States as of December 31, 1945. The electric railways are measured in miles of single track, the trolley coach lines in miles of negative overhead wire, and the motor bus lines in miles of round-trip route.

Electric railway track is concentrated in the large cities and in suburban and interurban lines. There are only 390 miles of track in the cities under 50,000 population. More than half of the 90,000 round-trip miles of motor bus route is in the suburban and local intercity service, and after that the greatest concentration of bus route is found in cities between 100,000 and 500,000 population. Trolley coaches are heavily concentrated in the cities between 250,000 and 500,000, where nearly half of the total mileage of 2,368 is located.

TABLE NO. 21

Total Miles of Electric Railway Track, Motor Bus Route and Trolley Coach Route of the Transit Industry in the United States, 1945,  
Distributed by Population Groups

	RAILWAY	TROLLEY COACH	MOTOR BUS
Subway and Elevated .....	1,252	—	—
Surface Lines:			
Population Group			
Over 1,000,000.....	3,160	91	5,800
500,000 - 1,000,000.....	2,330	159	3,250
250,000 - 500,000.....	2,170	1,041	9,200
100,000 - 250,000.....	1,270	592	11,100
50,000 - 100,000.....	1,050	291	7,850
Less Than 50,000.....	390	194	5,200
Suburban and Other.....	6,110	—	48,000
<b>TOTAL.....</b>	<b>17,732</b>	<b>2,368</b>	<b>90,400</b>

TABLE NO. 22

Electric Railway Track, Motor Bus Route and Trolley Coach Route of the Transit Industry in the United States, 1926-1945

AS OF DECEMBER 31ST	TOTAL MILES OF RAILWAY TRACK			TROLLEY COACH— MILES OF NEGATIVE OVERHEAD WIRE	MOTOR BUS— MILES OF ROUTE ROUND-TRIP
	SURFACE	SUBWAY AND ELEVATED	TOTAL		
1926.....	40,570	1,030	41,600	—	36,900
1927.....	39,682	1,040	40,722	—	38,900
1928.....	38,235	1,065	39,300	39	43,500
1929.....	36,520	1,080	37,600	59	52,800
1930.....	34,320	1,080	35,400	146	60,900
1931.....	32,120	1,080	33,200	194	60,500
1932.....	30,418	1,130	31,548	251	58,300
1933.....	28,730	1,170	29,900	281	52,700
1934.....	27,270	1,230	28,500	423	54,700
1935.....	25,470	1,230	26,700	548	58,100
1936.....	24,040	1,260	25,300	859	62,200
1937.....	22,460	1,310	23,770	1,166	67,000
1938.....	20,500	1,300	21,800	1,398	70,400
1939.....	19,300	1,300	20,600	1,543	74,300
1940.....	18,360	1,240	19,600	1,925	78,000
1941.....	17,100	1,250	18,350	2,098	82,100
1942.....	16,950	1,250	18,200	2,330	85,500
1943.....	16,950	1,260	18,210	2,305	87,000
1944.....	16,860	1,252	18,112	2,302	87,700
1945.....	16,480	1,252	17,732	2,368	90,400

### Trend Since 1926

THE RECORD OF ELECTRIC railway track and motor bus and trolley coach route mileage since 1926 is shown in Table 22. The most striking feature of this record is the steady shrinkage of surface electric railway track from 40,570 miles in 1926 to 16,480 miles in 1945, and the equally steady increase in motor bus route from 36,900 to 90,400 in the same period.

Subway and elevated track increased moderately from 1,030 miles in 1926 to 1,252 miles in 1945. The amount of increase was held down by the demolition of most of the elevated railway in New York which offset a considerable part of the increase in the subway mileage in that city.

Trolley coach mileage has had almost as spectacular an increase as the motor bus. The modern trolley coach dates from the year 1928. In that year there were 39 miles of negative overhead trolley coach wire and by the end of 1945 it had increased to 2,368 miles.

## EMPLOYMENT AND PAYROLL

THE AVERAGE NUMBER of transit employees, the total payroll and the average annual earnings per employee for the years 1931 to 1945 inclusive are shown in Table 23.

There was no change in the average number of employees in 1945 from 1944, but the total payroll increased by 33 million dollars or about 5.5 per cent. Average earnings per employee increased from 2,475 dollars to 2,612 dollars or approximately 5.5 per cent.

The total payroll and the average earnings per employee reached all-time highs in 1945, but the number of employees, at 242,000, was still considerably below the 250,000 employed in

TABLE NO. 23

Number of Employees, Annual Payroll and Average Annual Earnings per Employee in the Transit Industry of the United States, 1931-1945

YEAR	AVERAGE NUMBER OF EMPLOYEES	PAYROLL	AVERAGE ANNUAL EARNINGS PER EMPLOYEE
1931 . . . . .	250,000	\$423,000,000	\$1,692
1932 . . . . .	222,000	344,000,000	1,550
1933 . . . . .	206,000	297,000,000	1,442
1934 . . . . .	211,000	314,000,000	1,488
1935 . . . . .	209,000	321,000,000	1,536
1936 . . . . .	212,000	338,000,000	1,594
1937 . . . . .	215,000	356,000,000	1,656
1938 . . . . .	207,000	351,000,000	1,696
1939 . . . . .	204,000	356,000,000	1,745
1940 . . . . .	203,000	360,000,000	1,773
1941 . . . . .	205,000	386,000,000	1,882
1942 . . . . .	219,000	462,000,000	2,110
1943 . . . . .	239,000	554,000,000	2,318
1944 . . . . .	242,000	599,000,000	2,475
1945 . . . . .	242,000	632,000,000	2,612

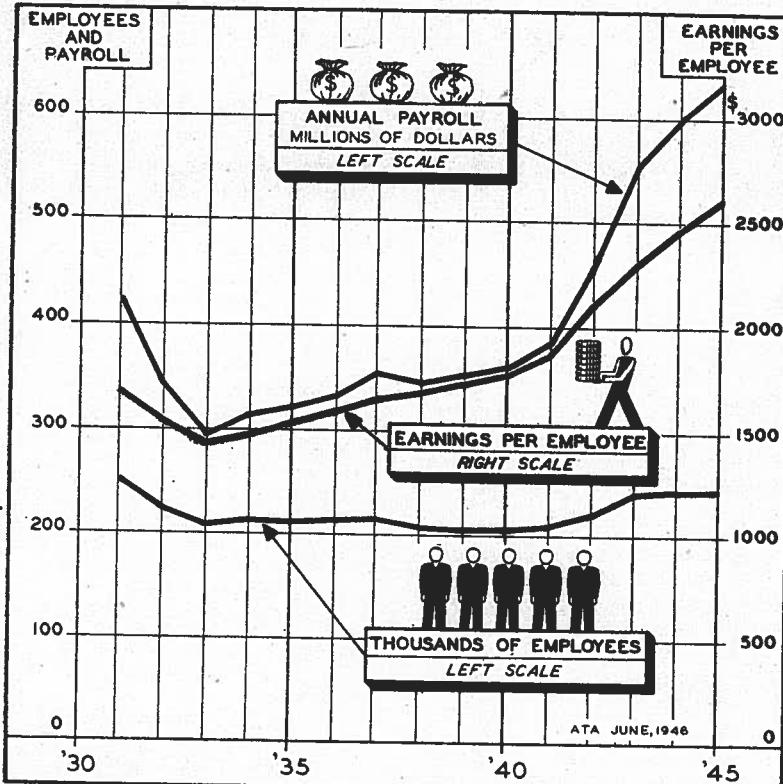


CHART XXIV—Number of employees, annual payroll and average annual earnings per employee 1931-1945.

1931. In that year the total payroll was 423 million dollars, 33 per cent below 1945, and the average annual earnings per employee was only 1,692 dollars, 35 per cent below 1945.

Back in 1922 the industry had over 300,000 employees and a payroll of 445 million dollars. The average annual earnings per employee was then 1,485 dollars.



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