

W. C. GILMAN & COMPANY

ENGINEERS

55 LIBERTY STREET

NEW YORK 5, N.Y.

April 11, 1947

Mr. B. J. Fallon, President
Chicago, North Shore and Milwaukee Railway
79 West Monroe Street
Chicago 3, Illinois

Dear Mr. Fallon;

I am sending to you herewith one copy of our report on Chicago, North Shore and Milwaukee Railway which furnishes a substantial amount of background material for the recommendations contained in our preliminary memorandum of March 5th. The recommendations themselves remain unchanged.

We have not been able to assemble additional copies of this report so as to get them in the mail tonight, but additional copies will be forwarded to you on Monday.

Very truly yours,

R. Gilman Smith

R. Gilman Smith

Enc.

CHICAGO, NORTH SHORE AND MILWAUKEE
RAILWAY COMPANY

General Report on Analysis
of Business and Operations

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April 11, 1947

CHICAGO, NORTH SHORE AND MILWAUKEE
RAILWAY COMPANY

General Report on Analysis
of Business and Operations

As requested, we have inspected the operations of the North Shore Line and the territory which it serves and have studied the methods and results of the operation of the system, all for the purpose of reaching some conclusions and recommendations as to future policies which would be most likely to produce and maintain improved earning power. This report summarizes the results of the analyses and the basic data on which we based the conclusions and recommendations stated in our preliminary memorandum of March 5, 1947.

General Characteristics of
Business and Operations

The business of the North Shore Line naturally divides as follows:

1. Passenger Transportation

- (a) Through riding between Chicago and Milwaukee. This traffic is handled on limited trains which operate via the Skokie Line between Howard Street, Chicago and North Chicago Junction and via the Main Line from North Chicago Junction to Milwaukee. Hourly service is furnished and the running time from downtown Chicago to downtown Milwaukee varies from an hour and 54 minutes to two hours and 13 minutes. Combination dining car and lounge car facilities are provided on the five round trips made per day by Electroliners, and dining car service is provided on three additional round trips operated with standard equipment. This service is in direct competition between Chicago and Milwaukee with the Chicago and North Western Railway which runs seven diesel-powered Streamliners which, with one exception, make the trip in from 75 to 85 minutes and the Chicago, Milwaukee, St. Paul and Pacific R. R. which runs 9 high-speed trains making the run between Chicago and Milwaukee also in from 75 to 85 minutes.

- (b) Intermediate riding between Chicago, Waukegan, Kenosha, Racine and Milwaukee. This business is handled by the Milwaukee limited trains described under (a) above, except for a few of the Electroliner trips which do not stop at Waukegan and as supplemented by certain additional limited trains between Chicago and Waukegan and a small amount of local service between Waukegan and Milwaukee. The only competition for this service is the Chicago and North Western as the Milwaukee road trains do not touch the intermediate cities of Waukegan, Kenosha and Racine.
- (c) Commutation and other local riding between Chicago and suburban communities north of Chicago as far as Waukegan and Mundelein. The bulk of this commutation and suburban business is handled over the Shore Line division of the North Shore between Linden Avenue, Wilmette and Waukegan with a small amount of similar business on the Skokie division to Libertyville and Mundelein. Of the total rush hour commutation business into Chicago from Wilmette and the suburban communities north of there, the North Shore Line handles approximately 20% and the Chicago and North Western Railway the remaining 80%. The running time of North Shore trains from Wilmette Avenue in Wilmette to downtown Chicago is from 38 to 41 minutes, while the Chicago and North Western commutation trains make this run in from 20 to 32 minutes. With respect to similar service from Mundelein and from points along the Skokie division, there is practically no competition. On all of this service as well as that from points between Waukegan and Milwaukee, the North Shore Line has the advantage over the steam roads of delivering its passengers at the stations on the Chicago Rapid Transit Loop in downtown Chicago and at certain stations on Chicago Rapid Transit lines both north and south of the central business district.
- (d) Personnel and visitor riding between both Great Lakes Naval Training Station and Fort Sheridan and both Chicago and Waukegan. During both the first World War and the second World War this business was of substantial volume. With respect to it, the North Shore Line competes with the Chicago and North Western Railway to a certain extent.
- (e) Local rail and bus service in Waukegan and between Waukegan and Winthrop Harbor.
- (f) Local rail service in Milwaukee. This is operated by a subsidiary company, the Chicago & Milwaukee Electric Railway Company, and is maintained solely for the protection of the operating rights of the interurban service in the city of Milwaukee.

2. Freight Transportation

- (a) Carload line haul. Freight business of this character is handled principally on the Skokie division north from Oakton Avenue, Evanston, and on the Mundelein division east from Rondout, and north on the Main Line to Waukegan, Kenosha and Racine. There are carload interchange facilities with the Chicago and North Western at Oakton Avenue and at North Chicago Junction, with the Milwaukee road and the Elgin, Joliet and Eastern at Rondout, with the Milwaukee road at Racine and with the Soo Line at Mundelein.
- (b) Switching. A considerable portion of this business is along the Chicago Rapid Transit right-of-way from Wilson Avenue to Evanston and involves cars taken over from the Milwaukee road at Montrose just south of Wilson Avenue.
- (c) LCL business. This consists principally of merchandise, express, newspapers and milk handled in company-owned merchandise cars or in baggage compartments on passenger trains.

The system of the North Shore Line divides itself naturally as follows:

1. Main Line from North Chicago Junction to Milwaukee.

Except for something less than three miles in the city, of Milwaukee, this line is adapted to high-speed passenger or freight operation and is double track except for a stretch of about half a mile just south of Milwaukee. The three mile stretch in the city of Milwaukee is paved track in city streets where operation is slow and over which only passenger equipment is operated. The passenger terminal in Milwaukee is advantageously located at 6th and Michigan Streets.

2. The Skokie division from Howard Street, Chicago to North Chicago Junction.

This line is also adapted to high-speed freight and passenger operation and is double track throughout.

3. The Shore Line from Linden Avenue, Wilmette to North Chicago Junction.

This line is double track throughout. It passes through several built-up communities, has many short radius curves and stations are close together. There are several short stretches of operation in paved streets. All of these factors cut down the speed of operation. Freight equipment can be handled on only the northern half of this line.

4. The Mundelein division from a junction with the Shore Line at Lake Bluff through Rondout to Mundelein with a connection to the Skokie division just west of Lake Bluff.

Except for a few hundred feet, this line is double track and is also adapted to high-speed freight and passenger operation.

5. Waukegan City local rail system.

This embraces the line from North Chicago Junction into the city of Waukegan over which both Shore Line inter-urban cars and Waukegan City local cars are operated and certain additional local rail lines in Waukegan.

6. Chicago Rapid Transit trackage rights.

The North Shore Line operates all of its passenger trains into the city of Chicago over tracks of Chicago Rapid Transit Company. For Shore Line trains, this operation is from Linden Avenue, Wilmette to and around the Loop and south to Roosevelt Road. For the Skokie Line trains, this operation is from Howard Street, Chicago, to and around the Loop and south to Roosevelt Road. For storage purposes certain North Shore trains are also carried on Chicago Rapid Transit tracks from Roosevelt Road south to a storage yard at 63d Street.

7. Motor bus operations.

Motor bus service is operated in Waukegan City in conjunction with the local rail service. The plans of the company contemplate that all Waukegan local service will eventually be furnished by motor buses. One of the present Waukegan bus lines operates north of Waukegan to Zion and Winthrop Harbor.

Operating Rights over Chicago Rapid Transit Tracks

These operating rights are an important asset to the North Shore Line as Chicago Rapid Transit tracks provide a reasonably rapid and direct entrance to Chicago and permit passengers to board and leave North Shore Line trains at certain convenient Loop and North Side stations. On the other hand, the impending purchase of Chicago Rapid Transit property by Chicago Transit Authority seems to us to present some very formidable potential hazards to the future operations of the North Shore Line.

The agreement covering these operating rights was entered into on March 31, 1919 and expired January 8, 1944. Present operations are on a day-to-day basis by orders of the United States District Court entered April 12, 1944 pending negotiation of a new contract. Present charges for these rights, as under the expired contract, are 16 cents per car mile operated. For the 12 months ended October 31, 1946 car miles operated were as follows:

Shore Line Trains	- Linden to Howard	531,028
Shore Line and Skokie Line Trains	- Howard to Roosevelt Rd.	2,907,961
	- Roosevelt Rd. to 63d St.	<u>453,661</u>
Total (including 57,076 merchandise car miles)		3,892,650
Rental charge for 12 months @ 16¢ per car mile		\$622,824

The rental charge includes use of tracks and facilities and supply of power for operation. The power cost portion of the rental is about 4 cents per car mile.

North Shore Line trains are operated by North Shore crews north of Howard Street and from Howard Street south are operated by Chicago Rapid Transit crews. Current annual payments to Chicago Rapid Transit for this operation (required by agreement with the labor union) and certain minor related services are around \$500,000, or probably about \$100,000 a year more than the probable cost if operations were entirely by North Shore Line crews.

The 453,661 car miles from Roosevelt Road to 63d Street, costing \$72,586 per year, is necessitated by inadequate car storage and servicing facilities on the elevated structure at Roosevelt Road on the Congress Street Stub.

Rapid Transit line operations are scheduled at present so that North Shore Line trains can proceed with little or no delay. The high degree of sympathetic cooperation necessary to make these joint operations successful - particularly to the North Shore Line - currently exists because of the common interest of certain individuals

who are executive officers of both companies. We feel that such complete cooperation might be much less likely to exist if the Rapid Transit lines were operated by the Chicago Transit Authority as a part of a coordinated transit system for Chicago, one of the important aims of which will be to develop and operate the existing rapid transit facilities so that they will be of maximum benefit to the Transit Authority's unified system. This could easily result in a material slowing up of North Shore Line operations with accompanying increases in costs and difficulty in maintaining schedules.

We also feel that under conditions which may exist in the future the negotiation of a new track rental agreement might impose an additional financial burden on the North Shore Line.

The importance of this situation is emphasized by the following percentages of North Shore Line car miles operated on Chicago Rapid Transit tracks and the per cent of car miles and car hours operated by Chicago Rapid Transit crews:

	% of Operations on Chicago Rapid Transit Tracks	% of Operations Carried on by CRT Crews	
	<u>Car Miles</u>	<u>Car Miles</u>	<u>Car Hours</u>
Chicago-Milwaukee service (Skokie Line)	17.1	17.1	25.7
Chicago-Waukegan service (Shore Line)	51.2	40.2	34.8

Analysis of Operations

For the purpose of analyzing the operations of the system, we have considered it as six separate pieces as follows:

1. Waukegan City local rail lines.
2. Passenger operations on the Skokie Line from Chicago to North Chicago Junction.
3. Passenger operations on the Main Line from North Chicago Junction to Milwaukee.
4. Passenger operations on the Shore Line from Chicago to Waukegan.

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5. Passenger operations on the Mundelein division, Lake Bluff to Mundelein.
 6. Freight operations in their entirety.

This has required a segregation into these six divisions of such basic operating statistics as miles of route, revenue passengers, car miles, car hours, number of cars required and passenger revenues. All of the system operating data used is for the 12 month period ended October 31, 1946.

Details of miles of route operated, miles of route owned and miles of single track owned are set forth in Table 1.

From an analysis of the printed time table of the system, published September 29, 1946, we have broken down the total reported passenger car miles operated by the system into the four interurban passenger divisions set forth above. In making this allocation, we have assigned to the Skokie Line between Chicago and North Chicago Junction the mileage operated by through cars which run between Chicago and Mundelein via the Skokie Line.

Using the same published time table supplemented by a special analysis furnished to us covering a breakdown of car hours operated on a typical weekday, we have made a similar allocation of total system car hours for the 12 month period.

The resulting breakdowns of miles of route, miles of single track, car miles and car hours, together with certain pertinent ratios are shown in Table 2, and briefly summarized as follows:

(a) Includes 189,530 car miles, Roosevelt Road to 63d Street.
 (b) Includes 264,131 " " " " " "
453,661

Our basic data for a similar breakdown of revenue passengers and passenger revenue was a statement of the total number of rail tickets issued to ticket agents from stock during the year 1946 classified by origin and destination. These tickets were summarized by origin and destination to determine the volume of riding between various points located within the limits of each of the four inter-urban rail divisions of our study and also the riding between the principal points on one division to the principal points on the other divisions.

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routing of those passengers riding between Chicago and the Great Lakes-North Chicago Junction-Waukegan area, as these passengers could travel by either the Shore Line or the Skokie Line. A summary of company traffic checks for four days taken on all Shore Line trains southbound at Church Street and northbound on Howard Street, and all of Skokie Line trains southbound at Skokie and northbound at Howard, showed that approximately 60% of the total passengers into and out of the Chicago area were carried on Shore Line trains, and 40% were carried on Skokie Line trains. The passengers referred to above, travelling between Chicago and the Great Lakes-North Chicago Junction-Waukegan area, were distributed between the two possible routes in such a manner that the total passengers carried into and out of Chicago on the two routes for the 12 month period had the same distribution as that shown by traffic checks.

Total tickets represented by our basic information, namely, those withdrawn from stock by agents for the year 1946, aggregated 13,293,000. After these were analyzed and summarized as described, the individual figures in the summary were stepped up by the application of percentages to produce a total of ^{Correct - 17 783 140} 17,873,100 representing the reported total revenue passengers carried on the interurban system during the 12 months ended October 31, 1946. A summary of this passenger analysis is shown in Table 3 and indicates generally the following:

The total number of passengers originating or terminating in the Chicago area south of Howard Street was 11,298,700.

Of these, 4,519,500 left Chicago by way of the Skokie Line and 6,779,200 by way of the Shore Line.

Total through riding between Chicago and Milwaukee was 906,200.

The local riding on the Shore Line originating and terminating at points between Howard Street and Waukegan was 3,819,200. An additional 121,400 were carried between Milwaukee and points on the Shore Line between Howard Street and Waukegan.

There were 1,335,400 passengers carried between Milwaukee and points on the Main Line north of North Chicago Junction.

The total number of passengers originating or terminating in Milwaukee were 2,363,000.

It is apparent from the figures in Table 3 that from the standpoint of number of passengers, the volume of traffic on the Shore Line exceeds the volume of total traffic on the Skokie and the Main Line combined.

With the detail underlying the passenger figures in Table 3 as a basis, the interurban passenger revenues for the 12 months ended October 31, 1946 were allocated between the four interurban divisions on the basis of the published tariffs of the company. Each of the four divisions was given credit for through passengers on the basis of the distance travelled on each division. This resulted in an allocation of interurban passenger revenues for the 12 months ended October 31, 1946 as follows:

RGS
"There is a
derived figure"

	<u>Passenger Revenues</u>	<u>Revenue Passengers</u>	<u>Average Fare per Passen- ger</u>	<u>Passen- gers per Car Mile</u>	<u>Passen- ger Revenue per Car Mile</u>
<u>Skokie Line</u>					
Chicago to No. Chicago Jct.	\$2,522,705	4,584,000	55.0¢	1.18	64.7¢
<u>Main Line</u>					
No. Chicago Jct. to Milwaukee	2,265,869	4,343,600	52.2	1.04	54.1
<u>Shore Line</u>					
Chicago to Waukegan	2,902,280	10,754,400	27.0	2.24	60.6
<u>Lake Bluff-Mundelein</u>	<u>54,700</u>	<u>500,600</u>	<u>10.9</u>	<u>2.54</u>	<u>27.7</u>
Total	\$7,745,554	17,873,100(a)	43.3¢	1.37	59.2¢

(a) Excludes duplications as in Table 3 of 606,800 and between Skokie Line and Main Line of 1,702,700 passengers from Chicago to points north of Waukegan.

Results of Operations by Divisions

As explained in the previous section, the interurban passenger revenues of the system have been allocated to the four interurban sections of line on the basis of number of passengers carried. Waukegan City rail revenues and freight revenues were directly available. Other transportation revenues and other operating revenues have been similarly divided on appropriate bases.

The detailed operating expenses for the 12 months ended October 31, 1946, after deducting expenses applicable to bus operation, have been regrouped according to the character of the expenses and the particular operating unit most nearly responsible for each item of expense. In most cases, individual operating expense accounts have been taken in total for this allocation. However, with respect to certain of the Way and Structures accounts, a percentage division has been made assigning a portion to expenses varying with the miles of road operated or miles of single track operated and a portion to expenses varying with the number of car miles operated. This allocation of expenses for each of the primary groups of accounts is shown in Table 4 together with the appropriate operating units and the resulting unit costs. The items from Table 4 are regrouped in Table 5 in order to assemble the various functional unit costs for working out the earnings statements by divisions of the system.

On the basis of the functional unit costs developed in Table 5, operating expenses have been allocated to Waukegan local rail service, the four interurban sections of the system and freight operations, and the resulting segregated income accounts are shown in Table 6. A summary of these figures from Table 6 is as follows:

	Operating Revenues	Operating Expenses, Maintenance and Rentals		Balance before Taxes and Depreciation	% of Revenues
		Amount	¢ per Car Mile	Amount	
Skokie Line	\$2,670,165	\$1,814,019	46.6¢	\$ 856,146	32.1%
Main Line	2,383,614	2,145,278	51.2	238,336	10.0
Shore Line	3,102,517	2,400,643	50.1	701,874	22.6
Mundelein	64,427	224,965	114.0	160,538*	-
Total Interurban	8,220,723	6,584,905	50.3	1,635,818	19.9
Waukegan City Rail	350,116	302,589	56.4	47,527	13.6
Freight Operations	997,256	860,206	42.5	137,050	13.8
Total Rail System	\$9,568,095	\$7,747,700	49.6¢	\$1,820,395	19.0%

* Denotes deficit.

Any costs analysis of this kind involves many assumptions and estimates. The bases on which such analyses are made may affect the absolute results but changes in the assumptions will not change materially the relative results. From the standpoint of operating results alone, the Skokie Line makes the best showing, with the Shore Line next. This is not unexpected because of the speed of operation (38.3 miles per hour) and passenger traffic characteristics of the Skokie Line. The traffic density of the Shore Line offsets in part the effect on operating costs of its low average operating speed (23.2 miles per hour). Similarly, the low traffic density of the Main Line results in high operating costs in spite of the relatively high average speed (42.3 miles per hour). The Mundelein division shows an operating loss before taxes and depreciation.

Freight operations as a whole, based on our analysis, show a deficit after taxes and depreciation. An analysis currently prepared by the company shows the same result, but indicates that carload freight by itself produces substantial net earnings while merchandise and other LCL business produces a deficit.

Waukegan City rail operations are just about earnings taxes and depreciation.

Future Trends of Traffic and Earnings

Freight traffic in the future will vary with business conditions and with the company's ability to extend its field of activity and the area within which it is in a position to compete for such traffic. On the basis of current experience it would appear that car-load line haul freight has the best earnings potentialities. With respect to the future development of this class of business, we have certain definite recommendations.

Local rail passenger service in the Waukegan-North Chicago area is definitely uneconomic. We understand that it is the company's intention to convert all service in that area to motor bus, and we concur in that program.

The interurban passenger service, which in recent years has produced the bulk of the system's revenues and net earnings, presents the major problem for the future. With respect to most of this traffic, the system is faced with steam railroad competition, as outlined earlier in this report. A substantial proportion of the available traffic is attracted to the system primarily because of more frequent service and more conveniently located terminals in both Chicago and Milwaukee. Competitive running times are not possible, except for through passengers on the Skokie Line between Waukegan and Chicago, and cannot be achieved without improvement in the entries to Chicago and Milwaukee and other line improvements, particularly on the Shore Line.

Total passenger traffic is currently substantially less in volume than a year ago. The decline is primarily in long haul and casual riding and in riding to and from Great Lakes Naval Training Station and Fort Sheridan. Commutation traffic, between Chicago and the suburban area to the north has declined little if any. These trends are normal and are being experienced by other carriers, and

will probably be accentuated in the future. Operating costs are still tending to increase, particularly the costs of operating labor.

In order to evaluate approximately the effect of these trends on the operating results of the system, we have prepared two estimates. The first of these is based on a 15% decrease in traffic and revenues, a similar decrease in car miles and car hours operated and a 5% decrease in the maximum number of cars operated. The second is based on a 25% decrease in traffic and revenues, a 20% decrease in car miles and car hours operated and a 10% decrease in the maximum number of cars operated. Operations on these assumed bases have been evaluated by applying the functional unit costs shown in Table 5, except that the car hour costs have been increased by 10% to allow for possible wage increase. Summarized results of these estimates are as follows:

Operating Expenses, Maintenance and Rentals	Present Results of Operation (From Table 6)		15% Decrease in Revenues and 15% Decrease in Car Miles and Car Hours		25% Decrease in Revenues and 20% Decrease in Car Miles and Car Hours	
	¢ per Car Mile		¢ per Car Mile		¢ per Car Mile	
	Amount		Amount		Amount	
Skokie Line	\$1,814,000	46.6¢	\$1,675,000	50.6¢	\$1,607,000	51.6¢
Main Line	2,145,000	51.2	2,024,000	56.9	1,964,000	58.6
Shore Line	2,401,000	50.1	2,199,000	54.0	2,098,000	54.7
Mundelein	225,000	114.0	219,000	130.5	213,000	135.3
Total	\$6,585,000	50.3¢	\$6,117,000	55.1¢	\$5,882,000	56.3¢
Balance after Oper. Expenses Rentals, Taxes and Depreciation	Amount	% of Revenue	Amount	% of Revenue	Amount	% of Revenue
Skokie Line	\$ 497,000	18.6%	\$258,000	11.3%	\$ 74,000	3.6%
Main Line	15,000	.6	204,000*	-	370,000*	-
Shore Line	530,000	17.1	296,000	11.1	107,000	4.5
Mundelein	189,000*	-	192,000*	-	192,000*	-
Total	\$853,000	10.4%	\$158,000	2.3%	\$381,000*	-

* Denotes deficit.

The estimates above indicate the vulnerability of present passenger service earnings.

This probable future trend can be minimized to some extent if new traffic can be attracted and if additional operating economies can be made effective. With the system as now constituted, the attraction of new business will be difficult, particularly if enforced operating economies resulting in longer headways in addition to shorter trains. While our recommendations contain some items which should aid in attracting traffic and in reducing costs, without changing materially the present characteristics of the system, we feel that more drastic steps will be necessary to maintain the system's position as a passenger carrier.

The bulk of the system's passenger business is made up of traffic between Chicago and the suburban area to the north as far as Waukegan. The following section describes the present transportation facilities in that area as a background for certain recommendations which we are making.

Present Passenger Transportation
Facilities in the Area between
Chicago and Waukegan

Howard Street, the northern boundary of the City of Chicago, is 10 miles from downtown Chicago. From Howard Street to Waukegan is 25.9 miles and for nearly all of this entire distance a strip from one mile to two miles wide along the shore of Lake Michigan is heavily populated. Except for the cities of Waukegan and North Chicago and the U. S. Government reservations at Great Lakes and Fort Sheridan, this area is essentially residential, and according to the U. S. Census had a population of 174,000 in 1940, as shown below. This is probably more nearly 200,000 at the present time, excluding Armed Service personnel on the two reservations.

<u>Miles from Downtown Chicago</u>		<u>1940 Population</u>
12.0	Evanston	65,389
14.3	Wilmette	17,226
15.2	Kenilworth	2,935
16.8	Winnetka	12,430
17.8	Hubbard Woods	-
19.2	Glencoe	6,825
21.6	Ravinia	-
23.2	Highland Park	14,476
24.5	Highwood	3,707
25.7	Fort Sheridan	-
28.3	Lake Forest	6,885
30.2	Lake Bluff	1,729
32.2	Great Lakes	-
33.2	North Chicago	8,465
35.9	Waukegan	34,241
Total		<u>173,308</u>

These communities from Evanston to and including Lake Bluff comprise the best and most heavily populated high-class suburban developments in the Chicago area. A large percentage of the residents commute daily to and from Chicago.

Except for Evanston and the southeastern corner of Wilmette, which are also served by Chicago Rapid Transit, transportation to and from Chicago for the entire area is provided by the North Shore Line and the Milwaukee division of the Chicago and Northwestern Railway. For most of the distance from Wilmette Avenue, Wilmette, to North Chicago (21.6 miles) the tracks of these two carriers occupy adjoining rights of way. Through Hubbard Woods and Winnetka, where a grade separation project was completed a few years ago, the two double track lines are on a common grade.

The lines of these two carriers now diverge at Wilmette. The North Shore goes east for about a mile on paved track in Greenleaf Avenue, and picks up the tracks of Chicago Rapid Transit, over which the North Shore operates into downtown Chicago.

The Chicago Rapid Transit tracks and the Chicago and Northwestern tracks come together again at Davis Street, Evanston and for

about two miles are on a common earth filled embankment. Just north of Howard Street, Chicago, the tracks of the two carriers again diverge. The Chicago and North Western tracks go nearly straight south to Clybourn Junction and the terminal at Madison and Canal Streets. Along this part of the line there are eight stations at which certain of the suburban trains stop.

Scheduled suburban service furnished by these two carriers consists on weekdays of 86 trains southbound and 79 trains northbound. All North Shore Line trains run to either Highwood or Waukegan. Chicago and North Western trains use Evanston, Winnetka, Highland Park and Waukegan as north end terminal points, with a few of the trains available for suburban service running as far as Kenosha and Milwaukee. This weekday scheduled service is as follows:

Between Chicago and	Number of Weekday Scheduled Trains					
	Southbound			Northbound		
	C&NW	CNS&M	Combined	C&NW	CNS&M	Combined
Evanston	7	-	7	6	-	6
Winnetka	5	-	5	2	-	2
Highland Park	4	-	4	5	-	5
Highwood	-	7	7	-	13	13
Waukegan	12	38	50	13	38	51
Kenosha	5	-	5	7	-	7
Milwaukee	<u>1</u>	<u>-</u>	<u>1</u>	<u>2</u>	<u>-</u>	<u>2</u>
Total	34	45	79	35	51	86

Of the 34 southbound Chicago and North Western trains, 19 arrive in Chicago between 8:00 A.M. and 10:00 A.M., and the remaining 15 arrive during the balance of the 16 hours between 6:30 A.M. and 10:30 P.M. Of the 45 southbound North Shore trains, 10 arrive in Chicago between 8:00 A.M. and 10:00 A.M., and the remaining 35 arrive during the balance of the 18 hours between 6:00 A.M. and 2:00 A.M. Northbound service shows similar relative concentration in the period from 4:00 P.M. to 6:00 P.M. It is apparent that the Chicago and North Western service is largely concentrated during rush hours

while North Shore service is at frequent intervals during other periods of the day and night. As a result of this, the C. & N. W. handles the major portion of rush hour riding while the North Shore has the major portion of the riding during other hours. Of the total of 165 trains per day (in both directions) some 36 North Shore trains arrive or leave downtown Chicago at times practically identical with 36 C. & N. W. trains.

Since nearly all North Shore trains make all stops, the running time is fairly uniform for all trains. Running times on C. & N. W. trains, however, vary widely as certain rush hour trains make no stops between Chicago and such stations as Evanston, Wilmette or Winnetka. Comparative running times are as follows:

<u>Between Chicago</u>	<u>Range of</u> <u>Running Times in Minutes</u>	
	<u>C. & N. W.</u>	<u>C., N.S. & M.</u>
and		
Evanston	19 - 37	27 - 30
Wilmette	22 - 41	38 - 42
Winnetka	26 - 47	45 - 50
Highland Park	30 - 60	60 - 65
Waukegan	61 - 83	89 - 100

Maximum cars per train on the C.&N.W. are 9 and on the C., N.S. & M. are normally 4. Seating capacities of present C. & N.W. cars vary from about 60 for the older cars to 96 for the newer cars. North Shore cars seat from 50 to 56. Present overall average operating speeds are 27.5 miles per hour for the C. & N.W. and 23.2 for the North Shore. The North Shore average speed for all operations is nearly its maximum for its fastest trip. The North Western, however, averages as high as 46 miles per hour on some of the runs between Winnetka or Highland Park and Chicago.

Present one way, round trip and comparable commutation ticket rates are the same on the two carriers between Chicago and Wilmette or points north of Wilmette. While North Shore trains make

passenger stops in Evanston and in Chicago between the Loop and Howard Street, the minimum fare honored is that between the point of boarding and Wilmette. From the Loop to Linden Avenue, Wilmette, the one-way ticket fare is 32 cents with commutation tickets at lower rates. Chicago Rapid Transit fare for the same ride is 15 cents. The C. & N.W. rates for travel between its Chicago Terminal and stations in Chicago and Evanston scale down according to the mileage distance, with a minimum one-way fare from the Terminal to Belmont Avenue or intermediate stations of 10 cents, and commutation rates as low as 6 cents per ride.

Holders of C. & N.W. commutation or round-trip tickets can purchase at the rate of 7 cents per ride equivalent types of tickets good on buses of Chicago Motor Coach Co. Regular fare is 10 cents. Connecting service between the C. & N.W. Madison Street Terminal and the Loop District is furnished by these buses.

North Shore Line passengers entering Chicago can transfer without charge to Chicago Rapid Transit trains. This privilege does not exist in the opposite direction, however, as North Shore tickets are not honored for fares at Chicago Rapid Transit stations. The present fare on Chicago Rapid Transit for a ride within the City of Chicago is 12 cents.

The area lying immediately west of the communities described above and extending from Howard Street, Chicago, to Lake Bluff is not now heavily populated. Several attractive and high-class communities have been developed, however, and with the resumption of residential building this area should develop rapidly. It is served now by the Skokie Line of the North Shore with practically no competition. More rapid transportation between this area and Chicago would undoubtedly expedite its development.

We believe that if transportation service to these areas

could be improved, substantially more business could be attracted.

A Plan for Rearrangement of these Transportation Facilities

This plan contemplates that all present rail suburban traffic of the C. & N.W. between Chicago and Waukegan be taken over by the North Shore and that the North Shore retire from high-speed competitive service between Chicago and Milwaukee. To accomplish this, the following steps would be necessary: (See Map 1.)

A - Train Routing

1. C. & N.W. Chicago-Milwaukee streamliners and other through trains now operating on the Milwaukee division would be routed via the Mayfair Cutoff from Noyes Street, Evanston, to Mayfair Jct. and thence to Clybourn and the Terminal on Wisconsin division tracks.
2. All suburban service from Waukegan south would be operated by the North Shore and routed via North Shore tracks between Waukegan and Wilmette and via C. & N.W. Milwaukee division tracks between Wilmette and the Madison and Canal Street Terminal. North Shore Skokie Line trains would use C. & N.W. Milwaukee division tracks south of Howard Street.

B - New Facilities Required

1. A fourth track on present C. & N.W. elevation from Noyes Street, Evanston, to end of present three track line north of Central Street, Evanston, .6 mile, and two additional tracks on C. & N.W. right-of-way from that point to Elmwood Avenue, Wilmette, .9 mile, connecting with present North Shore tracks at that point.
2. Electrification of C. & N.W. Milwaukee division from Wilmette to the Chicago Terminal, including certain tracks in the Terminal and necessary car storage yard facilities, some 15 miles of line, mostly three tracks.
3. Reconstruction of C., N.S. & M. Shore Line from Wilmette to Waukegan including grade separation and elimination of curves. This would be done jointly with C. & N.W. and the several communities, and the two carriers will be faced with this obligation some time in the future under present methods of operation.

4. Construction by C. & N.W. of a new Evanston passenger station at Noyes Street for its through trains and for interchange of passengers with suburban trains.
5. Modification of present Main Street, Evanston, C. & N.W. and CRT stations to permit easy transfer of passengers between suburban trains and CRT trains.
6. Construction of track connection between Skokie Line and C. & N.W. Milwaukee division at Howard Street.
7. Purchase of new, modern, light weight motor and trailer cars designed for multiple unit operation and with seating capacity of at least 100 per car. Some of the more modern C. & N.W. suburban cars might be purchased or leased for interim operation as trailers.
8. Ultimate grade separation of Mayfair Cutoff by C. & N.W. for the 5 miles of that line which is now at grade from Bryn Mawr Avenue, Chicago, to Davis Street, Evanston. In this distance there are now 15 highway crossings, of which 13 are at grade and 2 have underpasses.
9. Rearrangement of present C. & N.W. car and locomotive yards at Grand Avenue.

C - Corporate

1. The negotiation of a track rental agreement with the C. & N.W. for exclusive use of Milwaukee division tracks from Noyes Street, Evanston, to Clybourn and operating rights over certain tracks from Clybourn to and into the Terminal, including storage yard facilities.

The advantages of such a program to the North Shore Line would be as follows:

- (a) It would remove the North Shore Line completely from any contact with Chicago Rapid Transit and would provide it with a high speed entrance into Chicago and terminal facilities.
- (b) By taking over the present commutation and other local business from the Chicago and North Western from points south of Waukegan, its volume of business in that area would be more than doubled.
- (c) The operation of electric trains in this suburban service would be more economical than the present steam road operation. The higher speed would be more economical than the present North Shore electric operation and resulting service should prove more attractive to the travelling public.

- (d) A similar high speed entrance into Chicago would be provided for Skokie Line service which should be a material aid in developing the area served by that line as a desirable suburban residential section.
- (e) The grade separation and other work required on the North Shore Line north of Wilmette will undoubtedly have to be done in any event at some future date if the line is continued in operation.
- (f) All North Shore Line operations would be on track which would permit the operation of larger cars and longer trains thus reducing operating costs.

The advantages of this proposal to Chicago and North Western would be as follows:

- (a) Approximately one million more passengers per year would be potential customers between Chicago and Milwaukee for Chicago and North Western high speed trains and these could be handled at slight additional cost.
- (b) Operation of Milwaukee division through trains would be expedited because of the removal of present interference caused by heavy suburban service during rush hours.
- (c) The present locomotives and a substantial portion of the present passenger cars used in suburban service are old. If relieved of this operation, the Chicago and North Western would not have to face in the future a substantial expenditure for the modernization of this service.

For certain parts of the above program, there are possible alternatives, which are not discussed in this report.

The economic results of such a program are difficult to estimate with data now available. Such an estimate has been attempted, however, on the basis of estimated revenues, passengers and service required. To the operating units so developed, we have applied such of the North Shore functional unit costs as would be applicable to this operation.

Condensed results of this estimate covering unified service on the Shore Line are as follows:

	<u>Unified Operation</u>	<u>Present Shore Line (Table 6)</u>
<u>Shore Line</u>		
Operating Revenues		\$5,726,000
Operating Expenses	3,041,000	\$3,102,000
Taxes (except Income)	185,000	
Depreciation	<u>444,000</u>	<u>2,572,000</u>
Balance		\$2,056,000
<u>Skokie Line</u>		
Savings by new routing	<u>206,000</u>	<u>-</u>
Total available for C. & N.W. track rental and debt service on financing required for new construction		\$2,262,000
		\$ 530,000

The above is based on the following operating assumptions:

	<u>Present C&NW Suburban Service</u>	<u>Present CNS&M Shore Line</u>	<u>Combined</u>
Revenue Passengers	12,600,000	10,754,000	23,354,000
Passenger Revenue	\$2,624,000	\$3,102,000	\$5,726,000
Average fare per passenger	21.4¢	27.0¢	23.4¢
Car Miles	3,915,000	4,791,000	6,900,000
Car Hours	142,000	195,000	230,000
Average Speed (Miles per hour)	27.5	23.2	30.0
Operating Expenses per Car Mile	-	50.1¢	44.1¢

With a 15% reduction in passengers and service and a 10% increase in unit car hour costs the above balance of \$2,262,000 would be reduced to \$1,322,000.

With certain changes in present scheduled service and methods of operation other than increase in speed reflected above, it is believed that operating results might be improved somewhat.

It is estimated that the combined service could be operated with 160 new large capacity cars. Total capital expenditures required for the program on the part of the North Shore would probably be from \$16,000,000 to \$20,000,000.

Chicago and North Western requirements for rental cannot well be estimated. Operating costs included above cover allowances for all track and overhead maintenance on leased track, operations of stations and cost of purchased power. Chicago and North Western rental would therefore have to cover only taxes and compensation for use of property. At 6¢ per car mile on leased track this would be \$250,000 for both Shore Line and Skokie Line operations.

Recommendations

A - We recommend that further study and consideration be given to both the feasibility and the probable economic results of the above plan.

B - Motor Bus Substitution for Shore Line Service

We feel that the abandonment of the Shore Line rail service for bus operation would be unwise. Access to Chicago by bus would be slow and difficult if through service were furnished. Service terminating at Linden Avenue and transferring passengers to Chicago Rapid Transit would, in our opinion, be decidedly unattractive to the public. Of primary importance is the fact that there are no adequate highways paralleling the present Shore Line on which buses could be operated with any ease or at any attractive speed.

C - Feeder Bus Service

In most of the suburban communities north of Evanston, there is no local transportation service. We recommend that studies should be made as to feasible routes for operating feeder bus lines in these communities. Such lines, possibly one to a community, should run from near Lake Michigan to the Shore Line station, and thence westerly, possibly terminating at a Skokie Line station.

D - Frequency of Stops on the Shore Line

In many of the communities served, Shore Line trains make several stops. In many cases these stops are very close together, and most Shore Line trains stop at all of them. It would seem desirable to rearrange these stops so as to increase the distance between them, thereby permitting a faster running time. Under the plan for unified service outlined above this could easily be done and rail service then supplemented where necessary with paralleling local bus service.

E - Bus Service - Lake Bluff to Mundelein

It is recommended that motor bus service be substituted for the rail service now operated between Lake Bluff and Mundelein. Some saving should result in using a one-man bus as against a two-man car. Continuation of rail service from Mundelein to Chicago, via Skokie seems to be justified by the possible growth in commutation and other traffic, particularly if Recommendation A can be worked out. Also, track should be retained for freight service.

F - Waukegan Local Service

We understand that it is the company's intention to substitute bus service for all or most of the existing rail lines in Waukegan as soon as certain highway improvements are completed. In this we concur.

G - Freight Service

We believe that every effort should be made to increase the volume of carload freight on all portions of the system where such operations can be carried on. As the volume of such business can be increased, the unit cost of handling should decline. As steps to promote such an increase and its efficient handling, we recommend the following:

1. The construction of a track connection between the North Shore main line just south of Chicago and North Western Railway and Ryan Road and the Milwaukee-Racine-Kenosha line.
2. The construction of a similar interconnection at some point between Racine and Kenosha.
3. The purchase of one or two larger capacity electric freight locomotives to permit the more rapid handling of heavier trains.

Under the plan for unified Shore Line service the North Shore would acquire some additional freight business and freight handling facilities.

H - Hales Corners Line and Lakeside Interconnecting Railroad

As a part of the general freight program and also to improve the North Shore Line entrance to Milwaukee, we recommend the purchase from The Milwaukee Electric Railway & Transport Company of the rail line from 7th Street and St. Paul Avenue, Milwaukee to Hales Corners, and the procuring of trackage rights on the Lakeside Interconnecting Railroad from the Hales Corners Line to the Milwaukee-Racine-Kenosha Line. Either with or without a connection with the North Shore main line this would provide a high-speed entrance to Milwaukee over which both passengers and freight could be handled, carload interchange facilities with both the Chicago and North Western and the Milwaukee road, and several industry tracks in Milwaukee. It would also permit abandonment of local rail service in Milwaukee now operated at a substantial loss, and avoid possible heavy future expenditures for city track relocation.

I - Milwaukee Road Right of Way South of Montrose, Chicago

Our inspection of this right of way convinces us that its use by the North Shore for high speed passenger service is impractical. Its use would not materially improve the entrance to Chicago, substantial use would still be made of Chicago Rapid Transit trackage, it would require rerailing, reballasting and electrification and probably elevation or depression of the tracks. Any track changes would be very costly as there are industry tracks on both sides of the right of way for nearly its entire length.

CHICAGO, NORTH SHORE AND
MILWAUKEE RAILWAY

Summary of Miles of Road and
Miles of Single Track

Correct - from T T mileage.

	<u>Miles of Road</u>		<u>Miles of Single Track Owned</u>
	<u>Operated</u>	<u>Owned</u>	
<u>Main Line</u>			
Milwaukee Terminal to Harrison St.	2.8	-	-
Harrison St. to Edison Court, Waukegan	45.1	45.1	89.6
Edison Court to No. Chicago Jct.	3.1	3.1	6.2
Milwaukee to No. Chicago Jct.	<u>51.0</u>	<u>48.2</u>	<u>95.8</u>
<u>Skokie Line</u>			
No. Chicago Jct.-Mundelein Div. Jct.	3.3	3.3	6.6
Mundelein Div. Jct. to Dempster St.	16.7	16.7	33.4
Dempster St. to Oakton St.	1.0	1.0	2.0
Oakton St. to Howard St., Chicago	4.0	4.0	8.0
Howard St. to Roosevelt Rd., Chicago	12.0	-	-
No. Chicago Jct. to Chicago	<u>37.0</u>	<u>25.0</u>	<u>50.0</u>
<u>Milwaukee to Chicago, via Skokie Line</u>	88.0	73.2	145.8
<u>Shore Line</u>			
Waukegan to No. Chicago Jct.	3.1	3.1	6.2
No. Chicago Jct. to Lake Bluff	2.7	2.7	5.4
Lake Bluff to Highwood	5.6	5.6	11.2
Highwood to Linden Ave., Wilmette	11.1	11.1	22.2
Linden Ave. to Howard St., Chicago	4.0	-	-
Howard St. to Roosevelt Rd., Chicago	12.0	-	-
Waukegan to Chicago	<u>38.5</u>	<u>22.5</u>	<u>45.0</u>
<u>Mundelein Division</u>			
Lake Bluff to Skokie Line Jct.	1.2	1.2	1.7
Skokie Line Jct. to Libertyville	4.8	4.8	9.6
Libertyville to Mundelein	2.6	2.6	5.2
Lake Bluff to Mundelein	<u>8.6</u>	<u>8.6</u>	<u>16.5</u>
<u>Total Interurban System</u>	123.1(a)	104.3	207.3
<u>Waukegan City (Rail Lines)</u>	6.0	6.0	9.0

(a) Excluding duplications

CHICAGO, NORTH SHORE AND MILWAUKEE RAILWAY

Operating Units
12 Months Ended October 31, 1946

	Total System	Waukegan Rail Operation	Skokie Line Chicago to North Chicago Junction	Main Line North Chicago Junction to Milwaukee	Shore Line Chicago to Waukegan	Lake Bluff - Mundelein	Total Interurban Passengers	Total Freight, Express, etc.
<u>Route Miles</u>								
CNS & M Owned	110.3	6.0	25.0	48.2	22.5	8.6	104.3	
CNS & M Operated (I.U. Only)	123.1(c)	-	37.0	51.0	38.5	8.6	123.1(c)	
<u>Miles of Single Track</u>								
CNS & M Owned	216.3	9.0	50.0	95.8	45.0	16.5	207.3	
<u>Car Miles Operated</u>								
Passenger - On CNS & M Track	9,567,259	536,203	2,515,021	3,981,566	2,471,710	197,377	9,031,056	
On CRT Track	3,835,574	-	1,381,963	-	2,337,101	-	3,835,574	
On C & ME Ry. Track	208,000	-	-	208,000	2,453,611	-	208,000	
Total	13,610,833	536,203	3,896,984	4,189,566	4,790,712	197,368	13,074,630	
Freight	2,022,310(a)	-	-	-	-	-	-	2,022,310(a)
Total - On CNS & M Track	11,532,493	536,203	2,515,021	3,981,566	2,337,101	197,368	9,031,056	1,965,234
Operated	15,633,143	536,203	3,896,984	4,189,566	4,790,712	197,368	13,074,630	2,022,310
<u>Vehicles Owned - Total</u>	210	16	50	27	65	8	150	44
<u>Car Hours Operated</u>								
Passenger - Total Operated	445,458(b)	54,600(b)	96,761	92,900	194,773	66,424	390,858	
Average Speed - Miles per Hour	29.6(d)	9.8	38.3(d)	45.1	23.2(d)	30.8	32.3(d)	
Average Passenger Car Miles per Year per MST Owned	44,400	59,600	50,300	41,700	51,900	12,000	43,500	
Average Passenger Car Miles per Year per Vehicle Owned	64,800	33,500	77,900	155,200	73,700	24,700	85,700	

(a) Freight car miles not segregated by sections of line. Includes 57,076 car miles on CRT tracks.

(b) For computing car hour unit costs, Waukegan City Rail taken at 1/2, or 27,300, because of one man operation, making System total 418,158.

(c) Excluding duplications.

(d) Computed by eliminating car miles Roosevelt Rd. to 63rd Street -

Skokie	189,530
Shore Line	264,131
Total	453,661

CHICAGO, NORTH SHORE & MILWAUKEE RAILWAY

Allocation of Revenue Passengers
 12 months Ended October 31, 1946
 (Based on analysis of station agents
 ticket withdrawals for the year 1946)

	Total System (Excluding Duplications)	Skokie Division	Shore Line Division	Mundelein Division
Total originating or terminating South of Howard Street, Chicago	11,298,700	4,519,500	6,779,200	386,300 (c)
Made up of passengers to or from				
Shore Line points South of Great Lakes	5,268,300	-	5,268,300	-
Shore Line points North of Great Lakes		-	-	-
Skokie Line Points South of Great Lakes	258,500	258,500	-	-
Mundelein points West of junction with Skokie	386,300	386,300 (c)	-	386,300 (c)
Main Line points:				
Great Lakes, -North Chicago, -Waukegan	3,682,900 (a)	2,172,000 (a)	1,510,900 (a)	-
Zion	132,200	132,200	-	-
Kenosha	463,300	463,300	-	-
Racine	201,000	201,000	-	-
Milwaukee	906,200	906,200 (b)	-	-
Total originating and terminating at Shore Line points between Howard St. and Waukegan	3,819,200	-	3,819,200	-
Total originating or terminating at Great Lakes-North Chicago-Waukegan to or from Main Line points to and including Racine	1,151,200	1,151,200	-	-
Total originating or terminating at Milwaukee and made up of passengers to or from Main Line points between North Chicago Junction and Milwaukee	1,335,400	1,335,400 (b)	-	-
Total passengers riding between Shore Line points South of North Chicago Junction and Main Line points North of Waukegan to and including Racine	32,900	32,900 (c)	32,900 (c)	-
Total passengers riding between Shore Line points South of North Chicago Junction and Milwaukee	121,400	121,400 (b)	121,400 (c)	-
Total Passengers riding between Mundelein Line points and Lake Bluff	48,100	-	-	48,100
Total passengers riding between Mundelein Line points and Great Lakes-North Chicago- Waukegan	64,500	64,500 (c)	-	64,500 (c)
Total passengers riding between Mundelein Line points and points on Shore Line South of Lake Bluff	1,700	-	1,700	1,700 (c)
Grand Total	17,873,100	7,224,900	10,754,400	500,600
	Actual 17,783,140			

- (a) Segregation between Shore Line and Skokie made so that total passengers carried out of Chicago would be in line with traffic checks.
 (b) Total originating or terminating in Milwaukee, 2,363,000.
 (c) Duplications eliminated in total column (606,800).

CHICAGO, NORTH SHORE AND MILWAUKEE RAILWAY

Classification of Rail Operating Expenses
to Derive Functional Unit Costs

Exp. Date
Total Rail
Costs 12 Months
October 31, 1946

Classification of Expenses

Applicable Units for Apportionment of Costs

Unit Costs

Way and Structures

Crossing Protection 97,657
All other MST Costs 777,882
Car Mile Costs 290,893
Maint. of Shops and Car Houses 25,526
Total \$1,191,958 ✓

Route Miles of Owned Track 110.3^x \$885.38
Miles of Single Track - Owned Track 216.3 3,596.31
Car Miles Operated (Total) on Owned Track 11,532,493 .0252
Total Vehicles Owned 210 121.55

Equipment

Passenger and Combination Cars 390,705
Freight Cars and Locomotives 53,359
All other Costs 242,542
Total 686,606

Passenger Car Miles Operated 13,610,833 .0287
Direct to Freight Service -
Total Car Miles Operated 15,633,143 .0155

Power

Substation and Transmission 68,324
Power Purchased 690,524
Total 758,848

Route Miles of Owned Track 110.3 619.44
Total Car Miles Operated - Owned Track 11,532,493 .05988
" " " " " " .0657 -?

Conducting Transportation

Passenger Station Operation 561,943
Freight Trainmen, Stations, etc. 297,331
Dining Car Costs 138,498
Passenger Crews, etc. 1,512,684
Car Cleaners & Car House Employees, etc. 474,157
Crossing Protection 234,584
Total 3,219,197

Route Miles - Total Operated 123.1 4,564.93
Direct to Freight Service -
Direct to Passenger Service -
Passenger Car Hours Operated 418,158 3.6175^x
Total Vehicles Owned 210 2,257.89
Route Miles of Owned Track 110.3^x 2,126.78

Traffic - Total

178,583

Total Car Miles Operated 15,633,143 .0114

General and Miscellaneous

Injuries & Damages 120,528
Rent of Tracks -
CRT 622,824
C&ME Ry. 80,736
Rent of Equipment 84,740 ✓
All other General Expenses 803,680
Total 1,712,508

Passenger Car Miles Operated 13,610,833 .0089
Car Miles on CRT Track 3,892,650 .1600
Direct -
Direct to Freight Service -
Overhead to Total Expenses \$6,944,020 11.57%

Grand Total

\$7,747,700

CHICAGO, NORTH SHORE AND
MILWAUKEE RAILWAY

Derivation of Unit Costs for Allocation
of Expenses by Divisions and Type of Service

	Total Rail Costs 12 Months October 31, 1946	Unit Costs
<u>Route Miles of Owned Track</u>		
Way & Structures	\$ 97,657	\$ 885.38
Power	68,324	619.44
Conducting Transportation	234,584	2,126.78
Total	<u>400,565</u>	<u>3,631.60</u>
<u>Route Miles - Total Operated</u>		
Passenger Station Operations	561,943	4,564.93
<u>Miles of Single Track - Owned Track</u>		
Way & Structures	777,882	3,596.31
<u>Car Miles on Owned Track</u>		
Way & Structures	290,893	0.0252
Power Purchased	690,524	0.0599
Total	<u>981,417</u>	<u>0.0851</u>
<u>Total Car Miles Operated</u>		
Equipment	242,542	.0155
Traffic	178,583	.0114
Total	<u>421,125</u>	<u>.0269</u>
<u>Passenger Car Miles Operated</u>		
Equipment	390,705	.0287
Injuries & Damages	120,528	.0089
Total	<u>511,233</u>	<u>.0376</u>
<u>Total Vehicles Owned</u>		
Way & Structures	25,526	121.55
Conducting Transportation	474,157	2,257.89
Total	<u>499,683</u>	<u>2,379.44</u>
<u>Passenger Car Hours Operated</u>		
Conducting Transportation	1,512,684	3.6175
<u>Direct to Freight Service</u>		
Equipment	53,359	-
Conducting Transportation	297,331	-
Rent of Equipment	84,740	-
Total	<u>435,430</u>	-
<u>Direct to Passenger Service</u>		
Conducting Transportation	138,498	-
Rent of Tracks	703,560	-
Total	<u>842,058</u>	-
General Overhead	<u>803,680</u>	11.57%
Grand Total	<u>\$7,747,700</u>	

CHICAGO, NORTH SHORE AND MILWAUKEE RAILWAY

Results of Operation by Divisions of the System
12 Months Ended October 31, 1946

	<u>Total System</u>	<u>Waukegan Rail Operation</u>	<u>Skokie Line Chicago to N.Chicago Jct.</u>	<u>Main Line N. Chicago Jct. Milwaukee</u>	<u>Shore Line Chicago- Waukegan</u>	<u>Lake Bluff- Mundelein</u>	<u>Total Interurban Passenger</u>	<u>Total Freight Express, etc.</u>
Revenues								
Passenger	\$8,094,172	\$348,618	\$2,522,705	\$2,265,869	\$2,902,280	\$54,700	\$7,745,554	-
Baggage	36,207	-	12,000	12,207	12,000	-	36,207	-
Dining, Lounge & Special Cars & Misc.	128,767	-	30,000	30,000	68,767 *	-	128,767	-
Total Passenger Transportation	8,259,146	348,618	2,564,705	2,308,076	2,983,047	54,700	7,910,528	-
Total Freight, Express & Milk	990,002	-	-	-	-	-	-	\$990,002
Total Transportation Revenue	9,249,148	348,618	2,564,705	2,308,076	2,983,047	54,700	7,910,528	990,002
Station & Car Privileges & Parcel Room	56,324	1,138	55,186	-	-	-	55,186	-
Demurrage	7,254	-	-	-	-	-	-	7,254
Rent of Tracks	157,851	-	29,000	33,000	87,551 *	8,300	157,851	-
Rent of Equipment	15,461	-	-	-	15,461 *	-	15,461	-
Rent of Buildings	82,057	360	21,274	42,538	16,458	1,427	81,697	-
Total Other Revenue	318,947	1,498	105,460	75,538	119,470	9,727	310,195	7,254
Total Operating Revenues	<u>\$9,568,095</u>	<u>\$350,116</u>	<u>\$2,670,165</u>	<u>\$2,383,614</u>	<u>\$3,102,517</u>	<u>\$64,427</u>	<u>\$8,220,723</u>	<u>\$997,256</u>

CHICAGO, NORTH SHORE AND MILWAUKEE RAILWAY

Results of Operation by Divisions of the System

12 Months Ended October 31, 1946

	Total System	Waukegan Rail Operation	Skokie Line Chicago To North Chicago Junction	Main Line North Chicago Junction to Milwaukee	Shore Line Chicago to Waukegan	Lake Bluff Mundelein	Total Interurban Passengers	Total Freight, Express, etc.
Total Operating Revenues (Table 6, Sheet 1)	\$ 9,568,095	\$ 350,116	\$ 2,670,165	\$2,383,614	\$3,102,517	\$ 64,427	\$ 8,220,723	\$ 997,256
Operating Expenses								
Route Miles - Owned Track	\$ 400,565	\$ 21,790	\$ 90,790	\$ 175,043	\$ 81,711	\$ 31,231	\$ 378,775	-
- Total Operated	561,943	-	141,513	232,811	148,361	39,258	561,943	-
Miles of Single Track - Owned	777,882	32,367	179,815	344,527	161,834	59,339	745,515	-
Car Miles - On Owned Track - Total	981,417	45,631	214,029	338,831	198,888	16,796	768,544	167,242
Passenger Service Only	511,233	20,140	146,374	157,363	179,943	7,413	491,093	-
Total Operated	421,125	14,444	104,977	112,858	129,052	5,317	352,204	54,477
Vehicles Owned - Total	499,683	38,071	118,972	64,245	154,664	19,036	356,917	104,695
Car Hours - Passenger Service Only	1,512,684	98,758	350,032	336,065	704,590	23,239	1,413,926	-
Rent of Tracks	703,560	-	221,114	80,736	392,578	-	694,428	9,132
Direct Freight Costs	435,430	-	-	-	-	-	-	435,430
Direct Passenger Costs	138,498	-	58,232	80,266	-	-	138,498	-
Subtotal	6,944,020	271,201	1,625,848	1,922,745	2,151,621	201,629	5,901,843	770,976
General Expenses	803,680	31,388	188,171	222,533	249,022	23,336	683,062	89,230
Total Operating Expenses	7,747,700	302,589	1,814,019	2,145,278	2,400,643	224,965	6,584,905	860,206
Balance Before Taxes and Depreciation	\$1,820,395	47,527	856,146	238,336	701,874	(160,538)	1,635,818	137,050
Taxes	379,319	20,926	137,698	87,986	45,166	9,157	280,007	78,386
Depreciation	658,828	33,131	220,972	135,670	126,738	19,915	503,295	122,402
Subtotal	1,038,147	54,057	358,670	223,656	171,904	29,072	783,302	200,788
Net Revenues - Amount	\$ 782,248	\$ (6,530)	\$ 497,476	\$ 14,680	\$ 529,970	\$ (189,610)	\$ 852,516	\$ (63,738)
% of Revenues	8.19%	-	18.63%	0.62%	17.08%	-	10.37%	-
Allocated Property	\$40,015,419	\$2,207,501	\$14,526,151	\$9,281,860	\$4,764,693	\$ 966,083	\$29,538,737	\$8,269,181
% Return on Property	1.95%	(0.29%)	3.42%	0.16%	11.12%	(19.63%)	2.89%	(0.77%)

